

## PATENT JOURNAL

### INCLUDING TRADE MARKS, DESIGNS AND COPYRIGHT IN CINEMATOGRAPH FILMS

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#### TABLE OF CONTENTS

2. PATENTS	4
APPLICATIONS FOR PATENTS	5
ASSIGNMENTS IN TERMS OF SECTION 60-REGULATIONS 58-60 AND 64 (1)	117
CHANGE OF NAME IN TERMS OF REGULATION 39	119
PATENT LICENSES IN TERMS OF SECTION 53 (7)-REGULATIONS 62 AND 63	120
PATENT APPLICATIONS ABANDONED OR WITHDRAWN	120
APPLICATION FOR RESTORATION OF A LAPSED PATENT	120
APPLICATION FOR VOLUNTARY SURRENDER OF PATENTS UNDER SECTION 64 (1), REGULATION	67 OF THE ACT
	121
	123
	470
	470
OFFICE PRACTISE NOTICES	
APPLICATIONS FOR REGISTRATION OF DESIGNS IN TERMS OF ACT No. 195 OF 1993	
CHANGE OF NAME IN TERMS OF REGULATION 24	477
APPLICATION FOR THE RESTORATION OF A LAPSED DESIGN UNDER SECTION 23 OF THE ACT	477
APPLICATION TO CORRECT AND/OR AMEND DESIGNS APPLICATION OR REGISTRATION	477
NOTICE OF REGISTRATION OF DESIGNS	477
HYPOTHECATIONS	491
JUDGMENTS	491
OFFICE PRACTISE NOTICES	491
4. COPYRIGHT	492
NOTICES OF ACCEPTANCE	493
HYPOTHECATIONS	494
JUDGMENTS	494
OFFICE PRACTISE NTOTICES	494
5. CORRECTION NOTICES	495
TRADE MARK CORRECTION NOTICES	496
PATENT CORRECTION NOTICES	496
DESIGNS CORRECTION NOTICES	496
COPYRIGHT CORRECTION NOTICES	496
PATENTS	496
DESIGNS	536



#### PATENTS

#### APPLICATIONS FOR PATENTS

Copies of these specifications cannot be supplied until the applications have been accepted and advertised, or in the case of convention applications, until 18 months from the date of the application in the convention

#### THE PARTICULARS APPEAR IN THE FOLLOWING SEQUENCE:

The numerical references denote the following: (21) Number of application. (22) Date of application. (DA) Date of acceptance. (51) Class. (71) Name of applicant(s). (72) Name of all inventors. (33) Country. (31) Number and (32) Date of convention application. (54) Title of invention. (00) Number of sheets.

#### - APPLIED ON 2022-01-24 -

2022/01031 ~ Provisional ~54:3 SYSTEMS SHARING THE SAME PURPOSE ~71:Mike Junior McKerson, 7 Quibeba, Arboretum, South Africa ~72: Mike Junior McKerson~

2022/01035 ~ Complete ~54:LIQUID COMPOUND FERTILIZER AND APPLICATION THEREOF IN INCREASING SQUALENE CONTENT IN TOBACCO LEAVES ~71:China Tobacco Guangxi Industry Co.,Ltd., No. 28, Beihu South Road, Xixiangtang District, Nanning City, Guangxi Zhuang Autonomous Region, 530001, People's Republic of China;Guangxi Tobacco Company Hezhou Branch, No. 485, Hezhou Avenue, Babu District, Hezhou City, Guangxi Zhuang Autonomous Region, 542899, People's Republic of China ~72: HE, Mingxiong;HE, Yuanlan;HUANG, Chongjun;JIA, Haijiang;JIN, Yabo;LI, Zhi;QIN, Shangzhong;SHI, Baofeng;SHOU, Anfa;WEI, Jianyu;YANG, Qigang;ZHANG, Deping;ZHANG, Jili;ZHANG, Weining~

2022/01044 ~ Complete ~54:STRUCTURE AND CONSTRUCTION TECHNOLOGY OF PILED RAFT FOUNDATION WITH CONTROLLABLE STIFFNESS ~71:China Construction Installation Group Co., Ltd., No. 6, Wenlan Road, Qixia District, Nanjing, 210046, People's Republic of China;Nanjing Tech University, No. 30, Puzhu South Road, Jiangbei New District, Nanjing, Jiangsu, 211816, People's Republic of China ~72: SONG, Zhu;WANG, Xudong;ZHAO, Qingzhou;ZHOU, Feng;ZHOU, Kezhang;ZHOU, Shilin;ZHU, Rui~

2022/01046 ~ Complete ~54:GEOLOGICAL EXPLORATION SAMPLING DEVICE AND USING METHOD THEREOF ~71:Wanjiang University of Technology, No. 333, Huolishan Avenue, Ma'anshan City, Anhui Province, 243031, People's Republic of China ~72: Zhang Jun~

2022/01053 ~ Complete ~54:A WATER COLLECTION AND SUPPLY SYSTEM ~71:BOTHA, Reginold, James, 20 MOREGROVE ROAD, WESTERING, PORT ELIZABETH, 6025, SOUTH AFRICA, South Africa ~72: BOTHA, Reginold, James~ 33:ZA ~31:2021/00771 ~32:04/02/2021

2022/01057 ~ Complete ~54:CROSS-INTERFACE LIQUID 3D PRINTING DEVICE AND METHOD ~71:HARBIN INSTITUTE OF TECHNOLOGY, No. 92, Xidazhi Street, Nangang District, Harbin City, People's Republic of China;NORTHEAST FORESTRY UNIVERSITY, No. 26, Hexing Road, Xiangfang District, Harbin City, People's Republic of China ~72: BAI, Yongping;DONG, Jidong;HUANG, Yudong;JI, Yuan;JIANG, Zaixing;LI, Yangyang;LIU, Yijie;REN, Liping;WANG, Xufeng;XU, Lijuan;YANG, Ming;ZHANG, Dawei;ZHANG, Jichi~

2022/01058 ~ Complete ~54:METHOD FOR BREEDING SOFT-SHELLED TURTLES ~71:JIANGXI INSTITUTE FOR FISHERIES SCIENCES, No. 1099, Fudayou Road, Nanchang City, People's Republic of China ~72: FU, Huiyun;FU, Peifeng;HE, Gang;WANG, Changlai;XI, Hongbin;ZHANG, Guifang;ZHANG, Yanping~

2022/01069 ~ Complete ~54:A TUBE FLIPPING MACHINE ~71:VISHWAKARMA INSTITUTE OF INFORMATION TECHNOLOGY, SURVEY NO. 3/4, KONDHWA (BUDRUK), PUNE, India ~72: ALVARES, Rocky;ANERAO,

Prashant Ramchandra;BHOSALE, Apurva Arun;CHAUDHARY, Nikhil K.;KEDARI, Samruddhi S.;KULKARNI, Atul Prabhakar;RANE, Chaitanya Ashok~

2022/01070 ~ Complete ~54:FOCAL TREATMENT OF PROSTATE CANCER ~71:NYMOX CORPORATION, 777 Terrace Avenue, Hasbrouck Heights, United States of America ~72: AVERBACK, Paul~ 33:US ~31:16/528,326 ~32:31/07/2019

2022/01072 ~ Complete ~54:MULTI-SENSOR CALIBRATION METHOD AND DEVICE FOR NON-CONTACT MEASUREMENT, AND REFERENCE BLOCK ~71:GUANGDONG SAMSUN TECHNOLOGY CO., LTD., No. 3 Zhongnan S. RD. W., Shangsha Haibin Dist., Changan Town, Dongguan, Guangdong, 523000, People's Republic of China ~72: LI, Zhenhan;LU, Shaowu;TANG, Xiaoqi;YAN, Changya;ZENG, Xiangbing;ZHANG, Qingxiang;ZHANG, Zilong;ZHOU, Xiangdong~

2022/01075 ~ Complete ~54:REFINED FERMENTED BEVERAGES, AND A METHOD THEREOF ~71:MARK ANTHONY INTERNATIONAL SRL, 1 Haggatt Hall, St. Michael, Barbados ~72: ANTHONY C VIEIRA;DAVID G FOX;JACOB M MATTSON~ 33:US ~31:62/880,827 ~32:31/07/2019

2022/01092 ~ Complete ~54:TRAJECTORY RECONSTRUCTION METHOD AND APPARATUS, COMPUTER DEVICE AND STORAGE MEDIUM ~71:SHENZHEN RESEARCH INSTITUTE OF BIG DATA, Daoyuan Building 225, Longxiang Blvd. 2001 Longcheng Street, Longgang District, Shenzhen, Guangdong, 518172, People's Republic of China;THE CHINESE UNIVERSITY OF HONG KONG (SHENZHEN), Longxiang Blvd. 2001, Longcheng Street, Longgang District, Shenzhen, Guangdong, 518172, People's Republic of China ~72: ANG XIE;BO AI;FENG YIN;SHUGUANG CUI~ 33:CN ~31:201910660363.0 ~32:22/07/2019

2022/01033 ~ Complete ~54:ARTIFICIAL INTELLIGENCE RICE QUALITY INSPECTION ROBOT AND QUALITY INSPECTION METHOD ~71:CENTRAL SOUTH UNIVERSITY OF FORESTRY AND TECHNOLOGY, NO. 498, SHAOSHAN SOUTH ROAD, People's Republic of China;CHANGSHA RONGYE INTELLIGENT MANUFACTURING CO., LTD., ROOM 807-809, 8 / F, BUILDING 7, JINQIAO MARKET CLUSTER 2, People's Republic of China ~72: CHEN, CHEN;DING, YUQIN;LI, JIANGTAO;LIN, QINLU~

2022/01043 ~ Complete ~54:FOUNDATION PIT SUPPORTING DEVICE FOR TUNNEL DRAINAGE IN CONSTRUCTION WORKS ~71:Henan University of Urban Construction, Longxiang Avenue, Xincheng District, Pingdingshan City, Henan Province, 467000, People's Republic of China ~72: CHU, Yapei;HAN, Yang;HE, Ruixia;HOU, Haifang;LIANG, Geng;LIU, Heng;LUO, Congshuang;REN, Mingyang;SHEN, Tong;WANG, Qingguo;WU, Xuyang;ZHAI, Panpan~

2022/01045 ~ Complete ~54:ILLUSTRATIVE STRESS ANALYSIS METHOD FOR ADDITIVE MANUFACTURING ~71:Dongguan University of Technology, No.1, Daxue Rd., Songshan Lake, Dongguan, Guangdong, 523808, People's Republic of China;Institute of Advanced Science Facilities, Shenzhen, Building A3, No. 268, Zhenyuan Road, Guangming District, Shenzhen, Guangdong , 518107, People's Republic of China ~72: CHEN, Shenggui;LI, Nan;SHANG, Xin;XU, Jin;ZHANG, Lijuan;ZHOU, Zirong~

2022/01050 ~ Complete ~54:CONTINUOUS SEAWATER URANIUM EXTRACTION DEVICE ~71:Yantai University, No. 30, Qingquan Road, Laishan District, Yantai City, Shandong Province, 264005, People's Republic of China ~72: Li Yongpeng;Li Yulin;Sui Zhuyin;Tan Dan;Xu Xiufeng;Zhou Jianping~

2022/01062 ~ Complete ~54:A PORTABLE AND RAPID MALARIA DETECTING DEVICE ~71:GEORGE, Deepa Elizabeth, KARITHADATHIL (H) PIRAVOM P.O ERNAKULAM DISTRICT, India;GEORGE, Neethu, UNNIKUNNEL (H) KEERIKODE THODUPUZHA EAST P O IDUKKI DISTRICT, India;JOSEPH, Georgina Binoy, TOC H INSTITUTE OF SCIENCE & amp; TECHNOLOGY THUKALAN EDAVELIL, MULANTHURUTHY P.O, ERNAKULAM DISTRICT PIN, India;RAJESWARI, Dhanya, RAGAM, NEAR FIRST MILE, CHERAVALLY,

KAYAMKULAM ALAPPUZHA DISTRICT,, India;VARGHESE, Deepa Mary, KUNNASSERIL (H) TOPPILKATTETH ROAD THIRUVAMKULAM P.O ERNAKULAM DISTRICT, India ~72: GEORGE, Deepa Elizabeth;GEORGE, Neethu;JOSEPH, Georgina Binoy;RAJESWARI, Dhanya;VARGHESE, Deepa Mary~

2022/01041 ~ Complete ~54:LIQUID MICROELEMENT FERTILIZER AND APPLICATION THEREOF IN INCREASING SQUALENE CONTENT IN TOBACCO LEAVES ~71:China Tobacco Guangxi Industry Co.,Ltd., No. 28, Beihu South Road, Xixiangtang District, Nanning City, Guangxi Zhuang Autonomous Region, 530001, People's Republic of China;Guangxi Tobacco Company Hezhou Branch, No. 485, Hezhou Avenue, Babu District, Hezhou City, Guangxi Zhuang Autonomous Region, 542899, People's Republic of China ~72: HE, Mingxiong;HE, Yuanlan;HUANG, Chongjun;JIA, Haijiang;JIN, Yabo;LI, Zhi;LIANG, Yongjin;OU, Qinghua;QIN, Shangzhong;SHI, Baofeng;SHOU, Anfa;SUN, Jiansheng;WEI, Jianyu;YANG, Qigang;ZHANG, Deping;ZHANG, Jili~

2022/01175 ~ Provisional ~54:MOGALEIP ~71:MOGALE MAPONYA, ANGOLA STREET, South Africa ~72: MOGALE MAPONYA~

2022/01051 ~ Complete ~54:LABORATORY TABLECLOTH AUTOMATIC REPLACEMENT DEVICE ~71:The Fifth People's Hospital of Wuxi, The Fifth People's Hospital of Wuxi, No.1215 Guangrui Street, Liangxi District, Wuxi City, Jiangsu Province, People's Republic of China ~72: Fu Decai;Yan Yan~

2022/01055 ~ Complete ~54:INTELLIGENT ENVIRONMENT PRECISE CONTROLLER FOR LIVESTOCK AND POULTRY HOUSES ~71:NORTHEAST AGRICULTURAL UNIVERSITY, 600 Changjiang Road, Xiangfang District, People's Republic of China ~72: BAO, Jun;LI, Jialong;LIU, Honggui;LIU, Wenyang;MA, Chaofan;PAN, Yanjia;SONG, Lianjie;WANG, Shengchao;WANG, Xiaochen;XIE, Qiuju;YU, Haiming;ZHANG, Jicheng;ZHENG, Ping;ZHENG, Shupeng;ZONG, Yubing~

2022/01068 ~ Complete ~54:AN IOT BASED SYSTEM FOR SUPPLY CHAIN TRACING OF ORGANIC PRODUCT ~71:VISHWAKARMA INSTITUTE OF INFORMATION TECHNOLOGY, SURVEY NO. 3/4, KONDHWA (BUDRUK), PUNE, India ~72: BAGADE, Jayashri Vitthalrao;BANSAL, Ayush Satyanarayan;BUDHLANI, Lokesh Ganesh;GOLE, Ashish Manoj;INGLE, Aadesh Ghanshyam;SHELKE, Priya Makarand;VYAVAHARE, Siddesh Sunil~

2022/01071 ~ Complete ~54:METHODS OF TREATING ANTIBODY-MEDIATED DISORDERS WITH FCRN ANTAGONISTS ~71:GENZYME CORPORATION, 50 Binney Street, Cambridge, MA, United States of America ~72: MACKNESS, Brian;QIU, Huawei~ 33:US ~31:62/878,541 ~32:25/07/2019

2022/01084 ~ Complete ~54:CYCLONIC SEPARATOR ~71:Weir Minerals Africa (Pty) Limited, 5 Clarke Street, Alrode, ALBERTON 1449, GAUTENG, SOUTH AFRICA, South Africa ~72: BANERJEE, Chandranath;CEPEDA, Eduardo;JOSHI, Niyam Balacharya;MURALIDHARA, Amith Thirumale~ 33:GB ~31:1912400.7 ~32:29/08/2019

2022/01093 ~ Complete ~54:STRAIN CAPABLE OF TOLERATING HIGH CONCENTRATION OF CHROMIUM, AND MICROBIAL AGENT USED FOR HEXAVALENT CHROMIUM POLLUTION CONTROL ~71:SHANDONG UNIVERSITY OF SCIENCE AND TECHNOLOGY, No. 579 Qianwangang Road, Huangdao District, Qingdao, People's Republic of China ~72: LI, Lin~ 33:CN ~31:201911268008.5 ~32:11/12/2019;33:CN ~31:201911269480.0 ~32:11/12/2019

2022/01036 ~ Complete ~54:ADAPTIVE SPEED BUMP FOR SIGNALIZED INTERSECTION ~71:Qingdao University of Technology, No.777, Jialingjiang Road, Xuejiadao Street, Huangdao District, Qingdao City, Shandong Province, 266520, People's Republic of China ~72: LU, Liuying;WEI, Jinli;ZHANG, Linhao;ZHOU, Jianwei~

2022/01047 ~ Complete ~54:LAMP PRIMER SET, KIT AND APPLICATION FOR DETECTING PORCINE CIRCOVIRUS TYPE 3 ~71:Institute of Animal Health, Guangdong Academy of Agricultural Sciences, Institute of Animal Health, Guangdong Academy of Agriculture Sciences, Baishigang Street, Wushan Road, Tianhe District, Guangzhou City, Guangdong Province, 510640, People's Republic of China;Maoming Branch, Guangdong Laboratory for Lingnan Modern Agriculture, Maoming Branch, Guangdong Laboratory for Lingnan Modern Agriculture, Youcheng No.6 Road, Maonan District, Maoming City, Guangdong Province, 525000, People's Republic of China ~72: Bian Zhibiao;Cai Rujian;Chu Pinpin;Gou Hongchao;Jiang Zhiyong;Li Chunling;Li Yan;Song Shuai;Yang Dongxia;Zhai Shaolun;Zhang Kunli~

2022/01059 ~ Complete ~54:IDENTIFICATION AND ANALYSIS OF MICROBIAL SAMPLES BY RAPID INCUBATION AND NUCLEIC ACID ENRICHMENT ~71:ILLUMINA, INC., 5200 Illumina Way San Diego, United States of America ~72: WANG, Clifford Lee~ 33:US ~31:62/840,322 ~32:29/04/2019;33:ZA ~31:2021/01847 ~32:18/03/2021

2022/01081 ~ Complete ~54:A SYSTEM FOR COATING FERTILIZER SUBSTRATES ~71:UPL LTD, Agrochemical Plant, Durgachak, Midnapore Dist., HALDIA 721 602, WEST BENGAL, INDIA, India ~72: OLTIKAR, Vikas Vinayak;SHIRSAT, Rajan Ramakant;SHROFF, Jaidev Rajnikant;SHROFF, Vikram Rajnikant~ 33:IN ~31:201931027754 ~32:11/07/2019

2022/01083 ~ Complete ~54:A DOSING REGIMEN FOR AN IDO INHIBITOR ~71:Incyte Corporation, 1801 Augustine Cut-Off, WILMINGTON 19803, DE, USA, United States of America ~72: NEWTON, Robert C.;OWENS, Sherry;SMITH, Michael~ 33:US ~31:62/881,518 ~32:01/08/2019

2022/01039 ~ Complete ~54:FUZZY CLUSTERING METHOD OF GRAPH DATA BASED ON ROUGH SET THEORY ~71:Yunnan Minzu University, No.2929, Yuehua Street, Chenggong District, Kunming, Yunnan Province, 650504, People's Republic of China ~72: He WenQian;Liu ShiHu;Zhao YangYang~

2022/01079 ~ Complete ~54:COMPOSITIONS AND METHODS USEFUL FOR EBOLA VIRUS INFECTION ~71:AIM IMMUNOTECH INC., 2117 SW Highway, 484, Ocala, Florida, 34473, United States of America ~72: DAVID R STRAYER;THOMAS K EQUELS~ 33:US ~31:62/870,377 ~32:03/07/2019;33:US ~31:62/870,384 ~32:03/07/2019

2022/01085 ~ Complete ~54:GENETIC LOCI ASSOCIATED WITH DISEASE RESISTANCE IN SOYBEANS ~71:Syngenta Crop Protection AG, Rosentalstrasse 67, BASEL 4058, SWITZERLAND, Switzerland ~72: BREITINGER, Becky Welsh;CURLEY Jr., Thomas Joseph;DAWSON, John Luther;DIETRICH, Robert Arthur;HIPSKIND, John Daniel;LIU, Qingli~ 33:US ~31:62/881,035 ~32:31/07/2019

2022/01094 ~ Complete ~54:SYSTEM AND METHOD FOR OPTIMIZATION OF THE FERMENTATION PROCESS ~71:BUCKMAN LABORATORIES INTERNATIONAL, INC., 1256 North McLean Boulevard, United States of America ~72: BARROS, Rafael Lopes Duarte;BRANDEBURG, Nate;DUCATTI, João;HOWARD, Dave;KURTZ, John;KUZNETSOV, Dimitri;LOPES, Erika Balzuweit;MAGNESS, Bret;MORGANTE, Carolina, Mendes;SANTOS, Egnaldo Dos;SHARMA, Amit~ 33:US ~31:62/873,831 ~32:12/07/2019;33:US ~31:62/880,522 ~32:30/07/2019;33:US ~31:63/001,975 ~32:30/03/2020

2022/01049 ~ Complete ~54:A METHOD FOR RAPIDLY DETECTING THE CONCENTRATIONS OF ORGANOPHOSPHORUS FLAME RETARDANTS IN BODY FLUIDS ~71:Southwest Forestry University, 300 Bailongsi, Panlong District, Kunming, Yunnan Province, People's Republic of China ~72: Cui Daolei;Gong Jing;Li Jingya;Xiang Ping;Yang Danlei;Zhang Zhenning~

2022/01060 ~ Complete ~54:A METHOD AND SYSTEM FOR DEVELOPING AND VALIDATINGDUAL MODELS FOR THE 5-YEAR DIABETIC RETINOPATHY RISK SCORES ON TYPE 2 DIABETES MELLITUS PATIENTS

~71:AHMAD, Jamal, Diabetes & amp; Endocrinology Super Speciality Centre, Former Professor, Rajiv Gandhi Centre for Diabetes & amp; Endocrinology, Jawaharlal Nehru Medical College Aligarh Muslim University, Aligarh, India;AHMED, Aquil, Department of Statistics and Operations Research Aligarh Muslim University Aligarh, India;YUSUFI, Faiz Noor Khan, Department of Statistics and Operations Research, Aligarh Muslim University Aligarh, India ~72: AHMAD, Jamal;AHMED, Aquil;YUSUFI, Faiz Noor Khan~

2022/01065 ~ Complete ~54:A MECHANICAL TIMER SWITCH ~71:VISHWAKARMA INSTITUTE OF INFORMATION TECHNOLOGY, SURVEY NO. 3/4, KONDHWA (BUDRUK), PUNE, India ~72: CHAVHAN, Gajanan Himmatrao;GAWANDE, Pravin G.;GHATE, Krishna Rameshrao;PATIL, Milind Sahebrao;RAMTIRTHKAR, Chandrashekhar Ramesh~

2022/01066 ~ Complete ~54:A MULTI-UTILITY RACK ~71:VISHWAKARMA INSTITUTE OF INFORMATION TECHNOLOGY, SURVEY NO. 3/4, KONDHWA (BUDRUK), PUNE, India ~72: ANERAO, Prashant Ramchandra;KOLTE, Yash Manoj;NARKHEDE, Ganesh Bhoju;RAJPUT, Ashutosh Vajaysingh;ZAGADE, Guruprasad Mahendra~

2022/01073 ~ Complete ~54:CONSTANT LINEAR VELOCITY CONTROL METHOD FOR DETECTING CONTOUR OF WORKPIECE ~71:GUANGDONG SAMSUN TECHNOLOGY CO., LTD, No. 3, Zhongnan S. Rod. W., Shangsha Haibin Dist., Changan Town , Dongguan, Guangdong, 523000, People's Republic of China ~72: LU, Shaowu;TANG, Xiaoqi;YAN, Changya;ZENG, Xiangbing;ZHANG, Qingxiang;ZHOU, Xiangdong~ 33:CN ~31:201910616495.3 ~32:09/07/2019

2022/01032 ~ Provisional ~54:A FOG (FATS, OILS, AND GREASE) SEPARATION APPARATUS ~71:ECO CLARITY LTD., Office 123, 210 Upper Richmond Road, LONDON SW15 6NP, UNITED KINGDOM, United Kingdom ~72: CLEMES, Christopher Charles~

2022/01037 ~ Complete ~54:A KIND OF STRATUM SOIL SAMPLE STORAGE DEVICE FOR GEOLOGICAL EXPLORATION AND USING METHOD THEREOF ~71:Key Laboratory of Geological Safety of Coastal Urban Underground Space, Ministry of Natural Resources, No.73 Keyuanwei Fourth Road, Laoshan District, Qingdao City, Shandong Province, 266101, People's Republic of China;Qingdao Geo-Engineering Survering Institute (Qingdao Geological Exploration Development Bureau), No.73 Keyuanwei Fourth Road, Laoshan District, Qingdao city, Shandong Province, 266101, People's Republic of China;Qingdao Institute of marine geology, China Geological Survey, No. 596 Guanshan Road, Jimo District, Qingdao City, Shandong Province, 266237, People's Republic of China ~72: Jia Shi Xiang;Mu Bin;Qu Wan Long;Sun Jing;Wang Zhong Sheng;Zhao Yu Ting~

2022/01048 ~ Complete ~54:DEVICE AND METHOD FOR PROCESSING GLASS SLIDES CONTAINING CHINESE MEDICINAL MATERIALS ~71:Tai'an Food and Drug Inspection and Testing Research Institute ( Tai'an Fiber Inspection Institute ), No. 2666, Fengtian Road, High-tech Industrial Development Zone, Tai'an City, Shandong Province, 271000, People's Republic of China ~72: LI, Haiyan~

2022/01061 ~ Complete ~54:A SMART CUTLERY FOR PREVENTING SCALDING DURING CONSUMPTION OF FOOD ~71:CHAKRAVERTI, Ashish Kumar, SCHOOL OF ENGINEERING AND TECHNOLOGY, SHARDA UNIVERSITY, GREATER NOIDA,, India;CHAKRAVERTI, Sugandha, INDERPRASTHA ENGINEERING COLLEGE, SHAHIBABAD, GHAZIABAD,, India;CHAUDHARY, Vikas, JIMS ENGINEERING MANAGEMENT TECHNICAL CAMPUS, GREATER NOIDA, India;MAHAPATRA, Satyasundara, PRANVEER SINGH INSTITUTE OF TECHNOLOGY, KANPUR - AGRA - DELHI, NH2, BHAUTI, KANPUR, India;NAND, Parma, SCHOOL OF ENGINEERING AND TECHNOLOGY, SHARDA UNIVERSITY, GREATER NOIDA, India;SHAKYA, Achala, SCHOOL OF ENGINEERING AND TECHNOLOGY, SHARDA UNIVERSITY, GREATER NOIDA, India;SHARAD, Shwetav, BBDIT, GHAZIABAD, India;SINGH, Murari Kumar, SCHOOL OF ENGINEERING AND TECHNOLOGY, SHARDA UNIVERSITY, GREATER NOIDA, India;TRIPATHI, Gaurav, CENTRAL UNIVERSITY OF JHARKHAND,, India;VERMA, Lalita, SCHOOL OF COMPUTING SCIENCE AND ENGINEERING GALGOTIAS UNIVERSITY GREATER NOIDA, India ~72: CHAKRAVERTI, Ashish Kumar;CHAKRAVERTI, Sugandha;CHAUDHARY, Vikas;MAHAPATRA, Satyasundara;NAND, Parma;SHAKYA, Achala;SHARAD, Shwetav;SINGH, Murari Kumar;TRIPATHI, Gaurav;VERMA, Lalita~

2022/01064 ~ Complete ~54:A PORTABLE SOLID FERTILIZER SPREADER ~71:VISHWAKARMA INSTITUTE OF INFORMATION TECHNOLOGY, Survey No.3/4 Kondhwa (Budruk), Pune, India ~72: BHIRUD, Nivedita Satyajeet;KULKARNI, Atul Prabhakar;SAKHARE, Sachin Rambhau;TATALE, Subhash Bhalu~

2022/01074 ~ Complete ~54:DEVICE FOR AN ELECTRICAL PLUG PROVIDED WITH A WINDING MEANS ~71:Patrice KANDIN, 27 Cours des Alpes, France ~72: Patrice KANDIN~ 33:FR ~31:1908862 ~32:01/08/2019

2022/01042 ~ Complete ~54:STIFFNESS ADJUSTMENT DEVICE FOR PILED RAFT FOUNDATION ~71:China Construction Installation Group Co., Ltd., No. 6, Wenlan Road, Qixia District, Nanjing, 210046, People's Republic of China;Nanjing Tech University, No. 30, Puzhu South Road, Jiangbei New District, Nanjing, Jiangsu, 211816, People's Republic of China ~72: SONG, Zhu;WANG, Xudong;ZHAO, Qingzhou;ZHOU, Feng;ZHOU, Kezhang;ZHOU, Shilin;ZHU, Rui~

2022/01030 ~ Provisional ~54:SYSTEMS ~71:Mike Junior McKerson, 7 Quibeba, Arboretum, South Africa ~72: Mike Junior McKerson~

2022/01034 ~ Complete ~54:TERBINAFINE AGENT AND APPLICATION THEREOF IN INCREASING SQUALENE CONTENT IN TOBACCO LEAVES ~71:China Tobacco Guangxi Industry Co.,Ltd., No. 28, Beihu South Road, Nanning City, Guangxi Zhuang Autonomous Region, 530001, People's Republic of China;Yunnan Agricultural University, No. 95, Jinhei Road, Panlong District, Kunming City, Yunnan, 650201, People's Republic of China ~72: AO, Jincheng;HE, Mingxiong;HE, Yuanlan;HUANG, Chongjun;JIA, Haijiang;JIN, Yabo;LI, Bo;LI, Zhi;OU, Qinghua;QIN, Shangzhong;WEI, Jianyu;YANG, Qigang;ZHANG, Jili;ZHANG, Weining;ZHAO, Dongjie;ZHOU, Zhaofeng~

2022/01052 ~ Complete ~54:METHOD AND APPLICATION FOR SEPARATING ARSENIC AND TIN FROM MATERIALS CONTAINING ARSENIC AND TIN BY USING ARSENIC-ALKALI RESIDUE ~71:GUANGDONG POLYTECHNIC OF ENVIRONMENTAL PROTECTION ENGINEERING, Building 4. No. 5 Courtyard, Yuancun West Street, Tianhe District, Guangzhou, People's Republic of China ~72: CHU, Lijun;FANG, Hongsheng;SU, Qiuqiong;WANG, Wenxiang;WEI, Weiquan;YAN, Yingyan;ZHOU, Yugao~

2022/01056 ~ Complete ~54:OXYGEN-RICH MOTIOX CATALYST AND PREPARATION METHOD AND APPLICATION THEREOF ~71:NANCHANG HANGKONG UNIVERSITY, No. 696, Fenghe South Avenue, Nanchang City, People's Republic of China ~72: DAI, Weili;FAN, Yixuan;FAN, Yuwang;MA, Liang;XU, Yong;YANG, Lixia;ZHANG, Jie;ZHOU, Lei~

2022/01086 ~ Complete ~54:AEROSOL GENERATION ~71:Nicoventures Trading Limited, 1 Water Street, LONDON WC2R 3LA, GREATER LONDON, UNITED KINGDOM, United Kingdom ~72: FRIEDRICH, Ludwig~ 33:GB ~31:1910952.9 ~32:31/07/2019

2022/01038 ~ Complete ~54:METHOD FOR CONSTRUCTION OF TOBACCO FIELD FERTILE PLOUGH LAYER OF RED SOIL SLOPING FARMLAND ~71:China Tobacco Guangxi Industry Co.,Ltd., No. 28, Beihu South Road, Nanning City, Guangxi Zhuang Autonomous Region, 530001, People's Republic of China;Yunnan Agricultural University, No. 95, Jinhei Road, Panlong District, Kunming City, Yunnan, 650201, People's Republic of China ~72: AO, Jincheng;HUANG, Congguang;JIA, Haijiang;LI, Bo;WANG, Zheng;WEI, Jianyu;YANG, Qigang;ZENG, Xiangnan~

2022/01054 ~ Complete ~54:FAULT EARLY WARNING METHOD OF AN ELECTRIC VEHICLE DURING A CHARGING PROCESS BASED ON AN ADAPTIVE DEEP BELIEF NETWORK ~71:Qingdao University of Science and Technology, No. 99, Songling Road, Laoshan District, Qingdao City, Shandong Province, 260061, People's Republic of China ~72: GAO, Dexin;WANG, Yi;YANG, Qing;ZHANG, Shiyu;ZHOU, Jili~

2022/01067 ~ Complete ~54:AN ELECTRIC VEHICLE DRIVE RANGE ESTIMATION SYSTEM ~71:VISHWAKARMA INSTITUTE OF INFORMATION TECHNOLOGY, SURVEY NO. 3/4, KONDHWA (BUDRUK), PUNE, India ~72: AGARKAR, Aarti Amod;KARYAKARTE, Mandar Subhash;KHANDEKAR, Anand;KULKARNI, Lalit V.;TALWARE, Rajendra Shankar~

2022/01078 ~ Complete ~54:XYLANASE ADDITIVES FOR FOOD OR FEEDS ~71:RHODES UNIVERSITY, Lucas Avenue 6139, Grahamstown, South Africa ~72: BRETT IVAN PLETSCHKE;BRIAN NKANYISO MATHIBE;MPHO MAFA;SAMKELO MALGAS;STONES DALITSO CHINDIPHA~ 33:GB ~31:1909099.2 ~32:25/06/2019

2022/01080 ~ Complete ~54:IMPROVED MEDICAL APPARATUS FOR CONTAINING HAEMATOMAS ~71:ANGELORO, Ciro, Via Einaudi, 20, SANT'ANGELO LODIGIANO (LO) 26866, ITALY, Italy;MORSILLO, Enrico, Via Privata Fontanelle, 14, SAN COLOMBANO AL LAMBRO (MI) 20078, ITALY, Italy ~72: ANGELORO, Ciro;MORSILLO, Enrico~ 33:IT ~31:102019000012843 ~32:25/07/2019

2022/01088 ~ Complete ~54:PERSONAL CARE COMPOSITIONS AND METHODS ~71:Colgate-Palmolive Company, 300 Park Avenue, NEW YORK 10022, NY, USA, United States of America ~72: BOYD, Thomas;HERNANDEZ, Edgar H.;KENNEDY, Sharon;MAKSIMOVIC, Srdjan;MORGAN, Andre;POTECHIN, Kathy;WU, Qiang~ 33:US ~31:62/911,634 ~32:07/10/2019

2022/01090 ~ Complete ~54:THERMAL IMAGER TEMPERATURE CORRECTION SYSTEM AND METHOD, THERMAL IMAGER AND COMPUTER-READABLE RECORDING MEDIUM ~71:SICHUAN PROVINCE DONGYU INFORMATION TECHNOLOGY CO., LTD., Building 4, Deyang Technology Island, Nanshan Holdings No. 16, Yangjiang Road, Guanghan, Sichuan, 618300, People's Republic of China ~72: LI, Cheng~ 33:CN ~31:202010525138.9 ~32:10/06/2020

2022/01091 ~ Complete ~54:TEMPERATURE CONTROLLED STORAGE CONTAINER ~71:B MEDICAL SYSTEMS S.À R.L., 17, op der Hei, L-9809, Luxembourg ~72: GANSEN, Rene;HOFFMANN, Andreas~ 33:GB ~31:1909276.6 ~32:27/06/2019

2022/01040 ~ Complete ~54:METHOD AND DEVICE FOR MODELING NONLINEAR TIME-VARYING OBJECT OF INDUCTION MOTOR VARIABLE FREQUENCY SPEED REGULATION SYSTEM ~71:Beihua University, No.3999, Binjiang East Road, Jilin City, Jilin Province, People's Republic of China ~72: Bai Jing;Bai Yan;Feng Weidong;Xing Jisheng;Xu Yu;Yang Yong;Zhang Jing~

2022/01063 ~ Complete ~54:A HIGHLY EFFICIENT FAR RED EMITTING MG21CA4NA4(PO4)18: CE3+, EU3+ PHOSPHOR FOR PLANT CULTIVATION ~71:DESHMUKH, Radhika G., DEPARTMENT OF PHYSICS, SHRI SHIVAJISCIENCE COLLEGE, India;DHAPODKAR, Toshi S., DEPARTMENT OF PHYSICS, R. T. M. NAGPUR UNIVERSITY, India;DHOBLE, Sanjay J., DEPARTMENT OF PHYSICS, R. T. M. NAGPUR UNIVERSITY, India;KADAM, Abhijeet R., DEPARTMENT OF PHYSICS, R. T. M. NAGPUR UNIVERSITY, India;SHIRBHATE, Nayana S., VIDYAVIKAS ARTS, COMMERCE AND SCIENCE COLLEGE, SAMUDRAPUR, India ~72: DESHMUKH, Radhika G.;DHAPODKAR, Toshi S.;DHOBLE, Sanjay J.;KADAM, Abhijeet R.;SHIRBHATE, Nayana S.~ 2022/01082 ~ Complete ~54:OPTICAL BRANCHING AND TERMINATION BOX ~71:Furukawa Electric LatAm S.A., Rua Hasdrubal Bellegard, 820, Cidade Industrial, CURITIBA 81460-120, PR, BRAZIL, Brazil ~72: VIEIRA, Thiago Deconto~ 33:BR ~31:10 2019 014363 0 ~32:11/07/2019

2022/01087 ~ Complete ~54:PERSONAL CARE COMPOSITIONS ~71:Colgate-Palmolive Company, 300 Park Avenue, NEW YORK 10022, NY, USA, United States of America ~72: BOYD, Thomas;FAN, Aixing;LI, Min;MOY, Melissa;POTECHIN, Kathy~ 33:US ~31:62/884,472 ~32:08/08/2019

2022/01076 ~ Complete ~54:MAPPING RESTRICTION FOR INTRA-BLOCK COPY VIRTUAL BUFFER ~71:BEIJING BYTEDANCE NETWORK TECHNOLOGY CO., LTD., Room B-0035, 2/F, No.3 Building, No.30, Shixing Road, Shijingshan District,, Beijing, 100041, People's Republic of China;BYTEDANCE INC., 12655 West Jefferson Boulevard, Sixth Floor, Suite No. 137, Los Angeles, California, 90066, United States of America ~72: HONGBIN LIU;JIZHENG XU;KAI ZHANG;LI ZHANG~ 33:CN ~31:PCT/CN2019/097742 ~32:25/07/2019;33:CN ~31:PCT/CN2019/109849 ~32:07/10/2019;33:CN ~31:PCT/CN2019/122606 ~32:03/12/2019

2022/01089 ~ Complete ~54:RECYCLING OF STEROL-CONTAINING ASPHALT BINDER ~71:A.L.M. Holding Company, 920 10th Avenue North, ONALASKA 54650, WI, USA, United States of America;Ergon Asphalt & amp; Emulsions, Inc., 2829 Lakeland Drive, JACKSON 39232, MS, USA, United States of America ~72: BAUMGARDNER, Gaylon L.;HANZ, Andrew;REINKE, Gerald H.~ 33:US ~31:62/874,196 ~32:15/07/2019;33:US ~31:62/887,811 ~32:16/08/2019;33:US ~31:63/027,845 ~32:20/05/2020

2022/01077 ~ Complete ~54:APPARATUS FOR NUCLEAR MAGNETIC RESONANCE THERAPY ~71:AXEL MUNTERMANN, Karlschmitter Weg 26, 35580, Wetzlar, Germany ~72: AXEL MUNTERMANN~ 33:DE ~31:10 2019 119 960.3 ~32:24/07/2019

- APPLIED ON 2022-01-25 -

2022/01122 ~ Complete ~54:SELF-SPLITTING MIXED CONDUCTING THREE-PHASE MEMBRANE MATERIAL AS WELL AS PREPARATION METHOD AND APPLICATION THEREOF ~71:Qingdao Agricultural University, No. 700, Changcheng Road, Chengyang District, Qingdao City, Shandong, 266109, People's Republic of China ~72: FENG, Xiumei;QUAN, Hongzhu;XIA, Xiaoliang~

2022/01134 ~ Complete ~54:METHOD FOR PREPARING HAIR GROWTH LIQUID ~71:YANG, Tongshen, Congjiang County Hospital of Traditional Chinese Medicine, Qiandongnan Miao and Dong Autonomous Prefecture, Guizhou, 557400, People's Republic of China ~72: YANG, Tongshen~

2022/01145 ~ Complete ~54:3D PRINTING MATERIAL AND EQUIPMENT FOR THREE-DIMENSIONAL LASER DEPOSITION MOLDING ~71:HARBIN INSTITUTE OF TECHNOLOGY, No. 92, Xidazhi Street, Nangang District, Harbin City, People's Republic of China;NORTHEAST FORESTRY UNIVERSITY, No. 26, Hexing Road, Xiangfang District, Harbin City, People's Republic of China;QINGDAO UNIVERSITY, No. 7, Hong Kong East Road, Laoshan District, Qingdao City, People's Republic of China;SHANGHAI XINLI POWER EQUIPMENT RESEARCH INSTITUTE, No. 1777, Zhongchun Road, Minhang District, People's Republic of China ~72: DONG, Jidong;GAO, Guolin;HE, Kuai;JI, Yuan;JIANG, Zaixing;JING, Jing;LE, Hao;LI, Bing;LI, Yangyang;LIU, Yijie;MA, Lina;MAO, Chengli;REN, Liping;WANG, Xufeng;WU, Yadong;XU, Lijuan;ZHANG, Dawei;ZHANG, Jichi~

2022/01149 ~ Complete ~54:METHOD AND SYSTEM FOR QUANTIFYING REGIONAL CITY SYSTEM EVOLUTION AND SPATIAL INTERACTION ~71:HENAN UNIVERSITY, NO.85, MINGLUN STREET, People's Republic of China ~72: CUI, YAOPING;DENG, XIANGZHENG;LI, DONGYANG;LI, MENGDI;LI, WANLONG;LIU, XUAN~

2022/01158 ~ Complete ~54:INTERLEUKIN-2 AGENTS AND USES THEREOF ~71:VISTERRA, INC., 275 2nd Avenue 4th Floor Waltham, Massachusetts, 02451, United States of America ~72: BOOPATHY RAMAKRISHNAN;GREGORY BABCOCK;SCOTT MOORE CARLSON;ZACHARY SHRIVER~ 33:US ~31:62/879,137 ~32:26/07/2019;33:US ~31:62/983,061 ~32:28/02/2020

2022/01103 ~ Complete ~54:HYDRAULIC SUPPORT FOR FILLING BEHIND SUPPORT AND OPERATION AND USE METHOD THEREOF ~71:Inner Mongolia Fucheng Mining Co., Ltd, Shazhangtu Village, Shanghai Miao Town, Etuokeqian Banner, Inner Mongolia Autonomous Region, 016299, People's Republic of China ~72: CHENG, Qi;FANG, Wanwei;GAO, Deyou;LI, Weili;LIU, Yehuai;NIU, Qun;TIAN, Bin;WANG, Xudong~

2022/01110 ~ Complete ~54:CONVENIENT-TO-USE AND EFFICIENT DISINFECTION DEVICE FOR BIOCHEMICAL EXPERIMENTS ~71:Anhui Medical College, No. 632, Furong Road, Hefei City, Anhui Province, 230601, People's Republic of China ~72: CHEN, Jin;FANG, Peifei;LIU, Ping;LIU, Xiaoyan;YU, Furong;ZHAO, Li~

2022/01170 ~ Complete ~54:GANAXOLONE FOR USE IN TREATMENT OF STATUS EPILEPTICUS ~71:Marinus Pharmaceuticals, Inc., 5 Radnor Corporate Center, 100 Matsonford Road, RADNOR 19087, PA, USA, United States of America ~72: AIMETTI, Alex;CZEKAI, David;GASIOR, Maciej;HULIHAN, Joseph;MASUOKA, Lorianne;TSAI, Julia~ 33:US ~31:62/882,648 ~32:05/08/2019

2022/01105 ~ Complete ~54:CARBON/CARBON FIBER FRICTION MATERIAL AND PREPARATION METHOD AND USE THEREOF ~71:Lanzhou City University, No. 180, Anning East Road, Anning District, Lanzhou City, Gansu, 730070, People's Republic of China ~72: CHAI, Changsheng;CHEN, Xiang~

2022/01118 ~ Complete ~54:NONMETAL AUTOMOBILE BRAKE PAD AND PREPARATION METHOD THEREFOR ~71:Lanzhou City University, No. 180, Anning East Road, Anning District, Lanzhou City, Gansu Province, 730070, People's Republic of China ~72: CHAI, Changsheng;CHEN, Xiang;GAO, Guoliang~

2022/01099 ~ Complete ~54:AUTOMATIC CUTTINGS CLEANING DEVICE WITH REEL-TYPE MULTI-APERTURE SCREEN ~71:China University of Petroleum(East China), No. 66 Changjiang West Road, Huangdao District, Qingdao City, Shandong Province, 266580, People's Republic of China ~72: FENG, Jianwei;JIANG, Menggang;LI, Wenjie;SUN, Zhixue;ZHANG, Lisong~ 33:CN ~31:202110106939.6 ~32:27/01/2021

2022/01130 ~ Complete ~54:SYSTEM FOR RECOVERING AND REUSING BOOM POTENTIAL ENERGY OF CONSTRUCTION MACHINERY ~71:CHN Energy Xuzhou Power CO., LTD, Mao Cun Zhen, Tongshan District, Xuzhou, Jiangsu, 221000, People's Republic of China;China University of Mining and Technology, No.1, Daxue Road, Xuzhou, Jiangsu, 221116, People's Republic of China;Xuzhou College of Industrial Technology, No.1, Xiangwang Road, Xuzhou, Jiangsu, 221140, People's Republic of China ~72: Ji Zhi;Li Jiansong;Li Shaohui;Quan Ning;Sun Jinhai;Yan Wujie;Zhang Wenting;Zhao Jiyun~

2022/01102 ~ Complete ~54:CONSTRUCTION METHOD FOR A SHIELD TRANSLATION UNDER A DOWNWARD OVERTURN BEAM INVASION ~71:China Railway Third Bureau Group Co., Ltd., No. 6, Jianming North Road, Chang'an District, Shijiazhuang, Hebei, People's Republic of China;China Railway Third Group No.2 Engineering Co., Ltd., No. 6, Jianming North Road, Chang'an District, Shijiazhuang, Hebei, People's Republic of China ~72: CHEN, Yubo;DU, Yingjie;HE, Jianzhong;JIA, Gang;LI, Hang;LI, Ning;LIU, Chenghong;MA, Liang;MI, Jiangfeng;PAN, Wuzhan;WANG, Wenbo;WANG, Yingmei;WANG, Yuzeng~

2022/01111 ~ Complete ~54:CONSTRUCTION AND APPLICATION OF RECOMBINANT MDV STRAIN MDLV21 ~71:Shandong Agricultural University, 61 Daizong Street, Tai'an City, Shandong Province, 271018, People's Republic of China ~72: Cheng Ziqiang;Cui Ning;Li Jiuqing;Su Shuai;Wang Shuwen~ 33:CN ~31:2021109698201 ~32:23/08/2021

2022/01109 ~ Complete ~54:WASTEWATER PURIFICATION DEVICE FOR BIOCHEMICAL EXPERIMENTS ~71:Anhui Medical College, No. 632, Furong Road, Hefei City, Anhui Province, 230601, People's Republic of China ~72: CHEN, Jin;CHEN, Peiwen;FANG, Peifei;GONG, Xiaoxiao;WANG, Xiaoqing;YANG, Kai~

2022/01119 ~ Complete ~54:ANTIFRICTION AND HEAT CONDUCTION LUBRICATING GREASE FOR MOTOR BEARING OF PURE ELECTRIC VEHICLE ~71:Shandong North Zite Special Oil Co., Ltd., No. 8699, Zhoulong Road, Zhoucun District, Zibo City, Shandong Province, 255300, People's Republic of China ~72: LUO, Gang;SUN, Yuedong;YANG, Naitang;YANG, Wenhuan~

2022/01121 ~ Complete ~54:METHOD AND DEVICE FOR REACTING IN PROTON CONDUCTING MEMBRANE REACTOR TO SYNCHRONOUSLY OBTAIN HIGH PURITY HYDROGEN AND CHEMICALS ~71:Qingdao Agricultural University, No. 700, Changcheng Road, Chengyang District, Qingdao City, Shandong, 266109, People's Republic of China ~72: FENG, Xiumei;QUAN, Hongzhu;XIA, Xiaoliang~

2022/01133 ~ Complete ~54:TENSILE STRENGTH DETECTION DEVICE FOR BUCKET ROD OF EXCAVATOR ~71:SHANGHAI BEI'AN INDUSTRIAL CO., LTD., 601 Zhongshan South 2nd Road, Xuhui District, Shanghai, 200032, People's Republic of China;SHANGHAI FIRE RESEARCH INSTITUTE OF MEN, 391 Xihuan Road, Minhang District, Shanghai, 201199, People's Republic of China ~72: BIAN, Fuli;DAI, Yu;JIANG, Xudong;SHI, Wei;ZHONG, Lin~

2022/01142 ~ Complete ~54:COMPOUND PREPARATION FOR TREATING TYPE 2 DIABETES AND PREVENTING AND TREATING MACROVASCULAR COMPLICATIONS, PREPARATION METHOD AND APPLICATION METHOD ~71:WEIFANG MEDICAL UNIVERSITY, No. 7166, Baotong West Street, Weifang, Shandong, 261053, People's Republic of China ~72: CAO, Daihong;LI, Wentao;LIU, Jiangyue;WANG, Yunhan;ZHANG, Daijuan~

2022/01150 ~ Complete ~54:ALGORITHM FOR QUANTIFYING SIMILARITY BETWEEN BIOLOGICAL EVOLUTIONARY TREES ~71:HUAINAN NORMAL UNIVERSITY, DONGSHAN WEST ROAD, People's Republic of China ~72: BI, YONG;CHEN, XIAOXUE;HU, DONG;HUA, PANYU;SHI, GUOJING;WANG, CHENGRUN;WANG, XIAO;XING, YINGRU;ZHANG, JIFENG;ZHU, GUOHUA~ 33:CN ~31:2021102009706 ~32:23/02/2021

2022/01157 ~ Complete ~54:SELECTIVE ESTROGEN RECEPTOR DEGRADER ~71:SUN PHARMA ADVANCED RESEARCH COMPANY LIMITED, 17/B, Mahal Industrial Estate, Off Mahakali Caves Road, India ~72: ARADHYE, Jayraj Dilipbhai;CHITTURI,Trinadha Rao;PAL, Ranjan Kumar;PANCHAL, Bhavesh Mohanbhai;PATHAK, Sandeep Pankajkumar;PRAJAPATI, Kaushik Dhanjibhai;SAMANTA, Biswajit~ 33:IN ~31:201921029554 ~32:22/07/2019

2022/01169 ~ Complete ~54:CONNECTOR FOR SPINAL COLUMN SUPPORT ~71:SIGNUS Medizintechnik GmbH, Industriestr. 2, ALZENAU 63755, GERMANY, Germany ~72: VAN DER POL, Bas~ 33:DE ~31:10 2019 005 376.1 ~32:30/07/2019

2022/01107 ~ Complete ~54:METHOD FOR FILLING PASTE BEHIND FILLING HYDRAULIC SUPPORTS ~71:Inner Mongolia Fucheng Mining Co., Ltd, Shazhangtu Village, Shanghai Miao Town, Etuokeqian Banner, Inner Mongolia Autonomous Region, 016299, People's Republic of China ~72: CHENG, Qi;FAN, Meiling;LI, Tao;LI, Weili;LIU, Qiang;TIAN, Bin;WANG, Xudong;ZHANG, Wenfei~

2022/01166 ~ Complete ~54:CAR T-CELLS AGAINST BCMA FOR THE TREATMENT OF MULTIPLE MYELOMA ~71:Fundacio Clinic Per A La Recerca Biomedica, C / Rossello 149-153, BARCELONA 08036, SPAIN, Spain;Hospital Clinic De Barcelona, C/ Villarroel 170, BARCELONA 08036, SPAIN, Spain;Institut d'Investigacions Biomèdiques August Pi i Sunyer (IDIBAPS), C/ Rosselló 149-153, BARCELONA 08036, SPAIN, Spain;Universitat De Barcelona, Centro de Patents de la UB, C. Baldiri Reixac, 4 – Torre D, BARCELONA 08028, SPAIN, Spain ~72: JUAN OTERO, Manel;MARTÍN ANTONIO, Beatriz;PÉREZ AMILL, Lorena;SUÑE RODRIGUEZ, Guillermo;URBANO ISPIZUA, ÁIvaro~ 33:EP ~31:19382673.2 ~32:02/08/2019

2022/01115 ~ Complete ~54:METHOD FOR IMPROVING APPLE ROOTSTOCK GREENWOOD CUTTING ROOTING BASED ON TRANSIENT TRANSFORMATION ~71:Zhejiang Wanli University, No. 8, Qianhu South Road, Yinzhou District, Ningbo City, Zhejiang Province, 315100, People's Republic of China ~72: BAO, Zeyang;DU, Ruiyin;LI, Xu;LIU, Qingli;WANG, Kang;ZHENG, Qingbo~ 33:CN ~31:202111044475.7 ~32:07/09/2021;33:CN ~31:202111410766.3 ~32:25/11/2021

2022/01123 ~ Complete ~54:PANORAMIC ARRAY IMAGE MONITORING, TRACKING AND IDENTIFYING SYSTEM FOR WETLAND BIRDS ~71:Institute of Microbiology, Jiangxi Academy of Sciences, No. 7777, Changdong Avenue, Nanchang City, Jiangxi Province, 330046, People's Republic of China ~72: DENG, Mi;LIU, Lizhen;WU, Yongming;XIN, Zaijun;XU, Ligang;YAO, Zhong;YOU, Hailin~ 33:CN ~31:202110939141.X ~32:16/08/2021

2022/01126 ~ Complete ~54:FORMULATION AND DEVELOPMENT OF TRANSDERMAL PATCHES OF METFORMIN CONTAINING HERBAL PERMEATION ENHANCER ~71:Dr. Pankaj Motilal Chaudhari, Associate Professor, KVPS, Institute of Pharmaceutical Education, Boradi, Shirpur, Dhule, Maharashtra, 425428, India; Dr. Pramod Vitthalrao Burakle, Dr. Rajendra Gode college of pharmacy, Malkapur, Buldhana, Maharashtra, 443101, India; Mr. Anup Mukund Akarte, Associate Professor, KVPS, Institute of Pharmaceutical Education, Boradi, Shirpur, Dhule, Maharashtra, 425428, India; Mr. Ashish Madhukar Kandalkar, Principal, Late Shri Ramraoji Gawande, Institute of Pharmacy, Kaulkhed, Akola, Maharashtra, 444004, India; Mr. Balaji Namdeo Thakare, Assistant Professor, MES Satyajeet College of Pharmacy, Khandala, Akola road, Buldana, Mehkar, Maharashtra, 443301, India; Mr. Manish Ramesh Bhise, Shriram Sadan, Near Post Office, Jatharpeth, Akola, Maharashtra, 444005, India; Mr. Sanjay Namdeorao Vasu, Assistant Professor, SGSPS Institute of Pharmacy, Shivshakti Pratisthan, Kaulkhed, Hingana Road, Akola, Maharashtra, 444001, India:Mr. Sunny Ramchand Pahuja, Assistant Professor, SGSPS Institute of Pharmacy, Kaulkhed, Hingna road, Akola, Maharashtra, 444004, India; Mr. Vikas Prakash Patil, Assistant Professor, KVPS, Institute of Pharmaceutical Education, Boradi, Dhule, Maharashtra, 425405, India ~72: Dr. Pankaj Motilal Chaudhari; Dr. Pramod Vitthalrao Burakle; Mr. Anup Mukund Akarte: Mr. Ashish Madhukar Kandalkar: Mr. Balaji Namdeo Thakare: Mr. Manish Ramesh Bhise: Mr. Sanjay Namdeorao Vasu; Mr. Sunny Ramchand Pahuja; Mr. Vikas Prakash Patil~

2022/01136 ~ Complete ~54:DEVICE FOR SIMULATING DEGRADATION OF HOUSEHOLD GARBAGE ~71:Qingdao University of Technology, No. 777 Jialingjiang East Road, Huangdao District, Qingdao City, Shandong, 266520, People's Republic of China ~72: CHEN, Peng;JIA, Shibo;LI, Yuanyuan;LIU, Jiang;QUAN, Xianhao~

2022/01140 ~ Complete ~54:PREPARATION METHOD OF STANDARD SAMPLE FOR IDENTIFYING ZHAOTONG GASTRODIA ELATA BL. FORM. GLAUCA S. CHOW BY MEANS OF FINGERPRINT ~71:QUALITY STANDARDS AND TESTING TECHNOLOGY RESEARCH INSTITUTE, YUNNAN ACADEMY OF AGRICULTURAL SCIENCE, NO. 2238, BEIJING ROAD, KUNMING CITY, People's Republic of China ~72: LI, Qiwan;LIN,Tao;LIU, Hongcheng~

2022/01162 ~ Complete ~54:LOW DRIFT, HIGH EFFICIENCY SPRAYING SYSTEM ~71:Spraying Systems Co., North Avenue and Schmale Road, WHEATON 60187, IL, USA, United States of America ~72: ARENSON, Marc;CEDERBERG, Daniel~ 33:US ~31:62/874,183 ~32:15/07/2019 2022/01137 ~ Complete ~54:A KIND OF HOME ENVIRONMENT COMFORT CONTROL METHOD AND DEVICE BASED ON FUZZY INTELLIGENT BEHAVIOR SIMULATION ~71:Chongqing University of Science and Technology, No. 20, East University town road, Shapingba district, Chongqing, People's Republic of China ~72: Li Taifu;Liu Xinghua;Xiao Lei;Xu Kui;Yao Lizhong;Zong Xin~

2022/01160 ~ Complete ~54:ANTI-GRP78 ANTIBODIES AND METHOD OF USE THEREOF ~71:WASHINGTON UNIVERSITY, One Brookings Drive, St. Louis, United States of America ~72: HALLAHAN, Dennis;KAPOOR, Vaishali;SINGH, Abhay Kumar~ 33:US ~31:62/874,791 ~32:16/07/2019

2022/01104 ~ Complete ~54:RAPID AND EFFICIENT BREEDING METHOD OF STARCH-TYPE SWEET POTATO CULTIVAR ~71:Luohe Academy of Agricultural Sciences, 900 Huanghe Road, Yancheng District, Luohe City, 462000, People's Republic of China ~72: HUANG, Dahua;JIA, Tingwei;JIA, Zhaodong;LIU, Zhijian;MA, Chunye;MENG, Fanqi;NIU, Fuxiang;QIN, Suyan;SUN, Jian;WANG, Qing;XIE, Yizhi;ZHANG, Yongyue;ZHANG, Yunjie~

2022/01143 ~ Complete ~54:FECES FERMENTING HEAT-TAKING HEATING APPARATUS AND USE METHOD ~71:INSTITUTE OF ANIMAL HUSBANDRY, HEILONGJIANG ACADEMY OF AGRICULTURAL SCIENCES, NO. 368, XUEFU ROAD, People's Republic of China ~72: CHEN, HESHU;HE, XINMIAO;LIU, DI;QI, MEIYU;WANG, WENTAO;WU, SAIHUI;YU, XIAOLONG~

2022/01147 ~ Complete ~54:MOBILE LARGE-SCALE CABLE CUTTING DEVICE ~71:STATE GRID CORPORATION OF CHINA, No. 999, Huanghe Road, Xincheng District, Zaozhuang City, People's Republic of China;STATE GRID SHANDONG ELECTRIC POWER COMPANY ZAOZHUANG POWER SUPPLY COMPANY, No. 999, Huanghe Road, Xincheng District, Zaozhuang City, People's Republic of China ~72: DAI, Ergang;HAN, Feng;KANG, Wenwen;LI, Guoliang;LIU, Yujiao;YAN, Chongyang;YANG, Fengwen~ 33:CN ~31:202110415566.0 ~32:19/04/2021

2022/01154 ~ Complete ~54:NITENIN ANALOGUE COMPOUNDS AND THEIR USE IN THE TREATMENT OF CHRONIC AND ACUTE PAIN ~71:SEA4US - BIOTECNOLOGIA E RECURSOS MARINHOS, LDA., Rua Do Poente, Sagres, Portugal ~72: CLAUDETREMBLEAU, Laurent Alain;DA SILVEIRA MÁXIMO, Patrícia Isabel;DE SÉRIO BRANCO, Paula Cristina;DOS SANTOS BALTAZAR DE LIMA, Pedro Afonso;FERREIRA DA COSTA LOURENÇO, Ana Maria;GOMES, Rui;HIM TONG, Ming;LOPES DE SOUSA, Marisa Isabel;MAÇO ABREU, Ana Rosa;MONTEIRO SERRÃO, Joana Maria;PENA LINO, SíIvia Patrícia;PINHEIRO BASTOS, André Emanuel;PINTO FERREIRA, Luísa Maria;ROSADO SABINO, Vanessa Alexandra;SEGÃO MONDRAGÃO, Miguel Angelo;SOVELA MOURÃO, Henrique;SZWARC DOS SANTOS, Beatriz~ 33:PT ~31:115685 ~32:31/07/2019

2022/01163 ~ Complete ~54:MULTI-BODY HUBCAP FOR TIRE INFLATION SYSTEMS ~71:Equalaire Systems, Inc., 1414 Valero Way, CORPUS CHRISTI 78409, TX, USA, United States of America ~72: SHARKEY, James~ 33:US ~31:62/885,647 ~32:12/08/2019

2022/01173 ~ Complete ~54:NLRP3 MODULATORS ~71:ZOMAGEN BIOSCIENCES LTD, 662 Encinitas Blvd, Suite 250, Encinitas, United States of America ~72: HARRIS, Jason;MOHAN, Raju;NUSS, John;YUAN, Shendong~ 33:US ~31:62/875,409 ~32:17/07/2019

2022/01172 ~ Complete ~54:N-((1,2,3,5,6,7-HEXAHYDRO-S-INDACEN-4-YL)CARBAMOYL)-4,5,6,7-TETRAHYDROBENZOFURAN -2-SULFONAMIDE DERIVATIVES AND RELATED COMPOUNDS AS NLPR3 MODULATORS FOR THE TREATMENT OF MULTIPLE SCLEROSIS (MS) ~71:ZOMAGEN BIOSCIENCES LTD, 662 Encinitas Blvd, Suite 250, Encinitas, United States of America ~72: HARRIS, Jason;MOHAN, Raju;NUSS, John;YUAN, Shendong~ 33:US ~31:62/875,402 ~32:17/07/2019

2022/01098 ~ Complete ~54:APPLICATION OF RHODIOLA CRENULATA EXTRACT IN PREPARING FOODS, MEDICINES OR HEALTH CARE PRODUCTS INHIBITING ACTIVITY OF AMYLASE AND GLUCOSIDASE ~71:Northwest Plateau Institute of biology, Chinese Academy of Sciences, No.59, Xiguan Street, Xining City, Qinghai Province, 810001, People's Republic of China ~72: JIANG, Sirong;MEI, Lijuan;SHAO, Yun;TAO, Yanduo;YUE, Huilan;ZHAO, Xiaohui~

2022/01096 ~ Provisional ~54:TRAVEL PRODUCT MARKET ~71:Magoporutse Trevor Thokoane, 210 Cornus Street, South Africa ~72: Magoporutse Trevor Thokoane~

2022/01112 ~ Complete ~54:VULCANIZING MACHINE GREASE AND PREPARATION METHOD THEREFOR ~71:Shandong North Zite Special Oil Co., Ltd., No. 8699, Zhoulong Road, Zhoucun District, Zibo City, Shandong Province, 255300, People's Republic of China ~72: LUO, Gang;SUN, Yuedong;YANG, Naitang;YANG, Wenhuan~

2022/01106 ~ Complete ~54:PHOTOCURING 3D PRINTING INTELLIGENT PRODUCTION LINE BASED ON SIX-AXIS MANIPULATOR ~71:DONGGUAN POLYTECHNIC, No. 3, Daxue Road, High-tech Industrial Development Zone, Songshanhu, Dongguan City, Guangdong Province, 523808, People's Republic of China;Dongguan University Of Technology, No. 1, Daxue Road, Songshanhu, Dongguan City, Guangdong Province , 523808, People's Republic of China ~72: CHEN, Shenggui;LI, Longgen;MENG, Xinpei;ZHOU, Danni~

2022/01117 ~ Complete ~54:WATER CLEARING DEVICE FOR FRESHWATER FISH CULTURE ~71:Heilongiang River Fisheries Research Institute, Chinese Academy Of Fishery Sciences, No. 43, Songfa Street, Daoli District, Harbin City, Heilongjiang Province, 150070, People's Republic of China ~72: CHEN, Zhongxiang;GAO, Lei;HAO, Qirui;QIN, Dongli;WANG, Peng~

2022/01120 ~ Complete ~54:TRANSFORMER VOLTAGE REGULATING DEVICE BASED ON POWER ELECTRONIC TECHNOLOGY ~71:TANG, Hong, West House, 1st Floor, No. 21, Xinkang Lane, Hongqi District, Xinxiang City, Henan Province, 453000, People's Republic of China ~72: SONG, Nana;SUN, Zhiyin;TANG, Hong;WANG, Shaoju;WANG, Shuchao;ZHANG, Longbiao;ZHANG, Qishun;ZHANG, Xinhong~

2022/01144 ~ Complete ~54:APPLE PICKING MANIPULATOR ARM WITH CONSTANT TORQUE ~71:QINGDAO UNIVERSITY OF TECHNOLOGY, No.777, Jialingjiang East Road, Huangdao District, Qingdao City, Shandong Province, 266520, People's Republic of China ~72: CAI, Zihao;CHEN, Xin;JI, Pengxin;LIU, Xiaofeng;YANG, Jianjun;ZHOU, Yuyang~

2022/01146 ~ Complete ~54:METHOD FOR SIMULATING ATMOSPHERIC NATURAL DUSTFALL ~71:QINGDAO AGRICULTURAL UNIVERSITY, No. 700 Changcheng Road, Chengyang District, Qingdao, People's Republic of China ~72: LI, Haimei;LI, Shimei;LIANG, Hong;SUN, Li;SUN, Yingkun;TIAN, Yuan;ZHU, Xu~ 33:CN ~31:202210009991.4 ~32:05/01/2022

2022/01153 ~ Complete ~54:SOLVATES OF ABSCISIC ACID AND LIQUID COMPOSITIONS CONTAINING ABSCISIC ACID ~71:CLARIANT INTERNATIONAL LTD, Rothausstrasse 61, Switzerland ~72: ARNOLD, Roland;BAUR, Peter;DARIO, Luri Stefano Negrisiolo;GIESSLER-GEISS, Stephanie;NECKERMANN, Jennifer;STAIGER, Siegfried~ 33:EP ~31:19210021.2 ~32:19/11/2019

2022/01165 ~ Complete ~54:PHARMACEUTICAL COMPOSITION FOR TREATING LEVODOPA-INDUCED DYSKINESIA OR FOR SUPPRESSING PROGRESSION THEREOF ~71:Peptron, Inc., (JeonMin-Dong) 37-24, Yuseong-daero 1628beon-gil, Yuseong-gu, DAEJEON 34054, REPUBLIC OF KOREA, Republic of Korea ~72: CHOI, Ho II~ 33:US ~31:62/879,574 ~32:29/07/2019;33:KR ~31:10-2020-0094783 ~32:29/07/2020

2022/01176 ~ Provisional ~54:FOODLAB BEEF PATTY ~71:Koketso Mohaswa, 19 Mowana street Atteridgeville, South Africa ~72: Koketso Mohaswa~ 33:ZA ~31:1 ~32:24/01/2022

2022/01124 ~ Complete ~54:METHOD OF MAKING INCENSE WITH TOBACCO POWDERS ~71:TOBACCO RESEARCH INSTITUTE OF CHINESE ACADEMY OF AGRICULTURAL SCIENCES, No. 11, Jingsi Road, Keyuan, Laoshan District, Qingdao City, Shandong Province, 266101, People's Republic of China ~72: CHANG, Aixia;KONG, Fanyu;LIU, Guangliang;LU, Shijun;NING, Yang;QIU, Jun;SUN, Peng;YU, Weisong~

2022/01128 ~ Complete ~54:A LEAK-PROOF WIND FLEXIBLE MATERIAL FOR GOB-SIDE ENTRY RETAINING ~71:Guizhou Jinsha Longfeng coal industry Co., Ltd, Jinsha County, Bijie City, Guizhou Province, 551899, People's Republic of China;Shandong University of Science and Technology, No. 579, Qianwangang Road, Huangdao District, Qingdao City, Shandong Province, 266590, People's Republic of China ~72: CHEN Dawei;CHENG Weimin;LI Gang;MA Zan;SUN Xiangke;WANG Yi;XIE Hengxing;XIE Jun;Yu Dahe;ZHAO Hechun~

2022/01138 ~ Complete ~54:CHARGING MANAGEMENT SYSTEM AND METHOD BASED ON DEEP LEARNING ~71:Hubei Surpass Sun Electric Co., Ltd., No.59 Guanyu Road, High-tech Industrial Development Zone, Fancheng District, Xiangyang City, Hubei Province, 441003, People's Republic of China ~72: DAI, Ke;KANG, Yong;PAN, Fei;SUN, Yuhong~

2022/01152 ~ Complete ~54:A LATERAL CHROMATOGRAPHY TEST STRIP OF COLLOIDAL GOLD FOR TESTING THE CONCENTRATION OF LAMOTRIGINE PLASMA ~71:Anhui Shenlan Medical Technology Co., Ltd, 4th Floor, 1#D Part, Mingzhu Industrial Park, No.106 Chuangxin Avenue, High-Tech District, People's Republic of China ~72: Bin WANG;Chao ZHANG;Chuanxiang GUO;Fengling CHEN;Jing XU;Yicheng ZHANG~

2022/01156 ~ Complete ~54:STRUCTURAL WALL PANEL SYSTEM ~71:Viken OHANESIAN, 26331 Via Alano San Juan, United States of America ~72: Viken OHANESIAN~ 33:US ~31:62/878,934 ~32:26/07/2019

2022/01097 ~ Provisional ~54:SHAFT BORING SYSTEM ~71:MASTER SINKERS (PTY) LTD, 4 Bosman Street, FOCHVILLE, 2515, Gauteng, SOUTH AFRICA, South Africa ~72: GOODWIN, Nicolaas Bodenstein;JORDAAN, Barend Jacobus~

2022/01132 ~ Complete ~54:HELLBORUS.XHYBRIDUS FOREST CULTIVATION METHOD ~71:Changshan County Forestry and Water Conservancy Bureau, No.54, Wenfeng East Road, Tianma Street, Changshan County, Quzhou City, Zhejiang Province, 324200, People's Republic of China;Hangzhou Landscaping Incorporated, No. 226, Kaixuan Road, Jianggan District, Hangzhou City, Zhejiang Province, 310016, People's Republic of China;Northwest A and F University, No. 3, Taicheng Road, Yangling District, Xianyang City, Shaanxi Province, 712100, People's Republic of China;Taizhou Forestry Technology Extension Station, No. 300, Baiyunshan West Road, Jiaojiang District, Taizhou City, Zhejiang Province, 318000, People's Republic of China;Zhejiang Institute of Landscape Plants and Flowers, No. 508, Wangcun, Linpu Town, Xiaoshan District, Hangzhou City, Zhejiang Province, 311251, People's Republic of China ~72: DU, Lingjuan;FAN, Jing;MA, Guangying;QIU, Zhimin;SHI, Xiaohua;WANG, Sheping;ZHANG, Junlin~

2022/01148 ~ Complete ~54:LIVING BODY STORAGE TECHNOLOGY FOR ANASTATUS SP. ~71:PLANT PROTECTION RESEARCH INSTITUTE GUANGDONG ACADEMY OF AGRICULTURAL SCIENCES, 7 Jinying Road, Tianhe District, Guangzhou, People's Republic of China ~72: LI, Dunsong;XIA, Yue;ZHAO, Can~

2022/01155 ~ Complete ~54:CUPTSM FOR THE TREATMENT OF NEURODEGENERATIVE DISORDERS ~71:ALS THERAPY DEVELOPMENT INSTITUTE, 300 Technology Square, United States of America ~72: DENTON, Kyle;GILL, Alan;HATZIPETROS, Theo;LUKASHEV, Matvey;PERRIN, Steven;VIEIRA, Fernando G.~ 33:US ~31:62/878,581 ~32:25/07/2019

2022/01174 ~ Complete ~54:APPLICATION OF PROGESTIN IN PREPARATION OF DRUG INHIBITING CYTOKINE STORM ~71:SHENZHEN EVERGREEN THERAPEUTICS CO., LTD., 33A, SW Radio and Television Financial Center, the intersection of Fuzhong Road 3 and Pengcheng Road 1, Fuxin Community, Lotus Street, Futian District Shenzhen, People's Republic of China ~72: DU, Tao Tom;DU, Xin~ 33:CN ~31:202010350632.6 ~32:28/04/2020

2022/01135 ~ Complete ~54:PREPARATION METHOD OF STRONG-FLAVOR BLUEBERRY RED WINE ~71:Guizhou Botanical Garden, Guizhou Botanical Garden, No. 86, Luchongguan Road, Yunyan District, Guiyang City, Guizhou, 550006, People's Republic of China ~72: LI, Yongxia;LIU, Guohua;NIE, Fei;WANG, Yao;WEN, Guangqin;ZHANG, Xiaoyong~

2022/01151 ~ Complete ~54:ARTIFICIAL INTELLIGENCE MULTI-POINT TOUCH DEVICE FOR HOME DESIGN PRODUCT ~71:ZHIJIANG COLLEGE OF ZHEJIANG UNIVERSITY OF TECHNOLOGY, NO. 958, YUEZHOU AVENUE, KEQIAO DISTRICT, People's Republic of China ~72: SONG, HANWEI;XIA, YINGCHONG;YE, LELE~

2022/01159 ~ Complete ~54:AN ASPIRATE-DISPENSE APPARATUS AND ASSOCIATED METHODS ~71:DOUGLAS SCIENTIFIC, LLC, 3600 Minnesota Street, Alexandria, United States of America ~72: HAUG, Andrew Richard;WESTAD, Nathan Luther~ 33:US ~31:62/882,034 ~32:02/08/2019

2022/01171 ~ Complete ~54:EZH2 INHIBITION IN COMBINATION THERAPIES FOR THE TREATMENT OF CANCERS ~71:Constellation Pharmaceuticals, Inc., 215 First Street, Suite 200, CAMBRIDGE 02142, MA, USA, United States of America ~72: BRADLEY, William D.~ 33:US ~31:62/878,021 ~32:24/07/2019

2022/01100 ~ Complete ~54:AN OVERALL EXCAVATION DESIGN STRUCTURE OF FOUNDATION PIT TO ENSURE THE SAFE OPERATION OF THE RAILWAY ENGINEERING ~71:China Railway Third Bureau Group Co., Ltd., No. 6, Jianming North Road, Chang'an District, Shijiazhuang, Hebei, People's Republic of China;China Railway Third Group No.2 Engineering Co., Ltd., No. 6, Jianming North Road, Chang'an District, Shijiazhuang, Hebei, People's Republic of China ~72: CHEN, Yubo;DU, Yingjie;LIU, Chenghong;MA, Liang;WANG, Yingmei;ZHAO, Haibo~

2022/01108 ~ Complete ~54:BIO-BASED POLYURETHANE-COATED SLOW- AND CONTROLLED-RELEASE FERTILIZER OF CROP STRAWS PRETREATED BY STEAM EXPLOSION AND METHOD FOR PREPARING SAME ~71:Shandong Agricultural University, 61 Daizong Street, Tai'an City, Shandong Province, 271018, People's Republic of China;Xinyangfeng Agricultural Technology Co. Ltd., No. 7, Yuelianghu North Road, Jingmen City, Hubei Province, 448002, People's Republic of China ~72: Chen Siyu;Fang Fuli;Liu Zhiguang;Sun Xiao;Tian Hongyu;Wu Liang;Yu Xiaojing;Zhang Min~ 33:CN ~31:2021115403240 ~32:16/12/2021

2022/01095 ~ Provisional ~54:ADJUSTABLE TELESCOPIC BOOTH AND SUSPENSIVE HEAD SUPPORT AND VERTEBRAL STRUCTURE TRACTION APPLICATOR KIT. ~71:Clive Prowse, 25 Lucas Street, Newton Park, South Africa;Margaret Pamela Brotchie, 25 Lucas Street, Newton Park, South Africa ~72: Clive Prowse;Margaret Pamela Brotchie~

2022/01113 ~ Complete ~54:USE OF PIWI-INTERACTING RNA PIR-HSA-211106 ~71:Qingdao University, No. 308, Ningxia Road, Shinan District, Qingdao City, Shandong, 266071, People's Republic of China ~72: DONG, Yanhan;GAO, Jinning;HAO, Xiaodan;LI, Meng;LIU, Yongmei;WANG, Zibo;XU, Wenhua~

2022/01168 ~ Complete ~54:A PACKAGE ~71:British American Tobacco (Investments) Limited, Globe House, 1 Water Street, LONDON WC2R 3LA, UNITED KINGDOM, United Kingdom ~72: HODGES, Paul~ 33:GB ~31:1911723.3 ~32:15/08/2019

2022/01101 ~ Complete ~54:A CONSTRUCTION METHOD FOR CONTACT NET COLUMN FOUNDATIONS OF HIGH-SPEED RAILWAY ROADBED ~71:China Railway Third Bureau Group Co., Ltd., No. 6, Jianming North Road, Chang'an District, Shijiazhuang, Hebei, People's Republic of China;China Railway Third Group No.2 Engineering Co., Ltd., No. 6, Jianming North Road, Chang'an District, Shijiazhuang, Hebei, People's Republic of China ~72: AN, Yanwei;CHEN, Yangyang;CHEN, Yubo;DU, Yingjie;GUO, Dalin;GUO, Xingliang;LIU, Chenghong;LIU, Zhiru;MA, Liang;QI, Sheng;WANG ,Yongbin;ZHANG, Guangle~

2022/01116 ~ Complete ~54:PORTABLE INTELLIGENT TEMPERATURE CONTROL BAG ~71:LIU, Junbing, 2-7-8, Beida Ziyuan Yannan, No. 3 Xingyan Road, Jiulongpo District, Chongqing, 400080, People's Republic of China;WANG, Yalun, 2-7-8, Beida Ziyuan Yannan, No. 3 Xingyan Road, Jiulongpo District, Chongqing, 400080, People's Republic of China ~72: CHEN, Rong;DENG, Xiuqin;HE, Guan;LIU, Junbing;WANG, Yalun~

2022/01129 ~ Complete ~54:MIXED RARE EARTH INOCULATED AL-MG2SI COMPOSITE AND PREPARATION METHOD THEREOF ~71:Weifang University of Science & amp;Technology, 1299 Jinguang street, Shouguang City, Weifang City, Shandong Province, 262700, People's Republic of China ~72: Chen Shengyuan;Li Yingmin;Liu Tongyu;Liu Weihua;Ren Yuyan~

2022/01131 ~ Complete ~54:DEVICE AND METHOD FOR DETECTING DRIVING DATA OF FIRE-FIGHTING ROBOT ~71:SHANGHAI FIRE RESEARCH INSTITUTE OF MEN, 391 Xihuan Road, Minhang District, Shanghai, 201199, People's Republic of China;SHANGHAI FUSHITE FIRE CONTROL EQUIPMENT CO.LTD, (Intersection of Shipyard) 1st Floor, No. 601, Zhongshan South 2nd Road, Xuhui District, Shanghai, 200032, People's Republic of China ~72: JIA, Wenlong;JIANG, Xudong;SHI, Liang;SHI, Wei;YANG, Zhijun;ZHONG, Lin~

2022/01141 ~ Complete ~54:SIMPLE VENTILATION INSTALLATION FOR PIG FARM ~71:INSTITUTE OF ANIMAL HUSBANDRY, HEILONGJIANG ACADEMY OF AGRICULTURAL SCIENCES, NO. 368, XUEFU ROAD, NANGANG DISTRICT, HARBIN, People's Republic of China ~72: CHEN, Heshu;HE, Xinmiao;LIU, Di;QI, Meiyu;WANG, Wentao;WU, Saihui;YU, Xiaolong~

2022/01161 ~ Complete ~54:VIDEO CODING BITSTREAM EXTRACTION WITH IDENTIFIER SIGNALING ~71:Huawei Technologies Co., Ltd., Huawei Administration Building, Bantian, Longgang District, SHENZHEN 518129, GUANGDONG PROVINCE, CHINA (P.R.C.), People's Republic of China ~72: HENDRY, Fnu;WANG, Ye-Kui~ 33:US ~31:62/870,892 ~32:05/07/2019

2022/01125 ~ Complete ~54:METHOD AND SYSTEM FOR CALIBRATING FREQUENCY OFFSET IN SATELLITE COMMUNICATION ~71:Xuzhou Huitian Information Technology Co., Ltd., 1-719-1, Building 1, Wenfeng Building, No. 246 Jiefang Road, Yunlong District, Xuzhou City, Jiangsu, 221000, People's Republic of China ~72: XU, Jinsong~

2022/01127 ~ Complete ~54:ULTRAVIOLET DISINFECTION CONTACT DEVICE ~71:Sanmen People's Hospital, No. 15, Taihe Road, Hairun Street, Sanmen County, Taizhou City, Zhejiang, 317100, People's Republic of China ~72: FANG, Zejun;GONG, Chaoju;HU, Yanyan;YANG, Jun~

2022/01139 ~ Complete ~54:EGG CARTON WRAPPING AID ~71:GRADUS-SAMSON, Kyle, 18a Luisa Way, Nooitgedacht, South Africa ~72: GRADUS-SAMSON, Kyle~ 33:ZA ~31:2020/06898 ~32:05/11/2021

2022/01164 ~ Complete ~54:DOSING REGIMENS FOR ORAL COMPLEMENT FACTOR D INHIBITORS ~71:BioCryst Pharmaceuticals, Inc., 4505 Emperor Blvd., Suite 200, DURHAM 27703, NC, USA, United States of America ~72: BABU, Yarlagadda S.;SHERIDAN, William P.~ 33:US ~31:62/881,225 ~32:31/07/2019;33:US ~31:62/926,175 ~32:25/10/2019;33:US ~31:63/020,239 ~32:05/05/2020

2022/01167 ~ Complete ~54:PREVENTING AND TREATING HYPOGLYCEMIA ~71:Diamyd Medical AB, Box 7349, STOCKHOLM 103 90, SWEDEN, Sweden ~72: CARLSSON, Per-Ola;ESPES, Daniel~ 33:SE ~31:1950921-5 ~32:09/08/2019;33:SE ~31:2050506-1 ~32:04/05/2020

2022/01114 ~ Complete ~54:PRODUCTION PROCESS AND APPLICATION OF FEED FOR PROMOTING GONADAL DEVELOPMENT OF XENOCYPRIS DAVIDI BLEEKER PARENT FISH ~71:Jiangxi Institute for Fisheries Sciences, No. 1099, Fudayou Road, Nanchang City, Jiangxi, 330039, People's Republic of China ~72: FU, Peifeng;FU, Yilong;LI, Yanfang;WANG, Changlai;ZHANG, Guifang;ZHANG, Haixin;ZHANG, Yanping~

- APPLIED ON 2022-01-26 -

2022/01194 ~ Complete ~54:SEMI-AUTOMATIC SOLAR COLLECTOR PLATE INCLINATION ADJUSTING DEVICE ~71:Shihezi University, No. 221, Beisi Road, Shihezi City, Xinjiang Uygur Autonomous Region, People's Republic of China ~72: Li Jie;Li Xiaoxu;Liu Zhenji;Lu Hongmei~

2022/01199 ~ Complete ~54:INDEL MOLECULAR MARKER RELATED TO CASHMERE PRODUCTION TRAIT OF GOAT AND USE THEREOF ~71:Institute of Animal Science of Chinese Academy of Agricultural Sciences, No. 2 Yuanmingyuan West Road, Haidian District, Beijing, 100193, People's Republic of China ~72: JIANG, Lin;LI, Yefang;LIU, Xuexue;MA, Yuehui;PU, Yabin;ZHANG, Yanli~

2022/01219 ~ Complete ~54:LUNG NODULE SCREENING METHOD AND SCREENING SYSTEM BASED ON DEEP LEARNING TECHNOLOGY ~71:The Affiliated Hospital of Medical School, Ningbo University, No. 247, Renmin Road, Jiangbei District, Ningbo City, Zhejiang Province , 315020, People's Republic of China ~72: CHEN, Zixuan;LI, Xiaowen;ZHOU, Chengwei~ 33:CN ~31:202110368194.0 ~32:06/04/2021

2022/01224 ~ Complete ~54:CRYSTALLINE EPINEPHRINE MALONATE SALT ~71:BIOTHEA PHARMA, INC., 125 Summer Street, Suite 1675, Boston, Massachusetts, 02110, United States of America ~72: ADEL MOUSSA;JEAN-PIERRE SOMMADOSSI~ 33:US ~31:62/711,936 ~32:30/07/2018;33:US ~31:62/731,442 ~32:14/09/2018

2022/01235 ~ Complete ~54:RECEIVER FOR RECEIVING A COMBINATION SIGNAL TAKING ACCOUNT OF INTER-SYMBOL INTERFERENCE, METHOD FOR RECEIVING A COMBINATION SIGNAL, AND COMPUTER PROGRAM ~71:INNOVATIONSZENTRUM FÜR TELEKOMMUNIKATIONSTECHNIK GMBH IZT, AM WEICHSELGARTEN 5, 91058 ERLANGEN, GERMANY, Germany ~72: HIRSCHBECK, Martin~ 33:DE ~31:10 2019 209 800.2 ~32:03/07/2019

2022/01241 ~ Complete ~54:FOLDABLE TABLE ~71:STORYTELLER OVERLAND, LLC, 109 West Drive Birmingham, United States of America ~72: DONALDSON, Adam;FREYERMUTH, Dan;HUNTER, Jeffrey;ISBELL, Mark;LANG, Brent;SLATER, Dave~ 33:US ~31:62/816,571 ~32:11/03/2019;33:US ~31:16/814,270 ~32:10/03/2020

2022/01227 ~ Complete ~54:A FIXING CAGE DEVICE FOR LIVESTOCK ~71:INNER MONGOLIA ACADEMY OF AGRICULTURAL & amp; ANIMAL HUSBANDRY SCIENCES, No. 22 Zhaojun Road, Huhehaote City, People's Republic of China ~72: FANG, Yongyu;LI, Xiaoqi;LI, Zeting;LV, You;QIAO, Jianmin;SU, Shaofeng;TAO, Jinshan;WANG, Chao;WANG, Liwei;WANG, Xiao;WU, Haiqing;XUE, Yanlin;ZHANG, Bizhou;ZHANG, Jianqiang;ZHANG, Xin;ZHANG, Xingfu;ZHAO, Xiaoqing~

2022/01246 ~ Complete ~54:FOLDABLE LOUNGE ~71:STORYTELLER OVERLAND, LLC, 109 West Drive, United States of America ~72: DONALDSON, Adam;FREYERMUTH, Dan;HUNTER, Jeffrey;ISBELL, Mark;LANG, Brent;SLATER, Dave~ 33:US ~31:62/816,571 ~32:11/03/2019;33:US ~31:16/814,270 ~32:10/03/2020 2022/01254 ~ Complete ~54:A COIN FEEDING UNIT, A MODULE COMPRISING SAID COIN FEEDING UNIT, AND A COIN HANDLING MACHINE ~71:SCAN COIN AB, NordenskiöIdsgatan 24, 211 19, Malmö, Sweden ~72: DAN WIGENSTAM;HÅKAN MELIN;KRISTIAN BENGTSSON;VICTOR WALLMAN-CARLSSON~ 33:SE ~31:1950807-6 ~32:28/06/2019

2022/01180 ~ Complete ~54:A GYNECOLOGICAL SIALIDATE DETECTION KIT ~71:Anhui Shenlan Medical Technology Co., Ltd, 4th Floor, 1#D Part, Mingzhu Industrial Park, No.106 Chuangxin Avenue, High-Tech District, People's Republic of China ~72: Bin WANG;Chao ZHANG;Chuanxiang GUO;Fengling CHEN;Jing XU;Yicheng ZHANG~

2022/01188 ~ Complete ~54:SYSTEM AND METHOD FOR REGULATING LEVITATION FORCE OF RARE-EARTH PERMANENT MAGNETIC LEVITATION RAIL ~71:Guorui scientific innovation Rare Earth Functional Materials (Ganzhou) Co., Ltd, Room 201, Office Building, Area A, South Side, No. 6, Huilong Avenue, Ganzhou High-tech Industrial Development Zone, Ganxian District, Ganzhou City, Jiangxi , 341000, People's Republic of China;Jiangxi University of Science and Technology, No. 86, Hongqi Avenue, Zhanggong District, Ganzhou City, Jiangxi , 341000, People's Republic of China ~72: LUO, Sangen;YANG, Bin;YANG, Munan;ZHONG, Shuwei;ZOU, Zhenggang~

2022/01189 ~ Complete ~54:MICROBIAL AGENT FOR PREVENTING AND CONTROLLING PLANT DISEASES AND ENHANCING PLANT STRESS RESISTANCE, AND PREPARATION METHOD AND APPLICATION ~71:Shihezi University, No.221 North four road, Xiang yang Street, 31 Community, Shihezi City, Xinjiang, People's Republic of China ~72: Fan Yongbin;Li Guo;Wang Aiying;Wu Chongdie~

2022/01190 ~ Complete ~54:PREPARATION AND APPLICATION OF INONOTUS OBLIQUUS FERMENTED POLYSACCHARIDE ~71:Wang Qi, No. 2888, Xincheng Street, Nanguan District, Changchun City, Jilin Province, 130118, People's Republic of China ~72: Li Yu;Pan Jingzhi;Su Ling;Wang JinLing;Wang Qi~

2022/01210 ~ Complete ~54:METHOD FOR FERTILIZING SOIL AND INHIBITING ORCHARD WEEDS ~71:Hunan Crop Research Institute, No. 892, Yuanda 2nd Road, Furong District, Changsha City, Hunan Province, 410125, People's Republic of China ~72: HE, Luqiu;WANG, Suhua;YANG, Xuele;ZHANG, Lu~

2022/01228 ~ Complete ~54:AN UNMANNED VEHICLE REMOTE TAKEOVER METHOD BASED ON SCENE FAMILIARITY ~71:Qingdao Academy of Intelligent Industries, 26th Floor, Block B, Chuangye Building, No.1 Zhilidao Road, High-Tech District, People's Republic of China ~72: Feiyue WANG;Linyao YANG;Xiao WANG~

2022/01229 ~ Complete ~54:ELECTROLYTE COMPOSITION AND METHODS OF USE ~71:NUTRECO IP ASSETS B.V., 38, Veerstraat, Netherlands ~72: MARTÍN-TERESO LÓPEZ, Javier;WILMS, Juliette Nina Roxanne~ 33:EP ~31:19188823.9 ~32:29/07/2019

2022/01249 ~ Complete ~54:A MOUTHPIECE FOR AN ARTICLE FOR USE IN AN AEROSOL PROVISION SYSTEM AND AN ARTICLE FOR USE IN AN AEROSOL PROVISION SYSTEM ~71:British American Tobacco (Investments) Limited, Globe House, 1 Water Street, LONDON WC2R 3LA, UNITED KINGDOM, United Kingdom ~72: DAVIES, lanto;DUBEY, Umesh;GRISHCHENKO, Andrei~ 33:GB ~31:1911872.8 ~32:19/08/2019

2022/01186 ~ Complete ~54:PROTEIN IDENTIFICATION SYSTEM BASED ON CONVOLUTIONAL NEURAL NETWORK ~71:Hunan University of Chinese Medicine, No.300 Xueshi Road, Hanpu Science and Education Industrial Park, Yuelu District, Changsha City, Hunan Province, 410036, People's Republic of China;Hunan college of information, No.8 Wangwang Middle Road, Wangcheng County, Changsha City, Hunan Province, 410000, People's Republic of China ~72: Chen Jiahao;Chen Jiameng;Ding Changsong;Li Peng;Min Hui;Qi Ting;Yang Yi;Zhou Yongzhu~

2022/01191 ~ Complete ~54:SYSTEM AND METHOD FOR IMPROVING STABILITY OF RARE-EARTH PERMANENT MAGNETIC LEVITATION RAIL ~71:Guorui scientific innovation Rare Earth Functional Materials (Ganzhou) Co., Ltd, Room 201, Office Building, Area A, South Side, No. 6, Huilong Avenue, Ganzhou High-tech Industrial Development Zone, Ganxian District, Ganzhou City, Jiangxi , 341000, People's Republic of China;Jiangxi University of Science and Technology, No. 86, Hongqi Avenue, Zhanggong District, Ganzhou City, Jiangxi, 341000, People's Republic of China ~72: LUO, Sangen;YANG, Bin;YANG, Munan;ZHONG, Shuwei;ZOU, Zhenggang~

2022/01201 ~ Complete ~54:METHOD FOR QUICKLY DETECTING THE CONCENTRATION OF HEAVY METALS IN BODY FLUID ~71:Southwest Forestry University, 300 Bailongsi, Panlong District, Kunming, Yunnan Province, People's Republic of China ~72: Liu Jianxiang;Tian Wen;Wang Chengchen;Xiang Ping;Yang Ziyue;Zhang Mengyan~

2022/01211 ~ Complete ~54:DEVELOPMENT METHOD OF AGENT FOR REDUCING COLD DAMAGE TO MAIZE CROPS ~71:Qingdao Agricultural University, 700 Changcheng Road, Chengyang District, Qingdao City, Shandong Province, 266109, People's Republic of China ~72: LI, Jun;LI, Yubin;LIU, Ligong;LIU, Shutang;SONG, Chaoyu;SONG, Xiyun~

2022/01221 ~ Complete ~54:CYCLOPENTANE COMPOUNDS ~71:Dizal (Jiangsu) Pharmaceutical Co., Ltd., Huirong Business E Building, East Jinghui Road, WUXI CITY, JIANGSU PROVINCE, CHINA (P.R.C.), People's Republic of China ~72: LINDHAGEN, Jenny Susanna Marika;NIKITIDIS, Grigorios;PAN, Weitao;ZHANG, Xiaolin~ 33:IB ~31:2018/086503 ~32:11/05/2018

2022/01230 ~ Complete ~54:BIOMARKERS AND TREATMENTS OF ALZHEIMER'S DISEASE AND MILD COGNITIVE IMPAIRMENT ~71:AXON NEUROSCIENCE SE, 4, Arch. Makariou & amp; Kalogreon Nicolaides Sea View, City Block C, 5th Floor, Cyprus ~72: KONTSEKOVA, Eva;KOVACECH, Branislav;NOVAK, Michal;ŽILKA, Norbert~ 33:US ~31:62/897,940 ~32:09/09/2019;33:US ~31:63/003,585 ~32:01/04/2020

2022/01240 ~ Complete ~54:MEK INHIBITOR FOR TREATMENT OF STROKE ~71:EDVINCE AB, Scheeletorget 1, Sweden ~72: EDVINSSON, Lars~ 33:EP ~31:19189069.8 ~32:30/07/2019

2022/01247 ~ Complete ~54:BISPECIFIC ANTIBODY ~71:Ono Pharmaceutical Co., Ltd., 1-5, Doshomachi 2chome, Chuo-ku, OSAKA-SHI 5418526, OSAKA, JAPAN, Japan ~72: DE KRUIF, Cornelis Adriaan;KLOOSTER, Rinse;SHIBAYAMA, Shiro;SHIMBO, Takuya;TEZUKA, Tomoya;THROSBY, Mark;VAN LOO, Pieter Fokko~ 33:JP ~31:2019-139751 ~32:30/07/2019

2022/01250 ~ Complete ~54:DETERMINATION OF PICTURE PARTITION MODE BASED ON BLOCK SIZE ~71:BEIJING BYTEDANCE NETWORK TECHNOLOGY CO., LTD., Room B-0035, 2/F, No.3 Building, No.30, Shixing Road, Shijingshan District, Beijing, 100041, People's Republic of China;BYTEDANCE INC., 12655 West Jefferson Boulevard, Sixth Floor, Suite No. 137, Los Angeles, California, 90066, United States of America ~72: HONGBIN LIU;KAI ZHANG;LI ZHANG;ZHIPIN DENG~ 33:CN ~31:PCT/CN2019/097926 ~32:26/07/2019;33:CN ~31:PCT/CN2019/103892 ~32:31/08/2019

2022/01252 ~ Complete ~54:STRUCTURE PROTECTION SHEET, EXECUTION METHOD AND PRECAST MEMBER USING STRUCTURE PROTECTION SHEET, AND METHOD FOR MANUFACTURING PRECAST MEMBER ~71:KEIWA INCORPORATED, 10-5, Nihonbashi Kayabacho 2-chome, Chuo-ku, Tokyo, 1030025, Japan ~72: AKIRA NINOMIYA;KENTA SHIMOTANI;MASAKI YOSHIDA;NORIYUKI HORIUCHI;YOSHIKI NAKAJIMA~ 33:JP ~31:2019-132332 ~32:17/07/2019;33:JP ~31:2019-132333 ~32:17/07/2019

2022/01256 ~ Complete ~54:PROCESS FOR REDUCING AN ORGANIC MATERIAL TO PRODUCE METHANE AND/OR HYDROGEN ~71:DAVID JONATHAN WILLIS, 992 Pinewood Place Kingston, Canada;DOUGLAS

JOHN FREDERICK HALLETT, 195 Willingdon Ave. Kingston, Canada ~72: David Jonathan WILLIS;Douglas John Frederick HALLETT~ 33:US ~31:62/867,788 ~32:27/06/2019

2022/01198 ~ Complete ~54:SMART PARKING SYSTEM FOR NON-MOTOR VEHICLES BASED ON IPARK SMART LOCK ~71:HENAN UNIVERSITY OF URBAN CONSTRUCTION, Longxiang Avenue, Xincheng District, Pingdingshan City, Henan Province, 467036, People's Republic of China ~72: LI, Aizeng;LIU, Lihua;NIU, Caiqing;SONG, Minglei;SONG, Xinsheng;SUN, Zhaoyu;WANG, Yuhua;WEI, Yannan;XIAO, Song;ZHU, Huifeng~

2022/01217 ~ Complete ~54:COMPOUND SOLUTION FOR REDUCING DUST CONCENTRATION, PREPARATION METHOD AND APPLICATION ~71:Chongqing University of Science and Technology, No.20 University Town East Road, Shapingba District, Chongqing, 401331, People's Republic of China ~72: Li Xiang;Wang Xiaonan;Yang Junni~

2022/01223 ~ Complete ~54:IMMERSION DEVICE FOR TEMPERATURE MEASUREMENT AND METHOD FOR POSITION DETECTION ~71:Heraeus Electro-Nite International N.V., Centrum Zuid 1105, HOUTHALEN 3530, BELGIUM, Belgium ~72: NEYENS, Guido;VAN VLIERBERGHE, Michel~ 33:EP ~31:21154561.1 ~32:01/02/2021

2022/01239 ~ Complete ~54:AMINOTHIOLESTER COMPOUNDS AND USES THEREOF ~71:ADVANCED BIODESIGN, "les Allées du Parc", 575/655 Allée des Parcs, France ~72: BERROU, Axelle;CEYLAN, Ismail;MARTIN, Guillaume;PEREZ, Mileidys~ 33:EP ~31:19305989.6 ~32:31/07/2019

2022/01242 ~ Complete ~54:MOISTURIZING AND HYDRATING FACIAL MASK COMPOSITION, FACIAL MASK, AND PREPARATION METHOD FOR FACIAL MASK COMPOSITION ~71:HUBEI CHUANGJIE BIOLOGICAL TECHNOLOGY CO., LTD., Room 2061-2068, Zone 4, Building 1, Headquarters Economic Center, No. 1 Changle Avenue, Daye City Huangshi, Hubei, 435100, People's Republic of China ~72: FU, Chunli;TIAN, Weilan;WANG, Xiang;WANG, Yidian;WANG, Yinming;ZHU, Rongmei~ 33:CN ~31:201911072259.6 ~32:05/11/2019

2022/01178 ~ Provisional ~54:PRESSURE RINGS FOR GLAND PACKING ~71:Denis Winslow, 6C Roller Street , Spartan Ext 3 , Kempton Park , Gauteng, South Africa ~72: Denis Winslow~

2022/01204 ~ Complete ~54:PREPARATION METHOD OF DIRECTIONAL GROWTH CARBON NANOFIBER ARRAY ~71:Qingdao University of Science and Technology, 53 Zhengzhou Road, Qingdao University of Science and Technology, Shibei District, Qingdao City, Shandong Province, People's Republic of China ~72: Dong Hongzhou;Dong Lifeng;Sui Lina;Yu Liyan~

2022/01213 ~ Complete ~54:ELECTRO-ADSORPTION DESALTING UNIT FOR HIGH-SALINITY WASTEWATER ~71:Yantai University, No. 30, Qingquan Road, Laishan District, Yantai City, Shandong Province, 264005, People's Republic of China ~72: Pei Ziyuan;Sui Zhuyin;Yang Zhaojin;Zhang Guotong~

2022/01236 ~ Complete ~54:METHOD OF MAKING NICOTINAMIDE RIBOFURANOSIDE SALTS, NICOTINAMIDE RIBOFURANOSIDE SALTS AS SUCH, AND USES THEREOF ~71:BIOSYNTH AG, Rietlistrasse 4, Switzerland ~72: SCHABERT, Günter;SOYDEMIR, Aysel;SPITZ, Urs;ZIMMERMANN, Iris~ 33:EP ~31:19187314.0 ~32:19/07/2019;33:EP ~31:19206542.3 ~32:31/10/2019

2022/01183 ~ Complete ~54:AN ANTI-THEFT INVENTORY DELIVERY AND COLLECTION MANAGEMENT SYSTEM ~71:DANIEL STEPHANUS DE WET, 41 KOEDOESINGEL, South Africa ~72: DE WET, DANIEL STEPHANUS~ 33:ZA ~31:2021/00964 ~32:12/02/2021

2022/01196 ~ Complete ~54:PLANT FACTORY PIPING SYSTEM WITH VENTILATION AND CARBON DIOXIDE SUPPLY FUNCTIONS ~71:Sichuan Agriculture University, No.211 Huimin Road, Wenjiang District, Chengdu City, Sichuan Province, People's Republic of China ~72: Lu Wei;Zhou Shenghan~

2022/01206 ~ Complete ~54:METHOD AND SYSTEM FOR EVALUATING MARINE POLLUTANT CROSS-BOUNDARY TRANSPORT FLUX ~71:Shandong Marine Resource and Environment Research Institute (Shandong Marine Environmental Monitoring Center, Shandong Aquatic Products Quality Inspection Center), No. 216, Changjiang Road, Economic and Technological Development Zone, Yantai City, Shandong Province , 264006, People's Republic of China ~72: LIU, Ning;SUN, Guiqin;SUN, Wei;WANG, Bin;XU, Yandong;YANG, Lipeng;ZHU, Jinlong~

2022/01208 ~ Complete ~54:SPECIFIC GENE OF PHOLIOTA SQUARROSOIDES AND USE THEREOF ~71:Jilin Agricultural University, No. 2888, Xincheng Street, Nanguan District, Changchun City , Jilin Province, 130118, People's Republic of China ~72: CAO, Guangcheng;GAO, Chonghua;TIAN, Enjing;XIE, Xiaomei;ZHENG, Yuan~

2022/01215 ~ Complete ~54:DOUBLE-ROTOR SINGLE-STATOR AXIAL FLUX HYBRID EXCITATION MOTOR ~71:Shenyang University of Technology, No.111, Shenliao West Road, Economic and Technological Development Zone, Shenyang, 110870, People's Republic of China ~72: GUO, Zhenxing;PENG, Bing;YAN, Wei~

2022/01177 ~ Provisional ~54:SHARING OF ARTISTIC MEDIA ~71:ROSSOUW, Ryan, 122 Umkomaas Road, Alphen Park, South Africa ~72: ROSSOUW, Ryan~

2022/01197 ~ Complete ~54:UNDERGROUND CONCRETE MIXER FOR COAL MINES ~71:Qingdao Nakong Intelligent Technology Co., Ltd., No. 1288 Yinzhushan Road, Huangdao District, Qingdao City, Shandong, 266520, People's Republic of China;Shandong University of Science and Technology, No. 579, Qianwangang Road, Economic and Technological Development Zone, Qingdao City, Shandong, 266590, People's Republic of China ~72: DU, Mingchao;FENG, Kailin;GAO, Bo;HUANG, Liangsong;LI, Yuxia;YIN, Chao;ZHANG, Kun~

2022/01202 ~ Complete ~54:METHOD FOR PREPARING MICROEMULSION CLEANUP ADDITIVE FOR ULTRA-LOW PERMEABILITY RESERVOIR FRACTURING ~71:Huanxiling Oil Production Plant, Liaohe Oilfield of China National Petroleum Corporation, Huanxiling Oil Production Plant, Panshan County, Panjin City, Liaoning Province, 124109, People's Republic of China;Lengjia Oilfield Development Company, Liaohe Oilfield of China National Petroleum Corporation, No. 83, Shiyou Street, Xinglongtai District, Panjin City, Liaoning Province, 124009, People's Republic of China;Panjin Howleting Oil And Gas Technology Service Co., Ltd., No. 08.09.10.11, Maker Center, 1st Floor, Science and Technology Incubator, High-tech Industrial Development Zone, No. 30, Xingye Road, Xinglongtai District, Panjin City, Liaoning Province, 124013, People's Republic of China;Petrochemical Institute of Drilling and Production Institute, Liaohe Oilfield of China National Petroleum Corporation, No. 91, Huibin Street, Xinglongtai District, Panjin City, Liaoning Province, 124009, People's Republic of China;The Fourth Oil Production Plant, Changqing Oilfield of China National Petroleum Corporation, The Fourth Oil Production Plant, Changqing Petroleum Base, Changqing Road, Jingbian County, Yulin City, Shaanxi Province, 718500, People's Republic of China ~72: CUI, Zhongyu;GUO, Zilong;HE, Dewen;HUANG, Wuming;JIANG, Shuo;LI, Feng;LI, Jun;LI, Lin;LI, Mu;QIAO, Shihan;QU, Jinming;WANG, Jianwei;WANG, Junliang;XIANG, Pengxin;XU, Chong;XU, Shuang;YAN, Yupeng;ZHANG, Xinxin~

2022/01216 ~ Complete ~54:PRIMER SET AND KIT FOR IDENTIFYING GYROMITRA INFULA AND USE THEREOF ~71:Jilin Agricultural University, No. 2888, Xincheng Avenue, Nanguan District, Changchun City, Jilin Province, 130118, People's Republic of China ~72: CAO, Guangcheng;DUAN, Renhe;GAO, Chonghua;TIAN, Enjing;XIE, Xiaomei;ZHENG, Yuan~ 33:CN ~31:202111490147.X ~32:08/12/2021

2022/01222 ~ Complete ~54:TRIAZOLO-PYRIMIDINE COMPOUNDS AND USES THEREOF ~71:Dizal (Jiangsu) Pharmaceutical Co., Ltd., No. 199 Liangjing Road, Zhangjiang Hi-Tech Park, SHANGHAI 201203, CHINA (P.R.C.), People's Republic of China ~72: QI, Changhe;TSUI, Honchung;YANG, Zhenfan;ZENG, Qingbei;ZHANG, Xiaolin~ 33:IB ~31:2018/105220 ~32:12/09/2018

2022/01225 ~ Complete ~54:JUN JUJUBE PICKING MACHINE BASED ON SYNCHRONOUS DISTANCE ADJUSTMENT MECHANISM ~71:QINGDAO UNIVERSITY OF TECHNOLOGY, No.777, Jialingjiang East Road, Huangdao District, Qingdao City, People's Republic of China ~72: LI, Da;LI, Qingxiang;LI, Zhaohua;MENG, Qingyuan;SONG, Juntong;SUN, Shangzhen;YANG, Jianjun;ZHANG, Mingyu~

2022/01238 ~ Complete ~54:COMPOSITION AND METHODS FOR THE TREATMENT OF ANAL AND RECTAL DISORDERS ~71:CELLIX BIO PRIVATE LIMITED, PLOT NO. 1177 B, ROAD NO. 56, JUBILEE HILLS, South Africa ~72: KANDULA, Mahesh~ 33:IN ~31:201941030819 ~32:30/07/2019

2022/01243 ~ Complete ~54:COMPOSITE VOLTAGE TESTING DEVICE FOR DC-LINK CAPACITOR ~71:WUXI POWER FILTER CO., LTD, 513 Jincheng East Road, Meicun Street, Xinwu District, Wuxi, Jiangsu, 214112, People's Republic of China ~72: CAO, Chongfeng;FENG, Shenrong;GUO, Xiangming;LI, Yinda;SUN, Xiaowu~ 33:CN ~31:202011574330.3 ~32:28/12/2020

2022/01244 ~ Complete ~54:DEVICE, METHOD, SYSTEM AND STORAGE MEDIUM FOR PRECIPITATION MONITORING ~71:BINZHOU UNIVERSITY, No. 391, Huanghe 5th Road, Binzhou City, Shandong Province, 256600, People's Republic of China ~72: Deng, Lijun;Hao, Guannan;Liu, Rui~ 33:CN ~31:CN202111148871.4 ~32:19/09/2021

2022/01253 ~ Complete ~54:LOW COST AND SANITARY EFFICIENT SYSTEM AND METHOD THAT CREATES TWO DIFFERENT TREATMENT ZONES IN LARGE WATER BODIES TO FACILITATE DIRECT CONTACT RECREATIONAL ACTIVITIES ~71:CRYSTAL LAGOONS TECHNOLOGIES, INC., 2 Alhambra Plaza, Penthouse 1B, Coral Gables, Florida, 33134, United States of America ~72: FERNANDO BENJAMIN FISCHMANN~ 33:US ~31:16/456,762 ~32:28/06/2019

2022/01179 ~ Provisional ~54:AN INDICATOR, AND ASSOCIATED MANAGEMENT SYSTEMS AND METHODS USING THE SAME ~71:FENSHAM, Noel Cedric, 7 Chagupe Place, Shaka's Rock, Durban, SOUTH AFRICA, South Africa ~72: DUNT, Ian Howard;FENSHAM, Noel Cedric~

2022/01193 ~ Complete ~54:METHOD FOR PREPARING A COMPOSITE ~71:Weifang University of Science & Technology, NO. 1299 Jinguang street, Shouguang City, Weifang City, Shandong Province, 262700, People's Republic of China ~72: Chen Shengyuan;Li Yingmin;Liu Tongyu;Liu Weihua;Ren Yuyan~

2022/01212 ~ Complete ~54:PHOTONIC CRYSTAL ALL-OPTICAL AND/NOR LOGIC GATE ~71:Shandong Jiaotong University, No. 5, Jiaoxiao Road, Tianqiao District, Jinan City, Shandong Province , 250023, People's Republic of China ~72: YUAN, Ruihua~ 33:CN ~31:202110948549.3 ~32:18/08/2021

2022/01233 ~ Complete ~54:ONLINE SHARING SYSTEM FOR WARRANT TO RECEIVE AND SHARING METHOD OF RECEIVABLE RIGHT ~71:YANG, Hong Sun, 102-605, H HOUSE DAERIM NEW STAY, 595, SIHEUNG-DAERO, YEONGDEUNGPO-GU, SEOUL 07322, REPUBLIC OF KOREA, Republic of Korea ~72: YANG, Hong Sun~ 33:KR ~31:10-2019-0147608 ~32:18/11/2019

2022/01200 ~ Complete ~54:CA/FE/GO/BIOMASS CHARCOAL, SPECIAL CHARCOAL-BASED SLOW RELEASE FERTILIZER FOR CORN AND APPLICATION THEREOF ~71:Ludong University, No. 186, Middle Hongqi Road, Zhifu District, Yantai City, Shandong Province, 264025, People's Republic of China;Qingdao Agricultural University, No. 700 Changcheng Road, Chengyang District, Qingdao City, Shandong Province, 266109, People's Republic of China;Shandong Institute of Sericulture, No. 21 Zhichu North Road, Zhifu District, Yantai City, Shandong Province, 264001, People's Republic of China ~72: GUO, Xiaohong;LI, Meng;LI, Shurong;SONG, Bing;SONG, Ningning;WANG, Xiaoya;WU, Nan;ZHAO, Huili~

2022/01218 ~ Complete ~54:ECOLOGICAL RESTORATION AND SUSTAINABLE MANAGEMENT METHOD FOR SHRUB-ENCROACHED GRASSLAND ~71:XINJIANG INSTITUTE OF ECOLOGY AND GEOGRAPHY CHINESE ACADEMY OF SCIENCES, No. 818, Beijing South Road, Urumqi, Xinjiang Uygur Autonomous Region, 830011, People's Republic of China ~72: WANG, Xiaojing;WANG, Yongdong;XU, Xinwen;YOU, Yuan;ZHOU, Na~

2022/01182 ~ Complete ~54:CONTROLLED-SOURCE AUDIO-FREQUENCY MAGNETOTELLURIC DATA PROCESSING METHOD APPLICABLE TO MAGNETOTELLURIC SOUNDING INVERSION SOFTWARE ~71:INSTITUTE OF GEOLOGY AND GEOPHYSICS CHINESE ACADEMY OF SCIENCES, No. 19, Beitucheng Western Road, People's Republic of China ~72: ChangMin FU;Da LEI;Hao REN;QingYun DD;Ruo WANG;ZhiGuo AN~

2022/01185 ~ Complete ~54:A MARINE VESSEL PROPULSION DEVICE ~71:Deyu Fang, A107, Public Service Center, No. 1, Zhongma Street, Zhongma Qinzhou Industrial Park, Qinzhou Port Area, China (Guangxi) Pilot Free Trade Zone, Qinzhou, Guangxi, People's Republic of China;Guangxi Qinzhou Suhang New Material Technology Co., Ltd., A107, Public Service Center, No. 1, Zhongma Street, Zhongma Qinzhou Industrial Park, Qinzhou Port Area, China (Guangxi) Pilot Free Trade Zone, Qinzhou, Guangxi, People's Republic of China;Lilin Tan, A107, Public Service Center, No. 1, Zhongma Street, Zhongma Qinzhou Industrial Park, Qinzhou Port Area, China (Guangxi) Pilot Free Trade Zone, Qinzhou, Guangxi, People's Republic of China;Quan Zhang, A107, Public Service Center, No. 1, Zhongma Street, Zhongma Qinzhou Industrial Park, Qinzhou Port Area, China (Guangxi) Pilot Free Trade Zone, Qinzhou, Guangxi, People's Republic of China;Quan Zhang, A107, Public Service Center, No. 1, Zhongma Street, Zhongma Qinzhou Industrial Park, Qinzhou Port Area, China (Guangxi) Pilot Free Trade Zone, Qinzhou, Guangxi, People's Republic of China;Xuanyi Weng, A107, Public Service Center, No. 1, Zhongma Street, Zhongma Qinzhou Industrial Park, Qinzhou Port Area, China (Guangxi) Pilot Free Trade Zone, Qinzhou, Guangxi, People's Republic of China;Xuanyi Weng, A107, Public Service Center, No. 1, Zhongma Street, Zhongma Qinzhou Industrial Park, Qinzhou Port Area, China (Guangxi) Pilot Free Trade Zone, Qinzhou, Guangxi, People's Republic of China ~72: Deyu Fang;Lilin Tan;Quan Zhang;Xuanyi Weng~ 33:CN ~31:202111110090.6 ~32:23/09/2021

2022/01207 ~ Complete ~54:METHOD FOR CONSTRUCTING REINFORCED CONCRETE ARTIFICIAL PILLARS ~71:Changsha Institute of Mining Research Co., Ltd., No.343, Lushan South Road, Yuelu District, Changsha City, Hunan Province, 410012, People's Republic of China;JIANGXI UNIVERSITY OF SCIENCE AND TECHNOLOGY, No.343, Lushan South Road, Yuelu District, Changsha City, Hunan Province, 410012, People's Republic of China ~72: GUO, Zeyang;HE, Huansha;HUANG, Cong;HUANG, Yinghua;LI, Zhen;LIU, Chang;LV, Guanying;QI, Guanglu;QIN, Min;Tan, Xingyu;ZENG, Peng;ZHAO, Congcong;ZHAO, Kui;ZHAO, Liang~ 33:CN ~31:202111434726.2 ~32:29/11/2021

2022/01226 ~ Complete ~54:CONSOLIDATION TYPE BEAD SAW AND MANUFACTURING METHOD THEREOF ~71:QINGDAO UNIVERSITY OF SCIENCE AND TECHNOLOGY, No.99, Songling Road, Laoshan District, Qingdao City, People's Republic of China ~72: GAO, Wei;JIANG, Hongfei;WU, Conghao;YAN, Pengfei~

2022/01245 ~ Complete ~54:A LONG-ACTING BIOLOGICAL ORGANIC FERTILIZER ~71:Guoliang Zhao, 053600 No. 888, Zhenzhi, Madian Vil., Madian Town, Anping County, Hengshui, Hebei, People's Republic of China ~72: Guoliang Zhao~ 33:CN ~31:202010609272.7 ~32:29/06/2020

2022/01251 ~ Complete ~54:FABRIC SPRAY COMPOSITIONS ~71:UNILEVER GLOBAL IP LIMITED, Port Sunlight, Wirral, Merseyside, CH62 4ZD, United Kingdom ~72: CHRISTOPHER BOARDMAN~ 33:EP ~31:19189218.1 ~32:30/07/2019

2022/01257 ~ Complete ~54:METHOD TO ISOLATE TCR GENES ~71:NEOGENE THERAPEUTICS B.V., Science Park 106, Netherlands ~72: BENDLE, Gavin M.;GADIOT, Jules F.C.;GOMEZ-EERLAND,

Raquel;KUILMAN, Thomas;LINNEMANN, Carsten;SCHRIKKEMA, Deborah Sophie;SCHUMACHER, Antonius Nicolaas Maria;VAN HEIJST, Jeroen W.J.~ 33:US ~31:62/874,125 ~32:15/07/2019;33:US ~31:62/975,924 ~32:13/02/2020;33:US ~31:63/024,341 ~32:13/05/2020;33:US ~31:63/034,157 ~32:03/06/2020;33:US ~31:63/039,346 ~32:15/06/2020

2022/01205 ~ Complete ~54:SYSTEM FOR INTELLIGENTLY AND RAPIDLY IDENTIFYING MARINE PLANKTON ~71:Shandong Marine Resource and Environment Research Institute (Shandong Marine Environmental Monitoring Center, Shandong Aquatic Products Quality Inspection Center), No. 216, Changjiang Road, Economic and Technological Development Zone, Yantai City, Shandong Province , 264006, People's Republic of China ~72: CHENG, Ling;FU, Ping;HE, Jianlong;JIANG, Xiangyang;MA, Yuanqing;SONG, Xiukai;SUI, Fu;WANG, Ning~

2022/01255 ~ Complete ~54:CEMENT PREMIXER, DEVICE FOR PRODUCING A CONCRETE MIXTURE AND METHOD FOR PRODUCING A CEMENT SUSPENSION ~71:SONOCRETE GMBH, Thiemstrasse 45, Germany ~72: Dr. Christiane RÖSSLER;Ricardo REMUS~ 33:DE ~31:10 2019 120 939.0 ~32:02/08/2019

2022/01187 ~ Complete ~54:METHOD FOR EXTRACTING GARDENIA FRUIT OIL BASED ON UNIFORM DESIGN METHOD ~71:HI-TECH BIO-AGRO CO., LTD., National Agricultural Science and Technology Park, Heshi Town, Quyuan Management District, Yueyang City, Hunan Province, 414400, People's Republic of China;Hunan Academy of Forestry, Hunan Academy of Forestry, No.658 shaoshan South Road, Tianxin District, Changsha City, Hunan Province, 410004, People's Republic of China ~72: Chen Jingzhen;Kuang Ding;Li Changzhu;Li Dangxun;Li Peiwang;Xiao Zhihong;Yang Yan;Zhang Aihua~

2022/01220 ~ Complete ~54:CONDENSED IMIDAZOLE DERIVATIVES SUBSTITUTED BY TERTIARY HYDROXY GROUPS AS PI3K-GAMMA INHIBITORS ~71:Incyte Corporation, 1801 Augustine Cut-Off, WILMINGTON 19803, DE, USA, United States of America ~72: BUESKING, Andrew W.;BURNS, David M.;COMBS, Andrew P.;DOUTY, Brent;FALAHATPISHEH, Nikoo;JALLURI, Ravi Kumar;LEVY, Daniel;POLAM, Padmaja;SHAO, Lixin;SHEPARD, Stacey;SHVARTSBART, Artem;SPARKS, Richard B.;YUE, Eddy W.~ 33:US ~31:62/574,057 ~32:18/10/2017;33:US ~31:62/608,897 ~32:21/12/2017;33:US ~31:62/727,316 ~32:05/09/2018

2022/01234 ~ Complete ~54:PHOSPHORUS PRODUCTION METHODS AND SYSTEMS AND METHODS FOR PRODUCING A REDUCTION PRODUCT ~71:NOVAPHOS INC., 3200 COUNTY ROAD 630 WEST, FORT MEADE, FLORIDA 33841, USA, United States of America ~72: BLAKE, David B.;BLAKE, Lynnae L.;VIGNOVIC, Mark~ 33:US ~31:62/868,919 ~32:30/06/2019;33:US ~31:62/905,749 ~32:25/09/2019;33:US ~31:63/006,637 ~32:07/04/2020;33:US ~31:16/914,182 ~32:26/06/2020

2022/01184 ~ Complete ~54:A COVER FOR A RECEPTACLE ~71:MILOSEVICH, Abigail, No 84, Jack Nicklaus Drive, Pecanwood Estate, South Africa ~72: MILOSEVICH, Abigail~

2022/01192 ~ Complete ~54:INTELLIGENT DYNAMIC GUIDANCE DEVICE FOR LARGE PARKING LOT BASED ON WIRELESS COMMUNICATION ~71:Henan University of Urban Construction, Henan University of Urban Construction, Longxiang Avenue, Xincheng District, Pingdingshan City, Henan Province, 467036, People's Republic of China ~72: CHEN, Shu;HOU, Yuqing;JIAO, Shuaiyang;LI, Aizeng;LIU, Lihua;SONG, Minglei;WEI, Yannan;XIA, Zhixiang;XUE, Liyuan~

2022/01195 ~ Complete ~54:THREE-STAGE DECOMPRESSION TYPE V-SHAPED HYDROCYCLONE GAS FLOATING DEVICE ~71:China University of Petroleum (East China), No. 66, West Changjiang Road, Huangdao District, Qingdao, Shandong, 266580, People's Republic of China ~72: LIU, Chunhua;LIU, Xinfu;ZHANG, Ming~

2022/01209 ~ Complete ~54:PREPARATION METHOD OF ARONIA MELANOCARPA POLYSACCHARIDE FOR PROTECTING ALCOHOLIC LIVER INJURY ~71:Jilin Agricultural University, No. 2888, Xincheng Street, Nanguan District, Changchun City, Jilin Province, 130118, People's Republic of China ~72: Guan Lili;Li Meng;Li Yuting;Su Ling;Wang Jinling~

2022/01214 ~ Complete ~54:LOW-ROTOR-LOSS DOUBLE-STATOR AXIAL FLUX PERMANENT MAGNET MOTOR ~71:Shenyang University of Technology, No.111, Shenliao West Road, Economic and Technological Development Zone, Shenyang, 110870, People's Republic of China ~72: GUO, Zhenxing;PENG, Bing;SHI, Chen~

2022/01232 ~ Complete ~54:CROSS LINK INTERFERENCE MEASUREMENT CONDITIONS REPORTING ~71:NOKIA TECHNOLOGIES OY, KARAKAARI 7, 02610 ESPOO, FINLAND, Finland ~72: DALSGAARD, Lars;DU, Lei;HARREBEK, Johannes;PEDERSEN, Klaus, Ingemann;VEJLGAARD, Benny~

2022/01237 ~ Complete ~54:WALL PLASTERING BEAD ~71:DHINJAN, Budha Singh, 30 Myton Crescent, United Kingdom ~72: DHINJAN, Budha Singh~ 33:GB ~31:1910659.0 ~32:25/07/2019

2022/01248 ~ Complete ~54:ANALOGUES OF 3-(5-METHYL-1,3-THIAZOL-2-YL)-N-{(1R)-1-[2-(TRIFLUORO-METHYL)PYRIMIDIN-5-YL]ETHYL}BENZAMIDE ~71:Bayer Aktiengesellschaft, Kaiser-Wilhelm-Allee 1, LEVERKUSEN 51373, GERMANY, Germany;Bayer Pharma Aktiengesellschaft, MüIlerstr. 178, BERLIN 13353, GERMANY, Germany ~72: FISCHER, Oliver Martin;GANZER, Ursula;HERBERT, Simon Anthony;POOK, Elisabeth;ROTGERI, Andrea;ROTTMANN, Antje;THEDE, Kai~ 33:EP ~31:19182797.1 ~32:27/06/2019

2022/01181 ~ Complete ~54:VR/AR PRODUCT REMOTE DIGITAL-INTELLIGENT ART DISPLAY GLASSES ~71:ZHIJIANG COLLEGE OF ZHEJIANG UNIVERSITY OF TECHNOLOGY, NO. 958, YUEZHOU AVENUE, KEQIAO DISTRICT, SHAOXING CITY, People's Republic of China ~72: SONG, Hanwei;XIA, Yingchong;YE, Lele~

2022/01203 ~ Complete ~54:PREPARATION METHOD OF IRON/NITROGEN CO-DOPED ORDERED MESOPOROUS CARBON MATERIAL ~71:Qingdao University of Science and Technology, 53 Zhengzhou Road, Qingdao University of Science and Technology, Shibei District, Qingdao City, Shandong Province, People's Republic of China ~72: Dong Hongzhou;Dong Lifeng;Sui Lina;Yu Liyan~

2022/01231 ~ Complete ~54:RECEIVER FOR RECEIVING A COMBINATION SIGNAL TAKING INTO ACCOUNT INTERSYMBOL INTERFERENCE AND LOW COMPLEXITY, METHOD FOR RECEIVING A COMBINATION SIGNAL, AND COMPUTER PROGRAMME ~71:INNOVATIONSZENTRUM FÜR TELEKOMMUNIKATIONSTECHNIK GMBH IZT, AM WEICHSELGARTEN 5, 91058 ERLANGEN, GERMANY, Germany ~72: HIRSCHBECK, Martin~ 33:DE ~31:10 2019 209 801.0 ~32:03/07/2019

- APPLIED ON 2022-01-27 -

2022/01260 ~ Provisional ~54:RESIDENTIAL WARNING SIGN ~71:Steffens Gordon Botha, 524 Riekert street, Roseville, South Africa ~72: Steffens Gordon Botha~

2022/01261 ~ Provisional ~54:WIND INDICATING DEVICE ~71:PELLISSIER, Siegfried Charl, 26 Carmel Close, Ntulo Wildlife Estate, NELSPRUIT 1200, SOUTH AFRICA, South Africa ~72: PELLISSIER, Siegfried Charl~

2022/01262 ~ Provisional ~54:ENHANCED ENERGY HARVESTING FROM MOVING FLUIDS ~71:HANSMANN, Carl Ludwig, 2 Jasper Way, South Africa ~72: |HANSMANN, Carl Ludwig~

2022/01266 ~ Provisional ~54:ENHANCED ENERGY HARVESTING FROM MOVING FLUIDS ~71:HANSMANN, Carl Ludwig, 2 Jasper Way, South Africa ~72: HANSMANN, Carl Ludwig~

2022/01289 ~ Complete ~54:DEVICE FOR SEPARATING FINE SILT IN SEWAGE ~71:CHONGQING ARCHITECTURAL DESIGN INSTITUTE CO., LTD., No.31, Renhe Road, Yuzhong District, , Chongqing , 400015, People's Republic of China;Zunyi Normal University, Zunyi Normal University, Middle of Ping'an Avenue, Xinpu District, Zunyi, Guizhou, 563006, People's Republic of China ~72: GAO, Zhixi;HE, Li;TAN, Tao;ZENG, Boping~

2022/01295 ~ Complete ~54:MOVABLE FIXED TELESCOPIC BOX TYPE INTELLIGENT TEMPERATURE-CONTROLLED ROOM ~71:Ali Gangcheng Jiaqi Brick Factory, No.32 Huancheng Road, shiquanhe town, Gaer County, Tibet, People's Republic of China ~72: ChenZhengLong~

2022/01320 ~ Complete ~54:METHOD FOR THE BENEFICIATION OF IRON ORE STREAMS ~71:FORTESCUE METALS GROUP LTD, LEVEL 2, 87 ADELAIDE TERRACE, EAST PERTH, WESTERN AUSTRALIA 6004, AUSTRALIA, Australia ~72: ILICH, Bohdan Matthew;STRETCH, Stephen Andrew~ 33:AU ~31:2019902359 ~32:03/07/2019

2022/01322 ~ Complete ~54:PHARMAEUTICAL COMPOSITION COMPRISING ENSIFENTRINE ~71:VERONA PHARMA PLC, One Central Square, United Kingdom ~72: FRENCH, Edward James;SPARGO, Peter Lionel~ 33:GB ~31:1911517.9 ~32:12/08/2019

2022/01337 ~ Complete ~54:APPLICATION OF B-CASEIN A2 AND COMPOSITION THEREOF IN PROMOTING PROLIFERATION OF BIFIDOBACTERIUM ~71:BEIJING SANYUAN FOODS CO., LTD., No. 8 Yingchang Street, Daxing District, People's Republic of China ~72: CHEN, Lijun;JIANG, Tiemin;LI, Jiantao;LIU, Bin;LIU, Yanpin;QIAO, Weicang;ZHAO, Jun Ying;ZHOU, Weiming~

2022/01274 ~ Complete ~54:AN ECOLOGICAL BUILDING ENERGY SYSTEM BASED ON SOLAR ENERGY HEAT UTILIZATION ~71:Qingdao University of Technology, No. 11, Fushun Road, Shibei District, Qingdao, Shandong Province , 266011, People's Republic of China ~72: GAO, Weijun;GAO, Yanna;MENG, Xi~

2022/01278 ~ Complete ~54:A COASTAL BUILDING CURTAIN WALL AND METHOD FOR MANUFACTURING THE SAME ~71:Qingdao University of Technology, No. 11, Fushun Road, Shibei District, Qingdao, Shandong Province , 266011, People's Republic of China ~72: GAO, Weijun;GAO, Yanna;MENG, Xi~

2022/01286 ~ Complete ~54:EFFICIENT WASTE INCINERATION FLY ASH CURING AGENT AND PREPARATION METHOD THEREOF ~71:Qingdao University of Technology, No. 1, East Outer Ring Road, Fei County, Linyi City, Shandong Province, 273400, People's Republic of China ~72: CHEN, Peng;GUO, Bin;JIA, Shibo;LI, Yuanyuan;LIU, Jiang;QUAN, Xianhao~

2022/01305 ~ Complete ~54:THE AGRICULTURAL MACHINERY EQUIPMENT AND METHOD FOR THE INTEGRATION OF FINE SEED FERTILIZER AND SHALLOW BURIED DRIP IRRIGATION PIPE LAYING AND FILM MULCHING ~71:GUANGZHOU UNIVERSITY, 230 Waihuanxi Road, University Town, Guangzhou, People's Republic of China;IK GUJRAL PUNJAB TECHNICAL UNIVERSITY, Main Campus-Kapurthala, India;QINGDAO UNIVERSITY OF TECHNOLOGY, No. 777, Jialingjiang Road, Economic and Technological Development Zone, Qingdao, People's Republic of China ~72: HOU, Yali;LI, Changhe;LIU, Xiaochu;LU, Yue;SHARMA, Shubham~

2022/01313 ~ Complete ~54:ADAPTIVE OPPOSITE OBLIQUE CUTTING EXTRUSION PEELING AND FRICTION CLEANING DEVICE AND METHOD ~71:QINGDAO UNIVERSITY OF TECHNOLOGY, No. 777, Jialingjiang Road, Economic and Technological Development Zone, Qingdao, People's Republic of China;SICHUAN JIENENG DRYING EQUIPMENT CO., LTD., Room 1902, Floor 19, Unit 1, Building 1, No. 401 Sheng 'an Street, High-tech Zone, Chengdu, People's Republic of China ~72: HE, Guangzan;HOU, Yali;ZHANG, Xiaotian~

2022/01321 ~ Complete ~54:CEMENTITIOUS REAGENTS, METHODS OF MANUFACTURING AND USES THEREOF ~71:TERRA CO2 TECHNOLOGY HOLDINGS, INC., 601 16th Street Suite C #324, Golden, United States of America ~72: LAKE, Donald~ 33:US ~31:62/867,480 ~32:27/06/2019;33:US ~31:63/004,673 ~32:03/04/2020;33:US ~31:63/025,148 ~32:14/05/2020

2022/01271 ~ Complete ~54:SMART STRAWBERRY MICRO-LANDSCAPE SOILLESS CULTIVATION SYSTEM ~71:Institute of Leisure Agriculture, Shandong Academy of Agricultural Sciences, No. 202, Industrial North Road, Licheng District, Jinan City, Shandong Province , 250108, People's Republic of China ~72: CHEN, Shujun;WANG, Jianghui;WANG, Yue;YAO, Huimin;YUAN, Kuiming~

2022/01277 ~ Complete ~54:METHOD FOR PREPARING GOLD-LEAD FLUORESCENT NANOCLUSTER AND APPLICATION IN NABAM DETECTION ~71:Nanchang University, 999 Xuefu Avenue, Honggutan New District, Nanchang City, Jiangxi Province, 330000, People's Republic of China ~72: LI, Zhuo;WANG, Yong;ZHUANG, Qianfen~ 33:CN ~31:202110682857.6 ~32:19/06/2021

2022/01285 ~ Complete ~54:SOLAR ELECTRIC DEVICE FOR RESTORING SOIL CONTAMINATED BY HEAVY METAL ~71:Qingdao University of Technology, No.777, Jialingjiang East Road, Huangdao District, Qingdao City, Shandong, 266520, People's Republic of China ~72: CHEN, Peng;JIA, Shibo;LI, Yuanyuan;LIU, Jiang;QUAN, Xianhao;SHEN, Shuiyue~

2022/01298 ~ Complete ~54:AN ALTERNATOR DEVICE WITH VARIABLE POWER SETTINGS ~71:Giuliano RES, P.O. Box 720, Australia ~72: Giuliano RES~

2022/01329 ~ Complete ~54:QUINAZOLIN-4-ONE DERIVATIVES USEFUL FOR THE TREATMENT OF BRAF-ASSOCIATED DISEASES AND DISORDERS ~71:Array BioPharma Inc., 3200 Walnut Street, BOULDER 80301, CO, USA, United States of America ~72: BARBOUR, Patrick Michael;BROWN, Katie Keaton;COOK, Adam Wade;HICKEN, Erik James;KAHN, Dean Russell;LAIRD, Ellen Ruth;METCALF, Andrew Terrance;MORENO, David Austin;NEWHOUSE, Bradley Jon;PAJK, Spencer Phillip;PRIGARO, Brett Joseph;REN, Li;TARLTON, Eugene~ 33:US ~31:62/868,581 ~32:28/06/2019;33:US ~31:63/021,410 ~32:07/05/2020

2022/01336 ~ Complete ~54:DIFFERENT FORMS OF 6-CHLORO-2-ETHYL-N-(4-(4-(TRIFLUOROMETHOXY)PHENYL)PIPERIDINE-1-YL)BENZYL)IMIDAZO[1,2-A]PYRIDINE-3-CARBOXAMIDE ~71:QURIENT CO., LTD., C-801, 242, Pangyo-ro, Bundang-gu, Republic of Korea ~72: JUNG, Chunwon;KIM, Jaeseung;LEE, Saeyeon;NAM, Kiyean~

2022/01259 ~ Provisional ~54:A TRIPLE DECK VIBRATORY SCREEN AND A METHOD OF USING A TRIPLE DECK VIBRATORY SCREEN TO FUNCTION AS A SINGLE DECK VIBRATORY SCREEN ~71:MUNTON, Timothy, John, 14 KILLARNEY VILLAGE, 5TH STREET, KILLARNEY, JOHANNESBURG, 2193, South Africa ~72: MUNTON, Timothy, John~

2022/01269 ~ Complete ~54:HAZARDOUS CHEMICAL GAS REMOTE-MEASURING DETECTION DEVICE AND METHOD ~71:Hunan Aerospace YuanWang Science And Technology Co., Ltd, Building 2, Hunan Aerospace Administration Industrial Zone, No. 217, Fenglin 3 Road, Yuelu District, Changsha City, Hunan Province , 410013, People's Republic of China ~72: CHANG, Shengli;FANG, Xiao;LING, Gang;WANG, Gaoming;WU, Hao;YIN, Shouqin~

2022/01299 ~ Complete ~54:CERAMIC TILE CRUSHING AND DISMANTLING SYSTEM BASED ON ULTRASONIC VIBRATION ~71:HANERGY (QINGDAO) LUBRICATION TECHNOLOGY CO., LTD., No. 23-6, Tianshan Third Road, Jimo District, Qingdao, People's Republic of China;IK GUJRAL PUNJAB TECHNICAL UNIVERSITY, Main Campus-Kapurthala, India;QINGDAO UNIVERSITY OF TECHNOLOGY, No. 777, Jialingjiang Road, Economic and Technological Development Zone, Qingdao, People's Republic of China ~72: HOU, Yali;LI, Changhe;SHARMA, Shubham;ZHANG, Zechen;ZHOU, Zongming~

2022/01308 ~ Complete ~54:A DOFFER ONLINE AUTOMATIC CLEANING DEVICE AND METHOD ~71:QINGDAO DONGJIA TEXTILE MACHINERY GROUP CO., LTD., No. 89, Juyang Road, Qingdao, People's Republic of China;QINGDAO UNIVERSITY OF TECHNOLOGY, No. 777, Jialingjiang Road, Economic and Technological Development Zone, Qingdao, People's Republic of China ~72: HOU, Yali;JI, Heju;LI, Changhe;SUN, Jingang~

2022/01314 ~ Complete ~54:FIBER CARDING MACHINE BASED ON ROLLER TYPE CARDING STRUCTURE ~71:QINGDAO DONGJIA TEXTILE MACHINERY GROUP CO., LTD., No. 89, Juyang Road, Qingdao, People's Republic of China;QINGDAO UNIVERSITY OF TECHNOLOGY, No. 777, Jialingjiang Road, Economic and Technological Development Zone, Qingdao, People's Republic of China ~72: HOU, Yali;JI, Heju;LI, Changhe;WANG, Xiaoming~

2022/01326 ~ Complete ~54:ENERGY EFFICIENT WIRELESS DETONATOR SYSTEM ~71:DETNET SOUTH AFRICA (PTY) LTD, AECI Place, The Woodlands, Woodlands Drive, Woodmead, South Africa ~72: MAURISSENS, Daniel Auguste~ 33:ZA ~31:2019/05911 ~32:09/09/2019

2022/01279 ~ Complete ~54:METHOD FOR COLLECTING OUTDOOR THERMAL ENVIRONMENT DATA OF URBAN BUILDING GROUP BASED ON INFRARED DETECTION ~71:Qingdao University of Technology, No. 11, Fushun Road, Shibei District, Qingdao, Shandong Province , 266011, People's Republic of China ~72: GAO, Weijun;GAO, Yanna;MENG, Xi~

2022/01282 ~ Complete ~54:DEVICE FOR COLLECTING, DETECTING AND COMPREHENSIVELY TREATING LEACHATE ~71:Qingdao University of Technology, No.777, Jialingjiang East Road, Huangdao District, Qingdao City, Shandong, 266520, People's Republic of China ~72: CHEN, Peng;JIA, Shibo;LI, Yuanyuan;LIU, Jiang;QUAN, Xianhao;SHEN, Shuiyue~

2022/01291 ~ Complete ~54:SHOCK-ABSORBING FABRICATED SUSPENDED STAIRCASE STRUCTURE ~71:Anhui Xinhua University, No.555 Wangjiang West Road, Shushan District, Hefei City, Anhui Province, People's Republic of China ~72: He Xiaoyu;Jiang Yaqiong;Wu Tao~

2022/01319 ~ Complete ~54:SAFE, ENVIRONMENTALLY FRIENDLY AND CONTROLLABLE PROCESS FOR SYNTHESIZING DIEPOXIDE ~71:JIANGSU TETRA NEW MATERIAL TECHNOLOGY CO., LTD, RAO, Linghua NO.6-2 Zhonggang Road, Taixing Economic Development Zone, Taizhou, Jiangsu, 225300, People's Republic of China ~72: CAO, XiangMing;CHANG, YangJun;HAN, JianWei;JIA, Quan;YANG, Sheng~ 33:CN ~31:201910564540.5 ~32:27/06/2019

2022/01324 ~ Complete ~54:ABRASIVE ARTICLE AND METHOD OF FORMING ~71:SAINT-GOBAIN ABRASIFS, Rue de I'Ambassadeur, 78700 Conflans-Sainte-Honorine, France;SAINT-GOBAIN ABRASIVES, INC., One New Bond Street, Worcester, Massachusetts, 01615, United States of America ~72: AIYUN LUO;GWENAËLLE RINGENBACH;IGNAZIO GOSAMO;JI XIAO;LISE LAUVERGEON~ 33:CN ~31:201910584014.5 ~32:28/06/2019

2022/01330 ~ Complete ~54:IMIDAZO[4,5-C]PYRIDINE DERIVATIVES AS TOLL-LIKE RECEPTOR AGONSITS ~71:Pfizer Inc., 235 East 42nd Street, NEW YORK 10017, NY, USA, United States of America ~72: AHMAD, Omar;FENSOME , Andrew;FISHER, Ethan Lawrence;LACHAPELLE, Erik Alphie;UNWALLA, Rayomand J.;XIAO, Jun;ZHANG, Lei~ 33:US ~31:62/875,465 ~32:17/07/2019;33:US ~31:62/961,288 ~32:15/01/2020

2022/01287 ~ Complete ~54:APPLICATION OF TREM 2 PROTEIN ANTIBODY COATED MAGNETIC BEADS IN EXTRACTION OF MICROGLIA-DERIVED EXOSOMES IN SERUM ~71:Nanjing University, No.163 Xianlin Avenue, Nanjing City, Jiangsu Province, 210000, People's Republic of China ~72: DING, Xiang;LI, Liang~

2022/01311 ~ Complete ~54:POTATO PLANTING MACHINE WITH PRECISE SCREENING, INTELLIGENT RECOGNITION OF CUTTING AND MIXING ~71:LIAONING UNIVERSITY OF TECHNOLOGY, No. 169, Shiying Street, Jinzhou, People's Republic of China;QINGDAO UNIVERSITY OF TECHNOLOGY, No. 777, Jialingjiang Road, Economic and Technological Development Zone, Qingdao, People's Republic of China;SHANGHAI JINZHAO ENERGY SAVING TECHNOLOGY CO., LTD., Building 5, No. 1288, Boxue Road, Jiading District, People's Republic of China ~72: HOU, Yali;JIA, Dongzhou;LI, Changhe;YANG, Yuying;ZHANG, Naiqing~

2022/01331 ~ Complete ~54:MULTI-PANEL TONNEAU COVER ~71:Truck Accessories Group, LLC, 28858 Ventura Drive, ELKHART 46517, IN, USA, United States of America ~72: DYLEWSKI, II, Eugene A.~ 33:US ~31:62/875,172 ~32:17/07/2019;33:US ~31:62/928,448 ~32:31/10/2019;33:US ~31:62/928,606 ~32:31/10/2019;33:US ~31:62/929,129 ~32:01/11/2019;33:US ~31:62/929,141 ~32:01/11/2019;33:US ~31:62/929,161 ~32:01/11/2019;33:US ~31:62/929,189 ~32:01/11/2019;33:US ~31:62/929,244 ~32:01/11/2019;33:US ~31:16/928,117 ~32:14/07/2020

2022/01385 ~ Complete ~54:A SYSTEM FOR, AND METHOD OF RISK MANAGEMENT RELATED TO STATUTORY AND REGULATORY COMPLIANCE WITHIN A SOUTH AFRICAN ORGANISTION ~71:THEKVEST LEGAL ADVISORY SERVICES, UNIT 4 WATERFRONT OFFICE PARK, CORNER WEST AND REPUBLIC ROAD, South Africa ~72: LERATO THEKISO~

2022/01292 ~ Complete ~54:EXPERIMENTAL SYSTEM AND METHOD FOR SIMULATING SPONTANEOUS COMBUSTION AND THREE-ZONE DISTRIBUTION IN GOAF ~71:Guizhou Qianxi Energy Development Co., Ltd, Qianxi County, Bijie City, Guizhou Province, 551507, People's Republic of China;Shandong University of Science and Technology, No. 579, Qianwangang Road, Huangdao District, Qingdao City, Shandong Province, 266590, People's Republic of China ~72: CHEN Dawei;LI Hongxian;LIU Xuefei;MA Zan;SUN Shouyi;SUN Xiangke;WANG Yi;XIE Hengxing;XIE Jun;XU Shurong~

2022/01294 ~ Complete ~54:RAIL MOTOR CAR FOR USE IN NARROW CHANNELS OF CABLE PIPES ~71:STATE GRID XINJIANG ELECTRIC POWER CO., LTD., TULUFAN ELECTRIC POWER SUPPLY COMPANY, No. 666, Guangming Road, Gaochang District, Turpan City, Turpan Region, Xinjiang Uygur Autonomous Region, People's Republic of China ~72: GANG, Ligang;LIU, Huhu;LU, Zhengmin;TANG, Huaizhi;WEI, Gang;XUE, Gang~ 33:CN ~31:202111627571.4 ~32:28/12/2021

2022/01312 ~ Complete ~54:AUTOMATIC KNIFE ARRANGEMENT AND CUTTING DEVICE, CUTTING MACHINE AND ITS WORKING METHOD AND APPLICATION ~71:QINGDAO UNIVERSITY OF TECHNOLOGY, No. 777, Jialingjiang Road, Economic and Technological Development Zone, Qingdao, People's Republic of China;XINJIANG JIANG NING LIGHT INDUSTRIAL MACHINERY ENGINEERING TECHNOLOGY CO., LTD., Room 301, 3rd Floor, No. 303, Yinxing Street, Urumqi, People's Republic of China ~72: CHE, Ji;HOU, Yali;SUN, Jingang~

2022/01325 ~ Complete ~54:FUNGICIDAL COMBINATIONS, MIXTURES AND COMPOSITIONS AND USES THEREOF ~71:ADAMA MAKHTESHIM LTD., P.O. Box 60, Beer Sheva, 8410001, Israel ~72: SAMI SHABTAI~ 33:US ~31:62/877,180 ~32:22/07/2019

2022/01263 ~ Complete ~54:A MICROBIAL CHINESE HERBAL MEDICINE FEED FOR DETOXIFYING AND DEODORIZING AND ENHANCING AROMA AND IMPROVING MUTTON QUALITY ~71:ZHANG, Xia, Building 2, Shida Century Community, Dongsheng District, Ordos City, Inner Mongolia Autonomous Region, People's Republic of China ~72: KANG, Le;ZHANG, Chuyue;ZHANG, Xia;ZHANG, Yao~

2022/01383 ~ Provisional ~54:HANDSAW KNIFE ~71:RHUDOLF SEEMISE MOATSHE, 1344 STAND SECTION, MOTHOTLUG, MADIBENGG, NORTH WEST, South Africa ~72: RHUDOLF SEEMISE MOATSHE ~

2022/01296 ~ Complete ~54:HYDANTOIN PHARMACEUTICAL CO-CRYSTAL AND PREPARATION METHOD THEREOF ~71:Qingdao University of Science and Technology, No. 53 Zhengzhou Road, Shibei District, Qingdao City, Shandong Province, 266045, People's Republic of China ~72: CHI, Jingqi;DU, Yunmei;SUN, Yuexin;WANG, Lei~

2022/01270 ~ Complete ~54:METHOD FOR PREPARING CHIRAL OXINDOLE COMPOUND CONTAINING ALL-CARBON QUATERNARY CENTER ~71:Shihezi University, No. 211, Beisi Road, Shihezi City, Xinjiang Uygur Autonomous Region, 832003, People's Republic of China ~72: LI, Shiwu;REN, Yingzheng;ZHAO, Yujie;ZHAO, Zhifei~

2022/01301 ~ Complete ~54:PURELY HUMAN-POWERED DOUBLE-LAYER CONTROLLABLE POWER-ASSISTED BICYCLE ACCESS DEVICE ~71:INNER MONGOLIA UNIVERSITY FOR NATIONALITIES, No. 536, Huolinhe Street, Horqin District, Tongliao, People's Republic of China;NINGBO SANHAN ALLOY MATERIAL CO., LTD., No. 333, LianTang Road, Binhai Cixi Economic Development Zone, Ningbo, People's Republic of China;QINGDAO UNIVERSITY OF TECHNOLOGY, No. 777, Jialingjiang Road, Economic and Technological Development Zone, Qingdao, People's Republic of China ~72: HONG, Huaping;HOU, Yali;LI, Changhe;LIU, Dewei;ZHAO, Huayang~

2022/01302 ~ Complete ~54:PAIR-ROLLER AUXILIARY ARTIFICIAL WINTER JUJUBE PICKING DEVICE AND LIFTING LOCKING MECHANISM ~71:HENAN UNIVERSITY OF SCIENCE AND TECHNOLOGY, No. 263, Kaiyuan Avenue Luoyang, People's Republic of China;QINGDAO KAWS INTELLIGENT MANUFACTURING CO. LTD., Room 408, Qingdao International Postdoctoral I&E Park, 506 Huicheng Road, Chengyang District, Qingdao, People's Republic of China;QINGDAO UNIVERSITY OF TECHNOLOGY, No. 777, Jialingjiang Road, Economic and Technological Development Zone, Qingdao, People's Republic of China ~72: KONG, Ming;LI, Xinping;QIN, Aiguo;YANG, Min~

2022/01304 ~ Complete ~54:A SMART WARDROBE INTEGRATING THE FUNCTIONS OF VACUUM PACKAGING, AUTOMATIC ACCESS AND IRONING ~71:QINGDAO KAWS INTELLIGENT MANUFACTURING CO. LTD., Room 408, Qingdao International Postdoctoral I&E Park, 506 Huicheng Road, Chengyang District, Qingdao, People's Republic of China;QINGDAO UNIVERSITY OF TECHNOLOGY, No. 777, Jialingjiang Road, Economic and Technological Development Zone ,Qingdao, People's Republic of China;XINJIANG INSTITUTE OF TECHNOLOGY, No. 1 Xuefu West Road, Aksu, People's Republic of China ~72: LI, Wenyi;LIU, Xiangdong;QIN, Aiguo;ZHANG, Yanbin~

2022/01310 ~ Complete ~54:AN ECCENTRIC WHEEL CONNECTING ROD PUNCHING AND SEPARATING DEVICE FOR AUXILIARY SEED POTATO CUTTING TUBER ~71:IK GUJRAL PUNJAB TECHNICAL UNIVERSITY, Main Campus-Kapurthala, India;LIAONING UNIVERSITY OF TECHNOLOGY, No. 169, Shiying Street, Jinzhou, People's Republic of China;QINGDAO UNIVERSITY OF TECHNOLOGY, No. 777, Jialingjiang Road, Economic and Technological Development Zone, Qingdao, People's Republic of China ~72: HOU, Yali;JIA, Dongzhou;LI, Changhe;SHARMA, Shubham;WANG, Leyi~

2022/01315 ~ Complete ~54:A SELF-ARRANGING KNIFE CUTTING DEVICE AND WORKING METHOD FOR ROOT CROPS ~71:IK GUJRAL PUNJAB TECHNICAL UNIVERSITY, Main Campus-Kapurthala, India;INNER MONGOLIA UNIVERSITY FOR NATIONALITIES, No. 536, Huolinhe Street, Horqin District, Tongliao, People's Republic of China;QINGDAO UNIVERSITY OF TECHNOLOGY, No. 777, Jialingjiang Road, Economic and Technological Development Zone, Qingdao, People's Republic of China ~72: HOU, Yali;SHARMA, Shubham;XU, Wenhao;ZHAO, Huayang~ 2022/01323 ~ Complete ~54:WATERPROOF METHOD AND WATERPROOF FLOW GUIDE DEVICE FOR COAL MINE ROOF ~71:SHANDONG UNIVERSITY OF SCIENCE AND TECHNOLOGY, No.579 Qian Wangang Road, Huangdao District, Qingdao, Shandong, 266590, People's Republic of China ~72: JIANG, Donghai;LUAN, Hengjie;WANG, Tongxu~ 33:CN ~31:201911352257.2 ~32:25/12/2019

2022/01328 ~ Complete ~54:PHARMACEUTICAL COMPOSITIONS FOR GLUCAGON AND GLP-1 CO-AGONIST PEPTIDES ~71:MedImmune Limited, Milstein Building, Granta Park, CAMBRIDGE CB21 6GH, CAMBRIDGESHIRE, UNITED KINGDOM, United Kingdom ~72: GOMES DOS SANTOS, Ana Lucia~ 33:US ~31:62/869,263 ~32:01/07/2019

2022/01332 ~ Complete ~54:PHARMACEUTICAL FORMULATION ~71:Klaria Pharma Holding AB, Virdings Allé 2, UPPSALA 754 50, SWEDEN, Sweden ~72: BOYER, Scott;HÜBINETTE, Fredrik~ 33:GB ~31:1912505.3 ~32:30/08/2019

2022/01334 ~ Complete ~54:ESTROGEN RECEPTOR MODULATORS FOR TREATING MUTANTS ~71:Recurium IP Holdings, LLC, 10835 Road to the Cure, Suite 205, SAN DIEGO 92121, CA, USA, United States of America ~72: BUNKER, Kevin Duane;DONATE, Fernando;HEGDE, Sayee Gajanan;HUANG, Peter Qinhua;LI, Jiali;MA, Jianhui;SAMATAR, Ahmed Abdi~ 33:US ~31:62/883,395 ~32:06/08/2019;33:US ~31:63/009,746 ~32:14/04/2020

2022/01272 ~ Complete ~54:DEVICE FOR SEPARATING AND RECYCLING BRAIN TUMOR TISSUES ~71:THE AFFILIATED HOSPITAL OF QINGDAO UNIVERSITY, Department of Neurosurgery, Brain Hospital, The Affiliated Hospital of Qingdao University, No.17 Jiangsu Road, Shinan District, Qingdao City, Shandong Province, People's Republic of China ~72: CHENG, Lei;HAN, Kun;LV, Bingke;SHI, Mingpeng;WANG, Lin;ZHANG, Hongliang~

2022/01303 ~ Complete ~54:TAKE-OUT HEATING AND HEAT PRESERVATION TRANSPORTATION EQUIPMENT THAT CAN UTILIZE SOLAR ENERGY ~71:HANERGY (QINGDAO) LUBRICATION TECHNOLOGY CO., LTD., No. 23-6, Tianshan Third Road, Jimo District, Qingdao, People's Republic of China;QINGDAO UNIVERSITY OF TECHNOLOGY, No. 777, Jialingjiang Road, Economic and Technological Development Zone, Qingdao, People's Republic of China ~72: HOU, Yali;LI, Changhe;LI, Kang;ZHOU, Zongming~

2022/01264 ~ Provisional ~54:BUILDING MANAGEMENT SYSTEM AND METHOD ~71:Homii Life Style (Pty) Ltd, 40 Dr AB Xuma Street, Kwazulu Natal, 4001, SOUTH AFRICA, South Africa ~72: CHETTY, Leo~

2022/01268 ~ Complete ~54:AN ADAPTIVE FCM LICENSE PLATE LOCALIZATION METHOD AND SYSTEM ~71:Yang Aiqiang, No.1 Nongda Road, Furong District, Changsha City, Hunan Province, People's Republic of China ~72: Yang Aiqiang~

2022/01265 ~ Provisional ~54:ENHANCED ENERGY HARVESTING FROM MOVING FLUID ~71:HANSMANN, Carl Ludwig, 2 Jasper Way, South Africa ~72: HANSMANN, Carl Ludwig~

2022/01275 ~ Complete ~54:A PREPARATION METHOD AND MACHINED PARTS FOR CERMETS ~71:Dezhi Guo, No. 139 Zhaiyang Vil., Yulong Town, Xingyang City, Henan Province, People's Republic of China ~72: Dezhi Guo~ 33:CN ~31:202110284923.4 ~32:17/03/2021

2022/01316 ~ Complete ~54:A MULTI-STAGE SCREENING LIMIT FEEDING DEVICE AND METHOD ~71:HANERGY (QINGDAO) LUBRICATION TECHNOLOGY CO., LTD., No. 23-6, Tianshan Third Road, Jimo District, Qingdao, People's Republic of China;QINGDAO UNIVERSITY OF TECHNOLOGY, No. 777, Jialingjiang Road, Economic and Technological Development Zone, Qingdao, People's Republic of China ~72: HOU, Yali;XU, Shuaiqiang;ZHOU, Zongming~

2022/01283 ~ Complete ~54:BUILDING INTEGRATED PHOTOTHERMAL HEATING SYSTEM ~71:QINGDAO UNIVERSITY OF TECHNOLOGY, 11 Fushun Road, Shibei District, Qingdao, Shandong Province, 266011, People's Republic of China ~72: GAO, Weijun;GAO, Yanna;MENG, Xi~

2022/01288 ~ Complete ~54:SIMPLE PENDULUM VIBRATION DAMPING DEVICE USED INSIDE LARGE WIND POWER GENERATOR TOWER ~71:Shengzhou Zhejiang University of Technology Innovation Research Institute, No. 388 Punan Avenue, Pukou Street, Shengzhou City, Shaoxing City, Zhejiang , 312451, People's Republic of China;Zhejiang University of Technology, No. 18, Chaowang Road, Xiacheng District, Hangzhou City, Zhejiang, 310014, People's Republic of China ~72: CHAI, Hongliang;DING, Zhenyu;GAO, Zengliang;GUAN, Chenfeng;GUO, Lijian;LIU, Hekun;SONG, Jiahui~

2022/01307 ~ Complete ~54:AN INTELLIGENT PROCESSING SYSTEM AND METHOD FOR RESOURCE REUSE OF ANIMAL FECES ~71:IK GUJRAL PUNJAB TECHNICAL UNIVERSITY, Main Campus-Kapurthala, India;QINGDAO UNIVERSITY OF TECHNOLOGY, No. 777, Jialingjiang Road, Economic and Technological Development Zone, Qingdao, People's Republic of China ~72: HOU, Yali;LI, Changhe;MA Hao;SHARMA, Shubham~

2022/01273 ~ Complete ~54:METHOD FOR PREPARING CHIRAL 3,3'-DISUBSTITUTED OXINDOLE COMPOUND CONTAINING CYANO STRUCTURE ~71:Shihezi University, No. 211, Beisi Road, Shihezi City, Xinjiang Uygur Autonomous Region, 832003, People's Republic of China ~72: LI, Shiwu;LU, Shuhui;REN, Yingzheng;ZHAO, Yujie~

2022/01297 ~ Complete ~54:REMOTELY CONTROLLABLE AERONAUTICAL ORDNANCE ~71:OVERWERX LTD., 502-504 Dudley Road, Wolverhampton, WV2 3AA, United Kingdom ~72: JEFFREY HILL~ 33:US ~31:62/568,518 ~32:05/10/2017;33:US ~31:62/726,976 ~32:04/09/2018

2022/01318 ~ Complete ~54:STAGED INFORMATION EXCHANGE FACILITATED BY CONTENT-ADDRESSABLE RECORDS INDEXED TO PSEUDONYMOUS IDENTIFIERS BY A TAMPER-EVIDENT DATA STRUCTURE ~71:IMAGINEBC, 18310 Montgomery Village Ave., Suite 230, United States of America ~72: DORDEVIC, Nenad;RIND, Erik, H.;RIND, Greg;ROSEN, Michael;TENLY, Charles~ 33:US ~31:16/520,534 ~32:24/07/2019

2022/01333 ~ Complete ~54:ANTI-CD96 ANTIBODIES AND METHODS OF USE THEREOF ~71:Agenus Inc., 3 Forbes Road, LEXINGTON 02421, MA, USA, United States of America ~72: BRIEND, Emmanuel Cyrille Pascal;BUSHELL, K. Mark;CHAND, Dhan Sidhartha;GOMBOS, Randi Barbara;IGNATOVICH, Olga;RAMSAY, Nicola Anne~ 33:US ~31:62/894,334 ~32:30/08/2019;33:US ~31:62/931,476 ~32:06/11/2019

2022/01335 ~ Complete ~54:ADJUSTABLE POSITION ROTARY UNION ~71:Equalaire Systems, Inc., 1414 Valero Way, CORPUS CHRISTI 78409, TX, USA, United States of America ~72: HENNIG, Mark Kevin~ 33:US ~31:62/885,637 ~32:12/08/2019

2022/01290 ~ Complete ~54:METHOD FOR PREPARING TEXTILE FABRICS WITH FLAME-RETARDANT AND ANTI-MOLTEN-DRIPPING COATING ~71:Qingdao University, Qingdao University, No.308, Ningxia Road, Shinan District, Qingdao, Shandong Province, 266071, People's Republic of China ~72: CHEN, Guohua;QU, Lijun;TIAN, Mingwei;WANG, Jinquan;ZHU, Shifeng~

2022/01281 ~ Complete ~54:DEGRADABLE SHOCKPROOF BUBBLE FILM AND PREPARATION METHOD THEREOF ~71:ZIBO ZHONGNAN PHARMACEUTICAL PACKAGING MATERIALS CO., LTD., Jinyingu Pioneer Park, Zhantai Road, Economic Development Zone, Linzi District, Zibo City, Shandong Province , 255400, People's Republic of China ~72: GONG, Xiaohan;LIU, Cheng;MU, Xize;WANG, Huanyu;WANG, Xinnan;WANG, Yubo~
2022/01267 ~ Complete ~54:PREPARATION METHOD AND APPLICATION OF CEMENTED BACKFILL MATERIALS BY USING STEEL SLAG-DESULFURIZATION BY-PRODUCT AGENT ~71:University of Science and Technology Beijing, No.30 Xueyuan Road, Haidian District, Beijing City, 100083, People's Republic of China ~72: Li Keqing;Liu Jialu;Ni Wen;Ren Yutong;Wu Bo;Wu Zeping;Yu Junhao;Zhang Minggen;Zhang Siqi~

2022/01317 ~ Complete ~54:IL-15 CONJUGATES AND USES THEREOF ~71:SYNTHORX, INC., 11099 North Torrey Pines Road, Suite 290, United States of America ~72: CAFFARO, Carolina E.;MILLA, Marcos;PTACIN, Jerod~ 33:US ~31:62/890,741 ~32:23/08/2019;33:US ~31:62/931,663 ~32:06/11/2019;33:US ~31:62/958,177 ~32:07/01/2020

2022/01280 ~ Complete ~54:SMALL ULTRAVIOLET AGING CHAMBER AND TEST METHOD ~71:Guizhou Highway Development Company, No. 100, Yangguan Avenue, Guanshanhu District, Guiyang City, Guizhou , 550081, People's Republic of China;Guizhou Institute of Technology, No. 1, Caiguan Road, Yunyan District, Guiyang City, Guizhou, 550003, People's Republic of China;Guizhou Qiancheng Hongjing Engineering Consulting Co., Ltd., Building C, Guiyang Gaoxin Information Software Center, No. 100, Yangguan Avenue, Gaoxin Zone, Guiyang City, Guizhou, 550081, People's Republic of China ~72: DUAN, Shaofan;GAN, Xinli;LI, Jie;MENG, Jialu;TANG, Hui;ZHANG, Wenli~

2022/01276 ~ Complete ~54:ALL-WEATHER SELF-SUPPORTING INTELLIGENT HIGHWAY SYSTEM ~71:ShanDong JiaoTong University, NO. 5001 Haitang Road, Changqing District, Jinan City, Shandong Province, 250357, People's Republic of China ~72: Zhang Lidong~

2022/01284 ~ Complete ~54:FLOW FIELD FIXTURE FOR ELECTROCHEMICAL MACHINING OF L-SHAPED CURVED WORKPIECE ~71:Qingdao University of Science and Technology, No.99, Songling Road, Laoshan District, Qingdao City, Shandong Province, 266000, People's Republic of China ~72: SONG, Lirong;WANG, Lei;XU, Guoqing;XU, Yuanchang~

2022/01293 ~ Complete ~54:PREPARATION METHOD OF A PRE-VASCULARIZED BRAIN ACELLULAR STENT ~71:Affiliated Hospital of Nantong University, No. 20, Xisi Road, Nantong City, Jiangsu Province, 226019, People's Republic of China ~72: Liu Qianqian;Shi Wei;Yao Junzhong~

2022/01300 ~ Complete ~54:AUTOMATIC POSITIONING CLAMPING CONSTAT FORCE LIFTING VERTICAL BICYCLE PARKING DEVICE ~71:LIAONING UNIVERSITY OF TECHNOLOGY, No. 169, Shiying Street, Jinzhou, People's Republic of China;NINGBO SANHAN ALLOY MATERIAL CO., LTD., No.333, Liantang Road, Binhai Cixi Economic Development Zone, Ningbo, People's Republic of China;QINGDAO UNIVERSITY OF TECHNOLOGY, No. 777, Jialingjiang Road, Economic and Technological Development Zone, Qingdao, People's Republic of China ~72: CHEN, Minkai;HONG, Huaping;HOU, YaliG;JIA, Dongzhou;LI, Changhe~

2022/01306 ~ Complete ~54:THE INVENTION RELATES TO AN ELECTRONIC SCALE, AN AUTOMATIC WEIGHING PACKAGING CODING SYSTEM AND A WORKING METHOD THEREOF ~71:IK GUJRAL PUNJAB TECHNICAL UNIVERSITY, Main Campus-Kapurthala, India;QINGDAO UNIVERSITY OF TECHNOLOGY, No. 777, Jialingjiang Road, Economic and Technological Development Zone, Qingdao, People's Republic of China ~72: HOU, Yali;LI, Changhe;SHARMA, Shubham;SHI, Zhuang~

2022/01309 ~ Complete ~54:CASHMERE CARDING MACHINE TRANSMISSION SYSTEM AND CARDING MACHINE ~71:QINGDAO DONGJIA TEXTILE MACHINERY GROUP CO., LTD., No. 89, Juyang Road, Qingdao, People's Republic of China;QINGDAO UNIVERSITY OF TECHNOLOGY, No. 777, Jialingjiang Road, Economic and Technological Development Zone, Qingdao, People's Republic of China ~72: HOU, Yali;JI, Heju;JIANG, Zhiyong;LI, Changhe~

2022/01327 ~ Complete ~54:ENZYME INHIBITORS ~71:KalVista Pharmaceuticals Limited, Porton Science Park, Bybrook Road, Porton Down, SALISBURY SP4 0BF, WILTSHIRE, UNITED KINGDOM, United Kingdom ~72: BAKER, Thomas Matthew;CHILDS, Mitchell Lewis;CLARK, David Edward;DAVIE, Rebecca Louise;EDWARDS, Hannah Joy;EVANS, David Michael;HINCHLIFFE, Paul Stuart;HODGSON, Simon Teanby;MAZZACANI, Alessandro;SAMBROOK SMITH, Colin Peter;SMITH, Alun John;WRIGGLESWORTH, Joseph William;YANG, Xuezheng~ 33:IB ~31:2019/052358 ~32:21/08/2019

- APPLIED ON 2022-01-28 -

2022/01347 ~ Complete ~54:INSTRUMENT FOR MEASURING TREE HEIGHT ~71:Nanjing Institute of Environmental Sciences, Ministry of Ecology and Environment, 8 Jiangwangmiao Street, Nanjing, Jiangsu Province, People's Republic of China ~72: Chen Shuifei;Ding Hui;Ge Xiaomin;Hu Yaping;Zhang Wenwen;Zheng Xiao;Zhou Xu~

2022/01351 ~ Complete ~54:BLAST HOLE DATA CAPTURE DEVICE AND BLAST HOLE MONITORING SYSTEM ~71:SINKO, Harry, 34 Davenport Road, Australia ~72: HARTMAN, Johannes Erasmus Greeff~ 33:ZA ~31:2020/06741 ~32:29/10/2020

2022/01377 ~ Complete ~54:CURATIVE & METHOD ~71:NATURAL FIBER WELDING, INC., 6533 N Galena Rd, Peoria, Illinois, 61614, United States of America ~72: AARON KENNETH AMSTUTZ;ISAIAH AMSTUTZ;LUKE MICHAEL HAVERHALS;PETER FRANCIS WALKER;SKYLAR CLEMENT~ 33:US ~31:62/869,393 ~32:01/07/2019;33:US ~31:62/989,275 ~32:13/03/2020

2022/01340 ~ Provisional ~54:HEALTH INSURANCE CO-OP ~71:MIGHT NDAMANA NXUMALO, 254 MEYERTON ROAD, South Africa ~72: MIGHT NDAMANA NXUMALO~

2022/01366 ~ Complete ~54:INTRAMEDULLARY NAIL FOR DISTRACTING A LONG BONE ~71:ORTHOFIX S.R.L., Via delle Nazioni, 9, Italy ~72: HAMMEL, Sebastian;MÜLLER, Martina;STAUCH, Roman~ 33:DE ~31:10 2019 122 354.7 ~32:20/08/2019

2022/01349 ~ Complete ~54:GRANULATION METHOD OF GRAPH DATA SERIES COMBINING TIME SCALE AND SIMILARITY ~71:Yunnan Minzu University, No.2929, Yuehua Street, Chenggong District, Kunming, Yunnan Province, People's Republic of China ~72: Gao Haiyan;Liu ShiHu;Yang Chunsheng~

2022/01371 ~ Complete ~54:SYSTEMS AND METHODS FOR HIGH-MAGNIFICATION HIGH-RESOLUTION PHOTOGRAPHY USING A SMALL IMAGING SYSTEM ~71:SHAPIRO, Benjamin, 8770 Washington Boulevard, Apartment 204, CULVER CITY 90232, CA, USA, United States of America;WAKS, Edo, 811 4th Street NW, Unit 1118, WASHINGTON, DC 20001, USA, United States of America ~72: SHAPIRO, Benjamin;WAKS, Edo~ 33:US ~31:62/868,489 ~32:28/06/2019

2022/01354 ~ Complete ~54:CHAIN CONVEYOR AND LINK FOR SAME ~71:JOY GLOBAL UNDERGROUND MINING LLC, 40 Pennwood Place, Suite 100, Warrendale, United States of America ~72: HOOVER, Joseph Daniel;JOHANNINGSMEIER, Grant William;PATTERSON, Benjamin Scott;STEWART, Christopher George;VAN DYK, Dirk Johannes~ 33:US ~31:63/142,989 ~32:28/01/2021;33:US ~31:63/159,652 ~32:11/03/2021

2022/01363 ~ Complete ~54:SYSTEM AND METHOD FOR ANALYSIS OF CURRENT AND VOLTAGE LEVELS WITHIN A CENTER PIVOT IRRIGATION SYSTEM ~71:VALMONT INDUSTRIES, INC., One Valmont Plaza, United States of America ~72: THATCHER, Tracy A.~ 33:US ~31:62/899,174 ~32:12/09/2019

2022/01370 ~ Complete ~54:CELL-BINDING MOLECULE-TUBULYSIN DERIVATIVE CONJUGATE AND PREPARATION METHOD THEREFOR ~71:Hangzhou DAC Biotech Co., Ltd., Yongxin Building 12, No. 260 Sixth

Street, Heda, HANGZHOU 310018, ZHEJIANG, CHINA (P.R.C.), People's Republic of China ~72: BAI, Lu;CAO, Minjun;GAI, Shun;HUANG, Yuanyuan;LAI, Juan;LI, Wenjun;YANG, Qingliang;YE, Hangbo;ZHAO, Linyao;ZHAO, Robert~

2022/01375 ~ Complete ~54:MACROCYCLIC COMPOUNDS AS STING AGONISTS AND METHODS AND USES THEREOF ~71:LUPIN LIMITED, Kalpataru Inspire, 3rd Floor, Off Western Express Highway, India ~72: BANERJEE, Moloy;BHOSKAR, Smita Aditya;DAS, Amit Kumar;GUPTA, Nishant Ramnivasji;JADHAV, Ganesh Rajaram;KALHAPURE, Vaibhav Madhukar;KAMBOJ, Rajender Kumar;KARCHE, Navnath Popat;PALLE, Venkata P.;RAMDAS, Vidya;VYAVAHARE, Vinod Popatrao;WALKE, Deepak Sahebrao~ 33:IN ~31:201921029556 ~32:22/07/2019;33:IN ~31:201921051086 ~32:10/12/2019;33:IN ~31:202021003961 ~32:29/01/2020

2022/01339 ~ Provisional ~54:HEALTH INSURANCE CO-OP ~71:MIGHT NDAMANA NXUMALO, 254 MEYERTON ROAD, South Africa ~72: MIGHT NDAMANA NXUMALO~

2022/01356 ~ Complete ~54:BREWING TECHNIQUE OF PERICARPIUM TRICHOSANTHIS SPARKLING WINE ~71:SHANDONG POLYTECHNIC, No. 23000, Jingshi East Road, Licheng District, People's Republic of China ~72: LV, Yinghui;SHI, Xiaohua;YU, Leijuan;ZHANG, Daolei~

2022/01341 ~ Provisional ~54:THE BIOLOGY OF TISSUE TRANSFIGURATION IN VIVO ~71:Raquel Duarte, Charlotte Maxeke Hospital, South Africa ~72: Raquel Duarte;Ugo Ripamonti~ 33:ZA ~31:2019/08010 ~32:03/12/2019

2022/01357 ~ Complete ~54:A METHOD FOR CONTROLLING THE BLACKENING OF FROZEN SHRIMPS AND CRABS DURING THAWING ~71:RONGCHENG YINHAI AQUATIC CO., LTD., Nanqiaotou Village, Wanglian Subdistrict Office, Rongcheng District, Weihai City, People's Republic of China;YELLOW SEA FISHERIES RESEARCH INSTITUTE, CHINESE ACADEMY OF FISHERY SCIENCES, 106 Nanjing Road, Shinan District, Qingdao City, People's Republic of China ~72: CAO, Rong;LIU, Qi;MOU, Weili;SUN, Huihui;ZHAO, Ling~

2022/01368 ~ Complete ~54:MULTILAYERED DIGITAL VEIL DESIGN METHOD FOR SECURITY AND PRIVACY PROTECTION OF IMAGE CONTENT ~71:HAINAN UNIVERSITY, No.58 Renmin Avenue, Meilan District, Haikou, Hainan, People's Republic of China ~72: YAO, Xiaoming~ 33:CN ~31:202010119741.7 ~32:26/02/2020

2022/01352 ~ Complete ~54:LENS COVER HAVING LENS ELEMENT ~71:HGCI, INC., 3993 Howard Hughes Parkway, United States of America ~72: CAI, Dengke;HUO, Yongfeng~ 33:WO ~31:PCT/CN2020/132703 ~32:30/11/2020

2022/01372 ~ Complete ~54:MATERIALS AND METHODS FOR POLYMERIC ANTIBODY RECEPTOR TARGETING ~71:Janssen Biotech, Inc., 800/850 Ridgeview Drive, HORSHAM 19044, PA, USA, United States of America ~72: GANESAN, Rajkumar;GEIST, Brian;LIN-SCHMIDT, Xiefan;MARUTHACHALAM, Bharathikumar Vellalore;SINGH, Sanjaya;VENKATARAMANI, Sathyadevi;ZWOLAK, Adam~ 33:US ~31:62/882,291 ~32:02/08/2019;33:US ~31:62/882,346 ~32:02/08/2019;33:US ~31:62/882,361 ~32:02/08/2019;33:US ~31:62/882,387 ~32:02/08/2019;33:US ~31:62/940,196 ~32:25/11/2019;33:US ~31:62/940,200 ~32:25/11/2019;33:US ~31:62/940,206 ~32:25/11/2019;33:US ~31:62/940,208 ~32:25/11/2019;33:US ~31:62/940,220 ~32:25/11/2019;33:US ~31:62/940,228 ~32:25/11/2019;33:US ~31:62/940,232 ~32:25/11/2019

2022/01373 ~ Complete ~54:MATERIALS AND METHODS FOR MULTIDIRECTIONAL BIOTRANSPORTATION ~71:Janssen Biotech, Inc., 800/850 Ridgeview Drive, HORSHAM 19044, PA, USA, United States of America ~72: GANESAN, Rajkumar;GEIST, Brian;LIN-SCHMIDT, Xiefan;MARUTHACHALAM, Bharathikumar Vellalore;SINGH,

Sanjaya;VENKATARAMANI, Sathyadevi;ZWOLAK, Adam~ 33:US ~31:62/882,291 ~32:02/08/2019;33:US ~31:62/882,346 ~32:02/08/2019;33:US ~31:62/882,361 ~32:02/08/2019;33:US ~31:62/882,387 ~32:02/08/2019;33:US ~31:62/940,196 ~32:25/11/2019;33:US ~31:62/940,200 ~32:25/11/2019;33:US ~31:62/940,206 ~32:25/11/2019;33:US ~31:62/940,208 ~32:25/11/2019;33:US ~31:62/940,220 ~32:25/11/2019;33:US ~31:62/940,228 ~32:25/11/2019;33:US ~31:62/940,232 ~32:25/11/2019

2022/01378 ~ Complete ~54:ANTI-CD154 ANTIBODIES AND USES THEREOF ~71:TONIX PHARMA LIMITED, 56 Ftzwilliam Square North, Dublin 2, D02 X224, Ireland ~72: SETH LEDERMAN~ 33:US ~31:62/869,489 ~32:01/07/2019;33:US ~31:63/018,123 ~32:30/04/2020

2022/01359 ~ Complete ~54:A DEEP SEA DERIVED CHITOSANASE CSN5 AND ITS ENCODING GENE AND APPLICATION ~71:YELLOW SEA FISHERIES RESEARCH INSTITUTE, CHINESE ACADEMY OF FISHERY SCIENCES, 106 Nanjing Road, Shinan District, Qingdao City, People's Republic of China ~72: CAO, Rong;LIU, Qi;SUN, Huihui;YANG, Guosong;ZHAO, Ling~

2022/01369 ~ Complete ~54:ENZYME INHIBITORS ~71:KalVista Pharmaceuticals Limited, Porton Science Park, Bybrook Road, Porton Down, SALISBURY SP4 0BF, UNITED KINGDOM, United Kingdom ~72: CLARK, David Edward;EDWARDS, Hannah Joy;EVANS, David Michael;GANCIA, Emanuela;MAZZACANI, Alessandro;OBARA, Alicja Stela;PITTAWAY, Rachael;WRIGGLESWORTH, Joseph William~ 33:IB ~31:2019/052359 ~32:21/08/2019

2022/01374 ~ Complete ~54:MELANOCYTE-REGULATING PEPTIDES ~71:IDP Discovery Pharma, S.L., Baldiri Reixac Nº 4, BARCELONA 08028, SPAIN, Spain ~72: ESTEBAN MARTÍN, Santiago;NEVOLA, Laura~ 33:EP ~31:19382674.0 ~32:02/08/2019

2022/01355 ~ Complete ~54:PROCESS FOR BREWING HEALTH-CARE CHINESE RICE WINE WITH GANODERMA MYCELIUM ~71:SHANDONG POLYTECHNIC, No. 23000, Jingshi East Road, Licheng District, People's Republic of China ~72: HUI, Zhiheng;LV, Yinghui;SHI, Xiaohua;YU, Leijuan;ZHANG, Daolei;ZHU, Zhanhui~

2022/01364 ~ Complete ~54:DEUTERATED COMPOUNDS FOR USE IN THE TREATMENT OF CANCER ~71:ARTIOS PHARMA LIMITED, Babraham Hall, Babraham Research Campus, United Kingdom ~72: BLENCOWE, Peter;CHARLES, Mark;EKWURU, Tennyson;FINCH, Harry;HEALD, Robert;MCCARRON, Hollie;STOCKLEY, Martin~ 33:GB ~31:PCT/GB2019/052240 ~32:09/08/2019;33:GB ~31:1917863.1 ~32:06/12/2019

2022/01384 ~ Provisional ~54:BIO-DIESEL INFUSED STOVE ~71:BOIPELO NELLY MOTSHABI, 2910 UNIT 9 GA RANKUWA, South Africa ~72: BOIPELO NELLY MOTSHABI ~

2022/01342 ~ Provisional ~54:CASH MANAGEMENT SYSTEM ~71:CHANDRA, Arijit, 38 Virginia Street, South Africa ~72: CHANDRA, Arijit~

2022/01348 ~ Complete ~54:PREPARATION METHOD AND PRODUCT OF ARSENIC-CONTAINING SULFIDE MINERAL DEPRESSANT IN COPPER TAILINGS ~71:Guangxi University, Daxue east road 100, Nanning, Guangxi Zhuang Autonomous Region, People's Republic of China ~72: Chen Jianhua;Chen Ye~

2022/01358 ~ Complete ~54:A METHOD FOR DETECTING FIVE PHOSPHOLIPIDS IN AQUATIC PRODUCTS ~71:YELLOW SEA FISHERIES RESEARCH INSTITUTE, CHINESE ACADEMY OF FISHERY SCIENCES, 106 Nanjing Road, Shinan District, Qingdao City, People's Republic of China ~72: CAO, Rong;GUO, Mengmeng;PENG, Jixing;TAN, Zhijun;WANG, Lianzhu;WU, Haiyan;ZHAO, Xinnan;ZHENG, Guanchao~

2022/01367 ~ Complete ~54:EHRLICHIA VACCINES AND IMMUNOGENIC COMPOSITIONS ~71:RESEARCH DEVELOPMENT FOUNDATION, 402 North Division Street, Carson City, United States of America;ZOETIS SERVICES LLC, 10 Sylvan Way, Parsippany, United States of America ~72: DOMINOWSKI, Paul J.;MAHAN, Suman;MCBRIDE, Jere W.;MILLERSHIP, Jason J.;MWANGI, Duncan M.;RAI, Sharath;WAPPEL, Sharon M.~ 33:US ~31:62/873,843 ~32:12/07/2019;33:US ~31:62/879,762 ~32:29/07/2019;33:US ~31:63/049,476 ~32:08/07/2020

2022/01379 ~ Complete ~54:ELECTRONIC DEVICE INCLUDING FLEXIBLE PRINTED CIRCUIT BOARD ~71:SAMSUNG ELECTRONICS CO., LTD., 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Republic of Korea ~72: DONGYUP LEE;HEO JOON;JUNGCHUL AN~ 33:KR ~31:10-2020-0096695 ~32:03/08/2020

2022/01338 ~ Provisional ~54:SAFETY INSURANCE CO-OP ~71:MIGHT NDAMANA NXUMALO, 254 MEYERTON ROAD, South Africa ~72: MIGHT NDAMANA NXUMALO~

2022/01353 ~ Complete ~54:TUBULAR SECTION FOR WIND TURBINE TOWER AND CONSTRUCTION METHOD FOR WIND TURBINE TOWER ~71:SHANGHAI FENGLING RENEWABLES CO.,LTD., Room 1001,10th Floor, No.138, Huaihai Middle Road, Huangpu District, People's Republic of China ~72: Bing ZHANG;Binyi CHEN;Jiangyi SONG;Mengyuan LI;Wei YANG;Yong YAN~ 33:CN ~31:202111210407.3 ~32:18/10/2021;33:CN ~31:202111212247.6 ~32:18/10/2021;33:CN ~31:202111212262.0 ~32:18/10/2021;33:CN ~31:202111212275.8 ~32:18/10/2021;33:CN ~31:202111212278.1 ~32:18/10/2021;33:CN ~31:202111212282.8 ~32:18/10/2021;33:CN ~31:202111224239.3 ~32:18/10/2021

2022/01344 ~ Provisional ~54:FUEL MY ACCOUNT ~71:DUMISANI PHILDIN DLAMINI, 5MAPHANYA STREET, South Africa;DUMISANI PHILDIN DLAMINI, 5MAPHANYA STREET, South Africa ~72: DUMISANI PHILDIN DLAMINI;DUMISANI PHILDIN DLAMINI~

2022/01346 ~ Complete ~54:METHOD OF RICE-DUCK SYMBIOSIS ~71:Institute of animal husbandry and veterinary medicine, Jiangxi Academy of Agricultural Sciences, Nanchang County Academy of Agricultural Sciences, Nanchang City, Jiangxi Province, 330299, People's Republic of China ~72: Chen Xiaolian;Huang Jiangnan;Ji Huayuan;Li Haiqin;Liu Chenlong;Liu Linxiu;Rao Yuling;Tang Weiguo;Wan Mingchun;Wei Qipeng;Zhou Quanyong~

2022/01376 ~ Complete ~54:PROCESS AND SYSTEM FOR DIAMOND CLARITY MEASUREMENT ~71:GOLDWAY TECHNOLOGY LIMITED, Unit 103, 1/F, Lakeside 2 (Building 10W), Phase 2, People's Republic of China ~72: CHENG, Ka Wing;HUI, Koon Chung;TANG, Wing Chi~ 33:HK ~31:19127404.2 ~32:29/07/2019

2022/01350 ~ Complete ~54:FERTILIZER FOR PLANTING CITRUS BERGAMIA, FERTILIZING METHOD AND FERTILIZING DEVICE ~71:Sichuan Agricultural University, No.211, Huimin Road, Wenjiang District, Chengdu City, Sichuan Provience, 611130, People's Republic of China ~72: Chen Hongmei;Chen Zhonghou;Guo Rong;Liu Fan;Nie Xiaobin;Wang Xiaohui~

2022/01365 ~ Complete ~54:METHOD OF DETERMINING RISK FOR CHRONIC STRESS AND STROKE ~71:NORTH-WEST UNIVERSITY, 1 Hoffman Street, Joon van Rooy Building, South Africa ~72: MALAN, Leoné;MALAN, Nicolaas, Theodor~ 33:ZA ~31:2019/05103 ~32:01/08/2019

2022/01380 ~ Complete ~54:A PROCESS AND SYSTEM FOR COLOUR GRADING FOR DIAMONDS ~71:GOLDWAY TECHNOLOGY LIMITED, Unit 103, 1/F, Lakeside 2 (Building 10W), Phase 2, People's Republic of China ~72: CHENG, Ka Wing;HUI, Koon Chung;TANG, Wing Chi~ 33:HK ~31:19127401.8 ~32:29/07/2019

2022/01345 ~ Complete ~54:CONSTRUCTION METHOD OF AN EXPRESSION VECTOR SUITABLE FOR SUGARCANE ~71:Guangxi Academy of Agricultural Sciences, No.174 Daxue Road, Nanning, Guangxi, 530007, People's Republic of China ~72: Chen Zhongliang;Huang Dongliang;Li Aomei;Liao Fen;Qin Cuixian;Wang Miao;Zhou Li~

2022/01362 ~ Complete ~54:USE OF DIHYDROARTEMISININ AND GYPENOSIDE-L IN MANUFACTURE OF MEDICAMENT FOR RESISTING TUMOR ~71:SHENZHEN UNIVERSITY, No. 3688 Nanhai Road, Nanshan, Shenzhen, Guangdong, 518000, People's Republic of China ~72: FURONG DENG;HANLIN WANG;JIAN ZHANG;PEIPEI XIE;QIAN ZHANG;SI CHEN~ 33:CN ~31:202111301077.9 ~32:04/11/2021

2022/01343 ~ Provisional ~54:ANTIVIRAL GLOVES ~71:Shomeez Ramathoolal-Louw, 9 Churchill Street, South Africa ~72: Shomeez Ramathoolal-Louw~ 33:ZA ~31:1 ~32:27/01/2022

2022/01360 ~ Complete ~54:A METHOD FOR PREPARING PROTEIN PEPTIDE CHELATED CALCIUM MICROSPHERES AND ITS APPLICATION ~71:YANTAI YUANLIDE MARINE BIOLOGICAL CO., LTD, No. 25, Dongguan Road, Penglai District, Yantai City, People's Republic of China;YELLOW SEA FISHERIES RESEARCH INSTITUTE, CHINESE ACADEMY OF FISHERY SCIENCES, 106 Nanjing Road, Shinan District, Qingdao City, People's Republic of China ~72: CAO, Rong;JIANG, Naiyi;LIU, Qi;SUN, Huihui;ZHAO, Ling~

2022/01361 ~ Complete ~54:METHODS AND COMPOSITIONS COMPRISING PURIFIED RECOMBINANT POLYPEPTIDES ~71:GENENTECH, INC., 1 DNA Way, South San Francisco, California, 94080, United States of America ~72: AILEN M SANCHEZ;ANNAMARIE AMURAO;ATIA NAIM;CHRISTOPHER A TESKE;CORAZON VICTA;JAYME FRANKLIN;JOHN LOWE;MARTIN VANDERLAAN;SALOUMEH KADKHODAYAN FISCHER;SUSAN C FISHER;X CHRISTOPHER YU~ 33:US ~31:61/877,517 ~32:13/09/2013

- APPLIED ON 2022-01-31 -

2022/01396 ~ Complete ~54:METHOD FOR ESTABLISHING LINEAR STANDARD CURVE FOR DETERMINING CONCENTRATION OF VOLATILE OIL SOLUTION IN FLUE-CURED TOBACCO LEAVES ~71:Sichuan agriculture university, No. 211, Huimin Road, Wenjiang District, Chengdu, Sichuan, 611130, People's Republic of China ~72: Liu Lei;Liu Yajie;Xie Qiang;Ye Keyuan;Zeng Shuhua;Zhang Yonghui~

2022/01423 ~ Complete ~54:REMOVAL DEVICE FOR REMOVING A TUBULAR KNITTED MANUFACTURE FROM A CIRCULAR KNITTING MACHINE FOR HOSIERY OR THE LIKE ~71:Lonati S.p.A., Via Francesco Lonati, 3, BRESCIA 25124, ITALY, Italy ~72: LONATI, Ettore;LONATI, Fausto;LONATI, Francesco~ 33:IT ~31:102019000023577 ~32:11/12/2019

2022/01417 ~ Complete ~54:A FORMATION CU-GNPS NANOCOMPOSITE COATINGS FOR ENHANCEMENT OF POOL BOILING PERFORMANCE OF R 134A ~71:BELGAMWAR, Sachin Ulhasrao, DEPARTMENT OF MECHANICAL ENGINEERING, BIRLA INSTITUTE OF TECHNOLOGY & amp; SCIENCE (BITS), PILANI, (PILANI CAMPUS), India;BHAUMIK, Swapan, DEPARTMENT OF MECHANICAL ENGINEERING, NATIONAL INSTITUTE OF TECHNOLOGY AGARTALA, India;KATARKAR, Anil Shankar, DEPARTMENT OF MECHANICAL ENGINEERING, NATIONAL INSTITUTE OF TECHNOLOGY AGARTALA, India;MAJUMDER, Biswajit, DEPARTMENT OF MECHANICAL ENGINEERING, NATIONAL INSTITUTE OF TECHNOLOGY AGARTALA, India;PINGALE, Ajay Dadabhau, DEPARTMENT OF MECHANICAL ENGINEERING, BIRLA INSTITUTE OF TECHNOLOGY & amp; SCIENCE (BITS), PILANI, (PILANI CAMPUS), India ~72: BELGAMWAR, Sachin Ulhasrao;BHAUMIK, Swapan;KATARKAR, Anil Shankar;PINGALE, Ajay Dadabhau~

2022/01387 ~ Provisional ~54:CABLE THEFT DETECTION DEVICE ~71:Neill Human, 18 Dianthus Street, South Africa ~72: Neill Human~

2022/01389 ~ Provisional ~54:SOLAR SMARPHONE WIRELESS POUCH ~71:Boitumelo Matlhaba, 23 scott street, the orchards, South Africa ~72: Boitumelo Matlhaba~

2022/01392 ~ Provisional ~54:WATER TREATMENT SYSTEM ~71:TAYLORMADE WATER SOLUTIONS (PTY) LTD., Plot 234 Clowyn Crescent Chelsea, Port Elizabeth, Eastern Cape, 6001, South Africa ~72: CHAYTEN RICHARD HAASBROEK;RICHARD PETER TAYLOR~

2022/01433 ~ Complete ~54:BOOM CONTROL SYSTEM ~71:PRETORIUS, MARTIN ANDRÉ, 54 PONGOLA, AERORAND, MIDDELBURG, 1050,, South Africa ~72: PRETORIUS, MARTIN ANDRÉ~ 33:ZA ~31:2021/00493 ~32:25/01/2021

2022/01400 ~ Complete ~54:NOVEL HEAT PUMP SYSTEM FOR HVAC ENGINEERING ~71:Xihua University, 9999#Hongguang Road, Pidu District, Chengdu City, Sichuan Province, 610039, People's Republic of China ~72: Fu Bin;Lin Shuang;Qi Xuejun;Tao Shuyan~

2022/01430 ~ Complete ~54:CLINKER ~71:Circle Seven Trading 997 CC, 14 Wingen Walk, Shallcross, DURBAN 4093, KwaZulu-Natal, SOUTH AFRICA, South Africa ~72: RASOOL, Zahed~ 33:ZA ~31:2019/04345 ~32:02/07/2019;33:ZA ~31:2019/04515 ~32:10/07/2019;33:ZA ~31:2019/07355 ~32:06/11/2019

2022/01397 ~ Complete ~54:POLISHING MACHINE ~71:Huzhou College, 1# Xueshi Road, Huzhou City, Zhejiang Province, 313000, People's Republic of China ~72: Cao Feng;Chen Haifeng;Yu Ying~

2022/01401 ~ Complete ~54:RECOMBINANT TYPE A SENECA VIRUS EXPRESSING LUCIFERASE ~71:Qingdao Agricultural University, No.700 Changcheng Road, Chengyang District, Qingdao City, Shandong Province, 266000, People's Republic of China ~72: Huang Yilan;Liu Fuxiao;Shan Hu;Wang Qianqian~

2022/01407 ~ Complete ~54:GREEN ROOF INLAID PURIFICATION MODULE FOR SPONGE CITIES ~71:Zhengzhou University of Aeronautics, No. 2, Middle of University Road, Zhengzhou City, Henan Province, People's Republic of China ~72: Fang Yan;Shuling Zhao;Xiaomeng Fan;Yuguang Fu;Zhenxing Tang~

2022/01422 ~ Complete ~54:PARABOLIC TROUGH COLLECTOR MODULE, PARABOLIC TROUGH COLLECTOR MODULE UNIT, AND SOLAR THERMAL POWER PLANT ~71:DEUTSCHES ZENTRUM FÜR LUFT- UND RAUMFAHRT E.V., Linder Höhe, Germany ~72: EICKHOFF, Martin~ 33:DE ~31:20 2019 104 454.3 ~32:13/08/2019

2022/01435 ~ Complete ~54:SPUNBONDED NONWOVEN LAMINATE AND METHOD FOR PRODUCING A SPUNBONDED NONWOVEN LAMINATE ~71:REIFENHÄUSER GMBH & CO. KG MASCHINENFABRIK, SPICHER STRAßE 46-48, 53844, TROISDORF,, Germany ~72: BOHL,PATRICK;SOMMER, SEBASTIAN;WAGNER, TOBIAS~ 33:EP ~31:21 154 643.7 ~32:01/01/2021;33:DE ~31:10 2021 102 287.8 ~32:01/02/2021

2022/01432 ~ Complete ~54:LASER GUIDE SYSTEM ~71:PRETORIUS, MARTIN ANDRÉ, 54 PONGOLA, AERORAND, MIDDELBURG, 1050,, South Africa ~72: PRETORIUS, MARTIN ANDRÉ~ 33:ZA ~31:2021/00492 ~32:25/01/2021

2022/01393 ~ Provisional ~54:WOODEN DRINKING STRAW ~71:SELLO ELIA MOLEKWA, 46 DR JANE WATERSTON STREET, South Africa ~72: SELLO ELIA MOLEKWA~

2022/01413 ~ Complete ~54:A PLANTING METHOD OF WINTER RAPE-SUMMER MILLET IN DRY CULTIVATION AND RAIN CULTIVATION ~71:ShiJiaZhuang Academy of Agricultural and Forestry Sciences, 479 Shengli North Street, Chang'an District, Shijiazhuang City, Hebei Province, 050041, People's Republic of China ~72: Fu Yali;Liang Lipeng;Song Juhong;Tian Dongliang;Tian Guoying;Wang Haishan~ 2022/01402 ~ Complete ~54:INFORMATION TECHNOLOGY DATA STORAGE DEVICE ~71:Zhengzhou Railway Vocational And Technical College, No.56 of Pengcheng Avenue, Zhengdong New District, Zhengzhou, Henan, People's Republic of China ~72: Bin Chen;Churan Liu;Dacheng Zhong;Haoyi Zhang;Lanzhi Cheng;Lina Yang;Sihan Yu;Wenli Hu;Zixiang Zhao~

2022/01411 ~ Complete ~54:MULTI-FUNCTION MODULAR EXPANDABLE VENTILATOR ~71:China Institute of Atomic Energy, No.1, Sanqiang Road, Fangshan District, Beijing, 102413, People's Republic of China ~72: Chen Lei;Chen Yan;Deng Guihua;Gao Li;Hu Shouyang;Jia Shihai;Jin Shangtai;Li Peiyu;Li Xiaomei;Lin Shoulong;Lu Zhiyong;Song Jinxing;Sun Pengfei;Sun Shaofeng;Zhang Yan;Zhang Yunyu;Zhao Mingrui;Zhao Yonggang;Zhi Yu;Zhou Jing~

2022/01431 ~ Complete ~54:AIR-ASSISTED FEEDER ~71:GUANGDONG OCEAN UNIVERSITY, No. 1, Haida Road, Mazhang District, Zhanjiang, People's Republic of China ~72: CHEN, Liang;HUANG, Jieting;LI, Ruizhi;PENG, Jianbin;PENG, Xiaohong;XU, Yue;YAN, Xiuying;ZENG, Fanjin~ 33:CN ~31:202110564757.3 ~32:24/05/2021

2022/01424 ~ Complete ~54:REFERENCE PICTURE RESAMPLING WITH SWITCHABLE FILTERS ~71:QUALCOMM Incorporated, ATTN: International IP Administration, 5775 Morehouse Drive, SAN DIEGO 92121-1714, CA, USA, United States of America ~72: COBAN, Muhammed Zeyd;SEREGIN, Vadim~ 33:US ~31:62/872,225 ~32:09/07/2019;33:US ~31:16/912,660 ~32:25/06/2020

2022/01434 ~ Complete ~54:ROOF BOLT DRILL SYSTEM ~71:PRETORIUS, MARTIN ANDRÉ, 54 PONGOLA, AERORAND, MIDDELBURG, 1050,, South Africa ~72: PRETORIUS, MARTIN ANDRÉ~ 33:ZA ~31:2021/00494 ~32:25/01/2021

2022/01395 ~ Complete ~54:A KIND OF SANDWICH-TYPE COMPOSITE MEMBRANE FOR PRESERVATION OF SAUCE BRAISED PORK PRODUCTS ~71:Jinzhou Medical University, Jinzhou Medical University, Jinzhou City, People's Republic of China ~72: Han Yanxia;Li Dandan;Ni Rong;Zhang Yan;Zhang Zhen~

2022/01406 ~ Complete ~54:CONNECTING DEVICE FOR PROTECTIVE PIPELINES FOR RAILWAY TRAFFIC ~71:Zhengzhou Railway Vocational And Technical College, No.56 of Pengcheng Avenue, Zhengdong New District, Zhengzhou City, Henan Province, 450000, People's Republic of China ~72: Conglu Hong;Dandan Wang;Jie Gao;Lei Li;Ran Ran;Zhenzhen Yuan;Zhuo Ma~

2022/01421 ~ Complete ~54:DEVICE AND METHOD FOR BREEDING, IN PARTICULAR FOR BREEDING INSECTS ~71:Gia Tien NGO, Gartenstrasse 69b, Germany;Rohi SHALATI, Margarethenstrasse 5, Germany ~72: Gia Tien NGO;Rohi SHALATI~ 33:DE ~31:10 2019 121 102.6 ~32:05/08/2019

2022/01415 ~ Complete ~54:PREPARATION METHOD OF GANODERMA APPLANATUM FERMENTATION NEUTRAL HETEROPOLYSACCHARIDE CAPABLE OF IDENTIFYING INTESTINAL CANCER CELLS ~71:Jilin Agricultural University, No. 2888 Xincheng Avenue, Changchun City, Jilin Province, 130118, People's Republic of China ~72: Hui Song;Ling Su;Meng Li;Yuting Li;Zhouyu Jin~

2022/01426 ~ Complete ~54:COMPOSITIONS AND METHODS FOR BINDING ANTIBODIES AND INHIBITING NEUTRALIZING ANTIBODIES ~71:The University of North Carolina at Chapel Hill, 109 Church Street, CHAPEL HILL 27516, NC, USA, United States of America ~72: ASKEW, Charles;KUHLMAN, Brian;LI, Chengwen;THIEKER, David Forrest~ 33:US ~31:62/881,765 ~32:01/08/2019

2022/01403 ~ Complete ~54:TRAIN DOMESTIC GARBAGE DISPOSAL DEVICE ~71:Zhengzhou Railway Vocational And Technical College, No.56 of Pengcheng Avenue, Zhengdong New District, Zhengzhou, Henan, People's Republic of China ~72: Dandan Wang;Lei Li;Ran Ran;Wenjing Lv;Zhenzhen Yuan;Zhuo Ma~

2022/01416 ~ Complete ~54:A SYSTEM FOR REGRESSIVE RATE DISTORTION TRADE OFF WITH WEIGHTED ENTROPY CODING FOR HEVC ENCODING AND A METHOD THEREOF. ~71:KORISHETTI, Anilkumar. C, KASTURI SADAN, MAHADWARA ROAD, CROSS NO – 2, H. NO CCB 37, WARD 23, BELAGAVI, India;MALEMATH, V.S., FLAT 001, SIDDHI APTS, 6TH CROSS BHAGYA NAGAR, BELAGAVI, India ~72: KORISHETTI, Anilkumar. C;MALEMATH, V.S.~

2022/01419 ~ Complete ~54:A PROCESS FOR PREPARING BLOSSOM CORDIAL AND ITS COMPOSITIONS THEREOF ~71:CHATURVEDI, Vandana Mishra, D. Y. PATIL DEEMED TO UNIVERSITY, SCHOOL OF HOSPITALITY AND TOURISM STUDIES, SECTOR -7, VIDYA NAGAR, NERUL, India; CHUDHARI, Pallavi, D. Y. PATIL DEEMED TO UNIVERSITY, SCHOOL OF HOSPITALITY AND TOURISM STUDIES, SECTOR -7, VIDYA NAGAR, NERUL, India; KILPADI, Milind, D. Y. PATIL DEEMED TO UNIVERSITY, SCHOOL OF HOSPITALITY AND TOURISM STUDIES, SECTOR -7, VIDYA NAGAR, NERUL, India; MANKAME, Sameer, D. Y. PATIL DEEMED TO UNIVERSITY, SCHOOL OF HOSPITALITY AND TOURISM STUDIES, SECTOR -7, VIDYA NAGAR, NERUL, India; MHASKE, Kishor Vinayak, D. Y. PATIL DEEMED TO UNIVERSITY, SCHOOL OF HOSPITALITY AND TOURISM STUDIES, SECTOR -7, VIDYA NAGAR, NERUL, India; NAIK, Bhakti, D. Y. PATIL DEEMED TO UNIVERSITY, SCHOOL OF HOSPITALITY AND TOURISM STUDIES, SECTOR -7, VIDYA NAGAR, NERUL, India; PATHAN, Naeem, D. Y. PATIL DEEMED TO UNIVERSITY, SCHOOL OF HOSPITALITY AND TOURISM STUDIES, SECTOR -7, VIDYA NAGAR, NERUL, India; SALVI, Swapnil, D. Y. PATIL DEEMED TO UNIVERSITY, SCHOOL OF HOSPITALITY AND TOURISM STUDIES, SECTOR -7, VIDYA NAGAR, NERUL, India; VAITY, Omkar, D. Y. PATIL DEEMED TO UNIVERSITY, SCHOOL OF HOSPITALITY AND TOURISM STUDIES, SECTOR -7, VIDYA NAGAR, NERUL, India; VANIRE, Shilpa, D. Y. PATIL DEEMED TO UNIVERSITY, SCHOOL OF HOSPITALITY AND TOURISM STUDIES, SECTOR -7, VIDYA NAGAR, NERUL, India ~72: CHATURVEDI, Vandana Mishra;CHUDHARI, Pallavi;KILPADI, Milind;MANKAME, Sameer;MHASKE, Kishor Vinayak;NAIK, Bhakti;PATHAN, Naeem;SALVI, Swapnil;VAITY, Omkar;VANIRE, Shilpa.~

2022/01420 ~ Complete ~54:A SMART HOME MANAGEMENT SYSTEM AND A METHOD THEREOF ~71:CHANDRASHEKHAR, Himmatrao Patil, SCHOOL OF COMPUTER SCIENCE, DR. VISHWANATH KARAD, MIT-WORLD PEACE UNIVERSITY, S.NO.124, PAUD ROAD, KOTHRUD, PUNE, India;MALI, Shankar Maruti, SCHOOL OF COMPUTER SCIENCE, DR. VISHWANATH KARAD, MIT-WORLD PEACE UNIVERSITY, S.NO.124, PAUD ROAD, KOTHRUD, PUNE, India;PAKHRANI, Jatin, SCHOOL OF COMPUTER SCIENCE, DR. VISHWANATH KARAD, MIT-WORLD PEACE UNIVERSITY, S.NO.124, PAUD ROAD, KOTHRUD, PUNE, India;VARGHESE, Ashin, SCHOOL OF COMPUTER SCIENCE, DR. VISHWANATH KARAD, MIT-WORLD PEACE UNIVERSITY, S.NO.124, PAUD ROAD, KOTHRUD, PUNE, India;VIBHUTE, Amol Dattatraya, SCHOOL OF ENGINEERING AND INFORMATION TECHNOLOGY, AJEENKYA DY PATIL UNIVERSITY PUNE, India;VYAS, Shiva, SCHOOL OF COMPUTER SCIENCE, DR. VISHWANATH KARAD, MIT-WORLD PEACE UNIVERSITY, S.NO.124, PAUD ROAD, KOTHRUD, PUNE, India ~72: CHANDRASHEKHAR, Himmatrao Patil;MALI, Shankar Maruti;PAKHRANI, Jatin;VARGHESE, Ashin;VIBHUTE, Amol Dattatraya;VYAS, Shiva~

2022/01399 ~ Complete ~54:RECOMBINANT PARAINFLUENZA VIRUS 5 EXPRESSING DOUBLE REPORT TAGS ~71:Qingdao Agricultural University, No.700 Changcheng Road, Chengyang District, Qingdao City, Shandong Province, 266000, People's Republic of China ~72: Liu Fuxiao;Shan Hu;Wang Qianqian~

2022/01409 ~ Complete ~54:MULTIFUNCTIONAL SHOE WASHING MACHINE ~71:Binzhou University, No.391 Huanghe Road, Binzhou City, Shandong Province, 256600, People's Republic of China ~72: Hu Kunming;Li Daoyong;Liu Jing~

2022/01386 ~ Provisional ~54:FIBC ENHANCED METHOD AND PRODUCTION OF SUCH ~71:Andreas J Urichshofer, 11 Piet Rautenbach Str, South Africa;Lionel Nicholas Mantzivis, 1 Villa Tosca Valencia str, South Africa ~72: Lionel Nicholas Mantzivis~ 33:ZA ~31:ZA 2022 ~32:28/12/2021

2022/01436 ~ Complete ~54:ANTI-PD-1 ANTIBODIES, ACTIVATABLE ANTI-PD-1 ANTIBODIES, AND METHODS OF USE THEREOF ~71:CYTOMX THERAPEUTICS, INC., 151 OYSTER POINT BLVD., SUITE 400, SOUTH SAN FRANCISCO, CALIFORNIA, 94080,, United States of America ~72: CHAN, CHANTY MARIATEGUE;TIPTON, KIMBERLY ANN;WEST, JAMES WILLIAM~ 33:US ~31:62/191,902 ~32:13/07/2015;33:US ~31:62/205,852 ~32:17/08/2015;33:US ~31:62/295,314 ~32:15/02/2016;33:US ~31:62/323,543 ~32:15/04/2016;33:US ~31:62/333,629 ~32:09/05/2016

2022/01391 ~ Provisional ~54:OPTIMISED EXTRACTION FOR HERBAL RAW MATERIALS ~71:Dominic Florczak, 944 woodlands estate, 20 Candican Rd, South Africa ~72: Dominic Florczak~ 33:ZA ~31:31012022OE ~32:30/01/2022

2022/01404 ~ Complete ~54:COMPUTER DISPLAY FOR INFORMATION TECHNOLOGY ~71:Zhengzhou Railway Vocational And Technical College, No.56 of Pengcheng Avenue, Zhengdong New District, Zhengzhou, Henan, People's Republic of China ~72: Bin Chen;Dandan Dong;Lanzhi Cheng;Renjie Chang;Xiangge Yang;Yang Gao;Yang Yang~

2022/01410 ~ Complete ~54:METHOD FOR ESTABLISHING NATURAL LOGARITHM STANDARD CURVE FOR DETERMINING CONCENTRATION OF VOLATILE OIL SOLUTION IN FLUE-CURED TOBACCO LEAVES ~71:Sichuan Agriculture University, No. 211, Huimin Road, Wenjiang District, Chengdu City, Sichuan Province, 611130, People's Republic of China ~72: Liu Lei;Liu Yajie;Xie Qiang;Ye Keyuan;Zeng Shuhua;Zhang Yonghui~

2022/01428 ~ Complete ~54:METHODS OF TREATING DISORDERS ASSOCIATED WITH ELEVATED LEVELS OF ANTIBODIES THAT INTERACT WITH THE NMDA RECEPTOR ~71:Aptinyx Inc., 909 Davis Street, Suite 600, EVANSTON 60201, IL, USA, United States of America;Northwestern University, 633 Clark Street, EVANSTON 60208, IL, USA, United States of America ~72: KROES, Roger A.;MADSEN, Torsten M.;MOSKAL, Joseph R.~ 33:US ~31:62/881,472 ~32:01/08/2019

2022/01437 ~ Complete ~54:COMPOSITIONS AND METHODS FOR TREATING INFLAMMASOME RELATED DISEASES OR CONDITIONS ~71:UNIVERSITY OF MIAMI, 1951 NW 7TH AVENUE, SUITE 300, MIAMI, FLORIDA, 33136,, United States of America ~72: BRAMBILLA, ROBERTA;BRAMLETT, HELEN M;DE RIVERO VACCARI, JUAN PABLO;DIETRICH, W. DALTON;KEANE, ROBERT W~ 33:US ~31:16/026,482 ~32:03/07/2018

2022/01390 ~ Provisional ~54:SAIL ~71:HARRIS, Eric John, 68 Marlin Drive, Chintsa East, South Africa ~72: HARRIS, Eric John~

2022/01394 ~ Provisional ~54:A NOVEL METHOD FOR NON-TOXIC BIOMIMETIC NANOSPHERE SYNTHESIS UTILIZING SOLVENT EXTRACTION AND MOLECULAR BINDING TECHNIQUES. ~71:Dominic Florczak, 944 woodlands estate, 20 Candican Rd, South Africa ~72: Dominic Florczak~ 33:ZA ~31:ZA31012022NS ~32:30/01/2022

2022/01388 ~ Provisional ~54:A SWING HOOP CROQUET TRAINING DEVICE ~71:CAROTO, Peter Manuel Gonsalves, 21 Steenekoppie Street, MAGALIESBURG 1730, SOUTH AFRICA, South Africa ~72: CAROTO, Peter Manuel Gonsalves~

2022/01414 ~ Complete ~54:MOISTURIZING FACIAL MASK CONTAINING AURICULARIA CORNEA VAR. LI. AND PREPARATION METHOD THEREOF ~71:Jilin Agricultural University, No. 2888 Xincheng Avenue, Changchun City, Jilin Province, 130118, People's Republic of China ~72: Ling Su;Meng Li;Yuting Li~

2022/01412 ~ Complete ~54:LOW-VOLTAGE DC LIGHTING METHOD ~71:Ghed Technology (Guangdong) Co., Ltd, Fengsheng road, Gonghe Town, Heshan City, Jiangmen City, Guangdong Province, People's Republic of

China;Sichuan Normal University, No.5, Jing'an Road, Jinjiang District, Chengdu City, Sichuan Province, People's Republic of China ~72: Luo Hongsen;Yuan Ke~

2022/01427 ~ Complete ~54:DRUG DELIVERY SYSTEM FOR THE DELIVERY OF ANTIVIRAL AGENTS ~71:Merck Sharp & amp; Dohme Corp., 126 East Lincoln Avenue, RAHWAY 07065-0907, NJ, USA, United States of America ~72: BARRETT, Stephanie Elizabeth;FORSTER, Seth P.;GILES, Morgan B.;KOYNOV, Anthanas;TELLER, Ryan S.~ 33:US ~31:62/885,968 ~32:13/08/2019

2022/01398 ~ Complete ~54:PREPARATION METHOD, PRODUCT AND APPLICATION OF AMINO ACID FERTILIZER FOR REDUCING CADMIUM CONTENT IN RICE ~71:Jiangxi Normal University, Yaohu Campus of Jiangxi Normal University, No.99 Ziyang Avenue, Changdong Town, Nanchang County, Nanchang City, Jiangxi Province, 330022, People's Republic of China ~72: Liu Xingxing;Ni Caiying;Tian Wei;Xiao Luochang~

2022/01405 ~ Complete ~54:RAILWAY SLEEPER RECYCLING AND PROCESSING EQUIPMENT ~71:Zhengzhou Railway Vocational And Technical College, No.56 of Pengcheng Avenue, Zhengdong New District, Zhengzhou, Henan, People's Republic of China ~72: Dandan Wang;Lei Li;Min Zhang;Qiongjie Zhang;Ran Ran;Zhenzhen Yuan;Zhuo Ma~

2022/01408 ~ Complete ~54:POWER RESERVE SYSTEM AND METHOD FOR PHOTOVOLTAIC POWER GENERATION ~71:Zhejiang Gongshang University, No.18 Xuezheng Street, Xiasha Higher Education Park, Hangzhou City, Zhejiang Province, People's Republic of China ~72: Liu Xijuan;Wu Honggang;Yang Chen~

2022/01425 ~ Complete ~54:USE OF A COMPOSITE MATERIAL FOR ABSORBING AND DISTRIBUTING LIQUIDS IN ACTIVELY AND/OR PASSIVELY COOLED CURRENT-CARRYING SYSTEMS ~71:Carl Freudenberg KG, Höhnerweg 2-4, WEINHEIM 69469 , GERMANY, Germany ~72: KRITZER, Peter;SCHNEIDER, Ulrich;SENNE, Sarah~ 33:DE ~31:10 2019 127 180.0 ~32:09/10/2019

2022/01429 ~ Complete ~54:CELLS FOR IMPROVED IMMUNOTHERAPY AND USES THEREOF ~71:Memorial Hospital for Cancer and Allied Diseases, 1275 York Avenue, NEW YORK 10065, NY, USA, United States of America;Memorial Sloan-Kettering Cancer Center, 1275 York Avenue, NEW YORK 10065, NY, USA, United States of America;Sloan-Kettering Institute for Cancer Research, 1275 York Avenue, NEW YORK 10065, NY, USA, United States of America ~72: PERARO, Leila;SCHEINBERG, David A.~ 33:US ~31:62/881,467 ~32:01/08/2019

2022/01418 ~ Complete ~54:A SYSTEM FOR BETTER OPERATION OF MULTI-MICROGRID ~71:BALLAL, Makarand Sudhakar, DEPARTMENT OF ELECTRICAL ENGINEERING, VISVESVARAYA NATIONAL INSTITUTE OF TECHNOLOGY, MAHARASHTRA, India;DESHMUKH, Rohit Rajkumar, DEPARTMENT OF ELECTRICAL ENGINEERING, VISVESVARAYA NATIONAL INSTITUTE OF TECHNOLOGY, MAHARASHTRA, India;SURYAWANSHI, Hiralal Murlidhar, DEPARTMENT OF ELECTRICAL ENGINEERING, VISVESVARAYA NATIONAL INSTITUTE OF TECHNOLOGY, MAHARASHTRA, India;SURYAWANSHI, Prerna Hiralal, OFFICE OF EXECUTIVE ENGINEER, MSEDCL, PRAKASHDEEP LOKEVEREST COMPLEX, ACC ROAD, MULUND,, India;VERMA, Shivpal Ramtirth, DEPARTMENT OF ELECTRICAL ENGINEERING, VISVESVARAYA NATIONAL INSTITUTE OF TECHNOLOGY, MAHARASHTRA, India;WAKODE, Sarvesh Ashok, DEPARTMENT OF ELECTRICAL ENGINEERING, VISVESVARAYA NATIONAL INSTITUTE OF TECHNOLOGY, MAHARASHTRA, India ~72: BALLAL, Makarand Sudhakar;DESHMUKH, Rohit Rajkumar;SURYAWANSHI, Hiralal Murlidhar;SURYAWANSHI, Prerna HiralaI;VERMA, Shivpal Ramtirth;WAKODE, Sarvesh Ashok~

- APPLIED ON 2022-02-01 -

2022/01446 ~ Complete ~54:METHODS OF TREATING MULTIFOCAL CANCER ~71:NYMOX CORPORATION, 777 Terrace Avenue, Hasbrouck Heights, United States of America ~72: AVERBACK, Paul~ 33:US ~31:16/528,390 ~32:31/07/2019

2022/01451 ~ Complete ~54:T CELL RECEPTORS AND METHODS OF USE THEREOF ~71:University Health Network, 101 College Street, Unit 150, TORONTO M5G-IL7, ONTARIO, CANADA, Canada ~72: HIRANO, Naoto;SASO, Kayoko;SUGATA, Kenji~ 33:US ~31:62/880,504 ~32:30/07/2019

2022/01460 ~ Complete ~54:SMOOTH BORE HUBCAP AND ROTARY UNION ~71:Equalaire Systems, Inc., 1414 Valero Way, CORPUS CHRISTI 78409, TX, USA, United States of America ~72: SHARKEY, James~ 33:US ~31:62/885,654 ~32:12/08/2019

2022/01443 ~ Complete ~54:AUDIO ENCODER WITH A SIGNAL-DEPENDENT NUMBER AND PRECISION CONTROL, AUDIO DECODER, AND RELATED METHODS AND COMPUTER PROGRAMS ~71:FRAUNHOFER-GESELLSCHAFT ZUR FÖRDERUNG DER ANGEWANDTEN FORSCHUNG E.V., Hansastrasse 27c, Germany ~72: BÜTHE, Jan;DÖHLA, Stefan;DIETZ, Martin;GRILL, Bernhard;SCHNELL, Markus~ 33:EP ~31:PCT/EP2019/065897 ~32:17/06/2019

2022/01445 ~ Complete ~54:OLFACTORY DELIVERY OF THERAPEUTIC COMPOUNDS TO THE CENTRAL NERVOUS SYSTEM ~71:LOCUS IP COMPANY, LLC, 30500 Aurora Road, Suite 180, United States of America ~72: ALIBEK, Ken;FARMER, Sean~ 33:US ~31:62/885,231 ~32:10/08/2019

2022/01447 ~ Complete ~54:APPARATUSES, METHODS, AND SYSTEMS FOR VIBRATORY SCREENING ~71:DERRICK CORPORATION, 590 Duke Road, Buffalo, United States of America ~72: COLGROVE, James R.;PERESAN, Michael L.~ 33:US ~31:16/460,764 ~32:02/07/2019

2022/01449 ~ Complete ~54:VETERINARY COMPOSITIONS FOR THE PREVENTION AND/OR TREATMENT OF CRYPTOSPORIDIOSIS ~71:CEVA SANTE ANIMALE, 10 avenue de la Ballastière, Libourne, 33500, France ~72: BESCHE, Béatrice;JIMENEZ, Catherine~ 33:EP ~31:19305996.1 ~32:01/08/2019

2022/01450 ~ Complete ~54:MHC CLASS II MOLECULES AND METHODS OF USE THEREOF ~71:University Health Network, 101 College Street, Unit 150, TORONTO M5G-IL7, ONTARIO, CANADA, Canada ~72: GUO, Tingxi;HIRANO, Naoto;NAKATSUGAWA, Munehide;RAHMAN, Muhammed Aashiq;YAMASHITA, Yuki~ 33:US ~31:62/880,496 ~32:30/07/2019;33:US ~31:63/029,111 ~32:22/05/2020

2022/01452 ~ Complete ~54:SPRING WIRE, TENSION CLAMP FORMED THEREFROM AND METHOD FOR PRODUCING SUCH A SPRING WIRE ~71:Vossloh Fastening Systems GmbH, Vosslohstraße 4, WERDOHL 58791, GERMANY, Germany ~72: HU, Lei;WOLF, Dennis~ 33:EP ~31:19193224.3 ~32:23/08/2019

2022/01457 ~ Complete ~54:RUBISCO-BINDING PROTEIN MOTIFS AND USES THEREOF ~71:Howard Hughes Medical Institute, 4000 Jones Bridge Road, CHEVY CHASE 20815-6789, MD, USA, United States of America;The Board of Trustees of the Leland Stanford Junior University, Stanford Office of Technology Licensing, Academy Hall, 415 Broadway, REDWOOD CITY 94063, CA, USA, United States of America;The Trustees of Princeton University, Office of Technology Licensing, 619 Alexander Road, Suite 102, PRINCETON 08540, NJ, USA, United States of America;University of York, Heslington, YORK YO10 5DD, YORKSHIRE, UNITED KINGDOM, United Kingdom ~72: CHEN WONG, Vivian;CHOU, Hui-Ting;HE, Shan;ITAKURA, Alan;JONIKAS, Martin C.;MACKINDER, Luke Colin Martin;MATTHIES, Doreen;MEYER, Moritz;YU, Zhiheng~ 33:US ~31:62/882,306 ~32:02/08/2019 2022/01462 ~ Complete ~54:FILM FORMULATION COMPRISING CARRIERS ~71:Klaria Pharma Holding AB, Virdings Allé 2, UPPSALA 754 50, SWEDEN, Sweden ~72: BOYER, Scott;HÜBINETTE, Fredrik~ 33:GB ~31:1911715.9 ~32:15/08/2019

2022/01442 ~ Complete ~54:LABELLING DEVICE ~71:LOWVELD CONSULTING ENGINEERS (PTY) LTD, 2 Wentelbaan Street, South Africa ~72: VISSER, Hilma Brayn~

2022/01463 ~ Complete ~54:DISPOSABLE BLOOD METERING DEVICE ~71:BD Kiestra B.V., Marconilaan 6, DRACHTEN 9207 JC, THE NETHERLANDS, Netherlands ~72: AHMED, Samer;BRUINSMA, Johannes Anne;FEIJEN, Franciscus;RENKEMA, Roland;ROBERTSON, Daniel James~ 33:US ~31:62/883,294 ~32:06/08/2019

2022/01466 ~ Complete ~54:DYNAMIC TEST LOOP FOR DETERMINING MOLTEN SALT CORROSION ~71:JOHN COCKERILL S.A., Rue Potier, 1; B-4100 Seraing, Belgium ~72: JULIE BUCCI;MANUEL SMOLDERS;RIDHA HARZALLAH;STÉPHANE WINAND~ 33:EP ~31:19184129.5 ~32:03/07/2019

2022/01468 ~ Complete ~54:METHOD ~71:WORG PHARMACEUTICALS (HANGZHOU) CO., LTD., Suite 801, Building #5, JiaBao Technology Innovation Center, No. 519, 2nd Avenue, Qiantang New District, Hangzhou Zhejiang, 310000, People's Republic of China ~72: DAVID WRAITH;EVELIEN SCHURGERS;LISELOTTE JANSSON~ 33:GB ~31:1909774.0 ~32:08/07/2019

2022/01470 ~ Complete ~54:PROCESS FOR PREPARING THE CRYSTALLINE FORM II OF SOTAGLIFLOZIN ~71:LEXICON PHARMACEUTICALS, INC., 2445 Technology Forest Blvd., Suite 1100, The Woodlands, Texas, 77381, United States of America ~72: ANTONIO NOBREGA;BRUNO BUREL;JÉROME CEZERAC;MARTIAL ETIENNE;RICHARD FLACHER;STÉPHANE DUTHEIL~ 33:EP ~31:19305999.5 ~32:01/08/2019

2022/01464 ~ Complete ~54:ANTI-TIGIT ANTIBODIES AND APPLICATION THEREOF ~71:Shanghai Junshi Biosciences Co., Ltd., Floor 13, Building 2, Nos. 36 And 58, Haiqu Road, Pilot Free Trade Zone, SHANGHAI 201210, CHINA (P.R.C.), People's Republic of China;Suzhou Junmeng Biosciences Co., Ltd., East Of Changan Road, Wujiang Economic and Technological Development Zone, SUZHOU 215002, JIANGSU, CHINA (P.R.C.), People's Republic of China ~72: FENG, Hui;MENG, Qin;WU, Hai;YAO, Jian;YAO, Sheng~ 33:CN ~31:201910634309.9 ~32:15/07/2019

2022/01469 ~ Complete ~54:CONTINUOUS PROCESS FOR PREPARING THE CRYSTALLINE FORM II OF SOTAGLIFLOZIN ~71:LEXICON PHARMACEUTICALS, INC., 2445 Technology Forest Blvd., Suite 1100, The Woodlands, Texas, 77381, United States of America ~72: ANTONIO NOBREGA;BRUNO BUREL;JÉROME CEZERAC;MARTIAL ETIENNE;RICHARD FLACHER;STÉPHANE DUTHEIL~ 33:EP ~31:19305998.7 ~32:01/08/2019

2022/01448 ~ Complete ~54:A BIOMARKER FOR ALZHEIMER'S DISEASE USING BLOOD SAMPLES FROM CLINICALLY DIAGNOSED ALZHEIMER'S DISEASE SUBJECTS ~71:TODOS MEDICAL LTD., 1 Hamada St. 7670301, Rehovot, Israel ~72: ARENDT, Thomas;BROWNELL, Elise;COMMISSIONG, Gerald;TRZEPACZ, Paula;WEISS, Herman~ 33:US ~31:62/872,567 ~32:10/07/2019

2022/01458 ~ Complete ~54:DEVICE AND METHOD FOR DETERMINING LIQUID CONTACT AND LIQUID VOLUME IN A LIQUID DISPENSER BASED ON SOUND ~71:Meso Scale Technologies, LLC., 1601 Research Boulevard, ROCKVILLE 20850, MD, USA, United States of America ~72: KOVACS, Sandor;WU, Pei-Ming~ 33:US ~31:62/869,725 ~32:02/07/2019

2022/01461 ~ Complete ~54:CORE NETWORK NODE, ACCESSIBILITY MANAGEMENT DEVICE, AND COMMUNICATION METHOD ~71:NEC Corporation, 7-1, Shiba 5-chome, Minato-ku, TOKYO 1088001, JAPAN, Japan ~72: TAKAKURA Tsuyoshi;TAMURA, Toshiyuki~ 33:JP ~31:2019-174767 ~32:25/09/2019

2022/01440 ~ Provisional ~54:A NOVEL METHODOLOGY FOR THE CREATION OF A SMOKING COMPOSITION WITHOUT TOBACCO FOR HOOKAH ~71:Dominic Florczak, 944 woodlands estate, 20 Candican Rd, South Africa ~72: Dominic Florczak~ 33:ZA ~31:ZAF01022022VG ~32:31/01/2022

2022/01455 ~ Complete ~54:ORAL CARE COMPOSITIONS HAVING INCREASED FOAM PRODUCTION AND METHODS FOR THE SAME ~71:Colgate-Palmolive Company, 300 Park Avenue, NEW YORK 10022, NY, USA, United States of America ~72: DAS, Aradhana;SHEN, Hongwei;SIMON, Eric;XU, Yun~ 33:US ~31:62/892,243 ~32:27/08/2019

2022/01465 ~ Complete ~54:LONG-LASTING FORMULATION CONTAINING RIVASTIGMINE, AND METHOD FOR PREPARING SAME ~71:G2GBIO, INC., #411-1, 1646, Yuseong-daero, Yuseong-gu, Daejeon, 34054, Republic of Korea ~72: DONGHYUN PARK;EUNYOUNG SEOL;HEEKYOUNG CHOE;HEEYONG LEE;JUHAN LEE;YEONKYEONG LEE~ 33:KR ~31:10-2019-0084775 ~32:12/07/2019

2022/01456 ~ Complete ~54:NOVEL PEPTIDE, COMPOSITIONS AND METHOD FOR DELIVERY OF AGENTS INTO CELLS AND TISSUES ~71:Trustees of Tufts College, Ballou Hall, MEDFORD 02155, MA, USA, United States of America ~72: KUMAR-SINGH, Rajendra~ 33:US ~31:62/869,831 ~32:02/07/2019

2022/01508 ~ Provisional ~54:THE ZED-PALLET ~71:MARTHINUS JORDAAN NORTJÉ, 76 HAMILTON ROAD, CLAREMONT,, South Africa ~72: MARTHINUS JORDAAN NORTJÉ~

2022/01444 ~ Complete ~54:OPAQUE, NON-PEARLESCENT POLYESTER ARTICLES ~71:PENN COLOR, INC., 400 Old Dublin, Pike Doylestown, PA, United States of America ~72: ADAMS, Mark;BALL, Vincent, J., IV;CUDDIGAN, Julie;FARRELL, Thomas;LARIANE, Youcef;MILES, William;MYERS, Kenneth;RUBILAR, Javiera;SANDT, Andrew;WALSH, James;WIELOCH, Kelan~ 33:US ~31:62/890,266 ~32:22/08/2019;33:US ~31:62/936,131 ~32:15/11/2019

2022/01454 ~ Complete ~54:COMPOSITIONS AND METHODS FOR TREATMENT OF INFLAMMATORY AND IMMUNE DISEASES ~71:Prolacta Bioscience, Inc., 757 Baldwin Park Blvd., CITY OF INDUSTRY 91746, CA, USA, United States of America ~72: BUTTON, Julie E.;COOK, David N.;MCKENZIE, Gregory~ 33:US ~31:62/905,256 ~32:24/09/2019;33:US ~31:63/027,739 ~32:20/05/2020;33:US ~31:63/028,743 ~32:22/05/2020;33:US ~31:63/053,224 ~32:17/07/2020

2022/01439 ~ Provisional ~54:FLUID FILTRATION DEVICE ~71:LEWTHWAITE, John Edward, 250 Brakpan Road, Boksburg East, South Africa;LEWTHWAITE, John Michael, 250 Brakpan Road, Boksburg East, South Africa ~72: LEWTHWAITE, John Edward;LEWTHWAITE, John Michael~

2022/01438 ~ Provisional ~54:HOLDMYCASH ~71:Ziana Rafuza, 22 Dorrite Street, Ext 2, Lotus Gardens, South Africa ~72: Ziana Rafuza~

2022/01441 ~ Provisional ~54:E BOOKS PAD ~71:Cyril Sello Magoai, 389 Clownfish street Kaalfontein ext 1, South Africa ~72: Cyril Sello Magoai~

2022/01453 ~ Complete ~54:A CONNECTION DEVICE AND SYSTEM FOR SUSPENDING A MONORAIL BEAM FROM A ROOF BOLT ~71:Sandvik Mining and Construction G.m.b.H., Alpinestrasse 1, ZELTWEG 8740, AUSTRIA, Austria ~72: RIEGER, Hubert~

2022/01459 ~ Complete ~54:LOW COST METAL ELECTRODES ~71:Form Energy, Inc., 30 Dane Street, SOMERVILLE 02143, MA, USA, United States of America ~72: CARUSO, Isabella;CHAKRABORTY, Rupak;CHIANG, Yet-Ming;CHU, Max Rae;CONRY, Thomas;EISENACH, Rebecca;GIBSON, Michael;GILBERT, Tristan;HULTMAN, Benjamin Thomas;KHAREY, Amelie Nina;LIOTTA, Andrew;MILSHTEIN, Jarrod David;MUMMA, Rachel Elizabeth;NEWHOUSE, Jocelyn Marie;PANTANO, Joseph Anthony;PERKINS, Nicholas;SMITH, Danielle Cassidy;SMITH, Weston;SU, Liang;THOMPSON, Annelise Christine;UBER, Brandon;WEBER, Eric;WEHNER, Florian;WESTWOOD, Mitchell Terrance;WOJESKI, Brooke;WOODFORD, William Henry~ 33:US ~31:62/879,126 ~32:26/07/2019;33:US ~31:63/021,566 ~32:07/05/2020

2022/01467 ~ Complete ~54:METHOD FOR VIRAL INACTIVATION ~71:REGENERON PHARMACEUTICALS, INC., 777 Old Saw Mill River Road, Tarrytown, New York, 10591, United States of America ~72: ANDREW BARMASSE;JOHN MATTILA;MARK CHIBOROSKI~ 33:US ~31:62/881,692 ~32:01/08/2019

- APPLIED ON 2022-02-02 -

2022/01472 ~ Provisional ~54:RADIONIC PROCESSES ~71:NOOMALABS (PTY) LTD., 323 Lynnwood Road, Menlo Park, PRETORIA 0081, Gauteng Province, SOUTH AFRICA, South Africa ~72: DU PLESSIS, Jan Abraham~

2022/01481 ~ Complete ~54:AN INTELLIGENT LOGISTICS AND SUPPLY CHAIN SYSTEM ~71:DAS, Manoranjan, AERODROME AREA, PLOT NO. 212/7 LANE 4, BHUBANESWAR, India;DAS, Rashmi Prava, H.NO-L193, HB COLONY, BARAMUNDA, BHUBANESWAR, India;KOMMULA, Venkata Parasuram, PLOT 4714/11/01, JAWARA ROAD, VILLAGE, Botswana;MOHAMED, Aezeden, H.No-74, Markahm Drive, Taraka Campus, UNITECH, Lae, PMB 411, Papua New Guinea;MUDULI, Kamalakanta, FLAT NO-006, OMM PARADISE APARTMENTS, BHUBANESWAR, India;RAY, Manidatta, DUPLEX NO.: KV-14 (PHASE-I) KOKILA VILLA, AT- BOTANDA, SUNDERPADA, BHUBANESWAR, India ~72: DAS, Manoranjan;DAS, Rashmi Prava;KOMMULA, Venkata Parasuram;MOHAMED, Aezeden;MUDULI, Kamalakanta;RAY, Manidatta~

2022/01487 ~ Complete ~54:MILK FOAMING DEVICE AND METHOD FOR PRODUCING MILK FOAM ~71:JURA ELEKTROAPPARATE AG, Kaffeeweltstrasse 10, Switzerland ~72: Sandro KLEPZIG~ 33:EP ~31:19193185.6 ~32:22/08/2019

2022/01492 ~ Complete ~54:PROCESS FOR MANUFACTURING (S)-3-HYDROXY-1-(1H-INDOL-5-YL)-2-OXO-PYRROLIDINE-3-CARBOXYLIC ACID 3,5-DIFLUORO-BENZYLAMIDE ~71:Merck Patent GmbH, Frankfurter Strasse 250, DARMSTADT 64293, GERMANY, Germany ~72: HEINRICH, Timo;SEENISAMY, Jeyaprakashnarayanan~ 33:EP ~31:19184056.0 ~32:03/07/2019

2022/01498 ~ Complete ~54:PLANT HOLDER FOR HYDROPONIC SYSTEM ~71:GROW PIPES AB, Ålegårdsgatan 5, 431 50, MöIndal, Sweden ~72: CHRISTER TILK;GERT CHRISTIAAN DELPORT;JONAS PARI;MIKAEL PARI;ROBERT CARLSSON~ 33:SE ~31:1950889-4 ~32:12/07/2019

2022/01505 ~ Complete ~54:BIS-[N-((5-CARBAMOYL)-1H-BENZO[D]IMIDAZOL-2-YL)-PYRAZOL-5-CARBOXAMIDE] DERIVATIVES AND RELATED COMPOUNDS AS STING (STIMULATOR OF INTERFERON GENES) AGONISTS FOR THE TREATMENT OF CANCER ~71:MERSANA THERAPEUTICS, INC., 840 Memorial Drive, Cambridge, United States of America ~72: BENTLEY, Keith W.;DUVALL, Jeremy R.;JONES, Brian D.;KELLEHER, Eugene W.;RAY, Soumya S.;THOMAS, Joshua D.;TOADER, Dorin~ 33:US ~31:62/882,081 ~32:02/08/2019;33:US ~31:62/944,643 ~32:06/12/2019;33:US ~31:62/982,935 ~32:28/02/2020

2022/01479 ~ Complete ~54:WEDGE ARRANGEMENT FOR A FRICTION ANCHOR AND RELATED METHOD OF MANUFACTURE ~71:DI MATTEO, Marco, 19 Monte Bello, Shongweni Street, Lakefield Ext. 21, BENONI

1501, Gauteng, SOUTH AFRICA, South Africa ~72: DI MATTEO, Marco~ 33:ZA ~31:2021/00735 ~32:03/02/2021;33:ZA ~31:ZP 2021/03370 ~32:19/05/2021

2022/01489 ~ Complete ~54:VEHICLE MIRRORS ~71:MILES, Shane, 43 Harrington Street, Arundel, Australia ~72: MILES, Shane~ 33:AU ~31:2019902836 ~32:08/08/2019

2022/01490 ~ Complete ~54:PACKAGING APPARATUS FOR SECONDARY PACKAGES ~71:Anheuser-Busch InBev S.A., Grand'Place 1, BRUSSELS 1000 , BELGIUM, Belgium ~72: DEKOCKER, Wim;DUPERRAY, Philippe~ 33:EP ~31:19189079.7 ~32:30/07/2019;33:EP ~31:19219726.7 ~32:26/12/2019

2022/01476 ~ Provisional ~54:BANK NOTE HANDLING ~71:MARCUS, Dean Shane, 65 Serenade Road, Elandsfontein, South Africa;MARCUS, Stanley, 65 Serenade Road, Elandsfontein, South Africa ~72: MARCUS, Dean Shane;MARCUS, Stanley~

2022/01484 ~ Complete ~54:AN AUTOMATED GUIDED VEHICLE ~71:VISHWAKARMA INSTITUTE OF INFORMATION TECHNOLOGY, SURVEY NO. 3/4, KONDHWA (BUDRUK), PUNE, India ~72: BHUREWAR, Dheeraj Rajendra;DRAVID, Sampada Viraj;JAIN, Harsh Kirtikumar;KORE, Sandeep Sadashiv;KUBAL, Ashutosh Satish;KULKARNI, Atul Prabhakar;PANSARE, Sharvari Sharadkumar;SHRISHRIMAL, Rohan Ratanlal~

2022/01504 ~ Complete ~54:EDGE BUILD-UP MEASUREMENT ~71:ARCELORMITTAL, 24-26, Boulevard d'Avranches, Luxembourg ~72: David SLOAN~

2022/01486 ~ Complete ~54:MULTISPECIFIC ANTIGEN-BINDING MOLECULES FOR CELL TARGETING AND USES THEREOF ~71:REGENERON PHARMACEUTICALS, INC., 777 Old Saw Mill River Road, Tarrytown, United States of America ~72: FINNEY, Jennifer A.;HABER, Lauric;LIN, Chia-Yang;MCKAY, Ryan;SMITH, Eric~ 33:US ~31:62/887,411 ~32:15/08/2019;33:US ~31:62/924,435 ~32:22/10/2019;33:US ~31:62/978,584 ~32:19/02/2020;33:US ~31:63/057,824 ~32:28/07/2020

2022/01497 ~ Complete ~54:HYBRID AMIDE DERIVATIVES OF AMPHOTERICIN B ~71:The Board of Trustees of the University of Illinois, 352 Henry Administration Building, 506 South Wright Street, URBANA 61801, IL, USA, United States of America ~72: BURKE, Martin D.;MAJI, Arun;NIAN, Yong;YAN, Su;ZHANG, Jiabao~ 33:US ~31:62/884,464 ~32:08/08/2019;33:US ~31:62/951,753 ~32:20/12/2019

2022/01477 ~ Provisional ~54:A ROAD SIGNAGE DEVICE ~71:REFLECTATECH (PTY) LTD, 12 Terminal Crescent Glenhazel, Johannesburg, 2192, South Africa ~72: NEVILLE FLEISHMAN~

2022/01549 ~ Provisional ~54:BACKUP ENERGY SAVOUR ~71:PITSO COLLY MOLOBELA, 2112 IVORYPARK EXT 2 MOKONE STREET GAUTENG, South Africa ~72: PITSO COLLY MOLOBELA ~

2022/01474 ~ Provisional ~54:HYDRA ~71:arnold maake, 125 tembisa, South Africa ~72: arnold thabo maake~

2022/01482 ~ Complete ~54:A NOVEL PARALLEL TECHNIQUE CONSTRUCTION OVER THE OBSTACLE RECTILINEAR STEINER TREE ~71:GANJA, Shyamala, C/o Srinivas, No.137, 2nd main, 4th cross, Near Ganesh Bhavan, Hanumanth Nagar, India;RAMASWAMY, Latha Nalla, No.607/608A, 4th main, 6th Cross, BEML 4th stage, Rajarajeshwari Nagar, India;RENUKA, Prasad Gangadharamurthy, C/o Prasad G R,#617, 22nd cross,15th main, Banashankari 2nd stage, Banashankari II stage, India ~72: GANJA, Shyamala;RAMASWAMY, Latha Nalla;RENUKA, Prasad Gangadharamurthy~

2022/01485 ~ Complete ~54:BRD9 BIFUNCTIONAL DEGRADERS AND THEIR METHODS OF USE ~71:NOVARTIS AG, Lichtstrasse 35, Switzerland ~72: CHEN, Xin;GOUDE, Marie-line;HARRINGTON, Edmund, Martin;HOLLINGWORTH, Gregory, John;LORBER, Julien;SENDZIK, Martin;VULPETTI, Anna;ZOLLER,

Thomas~ 33:US ~31:62/900,860 ~32:16/09/2019;33:US ~31:62/900,863 ~32:16/09/2019;33:US ~31:62/900,865 ~32:16/09/2019;33:US ~31:62/900,869 ~32:16/09/2019

2022/01500 ~ Complete ~54:OPIOID GROWTH FACTOR RECEPTOR (OGFR) ANTAGONISTS, IN PARTICULAR NALOXONE AND/OR NALTREXONE FOR TREATING CANCER ~71:ROVAXA, 6 Warwick Circle, Andover, Massachusetts, 01810, United States of America ~72: BRYAN S MARGULIES;NIKHIL A THAKUR~ 33:US ~31:62/874,037 ~32:15/07/2019

2022/01502 ~ Complete ~54:DECISION ASSISTANCE SYSTEM AND METHOD FOR FIRING A PROJECTILE AT A TARGET ~71:SAFRAN ELECTRONICS & DEFENSE, 72-76 rue Henry Farman, 75015, Paris, France ~72: ALEXANDRE BOUVET;LAURENT GOUMY;YOANN CHEVALIER~ 33:FR ~31:FR1908231 ~32:22/07/2019

2022/01507 ~ Complete ~54:REMOVABLE PANEL ROOF FOR MODULAR, SELF-CONTAINED, MOBILE CLEAN ROOM ~71:G-CON MANUFACTURING, INC., P.O. Box 15922, College Station, United States of America ~72: HEATH, Billy Joe T.;POUNDERS, A. Colt;WILLIAMS, R. Blake~ 33:US ~31:62/887,303 ~32:15/08/2019

2022/01509 ~ Provisional ~54:CREATIVE ~71:PATRICK DUNN, 74 OGLE ROAD AUSTERVILLE,, South Africa ~72: PATRICK DUNN~

2022/01494 ~ Complete ~54:BIOMARKER FOR ACCESSING EFFICACY OF IMMUNE CHECKPOINT INHIBITOR ~71:National Cancer Center, 1-1, Tsukiji 5-chome, Chuo-ku, TOKYO 1040045, JAPAN, Japan;Ono Pharmaceutical Co., Ltd., 1-5, Doshomachi 2-chome, Chuo-ku, OSAKA-SHI 5418526, OSAKA, JAPAN, Japan ~72: HONDA, Atsushi;KAKINUMA, Toru;MURATA, Masayuki;NISHIKAWA, Hiroyoshi;OHYAMA, Yukiya;OYAGI, Atsushi~ 33:JP ~31:2019-144011 ~32:05/08/2019;33:JP ~31:2019-216881 ~32:29/11/2019

2022/01478 ~ Provisional ~54:MEASURING CUP ~71:william andrew alexander, 1 carrington road, klisser, South Africa ~72: William Andrew Alexander~

2022/01473 ~ Provisional ~54:VEHICLE LICENSE RENEWAL KIOSK ~71:SELECT REGISTRATIONS (PTY) LTD, 225 Neptune Street, Erasmusrand, South Africa ~72: HENNING, Lourens Andor Francois~

2022/01480 ~ Complete ~54:A METHOD FOR FABRICATING A CHALCOGENIDE AS2SE3 GLASS PHOTONIC CRYSTAL FIBER WITH INCREASED CORE DIAMETER ~71:JANGID, Sandeep, WARD NO- 13, BEHIND SDM COURT, KHETRI, DISTRICT – JHUNJHUNU, India;KUMAR, Ravindar, VILLAGE AND POST – OJATOO, TEHSIL – CHIRAWA, DISTRICT – JHUNJHUNU, India;KUMARI, Suman, D-48, GANESH COLONY, TEHSIL – SURAJGARH, PILANI, JHUNJHUNU, India;SHARMA, Mukesh Kumar, BHATT PANSARI, KHETRI, DISTRICT-JHUNJHUNU, India;SHARMA, Mukesh Kumar, BHATT PANSARI, KHETRI, DISTRICT-JHUNJHUNU, India;VARMA, Mukesh Kumar, WARD NO- 09, PURANI JAIL KE PASS, V. POST – KHETRI, DISTRICT – JHUNJHUNU, India ~72: JANGID, Sandeep;KUMAR, Ravindar;KUMARI, Suman;SHARMA, Mukesh Kumar;SHARMA, Ravindra Kumar, VARMA, Mukesh Kumar;VARMA, Mukesh Kumar, VARMA, Mukesh Kumar, VARMA, Mukesh Kumar, VARMA, Mukesh Kumar;

2022/01488 ~ Complete ~54:AVOIDING FALSE DETECTION ASSOCIATED WITH WAKE-UP SIGNAL ~71:TELEFONAKTIEBOLAGET LM ERICSSON (PUBL), SE-164 83 STOCKHOLM, SWEDEN, Sweden ~72: LOPEZ, Miguel;WILHELMSSON, Leif~ 33:US ~31:62/872,343 ~32:10/07/2019

2022/01510 ~ Provisional ~54:FEEDING APP ~71:William Andrew Alexander, 1 carrington road, klisser, South Africa ~72: William Andrew Alexander~

2022/01483 ~ Complete ~54:A SYSTEM FOR CATALYTIC CO-CRACKING OF WASTE PLASTICS POLYPROPYLENE AND RESIDUAL FUEL OIL ~71:AHMARUZZAMAN, Md., Department of Chemistry, National

Institute of Technology Silchar, Silchar, India;KASAR, Pamreishang, Department of Chemistry, National Institute of Technology Silchar, Silchar, India ~72: AHMARUZZAMAN, Md.;KASAR, Pamreishang~

2022/01491 ~ Complete ~54:DENESTING APPARATUS ~71:Anheuser-Busch InBev S.A., Grand'Place 1, BRUSSELS 1000, BELGIUM, Belgium ~72: DEKOCKER, Wim;DUPERRAY, Philippe~ 33:EP ~31:19189073.0 ~32:30/07/2019;33:EP ~31:19219765.5 ~32:27/12/2019

2022/01499 ~ Complete ~54:DUAL ATM AND DNA-PK INHIBITORS FOR USE IN ANTI-TUMOR THERAPY ~71:XRAD THERAPEUTICS, INC., 124 West 23rd Street, Apt. 16A., New York, New York, 10011, United States of America ~72: AIJUN LU;DAVID KIRSCH;GUOSHENG WU;JIANMIN FU;MICHAEL KASTAN;ROBERT A GOODNOW;SHUANG ZHANG;TONA GILMER;YAODE WANG;YUE SUN~ 33:CN ~31:201910695148.4 ~32:30/07/2019;33:US ~31:62/883,325 ~32:06/08/2019

2022/01475 ~ Provisional ~54:A PIPE CLAMP AND A KIT USING SAME ~71:FRITZ, Gerhardus, Petrus, 329 BROOKS STREET, MENLO PARK, 0081, SOUTH AFRICA, South Africa ~72: FRITZ, Gerhardus, Petrus~

2022/01496 ~ Complete ~54:FLUFF PULP ~71:Stora Enso OYJ, P.O. Box 309, HELSINKI 00101, FINLAND, Finland ~72: KÖNIG, Marianne;MUNGUIA-CHANG, Antonina;SÖDERSTAM, Gunilla;TUFVESSON, Helena~ 33:SE ~31:1951006-4 ~32:04/09/2019

2022/01493 ~ Complete ~54:RELAY SELECTION IN CELLULAR SLICED NETWORKS ~71:Koninklijke Philips N.V., High Tech Campus 52, EINDHOVEN 5656 AG, THE NETHERLANDS, Netherlands ~72: DEES, Walter;DIJK, Esko Olavi~ 33:EP ~31:19184170.9 ~32:03/07/2019;33:EP ~31:20151306.6 ~32:10/01/2020

2022/01495 ~ Complete ~54:PROCESSES FOR THE PREPARATION OF ALPHA-HYDROXY ESTERS BY ESTERIFICATION OF ALPHA-HYDROXY ACIDS ~71:Kemin Industries, Inc., 1900 Scott Avenue, DES MOINES 50317, IA, USA, United States of America ~72: HUANG, Shengshu;LAO, Ye;LI, Fangyi;NUYENS, Filip;SALAKLANG, Jatuporn;TANG, Zhuo;XU, Li~ 33:IB ~31:2019/104692 ~32:06/09/2019

2022/01501 ~ Complete ~54:HUMANIZED ANTI-LIV1 ANTIBODIES FOR THE TREATMENT OF CANCER ~71:SEAGEN INC., 21823 30th Drive S.E., Bothell, Washington, 98021, United States of America ~72: EMILY STEVENS;HONG LI;PHILLIP GARFIN;SHAWNA HENGEL;WILLIAM HANLEY~ 33:US ~31:62/877,233 ~32:22/07/2019;33:US ~31:62/890,498 ~32:22/08/2019;33:US ~31:63/003,613 ~32:01/04/2020;33:US ~31:63/031,496 ~32:28/05/2020

2022/01503 ~ Complete ~54:UREA COMPOUND FOR ANTAGONIZING LPA1 RECEPTOR ~71:TAISHO PHARMACEUTICAL CO., LTD., 24-1, Takada 3-chome, Toshima-ku, Tokyo, 1708633, Japan ~72: FUMITO UNEUCHI;KANAKO HATANAKA;SHOICHI KURODA;YUJI ITO;YUKI KOBAYASHI;YUKO UEHARA~ 33:JP ~31:2019-140088 ~32:30/07/2019

2022/01506 ~ Complete ~54:CALPAIN INHIBITORS AND USES THEREOF FOR TREATING NEUROLOGICAL DISORDERS ~71:BLADE THERAPEUTICS, INC., 442 Littlefield Avenue, United States of America ~72: FUENTES, Maria;IBRAHIM, Prabha;RAJAGOPALAN, P.T. Ravi;YU, Walter~ 33:US ~31:62/881,274 ~32:31/07/2019

2022/01471 ~ Provisional ~54:A DRIVE MOTOR ~71:COHEN, Lloyd, 40 King Fisher Drive, Pecanwood Estate, Broederstroom, North West, 0240, SOUTH AFRICA, South Africa;RADEV, Ivan Nikolov, 220a Blvd. Lomsko Shose, Sofia 1231, BULGARIA, Bulgaria ~72: RADEV, Ivan Nikolov~

- APPLIED ON 2022-02-03 -

2022/01517 ~ Provisional ~54:TABLE TOP ADVERTISING MEANS ~71:AIP Xtreme (Pty) Ltd, 15 Villa Vitelli, Mopani Close, Beverley, Gauteng, 2191, South Africa ~72: Darryn David Anthony~

2022/01545 ~ Complete ~54:CONTROLLING A DESTINATION OF NETWORK TRAFFIC ~71:SNAPT, INC, 333 West San Carlos Street, San Jose, United States of America ~72: BLAKEY, David Michael;TRENT, Mark Graeme;VAN DER SCHYFF, Willem Nicolaas~ 33:US ~31:62/878,625 ~32:25/07/2019

2022/01512 ~ Provisional ~54:MAGNETIC SLAG CONDITIONING ~71:MINTEK, 200 Malibongwe Drive, South Africa ~72: BEZUIDENHOUT, Driaan;LEKOBOTJA, Moshe;MATINDE, Elias;REYNOLDS, Ouinn Gareth;THOBADI, Itumeleng~

2022/01522 ~ Complete ~54:A METHOD OF MODIFIED GENETIC OPTIMIZATION TECHNIQUE FOR MIMO BROADCAST SCHEDULING. ~71:PATTANAYAK, Prabina, Dept. of Electronics and Communication Engineering NIT Silchar, Silchar, India ~72: KUMAR, Preetam;PATTANAYAK, Prabina~

2022/01530 ~ Complete ~54:METHOD FOR THE COMPRESSION OF GENOME SEQUENCE DATA ~71:ILLUMINA, INC., 5200 Illumina Way, United States of America ~72: RIZK, Guillaume Alexandre Pascal~ 33:US ~31:16/567,211 ~32:11/09/2019

2022/01538 ~ Complete ~54:UREA PHOSPHATE CALCIUM SULFATE GRANULES AND METHODS FOR PRODUCING AND USING THE SAME ~71:SABIC GLOBAL TECHNOLOGIES B.V., Plasticslaan 1, 4612 PX, Bergen op Zoom, Netherlands ~72: ANDREW GEORGE KELLS;KHALID AL-ROHILY;NILKAMAL BAG;YOGESH OMPRAKASH SHARMA~ 33:US ~31:62/873,521 ~32:12/07/2019

2022/01523 ~ Complete ~54:AN AUTOMATIC SPEECH EMOTION RECOGNITION SYSTEM ~71:DESHMANE, Anil K, JSPM'S BHAGWAT INSTITUTE OF TECHNOLOGY, BARSHI, DIST: SOLPAPUR, India;GOSAVI, Vinodpuri Rampuri, MAHARASHTRA INSTITUTE OF TECHNOLOGY, AURANGABAD SATARA PARISAR, BEED BY PASS, AURANGABAD, India;KOKATE, R. D., COLLEGE OF ENGINEERING(COEP) PUNE, SHIVAJI NAGAR, PUNE, India;PAWAR, Manju Dhanraj, MAHARASHTRA INSTITUTE OF TECHNOLOGY, AURANGABAD ,SATARA PARISAR, BEED BY PASS, AURANGABAD, India;SABLE, Ganesh, MAHARASHTRA INSTITUTE OF TECHNOLOGY, AURANGABAD, SATARA PARISAR, BEED BY PASS, AURANGABAD, India ~72: PAWAR, Manju Dhanraj~

2022/01532 ~ Complete ~54:DOSE DUMPING RESISTANT PHARMACEUTICAL COMPOSITIONS COMRISING VERINURAD ~71:AstraZeneca AB, SÖDERTÄLJE SE-151 85, SWEDEN, Sweden ~72: MALEKI, Laleh;VON CORSWANT, Christian~ 33:US ~31:62/874,691 ~32:16/07/2019

2022/01525 ~ Complete ~54:MODIFIED CIRCULAR RNAS AND METHODS OF USE THEREOF ~71:THE BOARD OF TRUSTEES OF THE LELAND STANFORD JUNIOR UNIVERSITY, Office of the General Counsel Building 170, 3rd Floor, Main Quad,, United States of America ~72: AMAYA, Laura;CHANG, Howard, Y.;CHEN, Chun-Kan;CHEN, Robert~ 33:US ~31:62/892,776 ~32:28/08/2019

2022/01547 ~ Complete ~54:TRACK ASSEMBLY BUSHING HAVING WHITE IRON MEMBER ~71:CATERPILLAR INC., 100 NE Adams Street, United States of America ~72: GRAHAM, Susan, M.;KEELE, Scott;PICKERILL, Robert, J.;RATHOD, Chandrasen, R.;RECKER, Roger, L.;YANIAK, Thomas, J.~ 33:US ~31:16/534,866 ~32:07/08/2019

2022/01528 ~ Complete ~54:FACTOR H POTENTIATING ANTIBODIES AND USES THEREOF ~71:GEMINI THERAPEUTICS SUB, INC., One Kendall Square, United States of America;STICHTING SANQUIN BLOEDVOORZIENING, Plesmanlaan 125, Netherlands ~72: BROUWER, Maria Clara;DEKKERS,

Gillian;GOVINDARAJAN, Sridhar;JONGERIUS, Ilse;KUIJPERS, Taco Willem;LAUDER, Scott;POUW, Richard Benjamin;PURCELL, Tom;RISPENS, Taede;WOUTERS, Diana~ 33:US ~31:62/875,309 ~32:17/07/2019

2022/01524 ~ Complete ~54:A METHOD OF MULTI-BIT QUANTIZED FEEDBACK MIMO SCHEDULING FOR HETEROGENEOUS BROADCAST NETWORK. ~71:PATTANAYAK, Prabina, DEPT. OF ELECTRONICS AND COMMUNICATION ENGINEERING NIT SILCHAR, SILCHAR, India ~72: KUMAR, Preetam;PATTANAYAK, Prabina~

2022/01533 ~ Complete ~54:HERBICIDAL COMPOSITIONS ~71:Bayer Aktiengesellschaft, Kaiser-Wilhelm-Allee 1, LEVERKUSEN 51373, GERMANY, Germany ~72: GATZWEILER, Elmar;HAAF, Klaus Bernhard;LORENTZ, Lothar;MENNE, Hubert;ROSINGER, Christopher Hugh;TRABOLD, Klaus~ 33:EP ~31:19184436.4 ~32:04/07/2019

2022/01544 ~ Complete ~54:INSPECTION SYSTEM INCLUDING A SELF-STABILIZING ASSEMBLY ~71:INTERACTIVE AERIAL, INC., 2662 Cass Road, Suite B, United States of America ~72: BENTSEN, Justin~ 33:US ~31:62/903,002 ~32:20/09/2019;33:US ~31:63/015,196 ~32:24/04/2020;33:US ~31:16/996,585 ~32:18/08/2020

2022/01529 ~ Complete ~54:INJECTABLE NUTRITIONAL SUPPLEMENT ~71:CHEMVET AUSTRALIA PTY LTD, 1/8 Rocklea Drive, Port Melbourne, Australia ~72: GRANT, Murray Graham~ 33:AU ~31:2019902471 ~32:12/07/2019

2022/01511 ~ Provisional ~54:ELECTRICAL CABLE THEFT DETECTION DEVICE ~71:Neill Human, 18 Dianthus Street, South Africa ~72: Neill Human~

2022/01535 ~ Complete ~54:ZINC PHOSPHATE CONTAINING COMPOSITIONS ~71:Colgate-Palmolive Company, 300 Park Avenue, NEW YORK 10022, NY, USA, United States of America ~72: HINES, Deon;LASKOWSKI, Erin;LAVENDER, Stacey;PETROU, Irene;SIMON, Eric;XU, Yun~ 33:US ~31:62/892,236 ~32:27/08/2019

2022/01519 ~ Provisional ~54:ANTIVIRAL GLOVES ~71:Shomees Ramathoolal-Louw, 9 Churchill Street, South Africa ~72: Shomees Ramathoolal-Louw~

2022/01542 ~ Complete ~54:T-CELL MODULATORY POLYPEPTIDES AND METHODS OF USE THEREOF ~71:CUE BIOPHARMA, INC., 21 Erie Street, Cambridge, Massachusetts, 02139, United States of America ~72: JOHN F ROSS;RODOLFO J CHAPARRO;RONALD D SEIDEL III;SASO CEMERSKI~ 33:US ~31:62/903,441 ~32:20/09/2019;33:US ~31:62/990,693 ~32:17/03/2020;33:US ~31:63/048,561 ~32:06/07/2020

2022/01513 ~ Provisional ~54:A BOLT ARRANGEMENT FOR A SLEEPER ~71:COLOSSAL CONCRETE PRODUCTS (PTY) LTD, 77 LEMMER ROAD, CORNER MOLECULE & amp; URANIUM ROAD, VULCANIA, BRAKPAN, SOUTH AFRICA, 1541, South Africa ~72: BURGER, Kobus~

2022/01537 ~ Complete ~54:MODIFIED EXOPOLYSACCHARIDE RECEPTORS FOR RECOGNIZING AND STRUCTURING MICROBIOTA ~71:Aarhus Universitet, Nordre Ringgade 1, AARHUS C 8000, DENMARK, Denmark ~72: ANDERSEN, Kasper Røjkjær;GYSEL, Kira;HANSEN, Simon Boje;KELLY, Simon;RADUTOIU, Simona;STOUGAARD, Jens;TAO, Ke;WONG, Mei Mei Jaslyn Elizabeth;ZHANG, Sha~ 33:US ~31:62/888,944 ~32:19/08/2019

2022/01516 ~ Provisional ~54:EARRING WITH SECURING MEANS ~71:Andrea van Straaten, The Hailing Station, No. 82 Sir John Rogersons Quay, Ireland ~72: Andrea van Straaten~

2022/01518 ~ Provisional ~54:MEEE ~71:Lloyd, 1309 ,Tlebebe section ,Luka, South Africa ~72: LLOYD~ 33:ZA ~31:2020210 ~32:30/01/2022

2022/01543 ~ Complete ~54:CROSS-SECTIONAL PROFILE FOR A FLAT KEY OR THE KEY CHANNEL OF A CYLINDER LOCK ~71:EVVA SICHERHEITSTECHNOLOGIE GMBH, Wienerbergstraße, 59-65, 1120, Wien, Austria ~72: FLORIAN OBERLEITNER - LEEB;MICHAEL RIESEL;WALTER BAUMHAUER~ 33:AT ~31:A50406/2020 ~32:12/05/2020

2022/01539 ~ Complete ~54:ANTI-MS4A4A ANTIBODIES AND METHODS OF USE THEREOF ~71:ALECTOR LLC, 131 Oyster Point Boulevard, Suite 600, South San Francisco, California, 94080, United States of America ~72: ANANYA MITRA;ANGIE GRACE YEE;ARNON ROSENTHAL;DANIEL P BERMINGHAM;FRANCESCA CIGNARELLA;HERVE RHINN;HUA LONG;ILARIA TASSI;JEONGHOON SUN;KARPAGAM SRINIVASAN;KLAUS-DIETER HEGER;MUHAMMAD A ALHAWAGRI;PHILIP LING KONG;SANTIAGO VIVEROS SALAZAR;TINA SCHWABE;WEI-HSIEN HO~ 33:US ~31:62/881,187 ~32:31/07/2019;33:US ~31:62/892,467 ~32:27/08/2019;33:US ~31:62/947,449 ~32:12/12/2019;33:US ~31:62/960,606 ~32:13/01/2020;33:US ~31:63/057,142 ~32:27/07/2020

2022/01514 ~ Provisional ~54:TEA IN A BARREL ~71:GARRETT NAIDOO, 3 ASH RIDGE - 23 POVAL ROAD, South Africa ~72: GARRETT NAIDOO~

2022/01536 ~ Complete ~54:HYBRID AMPHOTERICIN B DERIVATIVES WITH REDUCED TOXICITY ~71:The Board of Trustees of the University of Illinois, 352 Henry Administration Building, 506 South Wright Street, URBANA 61801, IL, USA, United States of America ~72: BURKE, Martin D.;MAJI, Arun;ZHANG, Jiabao~ 33:US ~31:62/884,471 ~32:08/08/2019;33:US ~31:62/927,731 ~32:30/10/2019

2022/01526 ~ Complete ~54:DRINKABLE SUPPLEMENT COMPOSITION FOR IMPROVED HEALTH AND HYDRATION ~71:LOCUS IP COMPANY, LLC, 30500 Aurora Road, Suite 180, United States of America ~72: ALIBEK, Ken;FARMER, Sean~ 33:US ~31:62/886,460 ~32:14/08/2019

2022/01534 ~ Complete ~54:MICROMOLECULE PI4KIIIA INHIBITOR COMPOSITION, PREPARATION METHOD THEREFOR AND USE THEREOF ~71:Nuo-Beta Pharmaceutical Technology (Shanghai) Co., Ltd., Room 131, Floor 5, Room 148, Floor 6, Building 1, No. 4560 Jinke Road, China (Shanghai) Pilot Free Trade Zone, SHANGHAI 201210, CHINA (P.R.C.), People's Republic of China ~72: HUANG, Fude;JIAO, Changping;WANG, Feng;YANG, Shu;ZHOU, Xiaojun~ 33:IB ~31:2019/094831 ~32:05/07/2019

2022/01548 ~ Complete ~54:ACTUATED AIR FILTER DUST VALVE ~71:CATERPILLAR INC., 100 NE Adams Street, United States of America ~72: IMMEL, Jon T.;RIES, Jeffrey R.;RODRIGUEZ, Javier A.;SPENGLER, Philip C.~ 33:US ~31:16/534,706 ~32:07/08/2019

2022/01521 ~ Complete ~54:PARTICULATE CARBON MATERIAL PRODUCIBLE FROM RENEWABLE RAW MATERIALS AND METHOD FOR ITS PRODUCTION ~71:SunCoal Industries GmbH, Rudolf-Diesel-Straße 15, LUDWIGSFELDE 14974, GERMANY, Germany ~72: BERGEMANN, Klaus;WITTMANN, Tobias~ 33:DE ~31:10 2015 014 956.3 ~32:21/11/2015;33:DE ~31:10 2015 015 549.0 ~32:29/11/2015;33:DE ~31:10 2015 015 550.4 ~32:29/11/2015;33:DE ~31:10 2016 201 801.9 ~32:05/02/2016

2022/01527 ~ Complete ~54:METHOD AND ELECTRONIC DEVICE FOR AGGREGATING SOURCES FOR PAYMENT TO FINANCIAL TRANSACTION ~71:ODUYEMI, Ademola Oduyemi, 67, Jacob Jordaenstraat, Antwerp, Belgium ~72: ODUYEMI, Ademola Oduyemi~ 33:IN ~31:201941026916 ~32:04/07/2019

2022/01515 ~ Provisional ~54:BOOK STAND ~71:Zakariyya Adamjee, Unit 18, No. 43, First Road, Linbro Park, Johannesburg, South Africa ~72: Zakariyya Adamjee~

2022/01540 ~ Complete ~54:ELECTRIC BICYCLE ~71:SERIAL 1 CYCLE COMPANY, LLC, 5300 S. 108th Street, Suite 15, #251, Hales Corners, Wisconsin, 53130, United States of America ~72: ANDREW SCHMIDT;BEN M LUND;BENJAMIN RAYMOND BASS~ 33:US ~31:62/874,663 ~32:16/07/2019

2022/01546 ~ Complete ~54:AUTOMATICALLY SCALING A NUMBER OF DEPLOYED APPLICATION DELIVERY CONTROLLERS (ADCS) IN A DIGITAL NETWORK ~71:SNAPT, INC, 333 West San Carlos Street, San Jose, United States of America ~72: BLAKEY, David Michael;TRENT, Mark Graeme;VAN DER SCHYFF, Willem Nicolaas~ 33:US ~31:62/878,632 ~32:25/07/2019

2022/01520 ~ Provisional ~54:SYSTEM CONFIGURATION FOR POWERING RESISTIVE HEATING ELEMENTS FROM DC POWER SOURCES ~71:Neill Human, 18 Dianthus Street, South Africa ~72: Neill Human~

2022/01531 ~ Complete ~54:REMOVAL DEVICE FOR REMOVING A KNITTED TUBULAR MANUFACTURE FROM A CIRCULAR KNITTING MACHINE FOR HOSIERY OR THE LIKE ~71:Lonati S.p.A., Via Francesco Lonati, 3, BRESCIA 25124, ITALY, Italy ~72: LONATI, Ettore;LONATI, Fausto;LONATI, Francesco~ 33:IT ~31:102019000023433 ~32:10/12/2019

2022/01541 ~ Complete ~54:ORAL FORMULATIONS OF EDARAVONE AND METHOD OF MANUFACTURING THEREOF ~71:BDR PHARMACEUTICALS INTERNATIONAL PRIVATE LIMITED, 407-408, Sharda Chambers, New Marine Lines, Maharashtra, Mumbai, 400020, India ~72: BADIGER ARAVIND MANAPPA;CHOKSI RAKSHIT KETANBHAI;JADAV NIRAV NATVARLAL;PATEL BHAVESH NAGINBHAI;PATIL MAYURKUMAR PURSHOTTAMBHAI;SHAH DHARMESH MAHENDRABHAI;SHAH JIGAR ATULKUMAR;THAKKAR VISHAL JAYANTILAL;TRIVEDI MADHAVKUMAR DILIPBHAI;VORA PRATIK ASHWINBHAI~ 33:IN ~31:201921028874 ~32:18/07/2019

- APPLIED ON 2022-02-04 -

2022/01580 ~ Provisional ~54:SIGHT PROTECTIVE SHIELDS ~71:Chris Van Eeden, C/o Ian & amp; Scott Street, Flimieda, Arnold & amp; Wessels Building, South Africa ~72: Chris Van Eeden~ 33:ZA ~31:1 ~32:30/01/2022

2022/01561 ~ Complete ~54:DATA PROCESSING METHOD, APPARATUS, DEVICE, AND STORAGE MEDIUM ~71:Wuxi Hisky Medical Technologies Co., Ltd., B401, 530 Plaza, University Science Park, Taihu International Science & amp; Technology Park, Xinwu District, WUXI 214000, JIANGSU, CHINA (P.R.C.), People's Republic of China ~72: DUAN, Houli;HE, Qiong;SHAO, Jinhua;SUN, Jin;XU, Xiaochen~ 33:CN ~31:201910706620.X ~32:01/08/2019

2022/01550 ~ Provisional ~54:SLEEP PA ~71:Stephanus Gerhardus Hattingh, 4 Zambesi Close, Kraaibosch Country Estate, South Africa ~72: Kevin Erasmus;Stephanus Gerhardus Hattingh~

2022/01552 ~ Complete ~54:MULTILAYER ANTIMICROBIAL LAMINATED ARTICLE ~71:TESSARA (PTY) LTD, 129, Industrial Park, 33 Kinghall Avenue, South Africa ~72: KEMP, Renier;KING Susan~

2022/01557 ~ Complete ~54:PHARMACEUTICAL COMPOSITION FOR NASAL DELIVERY ~71:OREXO AB, PO Box 303, Sweden ~72: FISCHER, Andreas;RÖNN, Robert;SÄVMARKER, Jonas~ 33:US ~31:16/506,023 ~32:09/07/2019

2022/01575 ~ Complete ~54:APPARATUS, SYSTEM AND METHOD FOR MONITORING A CONDITION ~71:EDWARD PENTY, Glebe House, Aldborough, Boroughbridge, Yorkshire, YO51 9ER, United Kingdom ~72: EDWARD PENTY~ 33:GB ~31:1912384.3 ~32:29/08/2019

2022/01554 ~ Complete ~54:METHODS FOR INCREASING THE BIOAVAILABILITY OF OTC AND PHARMACEUTICAL DRUGS ~71:LOCUS IP COMPANY, LLC, 30500 Aurora Road, Suite 180, United States of America ~72: ALIBEK, Ken;FARMER, Sean~ 33:US ~31:62/885,233 ~32:10/08/2019

2022/01558 ~ Complete ~54:CAGE ASSEMBLY FOR DISLODGING MATERIAL BUILDUP WITHIN PNEUMATIC CONVEYANCE SYSTEMS AND RELATED METHODS ~71:HUNZEKER, Daniel, 1954 N. 2000 E, United States of America ~72: HUNZEKER, Daniel~ 33:US ~31:62/874,894 ~32:16/07/2019

2022/01569 ~ Complete ~54:ANTIBODY COMBINATIONS FOR TREATMENT OF CANCER IN SPECIFIC PATIENTS ~71:BIOINVENT INTERNATIONAL AB, S?lvegatan 41, 223 70, Lund, Sweden;UNIVERSITY OF SOUTHAMPTON, Highfield, Southampton, Hampshire, S017 1BJ, United Kingdom ~72: BJÖRN FRENDÉUS;INGRID KARLSSON;INGRID TEIGE;LINDA MÅRTENSSON;MARK CRAGG;ROBERT OLDHAM;STEPHEN BEERS~ 33:EP ~31:19186840.5 ~32:17/07/2019

2022/01577 ~ Complete ~54:DEVICE FOR ENERGY TRANSFER AND FOR ENERGY STORAGE IN A LIQUID RESERVOIR ~71:ENVOLA GMBH, MAX-BORN-STRASSE 2-4, 89081 ULM,, Germany ~72: SCHECHNER, Alexander; SCHWENK, Günther~ 33:DE ~31:2019 118 223.9 ~32:05/07/2019

2022/01551 ~ Provisional ~54:LIQUID INTAKE ~71:CENTEX FLUID PRODUCTS AFRICA (PTY) LTD, 214 Albert Amon Street, Meadowdale, South Africa ~72: LEWIS, Justine Quinton~

2022/01555 ~ Complete ~54:RNA-TARGETING LIGANDS, COMPOSITIONS THEREOF, AND METHODS OF MAKING AND USING THE SAME ~71:THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL, 109 Church Street, Chapel Hill, NC, United States of America ~72: AUBÉ, Jeffrey;LI, Kelin;WEEKS, Kevin;ZELLER, Meredith~ 33:US ~31:62/883,370 ~32:06/08/2019;33:US ~31:63/031,944 ~32:29/05/2020

2022/01559 ~ Complete ~54:PROCESS FOR THE PREPARATION OF FLUENSULFONE ~71:YEDA RESEARCH AND DEVELOPMENT CO. LTD., at The Weizmann Institute of Science, P.O.Box 95, Israel ~72: KHENKIN, Alexander;NEUMANN, Ronny~ 33:US ~31:62/882,541 ~32:04/08/2019

2022/01570 ~ Complete ~54:CHIMERIC PAPILLOMAVIRUS L1 PROTEIN ~71:SINOCELLTECH LTD., No. 31, Kechuang 7th Street, Economic and Technological Development Zone, Beijing 100176, People's Republic of China ~72: CHUNXIA LUO;LIANGZHI XIE;LIN PANG;PING HU;WEI ZHANG;XIAOYAN SUO~ 33:CN ~31:201910656278.7 ~32:19/07/2019

2022/01562 ~ Complete ~54:PREPARATION COMPRISING ANTI-PD-1/HER2 BISPECIFIC ANTIBODY, AND PREPARATION METHOD THEREFOR AND USE THEREOF ~71:Beijing Hanmi Pharmaceutical Co., Ltd., No. 10 Tianzhu West Road, Tianzhu Airport Industrial Zone A, Shunyi District, BEIJING 101312, CHINA (P.R.C.), People's Republic of China;Innovent Biologics (Suzhou) Co., Ltd., 168 Dongping Street, Suzhou Industrial Park, SUZHOU 215123, JIANGSU, CHINA (P.R.C.), People's Republic of China ~72: LIU, Yanghan;MA, Yidong;WANG, Yinjue;ZHOU, Kaisong~ 33:CN ~31:201910726334.X ~32:07/08/2019

2022/01568 ~ Complete ~54:SYSTEM AND METHOD FOR DETERMNING STATUS OF HEALTH OF ANIMALS ARRIVING AT A FEED LOCATION ~71:Intervet International B.V., Wim De Koerverstraat 35, BOXMEER 5831 AN, THE NETHERLANDS, Netherlands ~72: NATARAJ, Akshaya;NICKELL, Jason;SCHELLER, Robert S.~ 33:US ~31:62/883,937 ~32:07/08/2019

2022/01573 ~ Complete ~54:VIRAL PARTICLES FOR USE IN TREATING SYNUCLEINOPATHIES SUCH AS PARKINSON'S DISEASES BY GENE THERAPY ~71:CONSORCIO CENTRO DE INVESTIGACIÓN BIOMÉDICA EN RED, c/ Monforte de Lemos, número 5, 28029, Madrid, Spain;FUNDACION PARA LA INVESTIGACION MEDICA APLICADA, Avda Pio XII 55 E-31008 Pamplona, Spain;UCB BIOPHARMA SRL, 60, Allée de la Recherche, 1070, Brussels, Belgium ~72: GLORIA GONZALEZ ASEGUINOLAZA;JOSÉ LUIS LANCIEGO PEREZ;RALPH MICHAEL LINDEN~ 33:EP ~31:19382706.0 ~32:12/08/2019

2022/01578 ~ Provisional ~54:SAFETY BELTS FOR PASSENGERS ON PICKUP VEHICLES IN LOAD SURFACE AREA ~71:CHARLES EUGENE O'REILLY, 97 POR1, 2ND AVENUE, FONTAINEBLEAU, GAUTENG, South Africa ~72: CHARLES EUGENE O'REILLY ~

2022/01576 ~ Complete ~54:ALKYNYL QUINAZOLINE COMPOUNDS ~71:BLACK DIAMOND THERAPEUTICS, INC., 139 Main Street, Suite 301, United States of America ~72: ARISTA, Luca;BUCK, Elizabeth;FLOHR, Alexander;LUCAS, Matthew C.;PADILLA, Fernando~ 33:US ~31:62/887,392 ~32:15/08/2019;33:US ~31:63/065,028 ~32:13/08/2020

2022/01553 ~ Complete ~54:MTA-COOPERATIVE PRMT5 INHIBITORS ~71:MIRATI THERAPEUTICS, INC., 9393 Towne Centre Drive, Suite 200 San Diego, United States of America ~72: BOBINSKI, Thomas, P;BURNS, Aaron, Craig;IVETAC, Anthony;KETCHAM, John, Michael;KUEHLER, Jon;KULYK, Svitlana;LAWSON, John, Russell;MARX, Matthew, Arnold;SMITH, Christopher, Ronald~ 33:US ~31:62/899,575 ~32:12/09/2019;33:US ~31:62/942,833 ~32:03/12/2019;33:US ~31:62/961,371 ~32:15/01/2020;33:US ~31:62/994,927 ~32:26/03/2020;33:US ~31:63/060,261 ~32:03/08/2020

2022/01571 ~ Complete ~54:POLYVALENT IMMUNOGENICITY COMPOSITION FOR HUMAN PAPILLOMAVIRUS ~71:SINOCELLTECH LTD., No. 31, Kechuang 7th Street, Economic and Technological Development Zone, Beijing 100176, People's Republic of China ~72: CHUNXIA LUO;LIANGZHI XIE;LIN PANG;PING HU;WEI ZHANG;XIAOYAN SUO~ 33:CN ~31:201910657255.8 ~32:19/07/2019

2022/01579 ~ Provisional ~54:WHEELIE BIN TELESCOPIC TRASH COMPACTOR ~71:CHARLES EUGENE O'REILLY, 97 POR1, 2ND AVENUE, FONTAINEBLEAU, GAUTENG, South Africa ~72: CHARLES EUGENE O'REILLY ~

2022/01565 ~ Complete ~54:POSITIONING OF MOBILE DEVICE IN UNDERGROUND WORKSITE ~71:Sandvik Mining and Construction Oy, Pihtisulunkatu 9, TAMPERE 33330, FINLAND, Finland ~72: MARTIKAINEN, Pekka~ 33:EP ~31:19198779.1 ~32:20/09/2019

2022/01566 ~ Complete ~54:APPARATUS FOR PURIFYING A LIQUID COMPRISING A TARGET SUBSTANCE ~71:FUJIFILM Diosynth Biotechnologies UK Limited, Belasis Avenue, BILLINGHAM TS23 1LH, UNITED KINGDOM, United Kingdom ~72: HAIGH, Jonathan;HEISE, Charles;NAGY, Tibor;PULLEN, James;TOPPING, Andrew~ 33:GB ~31:1911687.0 ~32:15/08/2019

2022/01556 ~ Complete ~54:FUNGICIDE COMPOSITION ~71:SIPCAM OXON S.P.A., Via Carroccio, 8, Italy ~72: Cristina RAPETTI;Francesca BORGO;Gianluca VALIERI;Marco BERNARDINI~ 33:IT ~31:1020190000144 ~32:08/08/2019

2022/01563 ~ Complete ~54:CELLULOSE PRETREATMENT ~71:Infinited Fiber Company Oy, Ruukinkuja 2, ESPOO 02330, FINLAND, Finland ~72: HARLIN, Ali;MÄKELÄ, Jani;MALANIN, Erkki~ 33:FI ~31:20195717 ~32:30/08/2019

2022/01560 ~ Complete ~54:LIQUID DRESSING COMPOSITIONS AND THEIR VETERINARY USES ~71:CAMBRIDGE ENTERPRISE LIMITED, The Old Schools, Trinity Lane, United Kingdom ~72: BASTOS, Carlos Passos;FARIA, Nuno;POWELL, Jonathan;THOM, Will~ 33:GB ~31:1911361.2 ~32:08/08/2019;33:GB ~31:2007917.4 ~32:27/05/2020

2022/01572 ~ Complete ~54:COMPACT ALUMINIUM ALLOY HEAT TREATMENT METHOD ~71:ALERIS ROLLED PRODUCTS GERMANY GMBH, Carl-Spaeter-Straße 10, 56070, Koblenz, Germany ~72: PHILIPPE MEYER~ 33:EP ~31:19190299.8 ~32:06/08/2019

2022/01564 ~ Complete ~54:HIGH DENSITY BOTTLE DRUM FOR STORAGE, AGITATION AND READING OF BLOOD CULTURE BOTTLES AND METHODS OF STORING ~71:Becton, Dickinson and Company, 1 Becton Drive, FRANKLIN LAKES 07417, NJ, USA, United States of America ~72: ARMSTRONG, Robert Edward;LENTZ, Ammon David;LOHAN, Daniel Justin;MURRAY, Christopher;POHL, Brent Ronald;WENGER, Kevin;ZERWECK, Jason~ 33:US ~31:62/883,796 ~32:07/08/2019

2022/01567 ~ Complete ~54:COMPOSITIONS OF TROFINETIDE ~71:Neuren Pharmaceuticals Limited, 188 Quay Street, Level 15 PWC Tower, AUCKLAND 1141, NEW ZEALAND, New Zealand ~72: AYOUB, Mimoun;BETTI, Cecilia;BLOWER, Clive;BONNAR, James Anthony;BOUSMANNE, Martin Bernard Catherine;DECROOS, Karel Willy Luc;MONIOTTE, Etienne David Frank Philippe;PETERSON, Mathew;SHAW, James Murray~ 33:US ~31:62/882,998 ~32:05/08/2019

2022/01574 ~ Complete ~54:METHOD FOR MANUFACTURING MICROCAPSULES CONTAINING A LIPOPHILIC ACTIVE INGREDIENT, MICROCAPSULES PREPARED BY SAID METHOD AND THE USE THEREOF ~71:MICROCAPSULES TECHNOLOGIES, 4 route de Châtillon 45390 Puiseaux, France ~72: GÉRARD HABAR~ 33:FR ~31:19 08996 ~32:06/08/2019

- APPLIED ON 2022-02-07 -

2022/01584 ~ Complete ~54:CONSTRUCTION METHOD AND IDENTIFICATION METHOD OF ORIGIN TRACEABILITY MODEL OF PORTUNUS TRITUBERCULATUS ~71:Shandong Marine Resource and Environment Research Institute (Ocean Environment Monitoring Center of Shandong Province, Aquatic Products Quality Inspection Center of Shandong Province), Shandong Marine Science and Technology Building, No.216 Changjiang Road, Economic & Center of Center Development Zone, Yantai, Shandong Province, 264006, People's Republic of China ~72: Cui Yanmei;Han Dianfeng;Huang Hui;Jiang Fang;Li Huanjun;Liu Huihui;Liu Xiaojing;Peng Kaixiu;Sun Yanqing;Tian Xiuhui;Xu Yingjiang;Zhang Xiuzhen~

2022/01587 ~ Complete ~54:SAMPLING DEVICE AND METHOD FOR TRADITIONAL CHINESE MEDICINE CAPSULES AND APPLICATION THEREOF ~71:Tai'an Institute of Food and Drug Inspection and Testing (Tai'an Institute of Fiber Inspection), No. 2666, Fengtian Road, High-tech Industrial Development Zone, Tai'an City, Shandong Province, 271000, People's Republic of China ~72: LI, Haiyan~

2022/01593 ~ Complete ~54:SEGMENTAL-TYPE HOLLOW GROUTING ANCHOR CABLE DEVICE FOR GEOTECHNICAL ENGINEERING ~71:Shandong Dong'anyun Mining Technology Co., Ltd., Room 819, High-tech Center, Laiwu High-tech Zone, Jinan City, Shandong Province , 271100, People's Republic of China ~72: CHENG, Qi;CHENG, Yunhai;LI, Weili;LIU, Zhaowei;MA, Mengxiang;PAN, Zexiang;WANG, Guandong;WANG, Yunzhu;XIA, Junmin;XIN, Baoyan~

2022/01613 ~ Complete ~54:MILK ACIDIFICATION METHOD AND APPLICATION THEREOF IN FEEDING CALVES AND LAMBS ~71:YULIN UNIVERSITY, No. 51 Chongwen Road, Yulin City, People's Republic of China ~72: DONG, Shuwei;LI, Helin;LI, Longping;QU, Lei;SHI, Lei;SONG, Xiaoyue;ZHAI, Junjun;ZHANG, Huini;ZHU, Haijing~

2022/01623 ~ Complete ~54:METHOD FOR THE COMPRESSION OF GENOME SEQUENCE DATA ~71:ILLUMINA, INC., 5200 Illumina Way, United States of America ~72: RIZK, Guillaume Alexandre Pascal~ 33:US ~31:16/567,211 ~32:11/09/2019

2022/01625 ~ Complete ~54:MACHINE METHODS TO DETERMINE NEOEPITOPE PAYLOAD TOXICITY ~71:NANTBIO, INC., 9920 Jefferson Boulevard, United States of America;NANTOMICS, LLC, 9920 Jefferson Boulevard, United States of America ~72: BENZ, Stephan Charles;GEISSERT, Lise;NIAZI, Kayvan;SUDOL, Jeremi;SZETO, Christopher;TSAI, Connie;VASKE, Charles Joseph;WNUK, Kamil A~ 33:US ~31:62/885,089 ~32:09/08/2019

2022/01630 ~ Complete ~54:NOVEL ANTIGEN BINDING MOLECULE FORMATS ~71:REGENERON PHARMACEUTICALS, INC., 777 Old Saw Mill River Road, Tarrytown, New York, 10591, United States of America ~72: ANDREW MURPHY;CHIAYANG LIN;ERIC SMITH;ERICA PYLES;MICHAEL ROSCONI;NINA LIU;SAMUEL DAVIS;SUPRIYA PATEL;TONG ZHANG~ 33:US ~31:62/884,496 ~32:08/08/2019;33:US ~31:63/050,483 ~32:10/07/2020

2022/01633 ~ Complete ~54:COMPOSITIONS AND METHODS FOR TREATING CANCER ~71:AIM IMMUNOTECH INC., 2117 SW Highway, 484, Ocala, Florida, 34473, United States of America ~72: DAVID R STRAYER;THOMAS K EQUELS~ 33:US ~31:63/081,296 ~32:21/09/2020

2022/01600 ~ Complete ~54:T CELL RECEPTORS AND METHODS OF USE THEREOF ~71:University Health Network, 101 College Street, Unit 150, TORONTO M5G-IL7, ONTARIO, CANADA, Canada ~72: HIRANO, Naoto;SASO, Kayoko;SUGATA, Kenji~ 33:US ~31:62/880,508 ~32:30/07/2019

2022/01586 ~ Complete ~54:MORCHELLA FACTORY CULTIVATION METHOD ~71:Gansu Radio and TV University Linxia Campus, No.64 Minzhu East Road, Linxia City, Gansu Province, 731100, People's Republic of China;Guangxi Normal University for Nationalities, No.23 Fozi Road, Jiangzhou District, Chongzuo City, Guangxi, 532200, People's Republic of China;Longxi County Experimental Primary School, No.13 Wenmiao Lane, Gongchang Town East Street, Longxi County, Dingxi City, Gansu Province, 731100, People's Republic of China ~72: Chang Yuwei;Duan Wenbin;He Shuling;Kang Le;Kang Xiaohua;Liu Shaopeng;Lu Hongxia;Ma Lingfa;Mo Caimiao;Shi Wanyan;Su Xiufang;Sun Yebin;Wei Jiangyuan;Yan Yinghui;Yang Jingjun;Yang Xianglan;Yu Jianfang~

2022/01592 ~ Complete ~54:ZN2+-AL3+-CO32-LDHS@AL ADSORBING MATERIAL AND APPLICATION THEREOF IN FLUORIDE ION ADSORPTION THROUGH RECYCLING ~71:Yulin University, No. 2, Wenhua North Road Xisha, Yuyang District, Yulin City, Shaanxi, 719000, People's Republic of China ~72: DANG, Rui;GAO, Yong;GUO, Wei;LI, Chunyan;LI, Xiao;LI, Yanjun;MA, Xiangrong;MA, Yajun;PAN, Yilin;REN, Mengjiao;XUE, Lei;ZHANG, Ya;ZHANG, Yuanyuan;ZHANG, Zhifang~

2022/01595 ~ Complete ~54:SAFENER CONTAINING HERBICIDAL OIL DISPERSION ~71:Arysta Lifescience Inc., 15401 Weston Parkway, Suite 150, CARY 27513, NC, USA, United States of America ~72: BAATH, Bhupinder;BENNETT, Stephen Craig;FLOOD, Charlie James;HAWKINS, Emma Louise;SECKINGER, Carlton Stephen;ZHANG, Hong~ 33:US ~31:62/512,343 ~32:30/05/2017

2022/01581 ~ Provisional ~54:GREEN POWER CHARGED PORTABLE POWER TRIPLER ELECTRICAL/MAGNETICALLY DRIVEN POWER GENERATOR UNIT ~71:Donovan van Eeden, 3 Merriman street, South Africa;Global Group Innovations Intelligence(Pty)Ltd, 3 Merriman street, South Africa ~72: Donovan van Eeden;Global Group Innovations Intelligence(Pty)Ltd~ 33:ZA ~31:2020/769239/07 ~32:05/02/2022

2022/01619 ~ Complete ~54:IL-2 CONJUGATES AND METHODS OF USE TO TREAT AUTOIMMUNE DISEASES ~71:SYNTHORX, INC., 11099 North Torrey Pines Road, Suite 290, United States of America ~72: CAFFARO, Carolina E.;MILLA, Marcos;PTACIN, Jerod~ 33:US ~31:62/898,478 ~32:10/09/2019;33:US ~31:62/900,488 ~32:14/09/2019;33:US ~31:62/930,987 ~32:05/11/2019;33:US ~31:62/953,075 ~32:23/12/2019;33:US ~31:63/042,393 ~32:22/06/2020

2022/01622 ~ Complete ~54:TREATMENT OF FRAGILE X SYNDROME WITH IBUDILAST IN COMBINATION WITH METFORMIN, CANNBIDIOL, SERTRALINE OR QUERCETIN ~71:HEALX LIMITED, Charter House, 66-68 Hills Road, United Kingdom ~72: BROWN, David~ 33:GB ~31:1912760.4 ~32:05/09/2019

2022/01632 ~ Complete ~54:PHARMACEUTICAL COMPOSITIONS COMPRISING BISPECIFIC ANTIBODIES DIRECTED AGAINST CD3 AND CD20 AND THEIR USES ~71:GENMAB A/S, Kalvebod Brygge 43, 1560, Copenhagen V, Denmark ~72: BOLETTE BJERREGAARD;CHRISTIAN CIMANDER;JACOB D CLAUSEN;JESPER PASS;JESPER VALBJOERN;LENE S HARLOW;MARIA A C WAHLBOM;METTE H JENSEN;PETER J MADSEN;SHAN REN~ 33:EP ~31:19191964.6 ~32:15/08/2019

2022/01604 ~ Complete ~54:METHODS OF IDENTIFYING T CELL RECEPTORS ~71:University Health Network, 101 College Street, Unit 150, TORONTO M5GIL7, ONTARIO, CANADA, Canada ~72: HIRANO, Naoto;NAKATSUGAWA, Munehide;RAHMAN, Muhammed Aashiq;SUGATA, Kenji;YAMASHITA, Yuki~ 33:US ~31:62/880,492 ~32:30/07/2019;33:US ~31:63/029,103 ~32:22/05/2020

2022/01607 ~ Complete ~54:T CELL RECEPTORS AND METHODS OF USE THEREOF ~71:University Health Network, 101 College Street, Unit 150, TORONTO M5G-IL7, ONTARIO, CANADA, Canada ~72: HIRANO, Naoto;SASO, Kayoko;SUGATA, Kenji~ 33:US ~31:62/880,505 ~32:30/07/2019

2022/01602 ~ Complete ~54:PROLIPOSOMAL TESTOSTERONE UNDECANOATE FORMULATIONS ~71:TesoRx Pharma, LLC, 325 Sharon Park Drive, Suite 739, MENLO PARK 94025, CA, USA, United States of America ~72: BETAGERI, Guru V.;HONG, Teresa;KADAJJI, Veeran Gowda;SWARNAKAR, Nitin K.;THIRUCOTE, Ramachandran;VENKATESAN, Natarajan~ 33:US ~31:62/884,919 ~32:09/08/2019

2022/01628 ~ Complete ~54:8 + 2 WAY XLR PCB FEMALE CONNECTOR ~71:NEUTRIK AG, Im alten Riet 143, Schaan, 9494, Liechtenstein ~72: OLIVER DOBLER~ 33:CN ~31:201921311838.7 ~32:13/08/2019

2022/01591 ~ Complete ~54:A TYPE OF SOYBEAN PROTEIN CARROT VEGETARIAN SAUSAGE AND ITS PREPARATION METHOD ~71:Jinzhou Medical University, No.40, Section 3, Songpo Road, Linghe District, Jinzhou City, Liaoning Province, People's Republic of China ~72: Han Yanxia;Li Dandan;Ni Rong;Zhang Yan;Zhang Zhen~

2022/01597 ~ Complete ~54:COMPOSITIONS FOR MAINTAINING OR MODULATING MIXTURES OF ETHER LIPID MOLECULES IN A TISSUE OF A HUMAN SUBJECT ~71:Baker Heart and Diabetes Institute, 75 Commercial Road, MELBOURNE 3004, VIC, AUSTRALIA, Australia ~72: MEIKLE, Peter John~ 33:AU ~31:2019902527 ~32:17/07/2019

2022/01599 ~ Complete ~54:PROCESS AND INTERMEDIATES FOR THE PREPARATION OF PYROXASULFONE ~71:Adama Agan Ltd., P.O. Box 262, Northern Industrial Zone, ASHDOD 7710001, ISRAEL, Israel ~72: BARDA, Yaniv;MANDABI, Aviad;RECSEI, Carl~ 33:US ~31:62/880,127 ~32:30/07/2019

2022/01606 ~ Complete ~54:SSEA-4 BINDING MEMBERS ~71:Scancell Limited, John Eccless House, Robert Robinson Avenue, Oxford Science Park, OXFORD OX4 4GP, OXFORDSHIRE, UNITED KINGDOM, United Kingdom ~72: CHUA, JiaXin;DURRANT, Linda Gillian~ 33:GB ~31:1912882.6 ~32:06/09/2019

2022/01620 ~ Complete ~54:METHODS AND SYSTEMS FOR DETERMINING PART WEAR USING A BOUNDING MODEL ~71:CATERPILLAR INC., 100 NE Adams Street, United States of America ~72: CAMPOMANES, Patrick S.;HARTOONIAN, Graham R.;MCCAFFREY, Brandon H.~ 33:US ~31:16/537,269 ~32:09/08/2019

2022/01629 ~ Complete ~54:STABILIZED FORMULATIONS OF 4-AMINO-3-SUBSTITUTED BUTANOIC ACID DERIVATIVES ~71:SAOL INTERNATIONAL RESEARCH LTD., H.P. House, 21 Laffan Street, Hamilton, HM09, Bermuda ~72: DAVID PENAKE;JOHN DEVANE;LEONARD O'MAHONY;MANUEL WEINHEIMER;SHARON HAMM;WOLFGANG MOHR~ 33:US ~31:16/524,664 ~32:29/07/2019

2022/01589 ~ Complete ~54:AN IOT BASED PRECISION SOIL FERTILITY MEASUREMENT SYSTEM FOR ORGANIC FARMING ~71: Abhay singh lodhi, Founder and CEO at " Om's Drone Developers", 501/9 Ward No.17, Jhanda Chowk, Umariya Pan, District Katni, Madhya Pradesh, 483332, India; Dr Aabha Jain, Associate Professor, PIEMR, 132 Mahaveer Kripa Avenue, Airport Road, Indore, Madhya Pradesh, 452005, India; Dr Ashok Kumar Koshariya, Assistant Professor, Department of Plant Pathology, School of Agriculture, Lovely Professional University, Jalandhar, Punjab, 144411, India; Dr. Amita Sharma, Assistant Professor, (Quantitative Management Techniques), Swami Keshwanand Rajasthan Agricultural University, Beechwal, Bikaner, Rajasthan, 334006, India; Dr. Jolly Masih, Associate Professor, Head Techno Managerial Research, PIEMR, Plot1, Mission Compound, Swaroop Sagar, Udaipur, Rajasthan, 313001, India; Dr. Lokesh Jasrai, Associate Professor (Marketing), H.No: 1134, New Defense Colony, Phase-3, Deep Nagar, Old Phagwara Road, Near Ram Bhag Temple, Jalandhar Cantt, Punjab, 144005, India; Dr. Molshree Rathore, Co convenor, Indian Dietetics Association, Durga Vihar, Anand Vihar Railway Colony, Jagatpura, Jaipur, Rajsthan, 302017, India; Dr. Rajesh Verma, Professor and Dean, Mittal School of Business, Lovely Professional University, Jalandhar - Delhi G.T. Road, Phagwara, Punjab, 144411, India; Dr. Surjeet Singh Dhaka, Assistant Professor, Department of Applied Agriculture, Central University of Punjab, Ghudda, Bathinda, Punjab, 151401, India; Mr. Suresh Chandra Sharma, Teaching Assistant & amp; Ph.D. Scholar, Institute of Agribusiness Management, SKRAU, Beechwal, Bikaner, Rajasthan, 334006, India ~72: Abhay singh lodhi;Dr Aabha Jain;Dr Ashok Kumar Koshariya;Dr. Amita Sharma; Dr. Jolly Masih; Dr. Lokesh Jasrai; Dr. Molshree Rathore; Dr. Rajesh Verma; Dr. Surjeet Singh Dhaka; Mr. Suresh Chandra Sharma~

2022/01611 ~ Complete ~54:METHOD FOR SIMULTANEOUSLY PREPARING ENERGY GAS AND DETOXIFYING CHROMITE ORE PEOCESSING RESIDUE BY USING SLUDGE ~71:QINGDAO UNIVERSITY OF TECHNOLOGY, No. 777, Jialingjiang Road, Huangdao District, Qingdao City, People's Republic of China;SHANDONG INVIRONMENTAL PROTECTION INDUSTRY GROUP CO., LTD., 303A, Building 13, Zhongrun Century City, 13777 Jingshi Road, Lixia District, Jinan City, People's Republic of China ~72: CHI, Panpan;HAN, Jianjiang;SUN, Yingjie;WANG, Shuai;XIAN, Yingzhuo;YANG, Xinfei;YU, Jian;ZHANG, Dalei~

2022/01614 ~ Complete ~54:FIXING SUPPORT FOR BRIDGE ENGINEERING ~71:Pingyin Highway Development Center, No.37, Jindong Street, Pingyin County, Jinan, Shandong, 250400, People's Republic of China ~72: Shaobin Yin~

2022/01618 ~ Complete ~54:RADIOLABELED MET BINDING PROTEINS FOR IMMUNO-PET IMAGING ~71:REGENERON PHARMACEUTICALS, INC., 777 Old Saw Mill River Road, Tarrytown, United States of America ~72: KELLY, Marcus;MA, Dangshe;OLSON, William~ 33:US ~31:62/901,003 ~32:16/09/2019

2022/01624 ~ Complete ~54:CAMPTOTHECIN DERIVATIVES WITH A DISULFIDE MOIETY AND A PIPERAZINE MOIETY ~71:SUN PHARMA ADVANCED RESEARCH COMPANY LTD., 17/B, Mahal Industrial Estate, Mahakali Caves Road, India ~72: CHITTURI,Trinadha Rao;GORE, Omkar Prakash;PATEL, Gopalkumar Chimanlal;PATEL, Jiten Ranchhodbhai;SENGUPTA, Prabal~ 33:IN ~31:201921027783 ~32:11/07/2019

2022/01603 ~ Complete ~54:TEMPLATE-BASED EXCERPTING AND RENDERING OF MULTIMEDIA PERFORMANCES ~71:Smule, Inc., 139 Townsend St., # 300, SAN FRANCISCO 94107, CA, USA, United States of America ~72: CHAN, Ka Yee;COOK, Perry Raymond;SMITH, Jeffrey Christopher;STEINWEDEL, David Adam~ 33:US ~31:16/509,688 ~32:12/07/2019

2022/01612 ~ Complete ~54:ROOF RACK WITH ADJUSTABLE GUARDRAIL HEIGHT ~71:FOSHAN HONGGUAN AUTO INTELLIGENT TECH CO., LTD., No. 9, Liangjun Road, Qijiao Industrial Zone, Mai Village, Xingtan town, Shunde District, Foshan City, People's Republic of China ~72: WU, JingZhong~ 33:CN ~31:202110643531.2 ~32:09/06/2021

2022/01617 ~ Complete ~54:A DELAMINATION CRACKING METHOD OF THICK AND HARD ROOF OF COAL MINE BASED ON ENERGY-CONCENTRATED EFFECT OF DETONATION WAVE COLLISION ~71:China University of Mining and Technology, No.1 Daxue Road, People's Republic of China ~72: Bingxiang HUANG;Dayong CHEN;Haoze LI;Jianchun OU;Luying SHAO;Mingxiao HOU;Qingwang CAI;Xinglong ZHAO;Xuejie JIAO;Yuekun XING;Zhanwei WU~

2022/01621 ~ Complete ~54:A METHOD OF REPELLING A RODENT FROM A SOWED SEED CROP ~71:ROODT, JACQUES JOHAN, Bloukrans Farm, South Africa ~72: ROODT, JACQUES JOHAN~ 33:ZA ~31:2020/07796 ~32:15/12/2020

2022/01627 ~ Complete ~54:ELECTRICAL PLUG CONNECTOR ~71:NEUTRIK AG, Im alten Riet 143, Schaan, 9494, Liechtenstein ~72: OLIVER DOBLER~ 33:AT ~31:A50701/2019 ~32:07/08/2019

2022/01585 ~ Complete ~54:LIBS QUANTITATIVE ANALYSIS METHOD BASED ON ENSEMBLE LEARNING ~71:Guangzhou Institute of Geochemistry, Chinese Academy of Sciences, Guangzhou Institute of geochemistry, Chinese Academy of Sciences, 511 Kehua street, Tianhe District, Guangzhou City, Guangdong Province, 510640, People's Republic of China ~72: Gong Gelian~

2022/01601 ~ Complete ~54:RIPRETINIB FOR TREATING GASTROINTESTINAL STROMAL TUMORS ~71:Deciphera Pharmaceuticals, LLC, 200 Smith Street, WALTHAM 02451, MA, USA, United States of America ~72: PITMAN, Jama;ROSEN, Oliver;SOTO, Rodrigo Ruiz~ 33:US ~31:62/885,797 ~32:12/08/2019;33:US ~31:62/904,198 ~32:23/09/2019;33:US ~31:62/926,281 ~32:25/10/2019;33:US ~31:62/936,018 ~32:15/11/2019;33:US ~31:62/968,927 ~32:31/01/2020;33:US ~31:62/968,945 ~32:31/01/2020;33:US ~31:63/023,921 ~32:13/05/2020;33:US ~31:63/023,936 ~32:13/05/2020

2022/01590 ~ Complete ~54:A PESTICIDE SPRAYING EQUIPMENT FOR APRICOT ORCHARD ~71:Zhangye Academy of Forestry, Nine kilometers outside the East Gate, Ganzhou District, Zhangye City, Gansu province, 734000, People's Republic of China ~72: Chen Peng;Feng Junren;Tian Xiaoping~

2022/01594 ~ Complete ~54:MINING FILLING METHOD FOR ADVANCED REPLACEMENT SECTION COAL PILLAR ~71:Shandong Dong'anyun Mining Technology Co., Ltd., Room 819, High-tech Center, Laiwu High-tech Zone, Jinan City, Shandong Province, 271100, People's Republic of China ~72: CHENG, Yunhai;FANG, Shaozong;JIAO, Shixue;PANG, Chuming;SHEN, Hao;WANG, Guandong;WANG, Xudong;WANG, Yifan;XIN, Baoyan~

2022/01608 ~ Complete ~54:RIP1 INHIBITORY COMPOUNDS AND METHODS FOR MAKING AND USING THE SAME ~71:Rigel Pharmaceuticals, Inc., 1180 Veterans Boulevard, SOUTH SAN FRANCISCO 94080, CA, USA, United States of America ~72: BHAMIDIPATI, Somasekhar;TAYLOR, Vanessa~ 33:US ~31:62/897,223 ~32:06/09/2019;33:US ~31:62/932,404 ~32:07/11/2019;33:US ~31:63/001,016 ~32:27/03/2020;33:US ~31:63/004,290 ~32:02/04/2020;33:US ~31:63/004,301 ~32:02/04/2020;33:US ~31:63/004,319 ~32:02/04/2020

2022/01616 ~ Complete ~54:A CONTAINER AND A METHOD OF MANUFACTURING A CONTAINER ~71:Pailpac (Pty) Ltd, 4 Lanner Road, Falcon Park, New Germany, Durban, SOUTH AFRICA, South Africa ~72: MURRAY, Brian~ 33:ZA ~31:2020/06923 ~32:06/11/2020

2022/01626 ~ Complete ~54:PROCESS FOR THE RECOVERY OF METALS FROM OXIDIC ORES ~71:UMICORE, Rue du Marais 31, B-1000, Brussels, Belgium ~72: JAN LEYSSEN;JEAN SCOYER;MARGOT NEVEN;MICHAEL BALTES;MICHEL DANIELS~ 33:EP ~31:19190915.9 ~32:09/08/2019

2022/01634 ~ Complete ~54:TREATMENT OF CANCERS WITH ANTIBODY DRUG CONJUGATES (ADC) THAT BIND TO 191P4D12 PROTEINS ~71:AGENSYS, INC., 1800 Stewart Street, Santa Monica, California, 90404, United States of America;SEAGEN INC., 21823 30th Drive SE, Bothell , Washington, 98021, United States of America ~72: OYEWALE O ABIDOYE~ 33:US ~31:62/886,270 ~32:13/08/2019

2022/01605 ~ Complete ~54:MHC CLASS II MOLECULES AND METHODS OF USE THEREOF ~71:University Health Network, 101 College Street, Unit 150, TORONTO M5G-IL7, ONTARIO, CANADA, Canada ~72: HIRANO, Naoto;SUGATA, Kenji~ 33:US ~31:62/880,501 ~32:30/07/2019;33:US ~31:63/029,114 ~32:22/05/2020

2022/01582 ~ Provisional ~54:GOOSE NEK GIRDLING TOOL ~71:M Hulley, Rutherford farm, South Africa ~72: M Hulley~

2022/01596 ~ Complete ~54:RIP1 INHIBITORY COMPOUNDS AND METHODS FOR MAKING AND USING THE SAME ~71:Rigel Pharmaceuticals, Inc., 1180 Veterans Boulevard, SOUTH SAN FRANCISCO 94080, CA, USA, United States of America ~72: BHAMIDIPATI, Somasekhar;CHEN, Yan;DARWISH, Ihab;KOLLURI, Rao;LUO, Zhushou;SHAW, Simon;TAYLOR, Vanessa;YU, Jiaxin~ 33:US ~31:62/897,223 ~32:06/09/2019;33:US ~31:62/932,404 ~32:07/11/2019;33:US ~31:63/001,016 ~32:27/03/2020;33:SR ~31:63/004,319 ~32:02/04/2020;33:US ~31:63/004,290 ~32:02/04/2020;33:US ~31:63/004,301 ~32:02/04/2020

2022/01739 ~ Provisional ~54:ARM BABY REST ~71:SAKHILE HOPEWELL NTULI, 1351 Ext 05,, South Africa ~72: SAKHILE HOPEWELL NTULI~

2022/01588 ~ Complete ~54:PROCESS FOR PREPARING HIGH-PURITY TRIMETHYLMETHOXYSILANE ~71:Shandong Guike New Material Co., Ltd., Jining Chemical Park, Huji Town, Jinxiang County, Jining, Shandong, 272211, People's Republic of China ~72: KONG, Fanzhen;KONG, Linggang;LI, Hanghang;LI, Pengtao;LU, Haifeng;QI, Shilin;QU, Yuan;YANG, Tiantian~

2022/01598 ~ Complete ~54:LIPIDATED CATIONIC PEPTIDE-PEG COMPOSITIONS FOR NUCLEIC ACID DELIVERY ~71:Nutcracker Therapeutics, Inc., 5858 Horton Street, Suite 540, EMERYVILLE 94608, CA, USA, United States of America ~72: MCKINLAY, Colin James~ 33:US ~31:62/885,022 ~32:09/08/2019;33:US ~31:62/907,470 ~32:27/09/2019

2022/01609 ~ Complete ~54:GERMICIDAL AIR DIFFUSER ~71:RICKARD AIR DIFFUSION (PTY) LTD, 16 Harris Drive, Ottery, South Africa ~72: RICKARD, Mark Gareth~ 33:ZA ~31:2021/01710 ~32:15/03/2021

2022/01610 ~ Complete ~54:TOBACCO LEAF EXTRACT AND USE THEREOF FOR THE TREATMENT OF TOBACCO ADDICTION ~71:NFL BIOSCIENCES, 64, rue de Rennes, France ~72: LAFONT, Bruno~ 33:FR ~31:1653079 ~32:07/04/2016

2022/01615 ~ Complete ~54:PLANT LAYOUT AND PROCESS FOR EXTRACTING FINE CHROME ~71:SIBANYE GOLD LIMITED t/a SIBANYE-STILLWATER, Libanon Business Park, 1 Hospital Road, (off Cedar Avenue), Libanon, Westonaria 1780, Gauteng, SOUTH AFRICA, South Africa ~72: JUBILEUS, Julius~ 33:ZA ~31:2021/00800 ~32:05/02/2021

2022/01583 ~ Provisional ~54:GAS TANK ~71:KHUTSO FRANS MALULEKA RATANAG LERATO MOSAKO, 1086 ITSOSENG, South Africa ~72: KHUTSO FRANS MALULEKA RATANANG LERATO MOSAKO~

2022/01631 ~ Complete ~54:DETERGENT COMPOSITION ~71:UNILEVER GLOBAL IP LIMITED, Port Sunlight, Wirral, Merseyside, CH62 4ZD, United Kingdom ~72: PANCHANAN BHUNIA;SAMEER KESHAV BARNE~ 33:EP ~31:19196616.7 ~32:11/09/2019

- APPLIED ON 2022-02-08 -

2022/01639 ~ Complete ~54:SYSTEM AND METHOD FOR EVALUATING OPTIMIZATION EFFECT OF PERFORATION PARAMETERS IN HORIZONTAL SECTION OF SHALE GAS WELL ~71:Shandong University of Science and Technology, No. 579 qianwangang Road, Qingdao Economic and Technological Development Zone, Huangdao District, Qingdao, Shandong, 266590, People's Republic of China;Sinopec Safety Engineering Research Institute Co., Ltd, 339 Songling Road, Laoshan District, Qingdao, Shandong, 266104, People's Republic of China ~72: Miao Yanan;Miao Yanan~

2022/01642 ~ Complete ~54:WHOLE BODY VIBRATION TEST SYSTEM FOR TRACTOR DRIVERS ~71:SHANDONG AGRICULTURAL MACHINERY RESEARCH INSTITUTE, No. 19, Sangyuan Road, Licheng District, Jinan City, Shandong Province, 250100, People's Republic of China;Shandong Sinder Agricultural Technology Co., Ltd., Building 4, Dinghao Plaza, Gongye South Road, Jinan Area, China (Shandong) Pilot Free Trade Zone , 250013, People's Republic of China;Xinjiang Agricultural and Animal Husbandry Machinery Product Quality Supervision and Management Station, No. 171, Xinyi Road, Xinshi District, Urumqi, Xinjiang, 830054, People's Republic of China ~72: CHEN, Guangkuo;HAN, Xingchang;HU, Long;JIANG, Zhichao;LAN, Yi;LI, Xianpeng;WANG, Qinxiang;WEI, Tonglong;XUE, Ming;YU, Xiugang~

2022/01644 ~ Complete ~54:WINDING DEVICE FOR ARMATURE COIL OF PERMANENT MAGNET SYNCHRONOUS MOTOR ~71:West Anhui University, Moon Island, West of Yunluqiao, Lu'an City, Anhui Province , 237012, People's Republic of China ~72: CHEN, Xiaofei;CHENG, Junhui;DUAN, Zhicheng;FANG, Jie;FANG, Jun;LU, Chengling;WENG, Zhiyuan;ZHANG, Gang~

2022/01650 ~ Complete ~54:CONTINUOUS MINING AND CONTINUOUS FILLING SYSTEM WITHOUT PERMANENT SUPPORTING AND FILLING AND IMPLEMENTATION METHOD THEREOF ~71:Shandong Dong'anyun Mining Technology Co., Ltd., Room 819, High-tech Center, Laiwu High-tech Zone, Jinan City, Shandong Province, 271100, People's Republic of China ~72: CHENG, Yunhai;HAN, Chengjian;PANG, Chuming;SHI, Mingwei;WANG, Xudong;ZUO, Leian~

2022/01667 ~ Complete ~54:PORTABLE SAFE ~71:BIAGI SAGA TECHNOLOGIES (PTY) LTD, 45 Eva Rd, Fairleads AH, South Africa ~72: KUISIS, Gerald~ 33:ZA ~31:2019/04709 ~32:18/07/2019

2022/01678 ~ Complete ~54:PROJECTILE, METHOD FOR PRODUCING A PROJECTILE, DIE FOR PRODUCING A PROJECTILE AND METHOD FOR SECURING A PROJECTILE CORE AGAINST ROTATION IN RESPECT OF A JACKET OF A PROJECTILE ~71:RUAG AMMOTEC AG, Uttigenstrasse 67, 3602, Thun, Switzerland ~72: DONALD MEYER;MARKUS BUCHER;MICHAEL MUSTER~ 33:DE ~31:10 2019 121 112.3 ~32:05/08/2019

2022/01680 ~ Complete ~54:INHIBITOR COMPOUNDS ~71:CINCERA THERAPEUTICS PTY LTD, Level 9, 31 Queens St, Melbourne, Victoria, 3000, Australia ~72: BERNARD LUKE FLYNN;GIANG LE;SHUXIN YANG~ 33:AU ~31:2019902614 ~32:24/07/2019

2022/01802 ~ Provisional ~54:ANTI DEEP FAKE SYSTEM ~71:Tofara Moyo, 5 Protea lane Newtonwest, Zimbabwe ~72: Tofara Moyo~

2022/01647 ~ Complete ~54:DILUTED PROTECTIVE SOLUTION FOR FROZEN SEMEN OF SHEEP ~71:Animal Husbandry and Veterinary Research Institute of Xinjiang Academy of Agricultural Reclamation,

No.221 Wuyi Road, Shihezi, Xinjiang, 832000, People's Republic of China ~72: Dai Rong;Fu Xiangwei;Liu Yucheng;Shi Guoqing;Wan Pengcheng;Yangyang~

2022/01654 ~ Complete ~54:A TELESCOPIC EDGE PROTECTION POST ~71:WORXSAFE AB, Nifsåsvägen 9, 831 52 , Östersund, Sweden ~72: BENGT JÖNSSON;OLOV VIBERG~ 33:EP ~31:21160826.0 ~32:04/03/2021

2022/01683 ~ Complete ~54:DRAINAGE SYSTEM AND DRAINAGE METHOD FOR ULTRA-DEEP SHAFT EXCAVATION PROCESS ~71:CHINA RAILWAY 18 BUREAU GROUP CO. LTD., Shuanggang Town, Jinnan District, People's Republic of China ~72: DONG, Xiaohui;LI, Genqiao;ZHANG, Xin~

2022/01636 ~ Provisional ~54:CLIP ~71:HARVEST BAGS (PTY) LTD., Factory 5, Stand 64, Eight Street, Babalegi, Gauteng, 0407, South Africa ~72: GIDEON JAKOBUS VAN WYK;XIAODONG SUN;ZHENMING HU~

2022/01687 ~ Complete ~54:FEED ADDITIVE FOR REMOVING MAIZE AFLATOXIN AND PREPARATION METHOD AND APPLICATION THEREOF ~71:INSTITUTE OF ANIMAL HUSBANDRY, HEILONGJIANG ACADEMY OF AGRICULTURAL SCIENCES, NO. 368, XUEFU ROAD, NANGANG DISTRICT, HARBIN, People's Republic of China ~72: CHEN, Heshu;FENG, Yanzhong;HE, Haijuan;HE, Liuqin;HE, Xinmiao;LIU, Di;LIU, Ziguang;QI, Meiyu;TIAN, Ming;WANG, Wentao;WU, Saihui;YU, Xiaolong;ZHANG, Haifeng~

2022/01635 ~ Provisional ~54:ALL-PURPOSE MODULAR AND MULTIFUNCTIONAL STORAGE RECEPTACLE ~71:Jonathan Klopper, 4 Lulworth Grove , Dalecross, , sandton, South Africa ~72: Jonathan Keith Frederick Klopper~

2022/01645 ~ Complete ~54:DEVICE FOR IDENTIFYING INITIAL POSITION OF ROTOR OF PERMANENT MAGNET SYNCHRONOUS MOTOR ~71:West Anhui University, Moon Island, West of Yunluqiao, Lu'an City, Anhui Province , 237012, People's Republic of China ~72: CHENG, Junhui;DUAN, Zhicheng;FANG, Jie;LU, Chengling;ZHANG, Gang~

2022/01649 ~ Complete ~54:METHOD FOR MICROWAVE-ASSISTED ALCOHOLYSIS OF POLYURETHANE FROM DISCARDED REFRIGERATORS ~71:Shanghai Polytechnic University, No. 2360, Jinhai Road, Pudong New Area, Shanghai, 201209, People's Republic of China ~72: HUANG, Qing;WANG, Lincai;WANG, Xiaoyan;YANG, Yuhan;YUAN, Wenyi~

2022/01657 ~ Complete ~54:ENVIRONMENTALLY FRIENDLY VENTILATION SYSTEM FOR DEEP SHAFT EXCAVATION ~71:CHINA RAILWAY 18 BUREAU GROUP CO. LTD., Shuanggang Town, Jinnan District, People's Republic of China ~72: DONG, Xiaohui;LI, Genqiao;ZHANG, Xiangping;ZHANG, Xin~ 33:CN ~31:202220072916.8 ~32:12/01/2022

2022/01668 ~ Complete ~54:LOW-ENERGY WATER TREATMENT ~71:THE WATER & amp; CARBON GROUP, 4/127 Creek St Brisbane, Australia ~72: DUCKWORTH, Cliff Alexander;HUNTER, James Patrick~ 33:AU ~31:2019903302 ~32:06/09/2019

2022/01681 ~ Complete ~54:AGRICULTURAL OR HORTICULTURAL INSECTICIDE OR ANIMAL ECTOPARASITE OR ENDOPARASITE CONTROL AGENT EACH COMPRISING A CONDENSED HETEROCYCLIC COMPOUND HAVING A SUBSTITUTED CYCLOPROPANE-OXADIAZOLE GROUP OR A SALT THEREOF AS ACTIVE INGREDIENT, AND METHOD FOR USING THE INSECTICIDE OR THE CONTROL AGENT ~71:NIHON NOHYAKU CO., LTD., 19-8, Kyobashi 1-chome Chuo-ku, Tokyo, 1048386, Japan ~72: CHIAKI YAMAUCHI;HIROKAZU FUJIHARA;IKKI YONEMURA~ 33:JP ~31:2019-165792 ~32:12/09/2019

2022/01653 ~ Complete ~54:DETERMINATION OF BASE MODIFICATIONS OF NUCLEIC ACIDS ~71:THE CHINESE UNIVERSITY OF HONG KONG, Office of Research and Knowledge Transfer Services, Room 301, Pi Ch'iu Building, Shatin, New Territories, Hong Kong ~72: KWAN CHEE CHAN;ON YEE TSE;PEIYONG JIANG;ROSSA WAI KWUN CHIU;SUK HANG CHENG;WENLEI PENG;YUK-MING DENNIS LO~ 33:US ~31:62/887,987 ~32:16/08/2019;33:US ~31:62/970,586 ~32:05/02/2020;33:US ~31:62/991,891 ~32:19/03/2020;33:US ~31:63/019,790 ~32:04/05/2020;33:US ~31:63/051,210 ~32:13/07/2020

2022/01662 ~ Complete ~54:OBJECT MARKING, PRODUCTION AND AUTHENTICATION METHOD ~71:AUTHENTIC VISION GMBH, Ludwig-Bieringer-Platz 1, Austria ~72: BERGMÜLLER, Thomas;WEISS, Thomas~ 33:EP ~31:19194679.7 ~32:30/08/2019

2022/01658 ~ Complete ~54:TEREPHTHALIC ACID ESTERS FORMATION ~71:9449710 CANADA INC., 480 Fernand-Poitras Street, Terrebonne, Canada ~72: ESSADDAM, Adel;ESSADDAM, Fares~ 33:US ~31:15/706,484 ~32:15/09/2017

2022/01669 ~ Complete ~54:INTRATHECAL ADMINISTRATION OF LEVETIRACETAM ~71:Sintetica S.A., Via Penate 5, MENDRISIO CH-6850, SWITZERLAND, Switzerland ~72: BIANCHI, Clara;DONATI, Elisabetta;MITIDIERI, Augusto;PICCAGLI, Barbara~ 33:US ~31:62/886,706 ~32:14/08/2019

2022/01675 ~ Complete ~54:MODELLING OF UNDERGROUND WORKSITE ~71:Sandvik Mining and Construction Oy, Pihtisulunkatu 9, TAMPERE 33330, FINLAND, Finland ~72: MARTIKAINEN, Pekka~ 33:EP ~31:19198780.9 ~32:20/09/2019

2022/01659 ~ Complete ~54:ANTI-IL-23P19 ANTIBODY FORMULATIONS ~71:BOEHRINGER INGELHEIM INTERNATIONAL GMBH, Binger Strasse 173, Germany ~72: GARIDEL, Patrick;SCHULTZ-FADEMRECHT, Torsten~ 33:US ~31:62/897,930 ~32:09/09/2019

2022/01670 ~ Complete ~54:MODIFIED AAV CAPSID PROTEINS FOR TREATMENT OF ARTHRITIC DISEASE ~71:MeiraGTx UK II Limited, 92 Britannia Walk, LONDON N1 7NQ, UNITED KINGDOM, United Kingdom;University of Heidelberg, Grabengaβe 1, HEIDELBERG 69117, GERMANY, Germany ~72: BÖRNER, Kathleen;BROEKSTRA, Niels;FINN, Jonathan Douglas;GRIMM, Dirk;SNOEK, Susanne Anna;VAN DER SANDEN, Sabine Maria Gertrude~ 33:NL ~31:2023505 ~32:15/07/2019

2022/01674 ~ Complete ~54:PHARMACEUTICAL COMPOSITION COMPRISING A TETRAHYDROPYRAZOLOPYRIMIDINONE COMPOUND ~71:Idorsia Pharmaceuticals Ltd, Hegenheimermattweg 91, ALLSCHWIL 4123, SWITZERLAND, Switzerland ~72: AMBUEHL, Michael;FOURNIER, Elvire;FRAICHARD, Amandine;FROIDEVAUX, Sylvie;GEISELER, Oliver;HERRMANN, Charlyse;HUBLER, Francis;MURPHY, Mark;RENNEBERG, Dorte;STAMM, Simon;VON RAUMER, Markus~ 33:IB ~31:2019/068419 ~32:09/07/2019

2022/01684 ~ Complete ~54:A NOVEL ATOMIZATION CORE ~71:SHANGHAI QV TECHNOLOGIES CO., LTD., Floor 10-11, No.60, Mudan Road, People's Republic of China ~72: PENG, Qiwen;PENG, Xiaofeng~ 33:CN ~31:201910742101.9 ~32:13/08/2019

2022/01651 ~ Complete ~54:OPERATION METHOD FOR SINGLE CELL ELECTROPHORESIS ASSAY AND OPERATION METHOD ~71:Central South University, Central South University, Changsha City, Hunan, 410083, People's Republic of China ~72: LI, Haipu;LUO, Wenbao;PENG, Fangyuan;PENG, Jingjin;YANG, Zhaoguang~ 33:CN ~31:202110255536.8 ~32:09/03/2021

2022/01656 ~ Complete ~54:FEED ADDITIVE FOR REMOVING VOMITOXIN AND PREPARATION METHOD AND APPLICATION THEREOF ~71:HUNAN NORMAL UNIVERSITY, NO.36 LUSHAN ROAD, CHANGSHA,

People's Republic of China;INSTITUTE OF ANIMAL HUSBANDRY, HEILONGJIANG ACADEMY OF AGRICULTURAL SCIENCES, NO. 368, XUEFU ROAD, NANGANG DISTRICT, People's Republic of China ~72: CHEN, Heshu;FENG, Yanzhong;HE, Haijuan;HE, Liuqin;HE, Xinmiao;LIU, Di;LIU, Ziguang;QI, Meiyu;TIAN, Ming;WANG, Wentao;WU, Saihui;YU, Xiaolong;ZHANG, Haifeng~

2022/01672 ~ Complete ~54:LIQUID COMPOSITIONS COMPRISING A LEVODOPA AMINO ACID CONJUGATE AND USES THEREOF ~71:NeuroDerm Ltd., 3 Pekeris Street, Rabin Science Park, REHOVOT 7670212, ISRAEL, Israel ~72: BEN-HAMO, Shmuel;BRAIMAN-WIKSMAN, Liora;GAZAL, Elana;IIJIMA, Daisuke;MAINFELD, Alex;MOROKUMA, Kenji;NAKAO, Akira;OKUNO, Masataka;SHALTIEL-KARYO, Ronit;ZAWOZNIK, Eduardo~ 33:US ~31:62/896,518 ~32:05/09/2019;33:US ~31:62/897,648 ~32:09/09/2019

2022/01676 ~ Complete ~54:DRIVE DEVICE FOR A STOPPER CLOSURE ON A METALLURGICAL VESSEL ~71:REFRACTORY INTELLECTUAL PROPERTY GMBH & amp; CO. KG, Wienerbergstrasse 11, 1100, Wien, Austria ~72: ERICH RÖLLIN;ROLAND LORENZ~ 33:EP ~31:19192630.2 ~32:20/08/2019

2022/01641 ~ Complete ~54:SEPARATION METHOD OF SPECIAL YEASTS FOR BLUEBERRY WINE FERMENTATION ~71:Guizhou Botanical Garden, Guizhou Botanical Garden, No. 86, Luchongguan Road, Yunyan District, Guiyang City, Guizhou, 550006, People's Republic of China ~72: LI, Yongxia;WANG, Yao;WEN, Guangqin;ZHANG, Qunying;ZHANG, Xiaoyong~

2022/01648 ~ Complete ~54:A METHOD AND DEVICE FOR REMOTE TRACING AND OPERATION OF A HOST DEVICE ~71:INTELLIGENCE 161 HARDWARE, 149 MacArthur Park, South Africa ~72: HENNING JACOBS~

2022/01663 ~ Complete ~54:REAR STRUCTURE FOR AN ELECTRIC VEHICLE ~71:ARCELORMITTAL, 24-26, Boulevard d'Avranches, Luxembourg ~72: Alexandre SOTTY;Elie GIBEAU;Nicolas SCHNEIDER;Yves DROUADAINE~ 33:IB ~31:PCT/IB2019/057481 ~32:05/09/2019

2022/01666 ~ Complete ~54:A POWER DISPENSING AUTHORIZATION SYSTEM ~71:CAPSCAN (PTY) LTD, 1208 Ruimsig Crescent Street, Woodhill, South Africa ~72: GRABOW, Stephan Heinrich;VAN DER VYVER, Andre;VAN SCHALKWYK, Tertius Lendert;ZEEMAN, Marita~ 33:ZA ~31:2019/04448 ~32:08/07/2019;33:ZA ~31:2019/05204 ~32:07/08/2019

2022/01671 ~ Complete ~54:METHOD OF ENHANCING THE EFFICACY AND STABILITY OF INGREDIENTS IN SUSPENSIONS ~71:Nanophase Technologies Corporation, 1319 Marquette Drive, ROMEOVILLE 60446, IL, USA, United States of America ~72: SARKAS, Harry W.~ 33:US ~31:16/537,337 ~32:09/08/2019

2022/01677 ~ Complete ~54:DRILL HEAD AND METHOD FOR PRODUCING A VERTICAL BOREHOLE IN THE GROUND ~71:HERRENKNECHT AG, Schlehenweg 2, 77963, Schwanau, Germany ~72: PATRICK RENNKAMP~ 33:US ~31:62/878,264 ~32:24/07/2019

2022/01638 ~ Complete ~54:PREPARATION METHOD OF YEAST ENRICHED WITH IRON, ZINC AND SELENIUM ~71:Institute of biology, Gansu Academy of Sciences, China, No.197 Dingnan Road, Chengguan District, Lanzhou City, Gansu Province, People's Republic of China ~72: Ji Bin;Liang Yan;Peng Yinan;Wang Zhiye;Ye Ze;Zhao Tingwei~

2022/01643 ~ Complete ~54:PEELING AND PITTING MACHINE CAPABLE OF CONTROLLING JUJUBE BROWNING ~71:Shanxi Institute for Functional Food, Shanxi Agricultural University, No. 79, Longcheng Street, Xiaodian District, Taiyuan City, Shanxi Province, 030031, People's Republic of China ~72: DING, Weiying;HAN, Jiming;MAO, Kai;YANG, Chun;YE, Zheng;ZHANG, Jiangning;ZHANG, Ling~

2022/01646 ~ Complete ~54:PREPARATION METHOD FOR LOW-MOLECULAR-WEIGHT FERMENTED COMPOSITE WHOLE FRUIT AND VEGETABLE FUNGAL CEREAL POWDER ~71:Shanxi Institute for Functional Food, Shanxi Agricultural University, No. 79, Longcheng Street, Xiaodian District, Taiyuan City, Shanxi Province , 030031, People's Republic of China ~72: DING, Weiying;HAN, Jiming;MAO, Kai;YANG, Chun;YE, Zheng;ZHANG, Jiangning;ZHANG, Ling~

2022/01655 ~ Complete ~54:LOCKING DEVICE WITH RENTAL REMINDER INDICATOR ~71:RHONA MAT PROPERTIES CC, 28 Newquay Street, New Redruth, ALBERTON, Johannesburg 1450, Gauteng, SOUTH AFRICA, South Africa ~72: BRITS, Frederik Petrus Philippus~ 33:ZA ~31:2021/00613 ~32:28/01/2021

2022/01664 ~ Complete ~54:FRONT STRUCTURE FOR AN ELECTRIC VEHICLE ~71:ARCELORMITTAL, 24-26, Boulevard d'Avranches, Luxembourg ~72: Alexandre SOTTY;Elie GIBEAU;Nicolas SCHNEIDER;Yves DROUADAINE~ 33:IB ~31:PCT/IB2019/057513 ~32:06/09/2019

2022/01682 ~ Complete ~54:AGRICULTURAL OR HORTICULTURAL INSECTICIDE OR ANIMAL ECTOPARASITE OR ENDOPARASITE CONTROL AGENT EACH COMPRISING AN IMIDAZOPYRIDAZINE COMPOUND HAVING A SUBSTITUTED CYCLOPROPANE-OXADIAZOLE GROUP OR A SALT THEREOF AS ACTIVE INGREDIENT, AND METHOD FOR USING THE INSECTICIDE OR THE CONTROL AGENT ~71:NIHON NOHYAKU CO., LTD., 19-8, Kyobashi 1-chome Chuo-ku, Tokyo, 1048386, Japan ~72: CHIAKI YAMAUCHI;IKKI YONEMURA~ 33:JP ~31:2019-165793 ~32:12/09/2019

2022/01640 ~ Complete ~54:CONSTANT FORCE ELECTROLYTIC GRINDING MACHINING DEVICE ~71:Anhui Polytechnic University, NO.8, Beijing Middle Road, Wuhu City, Anhui Province, 241000, People's Republic of China;EFORT Intelligent Equipment Co., LTD, No.96, Wanchun East Road, Wuhu City, Anhui Province, 241060, People's Republic of China;Hefei University of Technology, No.193, Tunxi Road, Hefei City, Anhui Province, 230009, People's Republic of China ~72: Chen Yuanlong;Fang Ming;Jiang Lijun;Jiang Wei;Xiao Yongqiang;Zhang Zhen~

2022/01652 ~ Complete ~54:ERBB RECEPTOR INHIBITORS ~71:Dizal (Jiangsu) Pharmaceutical Co., Ltd., No. 199 Liangjing Road, Zhangjiang Hi-Tech Park, SHANGHAI 201203, CHINA (P.R.C.), People's Republic of China ~72: LI, Zhengtao;TSUI, Honchung;WANG, Jiabing;YANG, Zhenfan;ZENG, Qingbei;ZHANG, Xiaolin;ZHONG, Wei~ 33:IB ~31:2018/085998 ~32:08/05/2018

2022/01665 ~ Complete ~54:UNMANNED AERIAL VEHICLE VARIABLE RATE FERTILIZATION DEVICE AND METHOD ~71:ANHUI SCIENCE AND TECHNOLOGY UNIVERSITY, No.9 Donghua Road, Fengyang, Chuzhou, Anhui, 233100, People's Republic of China ~72: LI, Xinwei;SU, Xiangxiang;TAO, Xinyu;ZHU, Yan;ZHU, Yongji~

2022/01679 ~ Complete ~54:APPARATUS FOR THE TREATMENT OF HORTICULTURAL PRODUCTS AND METHOD FOR CONTROLLING SUCH APPARATUS ~71:UNITEC S.P.A., Via Provinciale Cotignola, 20/9, 48022, Lugo, Italy ~72: LUCA BENEDETTI~ 33:IT ~31:102019000013407 ~32:31/07/2019

2022/01637 ~ Complete ~54:MULTI-DIRECTIONAL PULLING-STRAP CRANE TOWER BODY STABLIZING SYSTEM ~71:Hunan Villead Science and Technology Co., Ltd., Room 813, Block B, Daxue Chuangye Park, No.99 Daxue Road, High-Tech Industry Development District, People's Republic of China;Villead (Xuzhou) Intelligent Equipment Technology Co., Ltd, Room 813, Block B, Daxue Chuangye Park, No.99 Daxue Road, High-Tech Industry Development District, People's Republic of China;Villead (Xuzhou) Intelligent Equipment District, People's Republic of China ~72: Hua XIAO;Huijie YANG;Huijun DONG;Zhen XUE~

2022/01661 ~ Complete ~54:TREATMENT OF FRAGILE X SYNDROME ~71:HEALX LIMITED, Charter House, 66-68 Hills Road, United Kingdom ~72: BROWN, David~ 33:GB ~31:1911603.7 ~32:14/08/2019

2022/01660 ~ Complete ~54:MANUFACTURING PROCESS TOOL AND MANUFACTURING PROCESS METHOD FOR LATERAL POSITIONING STRIP TOOTHED BELT ~71:LIU, Suhua, ZHANG, Shide Information Section No.1 Zhenxing Road, People's Republic of China ~72: LIU, Suhua~ 33:CN ~31:201910651617.2 ~32:18/07/2019

2022/01673 ~ Complete ~54:PROMOTERS FOR REGULATION OF GENE EXPRESSION IN PLANTS ~71:Syngenta Crop Protection AG, Rosentalstrasse 67, BASEL 4058, SWITZERLAND, Switzerland ~72: AZHAKANADAM, Kasimalai;CLARKE V, Joseph Dallas;CONVILLE, Jared;ZHOU, Ailing~ 33:US ~31:62/896,735 ~32:06/09/2019

2022/01685 ~ Provisional ~54:DIGITAL INFRINGEMENT NOTICE SYSTEM ~71:Danzel Mohamed, 102 Alabaster Street, Ext 11, Ennerdale, South Africa;SI Source, 102 Alabaster Street, Ext 11, Ennerdale, South Africa ~72: Danzel Mohamed;SI Source~

- APPLIED ON 2022-02-09 -

2022/01700 ~ Complete ~54:MOBILE INTERNET-BASED MONITORING SYSTEM FOR PATIENTS WITH ALZHEIMER'S DISEASE ~71:Ningxia Medical University, No.1160 Shengli South Street, Xingqing District, Yinchuan City, Ningxia Hui Autonomous Region, 750000, People's Republic of China ~72: Li Yanming;Tian Jianying;Wang Tianqi;Wang Wencheng;Xu Haiming~

2022/01706 ~ Complete ~54:A PSEUDOVIRION CONTAINING THE NUCLEIC ACID FRAGMENTS OF THREE FOOD-HOME VIRUSES AND ITS PREPARATION METHOD ~71:CHINESE ACADEMY OF INSPECTION AND QUARANTINE, No. 11 Ronghua South Road, Yizhuang Economic and Technological Development Zone, People's Republic of China;YELLOW SEA FISHERIES RESEARCH INSTITUTE, CHINESE ACADEMY OF FISHERY SCIENCES, 106 Nanjing Road, Shinan District, Qingdao City, People's Republic of China ~72: GUO, Yingying;JIANG, Yanhua;LI, Na;LU, Xingan;QU, Meng;TAN, Zhijun;WANG, Lianzhu;YAO, Lin;ZHAO, Hongyang;ZHU, Wenjia~

2022/02050 ~ Provisional ~54:QPMS VENDOR CUBICLE ~71:QUICK PROJECT MANAGEMENT SERVICES cc, 47 CONSANI ROAD, South Africa ~72: ERAHIMA PETERSEN~

2022/01727 ~ Complete ~54:PYRENOID-LIKE STRUCTURES ~71:THE UNIVERSITY COURT OF THE UNIVERSITY OF EDINBURGH, Old College South Bridge, Edinburgh, EH8 9YL, United Kingdom ~72: ALISTAIR JAMES MCCORMICK;NICOLA JANE ATKINSON~ 33:GB ~31:1911068.3 ~32:02/08/2019

2022/01733 ~ Complete ~54:PHARMACEUTICAL PREPARATION ~71:Merck Patent GmbH, Frankfurter Strasse 250, DARMSTADT 64293, GERMANY, Germany ~72: HOOFF, Gero;KLEMM, Markus;RIEHL, Markus;SCHMIDT, Carsten;SCHOCH, Corinna;WEIGANDT, Markus~ 33:EP ~31:19185500.6 ~32:10/07/2019

2022/01735 ~ Complete ~54:MULTI-VALENT AND MULTI-SPECIFIC NANOPARTICLE PLATFORMS AND METHODS ~71:The Governing Council of the University of Toronto, Banting Institute, 100 College Street, Suite 413, TORONTO M5G 1L5, ONTARIO, CANADA, Canada;The Hospital for Sick Children, 686 Bay Street, 3rd Floor, TORONTO M5G 0A4, ONTARIO, CANADA, Canada ~72: JULIEN, Jean-philippe;RUJAS DIEZ, Edurne;TREANOR, Bebhinn;ZHAO, Tiantian~ 33:US ~31:62/881,899 ~32:01/08/2019

2022/01692 ~ Complete ~54:METHOD FOR CALCULATING GAS PERMEABILITY AFTER PRESSURE CORRECTION ~71:China University of Mining and Technology, Nanhu Campus, China University of Mining and Technology, No.1 Daxue Road, Xuzhou City, Jiangsu Province, 221116, People's Republic of China;Hubei University of Technology, No.28 Nanli Road, Hongshan District, Wuhan City, Hubei Province, 430068, People's
Republic of China ~72: Gui Shuqiang;Li Xiaozhao;Liu Jiangfeng;Luo Jing;Ma Shijia;Shao Jianfu;Zhang Fan;Zou Junpeng~

2022/01695 ~ Complete ~54:DEFORMABLE DUAL-PURPOSE LOWER LIMB REHABILITATION EXOSKELETON DEVICE ~71:Shandong University of Technology, Room 313, Block A, High-tech Business Incubator, No.135 Zhengtong Road, High-tech Industrial Development Zone, Zibo City, Shandong, 255086, People's Republic of China ~72: BI, Wenlong;GE, Wenqing;LI, Yanan;TAN, Cao;ZHAO, Yanjun~

2022/01699 ~ Complete ~54:INFLATABLE NEGATIVE PRESSURE ISOLATION TRANSFER CABIN AND USE METHOD THEREOF ~71:Guang'an People's Hospital, No. 1, Section 4, Binhe Road, Guang'an District, Guang'an City, Sichuan Province, 638001, People's Republic of China ~72: Chen Jing;Qian Liang;Ren Zhangxia;Yang Fayi;Yang Ning~

2022/01707 ~ Complete ~54:COMPOUND CHINESE HERBAL MEDICINE SUPERFINE POWDER ADDITIVE FOR IMPROVING PORK QUALITY ~71:SHANXI AGRICULTURAL UNIVERSITY, 81 Longcheng Street, Xiaodian District, Taiyuan City, People's Republic of China ~72: CAO, Riliang;CAO, Xuanya;HU, Guangying~

2022/01709 ~ Complete ~54:TREATMENT OF TYPE 2 DIABETES MELLITUS ~71:SANOFI, 54 rue La Boétie, France ~72: NIEMOELLER, Elisabeth;SOUHAMI, Elisabeth~ 33:EP ~31:19306106.6 ~32:13/09/2019

2022/01716 ~ Complete ~54:TETRACYCLIC COMPOUND, PREPARATION METHOD AND USE THEREOF ~71:JIANGXI JEMINCARE GROUP CO., LTD, Block 14, Zhongxing Nanchang Software Park Industrial Park, No.688 Aixihu North Road Nanchang Hi-Tech Industrial Development Zone, People's Republic of China;SHANGHAI JEMINCARE PHARMACEUTICALS CO., LTD, 1st Floor, Block 1, No.1118 Halei Road, Pilot Free Trade Zone, Pudong New Area, People's Republic of China ~72: FAN, Jun;GUO, Haibing;GUO, Shuchun;LIU, Yang;PENG, Jianbiao~ 33:CN ~31:201910712388.0 ~32:02/08/2019;33:CN ~31:201910899724.7 ~32:23/09/2019;33:CN ~31:201911157922.2 ~32:22/11/2019;33:CN ~31:202010054185.X ~32:17/01/2020

2022/01725 ~ Complete ~54:GRAPHENE TYPE WATERBORNE EPOXY ZINC-RICH COATING AND PREPARATION METHOD THEREFOR ~71:JIANGSU CHAMPION TECHNOLOGY GROUP CO., LTD., Honglan Industrial Park, Lishui Zone, Nanjing City, Jiangsu Province, 211219, People's Republic of China ~72: FAN TANG;JIN JUN QIAN;MING HU~ 33:CN ~31:2021106925754 ~32:22/06/2021

2022/01740 ~ Provisional ~54:A STOKVEL (GROUP SAVINGS) ACCOUNT, WHICH INCORPORATES ELECTRONIC APPROVAL FOR WITHDRAWALS AND/OR DEPOSITS AND/OR TRANSFERS AND/OR INVESTMENTS OF FUNDS (INCLUDING CRYPOCURRENCY) BY ACCOUNT SIGNATORIES. THE ACCOUNT WILL ALLOW ACCOUNT SIGNATORIES AND USERS ACCESS TO THE ACCOUNT, TO VIEW BALANCES, TRANSACTIONS AND INVESTMENTS. ~71:Thapelo Chanda, 703 Seremane Street, Montshiwa, 2737, South Africa ~72: Thapelo Chanda~ 33:ZA ~31:2018/01280 ~32:27/02/2018

2022/01690 ~ Complete ~54:PREPARATION METHOD OF COMPOUND STARTER AND APPLICATION THEREOF ~71:Bijie Jiaxiangmei Agricultural Comprehensive Development Co., Ltd., Zhuchang Town, Qixingguan District, Bijie City, Guizhou Province, People's Republic of China ~72: Hu Xiang;Li Yuhuan;Li Zhu;Nie Yuying;Tian Yu;Xiao Yang;Zhou Yi~

2022/01698 ~ Complete ~54:DOUBLE-LAYER CARBON MICRO-FLAKE WITH FRAME STRUCTURE AND ITS PREPARATION METHOD AND APPLICATION ~71:SUZHOU UNIVERSITY, No. 49, Middle Bianhe Road, Yongqiao District, Suzhou City, Anhui Province, 234000, People's Republic of China ~72: CHEN, Chong;SUN, Li~

2022/01703 ~ Complete ~54:A METHOD FOR RAPIDLY GRADING RAW FROZEN TUNA ~71:YELLOW SEA FISHERIES RESEARCH INSTITUTE, CHINESE ACADEMY OF FISHERY SCIENCES, 106 Nanjing Road, Shinan District, Qingdao City, People's Republic of China ~72: GUO, Yingying;LI, Na;QU, Meng;TAN, Zhijun;WANG, Lianzhu;YAO, Lin;ZHU, Wenjia~

2022/01705 ~ Complete ~54:A PCR IDENTIFICATION METHOD FOR THUNNUS MACCOYII, THUNNUS OBESUS AND THUNNUS ALBACARES SASHIMI ~71:CHINESE ACADEMY OF INSPECTION AND QUARANTINE, No. 11 Ronghua South Road, Yizhuang Economic and Technological Development Zone, People's Republic of China;YELLOW SEA FISHERIES RESEARCH INSTITUTE, CHINESE ACADEMY OF FISHERY SCIENCES, 106 Nanjing Road, Shinan District, Qingdao City, People's Republic of China ~72: GUO, Yingying;JIANG, Yanhua;LIU, Shufang;LU, Xingan;QU, Meng;TAN, Zhijun;WANG, Lianzhu;YAO, Lin;ZHAO, Hongyang;ZHU, Wenjia~

2022/01708 ~ Complete ~54:FARMLAND SOIL SAMPLING ROBOT ~71:WEST ANHUI UNIVERSITY, Moon Island, West of Yunluqiao, Lu'an City, People's Republic of China ~72: BAO, Huifang;CHENG, Junhui;FANG, Jie;HUANG, Miaomiao;XU, Junfeng;ZHANG, Gang~

2022/01715 ~ Complete ~54:A METHOD OF OBTAINING X-RAY IMAGES ~71:ADAPTIX LIMITED, BEGBROKE SCIENCE PARK, CENTRE FOR INNOVATION AND ENTERPRISE (CIE), WOODSTOCK ROAD, BEGBROKE, OXFORDSHIRE OX5 1PF, UNITED KINGDOM, United Kingdom ~72: EVANS, Mark;SCHMIEDEHAUSEN, Kristin;TRAVISH, Gil;WELLS, Steve~ 33:GB ~31:1910038.7 ~32:12/07/2019

2022/01719 ~ Complete ~54:STABLE POLYMORPHIC FORM OF 6-FLUORO-9-METHYL-9H-BETA-CARBOLINE AND USES THEREOF ~71:AUDIOCURE PHARMA GMBH, Schlegelstr. 9, 10115 Berlin, Germany ~72: HANS ROMMELSPACHER;REIMAR SCHLINGENSIEPEN;TOMASZ ZYGMUNT~ 33:EP ~31:19191150.2 ~32:09/08/2019

2022/01721 ~ Complete ~54:TOPICAL COMPOSITIONS ~71:BAUSCH HEALTH IRELAND LIMITED, 3013 Lake Drive, Citywest Business Campus, Dublin D24 PPT3, Ireland ~72: ARTURO ANGEL;RADHAKRISHNAN PILLAI;VARSHA BHATT~ 33:US ~31:62/881,836 ~32:01/08/2019

2022/01726 ~ Complete ~54:QUICK-DRYING, HIGHLY WEATHER-RESISTANT AND MECHANICALLY-UNIVERSAL ACRYLIC COATING, PREPARATION METHOD THEREFOR, AND USE THEREOF ~71:JIANGSU CHAMPION TECHNOLOGY GROUP CO., LTD., Honglan Industrial Park, Lishui Zone, Nanjing City, Jiangsu Province, 211219, People's Republic of China ~72: FAN TANG;HAI XIE~ 33:CN ~31:2021112410806 ~32:25/10/2021

2022/01728 ~ Complete ~54:PARALLEL PATH PUNCTURE DEVICE GUIDE ~71:INNOVACELL AG, Mitterweg 24, Austria ~72: Craig Joseph CERMAK~ 33:US ~31:62/911,057 ~32:04/10/2019

2022/01729 ~ Complete ~54:ANTI-CTLA4-ANTI-PD-1 BISPECIFIC ANTIBODY AND USES THEREOF ~71:Akeso Pharmaceuticals, Inc., Room 364, 333 Jianshe Road, Sino-Singapore Guangzhou Knowledge City, Jiufo, GUANGZHOU 510530, GUANGDONG, CHINA (P.R.C.), People's Republic of China ~72: LI, Baiyong;WANG, Zhongmin;XIA, Yu;ZHANG, Peng~ 33:CN ~31:201910711122.4 ~32:02/08/2019;33:CN ~31:201911224135.5 ~32:02/12/2019

2022/01738 ~ Complete ~54:TREATMENT OF CANINE CANCERS ~71:ONEHEALTHCOMPANY, INC., 530 Lytton Ave., United States of America ~72: ALLEN, Thaddeus A.;HARVEY, Garrett;LAMBERT, Lindsay;LEWIS, Benjamin;LOPES, Christina Kelly;LUKER, Madison;MILLER, Aubrey;POST, Gerald;RODRIGUES, Lucas~ 33:US ~31:62/882,401 ~32:02/08/2019;33:US ~31:62/897,872 ~32:09/09/2019;33:US ~31:62/898,888 ~32:11/09/2019;33:US ~31:62/899,932 ~32:13/09/2019;33:US ~31:62/901,185 ~32:16/09/2019;33:US

~31:62/902,889 ~32:19/09/2019;33:US ~31:62/904,987 ~32:24/09/2019;33:US ~31:62/906,924 ~32:27/09/2019;33:US ~31:62/909,098 ~32:01/10/2019

2022/01691 ~ Complete ~54:METHOD FOR PROMOTING CADMIUM ABSORPTION OF COTTON AND APPLICATION THEREOF ~71:Hunan Cotton Science Institute, No. 3036 Shanjuan Road, Dingcheng District, Changde City, Hunan Province, 415101, People's Republic of China ~72: Chen Haodong;Guo Lishuang;Kuang Zhengcheng;Li Yujun~

2022/01710 ~ Complete ~54:HYBRID BOILER-DRYER AND METHOD ~71:GENERAL ELECTRIC COMPANY, One River Road, United States of America ~72: EDBERG, Carl;UNKER, Steven;VITSE, Frederic~ 33:US ~31:16/548,167 ~32:22/08/2019

2022/01693 ~ Complete ~54:SAND-MUDSTONE THIN INTERBED SEDIMENTARY FACIES ANALYSIS METHOD BASED ON LITHOFACIES COMBINATION MODEL AND SEISMIC SPECTRUM CHARACTERISTICS ~71:China University of Petroleum (East China), No. 66, Changjiang West Road, Huangdao District, Qingdao, Shandong, 266000, People's Republic of China ~72: CHEN, Faliang;JIA, Tong;LUO, Xiaorong;SONG, You;YAN, Yiming;ZHANG, Fanchang;ZHANG, Liqiang~

2022/01694 ~ Complete ~54:PORTABLE ULTRASONIC RANGING DEVICE FOR CIVIL ENGINEERING ~71:Ludong University, NO.186, Middle Hongqi Road, Zhifu District, Yantai City, Shandong Province, 264025, People's Republic of China ~72: Zhang Keyu~

2022/01701 ~ Complete ~54:BLIND PERSON GUIDANCE DEVICE AND BLIND PERSON GUIDANCE METHOD ~71:TAO, Yuening, Room 802, No. 17, Lane 839, Yunshan Road, Pudong New Area, Shanghai, 200120, People's Republic of China ~72: TAO, Yuening~ 33:CN ~31:202210019002.X ~32:10/01/2022

2022/01712 ~ Complete ~54:METHOD FOR DETERMINING THE RISK OF AN AVIAN PATHOGENIC E. COLI (APEC) INFECTION IN AN AVIAN FLOCK ~71:EVONIK OPERATIONS GMBH, RELLINGHAUSER STRASSE 1-11, 45128 ESSEN, GERMANY, Germany ~72: BÖHL, Florian;DARGATZ, Michelle;FLÜGEL, Monika;IGWE, Emeka, Ignatius;KAPPEL, Andreas;PELZER, Stefan;RETH, Alexander;THIEMANN, Frank;WEISSMANN, Michaela~ 33:EP ~31:19186697.9 ~32:17/07/2019

2022/01717 ~ Complete ~54:DRAINAGE SYSTEM ALONG RIVER SLOPE ~71:TONGXIANG BEITE TECHNOLOGY CO. LTD, 1 Zhenzhi Street, Chongfu Town, Tongxiang City, Jiaxing, Zhejiang, 314511, People's Republic of China ~72: YAO, Fangying;ZHOU, Juanru~ 33:CN ~31:201911160046.9 ~32:23/11/2019

2022/01720 ~ Complete ~54:MIXTURES COMPRISING INDAZOLE PESTICIDES ~71:FMC CORPORATION, 2929 Walnut Street, Philadelphia, Pennsylvania, 19104, United States of America ~72: WENMING ZHANG~ 33:US ~31:62/873,100 ~32:11/07/2019;33:US ~31:62/873,302 ~32:12/07/2019

2022/01723 ~ Complete ~54:SUBSTITUTED 2-MORPHOLINOPYRIDINE DERIVATIVES AS ATR KINASE INHIBITORS ~71:REPARE THERAPEUTICS INC., 7210 Frederick-Banting, Suite 100 St-Laurent, Québec, H4S 2A1, Canada ~72: ABBAS ABDOLI;AUDREY PICARD;CAMERON BLACK;CYRUS M LACBAY;JEAN-FRANÇOIS TRUCHON;LEE FADER;MIGUEL ST-ONGE;PAUL JONES;SHELDON N CRANE;STÉPHANE DORICH;STÉPHANIE LANOIX;VOUY LINH TRUONG~ 33:US ~31:62/877,177 ~32:22/07/2019;33:CA ~31:PCT/CA2019/051539 ~32:30/10/2019

2022/01730 ~ Complete ~54:PESTICIDALLY ACTIVE CYCLIC AMINE COMPOUNDS ~71:Syngenta Crop Protection AG, Rosentalstrasse 67, BASEL 4058, SWITZERLAND, Switzerland ~72: BONVALOT, Damien;BOU HAMDAN, Farhan;EDMUNDS, Andrew;GAGNEPAIN, Julien Daniel Henri;HILLESHEIM, Elke Maria;HUETER, Ottmar Franz;JACOB, Olivier;JUNG, Pierre Joseph Marcel;KOLLETH KRIEGER, Amandine;NAPOLITANO, Carmela;PITTERNA, Thomas;POULIOT, Martin;RENDLER, Sebastian;RENOLD, Peter;SCARBOROUGH, Christopher Charles;SIKERVAR, Vikas~ 33:EP ~31:19198814.6 ~32:20/09/2019;33:IN ~31:202011033968 ~32:07/08/2020

2022/01732 ~ Complete ~54:STABLE MEDICINAL CANNABIDIOL COMPOSITIONS ~71:Cardiol Therapeutics Inc., 2265 Upper Middle Road East, Suite 602, OAKVILLE L6H 0G5, ON, CANADA, Canada ~72: BOLTON, Anthony Ernest;RISTEVSKI, Blagoja~

2022/01734 ~ Complete ~54:SOLID ORAL DOSAGE FORM COMPRISING NAPROXEN AND VITAMIN B1 ~71:DSM IP Assets B.V., Het Overloon 1, HEERLEN 6411 TE, THE NETHERLANDS, Netherlands ~72: KARPUKHIN, Denis;MA, Zhenbo;SALMON, Conroy Clive~ 33:EP ~31:19193620.2 ~32:26/08/2019

2022/01737 ~ Complete ~54:CELL PHONE MOUNT FOR BUG KILLING GUNS ~71:MAGGIORE, Lorenzo, 2401 Lincoln Boulevard, #C, United States of America ~72: MAGGIORE, Lorenzo~

2022/01686 ~ Provisional ~54:A DEVICE FOR ORIENTATING AN OUTLET OF A SPRINKLER ~71:UNIVERSITY OF SOUTH AFRICA, 1 PRELLER STREET, South Africa ~72: STOFFBERG, GERRIT HENDRIK~

2022/01689 ~ Complete ~54:EXPERIMENTAL DEVICE FOR TEACHING DEMONSTRATION OF ELECTROMAGNETICS ~71:Huainan Normal University, Huainan Normal University, Dongshan West Road, Huainan City, Anhui Province, 232038, People's Republic of China ~72: Nie Wenyan~ 33:CN ~31:202110925445.0 ~32:12/08/2021

2022/01697 ~ Complete ~54:METHOD FOR ALKALI-FREE SYNTHESIS OF GLYCOLIC ACID FROM WASTE BIOMASS ~71:China University of Petroleum (East China), No. 66, West Changjiang Road, Huangdao District, Qingdao, Shandong , 266500, People's Republic of China ~72: DENG, Wen'an;DU, Feng;FANG, Tianqi;JIN, Xin;JIN, Youhai;LI, Chuan;LIU, Mengyuan;MENG, Kexin;WANG, Zhenyang;YAN, Wenjuan;YOU, Zhenchao;ZHANG, Guangyu~

2022/01702 ~ Complete ~54:A METHOD FOR IDENTIFYING SASHIMI OF THUNNUS OBESUS, THUNNUS ALALUNGA AND THUNNUS MACCOYII ~71:CHINESE ACADEMY OF INSPECTION AND QUARANTINE, No. 11 Ronghua South Road, Yizhuang Economic and Technological Development Zone, People's Republic of China;YELLOW SEA FISHERIES RESEARCH INSTITUTE, CHINESE ACADEMY OF FISHERY SCIENCES, 106 Nanjing Road, Shinan District, Qingdao City, People's Republic of China ~72: JIANG, Yanhua;LI, Na;LIU, Shufang;LU, Xingan;QU, Meng;TAN, Zhijun;WANG, Lianzhu;YAO, Lin;ZHAO, Hongyang~

2022/01713 ~ Complete ~54:IMPROVED TREATMENT USING EYP001 ~71:ENYO PHARMA, 60 AVENUE ROCKEFELLER BIOSERRA 1 - BÂTIMENT B, 69008 LYON, FRANCE, France ~72: DARTEIL, RaphaëI;ROY, Elise;SCALFARO, Pietro;VONDERSCHER, Jacky~ 33:EP ~31:19186947.8 ~32:18/07/2019

2022/01688 ~ Complete ~54:ELECTROMAGNETIC FIELD PRINCIPLE BASED SENSOR FOR MONITORING DISPLACEMENT OF MOUNTAIN ~71:Xiamen University of Technology, No. 600, Ligong Road, Xiamen City, Fujian , 361024, People's Republic of China ~72: CAI, Xiaoying;CHEN, Ping;HE, Yuanrong;NIE, Dewei~

2022/01696 ~ Complete ~54:TESTING DEVICE FOR CONTROLLING MOTOR ~71:Huainan Normal University, Huainan Normal University, Dongshan West Road, Huainan City, Anhui Province, 232038, People's Republic of China ~72: Nie Wenyan~ 33:CN ~31:202110431460.X ~32:21/04/2021

2022/01711 ~ Complete ~54:THREADED IDLER BLOCK CAP ~71:CATERPILLAR INC., 100 NE Adams Street, United States of America ~72: DONLAN, Zachary T.;DUMITRU, Mircea~ 33:US ~31:16/539,278 ~32:13/08/2019

2022/01718 ~ Complete ~54:SEPARATED LIFT-THRUST VTOL AIRCRAFT WITH ARTICULATED ROTORS ~71:TEXTRON SYSTEMS CORPORATION, 124 Industry Lane MS 9050/300, United States of America ~72: Sean Marshall BAITY;Stephen W. MILLER~ 33:US ~31:62/887,764 ~32:16/08/2019

2022/01722 ~ Complete ~54:AFRICAN SWINE FEVER VACCINE ~71:THE PIRBRIGHT INSTITUTE, Ash Road, Pirbright Woking, Surrey, GU24 0NF, United Kingdom ~72: CHRIS NETHERTON;DAVE CHAPMAN;GERALDINE TAYLOR;LINDA DIXON~ 33:GB ~31:1910794.5 ~32:29/07/2019

2022/01704 ~ Complete ~54:A METHOD FOR RAPIDLY GRADING RAW THUNNUS ORIENTALIS MEAT ~71:YELLOW SEA FISHERIES RESEARCH INSTITUTE, CHINESE ACADEMY OF FISHERY SCIENCES, 106 Nanjing Road, Shinan District, Qingdao City, People's Republic of China ~72: GUO, Yingying;JIANG, Yanhua;LI, Na;QU, Meng;TAN, Zhijun;WANG, Lianzhu;YAO, Lin;ZHU, Wenjia~

2022/01714 ~ Complete ~54:PESTICIDAL PYRAZOLE AND TRIAZOLE DERIVATIVES ~71:BASF SE, CARL BOSCH STRASSE 38, 67056 LUDWIGSHAFEN AM RHEIN, GERMANY, Germany ~72: ADISECHAN, Ashokkumar;CHAUDHURI, Rupsha;GARZA SANCHEZ, Rosario, Aleyda;MAITY, Pulakesh;NARINE, Arun;SAMBASIVAN, Sunderraman;SHAIKH, Rizwan, Shabbir~ 33:EP ~31:19187200.1 ~32:19/07/2019

2022/01724 ~ Complete ~54:HYPERBRANCHED EPOXY ZINC-RICH COATING AND PREPARATION METHOD THEREFOR ~71:JIANGSU CHAMPION TECHNOLOGY GROUP CO., LTD., Honglan Industrial Park, Lishui Zone, Nanjing City, Jiangsu Province, 211219, People's Republic of China ~72: FAN TANG;HAI XIE~ 33:CN ~31:2021110450796 ~32:07/09/2021

2022/01731 ~ Complete ~54:SOLID ORAL DOSAGE FORM COMPRISING NAPROXEN AND VITAMIN B12 ~71:DSM IP Assets B.V., Het Overloon 1, HEERLEN TE 6411, THE NETHERLANDS, Netherlands ~72: KARPUKHIN, Denis;MA, Zhenbo;SALMON, Conroy Clive~ 33:EP ~31:19193618.6 ~32:26/08/2019

2022/01736 ~ Complete ~54:APPARATUS AND METHOD FOR OPERATING AN ELECTROLYTIC CELL ~71:ELYSIS LIMITED PARTNERSHIP, 1 Place Ville Marie Suite 2323 Montréal,, Canada ~72: BARDET, Benoit;NOIZET, Alain;PETITJEAN, Bruno~ 33:US ~31:62/892,722 ~32:28/08/2019

- APPLIED ON 2022-02-10 -

2022/01747 ~ Complete ~54:USE OF EXCITED GSTP1 GENE IN MEDICAMENT FOR PREVENTING RADIATION-INDUCED LUNG INJURY ~71:THE FIRST MEDICAL CENTER OF THE CHINESE PLA GENERAL HOSPITAL, No. 28, Fuxing Road, Haidian District, Beijing, 100039, People's Republic of China ~72: BI, Yawei;DU, Lehui;HUANG, Xiang;LEI, Xiao;LIU, Fang;MA, Na;QU, Baolin;RAO, Le;YU, Wei~

2022/01799 ~ Complete ~54:COIN CLEANING MACHINE AND IMPLEMENTATION METHOD THEREFOR ~71:HANGZHOU RISHE MACHINERY CO., LTD, East Area, 4th Floor, Building 1, No.66 Xianglong Road, Baiyang Street, Qiantang New District, Hangzhou, Zhejiang, 310018, People's Republic of China ~72: XU, Zhengfang~ 33:CN ~31:202110678665.8 ~32:18/06/2021

2022/01754 ~ Complete ~54:METHOD FOR DETERMINING MOLECULAR WEIGHT AND MOLECULAR WEIGHT DISTRIBUTION OF SODIUM HYALURONATE WITH SIZE EXCLUSION CHROMATOGRAPHY ~71:Jining University, No. 1, Xingtan Road, New District, Qufu City, Jining City, Shandong, 273155, People's Republic of China;Shandong Nuomingkang Pharmaceutical Research Institute Co., Ltd., Life Science Center, No. 1 Plant of the Tenth Industrial Park, Lianhua Road, High-tech Zone, Jining City, Shandong , 272000, People's Republic of China ~72: DENG, Changjiang;DU, Xinxin;FENG, Huadong;LI, Mingli;SHI, Yanqiu;XIAO, Chuan;XING, Jinhua;ZHOU, Dongdong~

2022/01774 ~ Complete ~54:METHOD FOR HEAT REFLUX OXIDATION OF COAL MINE GAS FIELD OF TECHNOLOGY ~71:BEIJING ZHONGYUAN BOZHI ENERGY SAVING TECHNOLOGY CO., LTD., No. 102 Jushan Farm, Xingshikou Road, Haidian District, People's Republic of China ~72: WANG, Jianxue;XIAO, Qi~ 33:CN ~31:202110798530.5 ~32:15/07/2021

2022/01742 ~ Provisional ~54:COMPACT BUSBAR DISTRIBUTION SYSTEM ~71:Josh Berman, 79 9th Road, Kew, South Africa ~72: Josh Berman~

2022/01749 ~ Complete ~54:HOMOGENEOUS RARE EARTH CATALYST AND PREPARATION METHOD AND APPLICATION THEREOF ~71:Qingdao University of Science and Technology, No. 53, Zhengzhou Road, Shibei District, Qingdao City, Shandong Province, 266061, People's Republic of China ~72: LIU, Heng;WANG, Feng;ZHANG, Chunyu;ZHANG, Xuequan~ 33:CN ~31:202111527882.3 ~32:14/12/2021

2022/01757 ~ Complete ~54:CAPSULE MEDICINE FOR TREATING VARIOUS STOMACH DISEASES ~71:YANG, Tongshen, Congjiang County Hospital of Traditional Chinese Medicine, Qiandongnan Miao and Dong Autonomous Prefecture, Guizhou, 557400, People's Republic of China ~72: YANG, Tongshen~

2022/01767 ~ Complete ~54:AN INTELLIGENT SYSTEM USING PHOTOVOLTAIC HEAT FOR DESALINATION OF SEAWATER AND PRODUCTION OF HYDROGEN ~71:Qingdao University of Technology, No.11 Fushun Road, Qingdao, Shandong Province, People's Republic of China ~72: GAO, Weijun;GAO, Yanna;MENG, Xi~

2022/01773 ~ Complete ~54:HARMFUL GAS REMOVAL AGENT FOR PRESERVING HORTICULTURAL PRODUCT AND PREPARATION METHOD THEREFOR ~71:School of Food Science and Engineering, Shanxi Agricultural University, No. 79, Longcheng Street, Xiaodian District, Taiyuan City, Shanxi Province, 030001, People's Republic of China ~72: CHEN, Jia;FENG, Zhihong;GAO, Zhenfeng;WANG, Chunsheng~

2022/01745 ~ Complete ~54:ELECTROMAGNETIC WAVE LENS, PRODUCTION METHOD OF ELECTROMAGNETIC WAVE LENS AND LENS ANTENNA ~71:Foshan Eahison Communication Co., Ltd., Block 8, No. 4, Jinxiang Road, Sanshui District, Foshan City, Guangdong Province, 528100, People's Republic of China ~72: LI, Jiaduo;LI, Tao;LU, Yongchao;SUN, Yaozhi;ZHENG, Hongzhen~

2022/01748 ~ Complete ~54:CATALYST SYSTEM AND APPLICATION THEREOF, AND METHOD FOR PREPARING SYNDIOTACTIC 1,2-POLYBUTADIENE ~71:Qingdao University of Science and Technology, No. 53 Zhengzhou Road, Shibei District, Qingdao City, Shandong Province, 266061, People's Republic of China ~72: LIU, Heng;NA, Lihua;YANG, Qi;ZHANG, Chunyu;ZHANG, Xuequan~ 33:CN ~31:202111573496.8 ~32:21/12/2021

2022/01755 ~ Complete ~54:SEMI-RELEASABLE AORTIC STENT DELIVERY SYSTEM ~71:Quzhou People's Hospital, No. 100, Minjiang Ave., Kecheng District, Quzhou, Zhejiang, People's Republic of China ~72: Guobing Cheng;Jiawen Wu;Mengmeng Zhou;Sheng Liao;Wei Lu;Xiaoyang Li~ 33:CN ~31:202111489998.2 ~32:08/12/2021

2022/01743 ~ Provisional ~54:COMPACT BUSBAR DISTRIBUTION SYSTEM ~71:Josh Berman, 79 9th Road, Kew, South Africa ~72: Josh Berman~

2022/01761 ~ Complete ~54:INORGANIC POLYMER MODIFIED PROTON EXCHANGE MEMBRANE AND PREPARATION METHOD THEREOF ~71:Liaoning Petrochemical University, No. 1, West Section of Dandong Road, Wanghua District, Fushun City, Liaoning Province, 113005, People's Republic of China ~72: MENG, Zhaohan;QIAO, Qingdong;XIAO, Wei;XU, Jingkai;YANG, Zhanxu~

2022/01765 ~ Complete ~54:BUD-REMOVING AND GROWTH-PROMOTING MEDICAL AGENT FOR BANANAS AND PREPARATION METHOD THEREOF ~71:Guizhou Institute of Subtropical Crops, No. 1, Fenglin East Road, Xiawutun, Xingyi City, Guizhou, 562400, People's Republic of China;Hainan University, 58 Renmin Avenue, Meilan District, Haikou City, Hainan Province, 570100, People's Republic of China ~72: HAN, Shuquan;LI, Maofu;LIU, Fanzhi;LU, Jiaju;LUO, Lina;WU, Fan~

2022/01779 ~ Complete ~54:WET PREPARATION OF RADIOTHERAPY SOURCES ~71:ALPHA TAU MEDICAL LTD., 5 Kiryat Hamada Street, Jerusalem, Israel ~72: KELSON, Itzhak;SCHMIDT, Michael~ 33:US ~31:62/913,184 ~32:10/10/2019

2022/01781 ~ Complete ~54:A DRIVE SUB FOR A DRILLING ASSEMBLY ~71:REFLEX INSTRUMENTS ASIA PACIFIC PTY LTD, 216 Balcatta Road, Australia ~72: BEACH, Andrew Phillip;MOKARAMIAN, Amir~ 33:AU ~31:2019903131 ~32:27/08/2019

2022/01788 ~ Complete ~54:MATERIALS AND METHODS FOR IMPROVED SINGLE CHAIN VARIABLE FRAGMENTS ~71:Janssen Biotech, Inc., 800/850 Ridgeview Drive, HORSHAM 19044, PA, USA, United States of America ~72: ARMSTRONG, Anthony A.;BOUCHER, Lauren;DIEM, Michael;FELDKAMP, Michael;HUANG, Chichi;LUO, Jinquan;TEPLYAKOV, Alexey~ 33:US ~31:62/887,514 ~32:15/08/2019;33:US ~31:62/887,519 ~32:15/08/2019;33:US ~31:62/887,524 ~32:15/08/2019;33:US ~31:62/887,527 ~32:15/08/2019;33:US ~31:62/887,529 ~32:15/08/2019;33:US ~31:62/946,865 ~32:11/12/2019;33:US ~31:62/946,877 ~32:11/12/2019;33:US ~31:62/946,882 ~32:11/12/2019;33:US ~31:62/946,886 ~32:11/12/2019;33:US ~31:62/946,897 ~32:11/12/2019

2022/01792 ~ Complete ~54:EVALUATING THE SAFETY PERFORMANCE OF VEHICLES ~71:CAMBRIDGE MOBILE TELEMATICS INC., 314 Main Street, Suite 1200, Cambridge, Massachusetts, 02142, United States of America ~72: HARI BALAKRISHNAN;JUN-GEUN PARK;SAMUEL MADDEN;WILLIAM BRADLEY~ 33:US ~31:16/521,856 ~32:25/07/2019

2022/01800 ~ Complete ~54:APPARATUS AND METHODS FOR NEW RADIO SIDELINK CHANNEL STATE INFORMATION ACQUISITION ~71:IDAC HOLDINGS, INC., 200 Bellevue Parkway, Suite 300, United States of America ~72: DENG, Tao;FREDA, Martino M.;HOANG, Tuong;LEE, Moon-il;YE, Chunxuan~ 33:US ~31:62/886,740 ~32:14/08/2019;33:US ~31:62/930,970 ~32:05/11/2019;33:US ~31:62/975,497 ~32:12/02/2020

2022/01758 ~ Complete ~54:INTELLIGENT FRONT CANTILEVER BEAM FOR TEMPORARY SUPPORT DURING ROADWAY EXCAVATION ~71:Shandong University of Science and Technology, 579 Qianwangang Road, Economic and Technological Development Zone, Qingdao, Shandong Province, 266590, People's Republic of China ~72: CHEN, Miao;QU, Chenming;WANG, Jing;ZANG, Chuanwei;ZHU, Hongmo~

2022/01769 ~ Complete ~54:OFFICIAL SEAL WITH PRESSING TURNOVER STRUCTURE ~71:NORTH CHINA UNIVERSITY OF SCIENCE AND TECHNOLOGY, No.21 Bohai Road, Tangshan Bay Eco-city, Caofeidian District, Tangshan, Hebei Province, People's Republic of China ~72: Fenglan JU;Lei LIU;Xiaobo YAN~ 33:CN ~31:202210049978.1 ~32:07/01/2022

2022/01775 ~ Complete ~54:A SYSTEM FOR DETECTING FAULT IN A NETWORK AND PERFORMING RECOVERY MANAGEMENT AND A METHOD THEREOF ~71:ANSAR IBRAHIM, Sonya, B.S.Abdur Rahman Crescent Institute of Science and Technology, Vandalur, Chennai, India;ARUCHAMY, Prasanth, Department of Electronics and Communication Engineering, Sri Venkateswara College of Engineering, Sriperumbudur, India;KARUPPANASAMY, Kavitha, Department of Electronics and Communication Engineering, Velalar College of Engineering and Technology, Thindal Erode, India;MURUGESHAN, Bhavadharini, Easwari Engineering College, Bharathi Dalai, Ramapuram, Chennai, India;RAJA, Vaishnavi, Kings Engineering College,

Irungattukottai, Sriperumbudur, Chennai, India;SANKARANARAYANAN, Lavanya, Muthayammal Engineering College, Kakkaveri po, Attur main road, Rasipuram tk, Namakkal Dt, India;THANGAVELU, Muthumanickam, Department of Electronics and Communication Engineering, Vinayaka Mission's Kirupananda Variyar Engineering College, NH-47, Sankari Main Road, Periya Seeragapadi (po) Salem, India;THANKAMONY DEVAKHI, Subha, R.M.K. Engineering College, Kavaraipettai-601206, Gummidipoondi Taluk, Thiruvallur, India ~72: ANSAR IBRAHIM, Sonya;ARUCHAMY, Prasanth;KARUPPANASAMY, Kavitha;MURUGESHAN, Bhavadharini;RAJA, Vaishnavi;SANKARANARAYANAN, Lavanya;THANGAVELU, Muthumanickam;THANKAMONY DEVAKHI, Subha~

2022/01753 ~ Complete ~54:METHOD FOR DETECTING RELATED SUBSTANCES IN ANTIBACTERIAL EYE DROPS ~71:Jining University, No. 1, Xingtan Road, New District, Qufu City, Jining City, Shandong , 273155, People's Republic of China;Shandong Nuomingkang Pharmaceutical Research Institute Co., Ltd., Life Science Center, No. 1 Plant of the Tenth Industrial Park, Lianhua Road, High-tech Zone, Jining City, Shandong, 272000, People's Republic of China ~72: DENG, Changjiang;LI, Mingli;WANG, Longfei;XIAO, Chuan;XING, Jinhua;ZHANG, Shangyao;ZHOU, Dongdong~

2022/01760 ~ Complete ~54:RESCUE ROBOT ~71:SHANGHAI BEI'AN INDUSTRIAL CO., LTD., 601 Zhongshan South 2nd Road, Xuhui District, Shanghai, 200032, People's Republic of China;SHANGHAI FIRE RESEARCH INSTITUTE OF MEN, 391 Xihuan Road, Minhang District, Shanghai, 201199, People's Republic of China ~72: BIAN, Fuli;JIANG, Xudong;SHI, Wei;YANG, Zhijun;ZHONG, Lin~

2022/01796 ~ Complete ~54:TETRAVALENT SYMMETRIC BISPECIFIC ANTIBODY ~71:WUHAN YZY BIOPHARMA CO., LTD, Biolake, C2-1, No.666 Gaoxin Road, Donghu New Technology Development Zone, Wuhan, Hubei, 430075, People's Republic of China ~72: JING ZHANG;LIANG ZENG;LIJUAN FANG;PENGFEI ZHOU;YONGXIANG YAN~

2022/01764 ~ Complete ~54:IMPROVED CAPSICUM CHINENSE JACQUIN LEAF GENOME DNA EXTRACTION METHOD ~71:Hainan University, No. 58 Renmin Avenue, Haikou City, Hainan Province, 570228, People's Republic of China;Tropical Crops Genetic Resources Institute, Chinese Academy of Tropical Agricultural Sciences, No. 4 Xueyuan Road, Longhua District, Haikou City, Hainan Province, 571101, People's Republic of China ~72: CAO, Zhenmu;LIU, Ziji;QIN, Yuling;ZHU, Jie~

2022/01780 ~ Complete ~54:NOISE CANCELLATION WITH IMPROVED FREQUENCY RESOLUTION ~71:SILENCER DEVICES, LLC, 128 SUMMIT AVENUE, HACKENSACK, NEW JERSEY 07601, USA, United States of America ~72: JUNQUA, Jean-Claude;SAJAL, Raihan, Ferdous;SEAGRIFF, Eugene~ 33:US ~31:16/514,465 ~32:17/07/2019;33:US ~31:16/929,504 ~32:15/07/2020

2022/01763 ~ Complete ~54:METHOD FOR SALT-RESISTANT AND WATERLOGGING-PREVENTING CONCAVE-CONVEX CULTIVATION OF COTTON CROPS IN COASTAL SALINE-ALKALI LAND ~71:Shandong Academy of Agricultural Sciences, No. 202, Industrial North Road, Jinan City, Shandong Province, 250100, People's Republic of China ~72: CUI, Zhengpeng;DAI, Jianlong;DONG, Hezhong;ZHANG, Dongmei;ZHANG, Yanjun~

2022/01783 ~ Complete ~54:HERBICIDAL MIXTURES CONTAINING AMINE SALTS OF ACIDIC HERBICIDES ~71:Monsanto Technology LLC, 800 North Lindbergh Boulevard, SAINT LOUIS 63167, MO, USA, United States of America ~72: DYSZLEWSKI, Andrew D.;MACINNES, Alison~ 33:US ~31:62/873,026 ~32:11/07/2019

2022/01787 ~ Complete ~54:IMPROVED LIPID NANOPARTICLES FOR DELIVERY OF NUCLEIC ACIDS ~71:Acuitas Therapeutics, Inc., 6190 Agronomy Rd., Suite #402, University of British Columbia - KETR, VANCOUVER V6T 1W5, BRITISH COLUMBIA, CANADA, Canada ~72: BARBOSA, Christopher J.;LIN, Paulo Jia Ching;SEMPLE, Sean;TAM, Ying K.~ 33:US ~31:62/886,894 ~32:14/08/2019

2022/01848 ~ Provisional ~54:ADJUSTABLE HOOK AND EYE/SNAP ON PANTIES ~71:Judy Yvonne Sonja Allahyar, 804 Golden Sands, 95 Snell Parade,, South Africa ~72: Judy Yvonne Sonja Allahyar~

2022/01751 ~ Complete ~54:METHOD FOR BREEDING NEW STRAINS OF SHEEP FOR MEAT AND MILK ~71:Animal Husbandry and Veterinary Research Institute of Xinjiang Academy of Agricultural Reclamation, No.221 Wuyi Road, Shihezi City, Xinjiang, 832000, People's Republic of China ~72: Dai Rong;Fu Xiangwei;Liu Yucheng;Shi Guoqing;Wan Pengcheng;Yang Yang~

2022/01752 ~ Complete ~54:MICROALGAE SEPARATION METHOD BASED ON CELL SLIDE ~71:Inner Mongolia Algal Blue Biotechnology Co., Ltd., E-18, Spirulina Industrial Park, Etuoke Banner, Ordos City, Inner Mongolia, 016100, People's Republic of China;Inner Mongolia Medical University, No. 5, Xinhua Street, Hohhot, Inner Mongolia, 010110, People's Republic of China ~72: BAO, Lili;HU, Ruiping;MA, Chunli;MA, Teng;SHI, Haibo;XUE, Huiting;YAN, Sirui;YU, Jiancheng;YUAN, Hong;ZHANG, Jingnan~ 33:CN ~31:202111201949.4 ~32:15/10/2021

2022/01771 ~ Complete ~54:LUNEBERG LENS ANTENNA CAPABLE OF ELECTRICALLY ADJUSTING POSITIONS OF FEED SOURCES AND LUNEBERG LENS ANTENNA GROUP ~71:Foshan Eahison Communication Co., Ltd, Block 8, No. 4, Jinxiang Road, Sanshui District, Foshan City, Guangdong Province , 528100, People's Republic of China ~72: DENG, Chongxuan;GAO, Liming;KANG, Youjun;LIANG, Zhibin;SHANG, Chunhui;YANG, Haibo;ZHU, Qiang~

2022/01762 ~ Complete ~54:NOVEL STRENGTHENED GAS-LIQUID MIXING AND EXCHANGE DEVICE AND METHOD THEREOF ~71:CHINA UNIVERSITY OF MINING AND TECHNOLOGY, China University of Mining and Technology Nanhu Campus, No.1 University Road, Xuzhou City, Jiangsu Province, 221116, People's Republic of China ~72: BAI, Haoyu;CHANG, Xi;FANG, Zhenchang;LI, Xiaochuan;LI, Zhihao;WEI, Tao;XIAO, Di;ZHANG, Mingrui~

2022/01772 ~ Complete ~54:DIGITAL EARTH-BASED VISUALIZATION METHOD AND SYSTEM ~71:Army Academy of Armored forces of PLA, 21 Dujiakan, Fengtai District, Beijing, 100072, People's Republic of China ~72: FANG, Lulu;KOU, Yingzhan;LEI, Zhen;SUN, Yan;ZHAI, Xiaoning;ZHAO, Zhanbiao;ZHENG, Xianzhu;ZHOU, Zeyun;ZHU, Lianjun~

2022/01741 ~ Provisional ~54:TAXI PASSENGER SAFETY DEVICE ~71:SELBY RANTHO, 405 HERBETH AVENUE, South Africa ~72: SELBY RANTHO~

2022/01750 ~ Complete ~54:USE OF EXOSOME CIRCRNA PVT1 ~71:Qingdao University, No. 308, Ningxia Road, Shinan District, Qingdao City, Shandong, 266071, People's Republic of China ~72: DONG, Yanhan;FAN, Yuqiao;GAO, Jinning;HAO, Xiaodan;LIU, Yongmei;WANG, Shuai;WANG, Zibo;XU, Wenhua~

2022/01756 ~ Complete ~54:SCREENING METHOD OF STRAIN OF BIO-ORGANIC FERTILIZER IN EXTREME HABITAT AND MICROBIAL AGENT COMPOUNDING PROCESS ~71:Institute of biology, Gansu Academy of Sciences, 197 Dingxi South Road, Chengguan District, Lanzhou City, Gansu Province, 730000, People's Republic of China ~72: Du Jinhao;Ji Bin;Liang Yan;Peng Yinan;Qi Hongshan;Song Jie;Wang Zhiye;Zhao Tingwei~

2022/01759 ~ Complete ~54:HIGH-PERFORMANCE FREQUENCY CONVERSION SPEED REGULATION METHOD OF INDUCTION MOTOR BASED ON DIFFERENTIAL FEEDBACK ~71:Beihua University, No.3999, Binjiang East Road, Jilin City, Jilin Province, People's Republic of China ~72: Bai Jing;Bai Yan;Feng Weidong;Xing Jisheng;Xu Yu;Yang Yong;Zhang Jing~

2022/01770 ~ Complete ~54:NANO CERAMIC DISK FILTER ~71:Filtang Technologies Corporation, Room 103, Mall No.2, Zhujiang Road No.32, Yantai Development Zone, Shandong Province, 264006, People's Republic of

China ~72: FANG, Ji;FENG, Yong;LI, Xingshu;PU, Enxu;QIN, Song;SUN, Siqiong;SUN, Xiaoxiao;WANG, Kai;ZHANG, Zhenhua~

2022/01776 ~ Complete ~54:EVALUATION ON DOWEL FORCE OF FLEXURAL REINFORCEMENT WITH SHEARREINFORCEMENT ~71:POLURAJU, Palleboina, Department of Civil Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, Guntur, India;PRASAD, Joshi Sreenivasa, Department of Civil Engineering, Anurag University, Venkatapur, Ghatkesar, Medchal District, Hyderabad, India ~72: POLURAJU, Palleboina;PRASAD, Joshi Sreenivasa~

2022/01777 ~ Complete ~54:A BANDWIDTH EFFICIENT METHOD FOR SIMULTANEOUS MINIMISATION OF SIDE-BAND POWER AND PAPR IN OFDM BASED COGNITIVE RADIO SYSTEMS ~71:SIVADAS, Namitha Arackal, Arakkal House, VVRA 12, Vasanth Vihar, Pattikkad P O, Kerala, India ~72: SIVADAS, Namitha Arackal~

2022/01785 ~ Complete ~54:ANTI-PD-1 ANTIBODY AND MEDICAL USE THEREOF ~71:CTTQ-Akeso (Shanghai) Biomed. Tech. Co., Ltd., Room A1001, Building 3, No. 2288, Shitai Road, Baoshan District, SHANGHAI 201908, CHINA (P.R.C.), People's Republic of China ~72: LI, Baiyong;WANG, Zhongmin;XIA, Yu;ZHANG, Peng~ 33:CN ~31:201910711138.5 ~32:02/08/2019;33:CN ~31:201911105711.4 ~32:13/11/2019;33:CN ~31:201911105715.2 ~32:13/11/2019;33:CN ~31:20191113858.4 ~32:19/11/2019

2022/01786 ~ Complete ~54:HETEROCYCLIC RIP1 KINASE INHIBITORS ~71:Rigel Pharmaceuticals, Inc., 1180 Veterans Boulevard, SOUTH SAN FRANCISCO 94080, CA, USA, United States of America ~72: BHAMIDIPATI, Somasekhar;SHAW, Simon;TAYLOR, Vanessa~ 33:US ~31:62/897,223 ~32:06/09/2019;33:US ~31:62/932,404 ~32:07/11/2019;33:US ~31:63/001,016 ~32:27/03/2020;33:US ~31:63/004,290 ~32:02/04/2020;33:US ~31:63/004,301 ~32:02/04/2020;33:US ~31:63/004,319 ~32:02/04/2020

2022/01789 ~ Complete ~54:SOLID ORAL DOSAGE FORM COMPRISING NAPROXEN AND VITAMIN B6 ~71:DSM IP Assets B.V., Het Overloon 1, HEERLEN 6411 TE, THE NETHERLANDS, Netherlands ~72: KARPUKHIN, Denis;MA, Zhenbo;SALMON, Conroy Clive~ 33:EP ~31:19193616.0 ~32:26/08/2019

2022/01797 ~ Complete ~54:COUNTER-ROTATING DIFFERENTIAL ELECTRIC MOTOR ASSEMBLY ~71:CR FLIGHT L.L.C., 6230 Vernon Way, Carmichael, California, 95608, United States of America ~72: JASON EMIGH;JONATHAN D EMIGH;RANDELL J WISHART;RAY PORTER~ 33:US ~31:62/893,290 ~32:29/08/2019;33:US ~31:62/893,293 ~32:29/08/2019;33:US ~31:62/993,594 ~32:23/03/2020

2022/01801 ~ Complete ~54:GRAFTED POLYVINYL ALCOHOL POLYMER, FORMULATIONS CONTAINING THE SAME AND CREPING METHODS ~71:BUCKMAN LABORATORIES INTERNATIONAL, INC., 1256 North McLean Boulevard, United States of America ~72: GLOVER, Daniel;MOUSTAFA, Ahmed~ 33:US ~31:62/898,719 ~32:11/09/2019

2022/01790 ~ Complete ~54:RIP1 INHIBITORY COMPOUNDS AND METHODS FOR MAKING AND USING THE SAME ~71:Rigel Pharmaceuticals, Inc., 1180 Veterans Boulevard, SOUTH SAN FRANCISCO 94080, CA, USA, United States of America ~72: BHAMIDIPATI, Somasekhar;CHEN, Yan;DARWISH, Ihab;KOLLURI, Rao;LUO, Zhushou;SHAW, Simon;TAYLOR, Vanessa;YU, Jiaxin~ 33:US ~31:62/897,223 ~32:06/09/2019;33:US ~31:62/932,404 ~32:07/11/2019;33:US ~31:63/001,016 ~32:27/03/2020;33:US ~31:63/004,290 ~32:02/04/2020;33:US ~31:63/004,319 ~32:02/04/2020

2022/01793 ~ Complete ~54:PROCESS OF MAKING CFTR MODULATORS ~71:VERTEX PHARMACEUTICALS INCORPORATED, 50 Northern Avenue, Boston, Massachusetts, 02210, United States of America ~72: ARMANDO URBINA;BENJAMIN J LITTLER;BRYAN FRIEMAN;COREY DON ANDERSON;DAVID ANDREW SIESEL;FABRICE PIERRE;JASON MCCARTNEY;JEREMY J CLEMENS;JINGLAN ZHOU;JOHN E COCHRAN;MARK THOMAS MILLER;PAUL ANGELL;PETER GROOTENHUIS;PRASUNA PARASELLI;SARA E SWIFT;SARA SABINA HADIDA RUAH;THOMAS CLEVELAND;TIMOTHY RICHARD COON~ 33:US ~31:62/886,660 ~32:14/08/2019

2022/01778 ~ Complete ~54:HOLDER FOR INHALER ARTICLE ~71:PHILIP MORRIS PRODUCTS S.A., Quai Jeanrenaud 3, Switzerland ~72: CAMPITELLI, Gennaro;MOHSENI, Farhang~ 33:EP ~31:19205471.6 ~32:25/10/2019

2022/01791 ~ Complete ~54:COMPUTER-IMPLEMENTED SYSTEM AND METHOD FOR FACILITATING TRANSACTIONS ASSOCIATED WITH A BLOCKCHAIN USING A NETWORK IDENTIFIER FOR PARTICIPATING ENTITIES ~71:nChain Holdings Limited, Fitzgerald House, 44 Church Street, ST. JOHN'S, ANTIGUA & amp; BARBUDA, Antigua and Barbuda ~72: DAVIES, Jack Owen;WAHAB, Jad Faisal;WRIGHT, Craig Steven~ 33:GB ~31:1909960.5 ~32:11/07/2019

2022/01746 ~ Complete ~54:A FAULT DETECTION METHOD BASED ON KERNEL HYBRID SPATIAL PROJECTION ~71:ANHUI UNIVERSITY OF SCIENCE AND TECHNOLOGY, No. 168, Taifeng Road, Huainan City, Anhui Province, 232001, People's Republic of China ~72: FANG, Xianjin;LIU, Huilin;LU, Shuqun;SU, Shuzhi;WANG, Ziying;ZHANG, Maoyan;ZHANG, Zhipeng;ZHU, Yanmin~

2022/01798 ~ Complete ~54:MECHANISM AND METHOD FOR SEPARATING WELDING LUGS ~71:HANGZHOU TAISHANG INTELLIGENT EQUIPMENT CO., LTD, 66 Xianglong Road, Baiyang Street, Qiantang District, Hangzhou, Zhejiang, 310018, People's Republic of China ~72: FANG, Yong;WANG, Hui;WEI, Peng;WU, Chihao;XU, Zhengfang~ 33:CN ~31:202110931850.3 ~32:13/08/2021

2022/01784 ~ Complete ~54:SALT AND CRYSTAL FORM OF COMPOUND HAVING AGONISTIC ACTIVITY TO S1P5 RECEPTOR ~71:Ono Pharmaceutical Co., Ltd., 1-5, Doshomachi 2-chome, Chuo-ku, OSAKA-SHI 5418526, OSAKA, JAPAN, Japan ~72: BEVILL, Melanie Janelle;FUJITO, Takayuki;HOUSTON, Travis Lee;IMURA, Naoko;JOHNSON, Courtney S.;KIJIMA, Hideomi;OTANI, Shuhei;PARENT, Stephan D.~ 33:US ~31:62/889,091 ~32:20/08/2019

2022/01795 ~ Complete ~54:MODULATORS OF CYSTIC FIBROSIS TRANSMEMBRANE CONDUCTANCE REGULATOR ~71:VERTEX PHARMACEUTICALS INCORPORATED, 50 Northern Avenue, Boston, Massachusetts, 02210, United States of America ~72: ALEXANDER RUSSELL ABELA;ANDREAS TERMIN;ANTON V GULEVICH;BRETT B BUSCH;BRETT C BOOKSER;BRYAN FRIEMAN;CARL V VOGEL;COREY DON ANDERSON;FABRICE PIERRE;HARIPADA KHATUYA;JASON MCCARTNEY;JEREMY J CLEMENS;JINGLAN ZHOU;JOHNNY UY;MARK THOMAS MILLER;PETER GROOTENHUIS;PRASUNA PARASELLI;SARA E SWIFT;SARA SABINA HADIDA RUAH;SENAIT G GHIRMAI;THOMAS CLEVELAND;TIMOTHY RICHARD COON;YOSHIHIRO ISHIHARA~ 33:US ~31:62/886,611 ~32:14/08/2019;33:US ~31:62/886,739 ~32:14/08/2019

2022/01744 ~ Complete ~54:FEED ADDITIVE FOR REMOVING ZEARALENONE TOXIN AND PREPARATION METHOD AND APPLICATION THEREOF ~71:INSTITUTE OF ANIMAL HUSBANDRY, HEILONGJIANG ACADEMY OF AGRICULTURAL SCIENCES, NO. 368, XUEFU ROAD, NANGANG DISTRICT, HARBIN, People's Republic of China ~72: CHEN, Heshu;FENG, Yanzhong;HE, Haijuan;HE, Liuqin;HE, Xinmiao;LIU, Di;LIU, Ziguang;QI, Meiyu;TIAN, Ming;WANG, Wentao;WU, Saihui;YU, Xiaolong;ZHANG, Haifeng~

2022/01768 ~ Complete ~54:A RESOURCE SCHEDULING AND PLANNING METHOD BASED ON OPERATIONS RESEARCH ~71:Sichuan Normal University, No.1819, Chenglong Avenue, Longquanyi District, Chengdu, Sichuan, People's Republic of China ~72: LUO, Feng~

2022/01766 ~ Complete ~54:RAPID CULTIVATION METHOD FOR AVOCADO GRAFTED SEEDLINGS ~71:Guizhou Institute of Subtropical Crops, No. 1, Fenglin East Road, Xiawutun, Xingyi City, Guizhou, 562400, People's Republic of China ~72: HAN, Shuquan;HE, Erqi;LIU, Fanzhi;LU, Jiaju;LUO, Lina;WANG, Xiaomin~

2022/01782 ~ Complete ~54:TREATMENT OF CANCER WITH A COMBINATION OF AN ANTIBODY THAT BINDS LGR5 AND EGFR AND A TOPOISOMERASE I INHIBITOR ~71:MERUS N.V., Yalelaan 62, Netherlands ~72: THROSBY, Mark;WASSERMAN, Ernesto Isaac~ 33:EP ~31:19192327.5 ~32:19/08/2019

2022/01794 ~ Complete ~54:CRYSTALLINE FORMS OF CFTR MODULATORS ~71:VERTEX PHARMACEUTICALS INCORPORATED, 50 Northern Avenue, Boston, Massachusetts, 02210, United States of America ~72: ALES MEDEK;BEILI ZHANG;BRYAN FRIEMAN;CARL L ZWICKER;COREY DON ANDERSON;FABRICE PIERRE;JASON MCCARTNEY;JENNIFER LU;JEREMY J CLEMENS;JICONG LI;JINGLAN ZHOU;KEVIN J GAGNON;MARK THOMAS MILLER;MICHAEL WALDO;MUNA SHRESTHA;PETER (DECEASED) GROOTENHUIS;PRASUNA PARASELLI;SARA E SWIFT;SARA SABINA HADIDA RUAH;THOMAS CLEVELAND;TIMOTHY RICHARD COON;YI SHI~ 33:US ~31:62/886,565 ~32:14/08/2019;33:US ~31:63/015,903 ~32:27/04/2020

- APPLIED ON 2022-02-11 -

2022/01803 ~ Provisional ~54:ROTATION ACTUATOR FOR ELECTRICITY GENERATION AND PUMP OPERATION ~71:Reokeditswe Spencer Moropa, 4070 Petticoat crescent, Kaalfontein, South Africa ~72: Reokeditswe Spencer Moropa~

2022/01831 ~ Complete ~54:ASSEMBLED BALLASTLESS TRACK STRUCTURE AND LONGITUDINAL CONNECTING STRUCTURE AND ASSEMBLY METHOD OF THE SAME ~71:CHINA RAILWAY SIYUAN SURVEY AND DESIGN GROUP CO.,LTD., No.745, Heping Avenue, Yangyuan, Wuchang District, Wuhan, Hubei, 430060, People's Republic of China ~72: CAIJUAN ZHAN;HEDAO WEI;HUIBIN LOU;JIALIANG SUN;JIE ZHANG;LI SUN;QIUYI LI;SENRONG WANG;SHUNXI QUAN~ 33:CN ~31:201910884767.8 ~32:19/09/2019

2022/01841 ~ Complete ~54:METAL RECOVERY PROCESS ~71:Minex Technology Group Limited, 30 Garratts Lane, BANSTEAD SM7 2EA, SURREY, UNITED KINGDOM, United Kingdom ~72: DEY, Brian Matthew~ 33:GB ~31:1911658.1 ~32:14/08/2019

2022/01804 ~ Provisional ~54:REGEN POWER SUPPLY UNIT ~71:Peter Alfred Jancek, No1 San Marino, Sir David Baird Drive, South Africa ~72: Peter Alfred Jancek~

2022/01813 ~ Complete ~54:SHOCK-ABSORBING SEAT WITH TEMPERATURE CONTROL AND VENTILATION FOR AUTOMOBILES ~71:Baicheng Normal University, NO.57 Zhongxing West Road, Taobei District, Baicheng City, Jilin Province, 137099, People's Republic of China ~72: Bai Guang;Liu Jie;Shan Yuhao;Yu Shuai;Yu Xiuhua;Zhang Chongji;Zhang Ying~

2022/01829 ~ Complete ~54:NONPEPTIDE SOMATOSTATIN TYPE 5 RECEPTOR AGONISTS AND USES THEREOF ~71:CRINETICS PHARMACEUTICALS, INC., 10222 Barnes Canyon Road, Building #2, United States of America ~72: CHEN, Mi;PONTILLO, Joseph;WANG, Shimiao;ZHAO, Jian;ZHU, Yunfei~ 33:US ~31:62/886,764 ~32:14/08/2019

2022/01806 ~ Complete ~54:FEED ADDITIVE FOR PREVENTING AND TREATING GASTRITIS OF NORTHEAST MIN PIGS AS WELL AS PREPARATION METHOD AND APPLICATION THEREOF ~71:HUNAN NORMAL UNIVERSITY, NO.36 LUSHAN ROAD, CHANGSHA, People's Republic of China;INSTITUTE OF ANIMAL HUSBANDRY, HEILONGJIANG ACADEMY OF AGRICULTURAL SCIENCES, NO. 368, XUEFU ROAD, NANGANG DISTRICT, HARBIN, People's Republic of China ~72: CHEN, Heshu;FENG, Yanzhong;HE, Haijuan;HE, Liuqin;HE, Xinmiao;LIU, Di;LIU, Ziguang;QI, Meiyu;TIAN, Ming;WANG, Wentao;WU, Saihui;YU, Xiaolong;ZHANG, Haifeng~

2022/01815 ~ Complete ~54:AUTOMATICALLY-CONTROLLED BEVERAGE BLENDING APPARATUS ~71:Tangshan University, No. 9, Daxue West Road, Lubei District, Tangshan, Hebei , 063020, People's Republic of China ~72: LIAN, Wenli~

2022/01824 ~ Complete ~54:PLASTIC ROAD PLATE AND THE METHOD OF ITS MANUFACTURE ~71:Plastman Sp. z o.o., ul. Cynamonowa 19, lok. 541, 02-777, Poland ~72: Paweł Regulski~ 33:PL ~31:P.439577 ~32:19/11/2021

2022/01832 ~ Complete ~54:VIBRATION REDUCTION SECTION PREFABRICATED BALLASTLESS TRACK STRUCTURE HAVING LONGITUDINAL CONNECTING STRUCTURE, AND ASSEMBLY METHOD ~71:CHINA RAILWAY SIYUAN SURVEY AND DESIGN GROUP CO.,LTD., No.745, Heping Avenue, Yangyuan, Wuchang District, Wuhan, Hubei, 430060, People's Republic of China ~72: BIN ZHU;GUOPING XU;GUOTANG ZHAO;HEDAO WEI;HUIBIN LOU;JIE ZHANG;LI SUN;SENRONG WANG;SHIJIE ZHANG;YANLI YANG;ZHENGQUAN DING~ 33:CN ~31:201910884758.9 ~32:19/09/2019

2022/01830 ~ Complete ~54:METHODS AND PRODUCTS FOR TREATMENT OF GASTROINTESTINAL DISORDERS ~71:FINCH THERAPEUTICS HOLDINGS LLC., 200 INNER BELT RD., SUITE 400, SOMERVILLE, MA 02143, USA, United States of America;MILLENNIUM PHARMACEUTICALS, INC., 40 LANDSDOWNE STREET, CAMBRIDGE, MA 02139, USA, United States of America ~72: GERARDIN, Ylaine;GIALLOURAKIS, Cosmos;HENSKE, John;SADOVSKY, Rotem;SMITH, Mark;TAYLOR, Ewan;TIMBERLAKE, Sonia;VO, Anh-Thu, Elaine~ 33:US ~31:62/876,350 ~32:19/07/2019;33:US ~31:63/001,888 ~32:30/03/2020

2022/01805 ~ Provisional ~54:WEB ACCESS CONTROL SYSTEM (WACS) ~71:IAN ALEXANDER JACOBS, 1183 benswart street, moregloed, South Africa ~72: ian alexander jacobs~

2022/01814 ~ Complete ~54:METHOD FOR SIMULTANEOUSLY PREPARING TOBACCO ESSENTIAL OIL AND TOBACCO ESSENCE ~71:CHINA TOBACCO HEBEI INDUSTRIAL CO.,LTD, No. 1 Weiming South Street, Qiaoxi District, Shijiazhuang, Hebei, 050065, People's Republic of China ~72: BU, Yifan;DAI, Ya;HAO, Hongling;HE, Aimin;MA, Rong;SU, Guosui;SU, Hongjun;ZHANG, Yanfang~ 33:CN ~31:202011313173.0 ~32:20/11/2020

2022/01823 ~ Complete ~54:DENTAL IMPLANT ~71:CHEN, Yang, Building 8, Guangsha Shui'an Dongfang Phase II, Hongqi Street, Baqiao District, Xi'an City, Shaanxi Province, 710038, People's Republic of China ~72: CHEN, Yang~

2022/01838 ~ Complete ~54:PROCESS FOR OBTAINING SODIUM SILICATE POWDER FROM SANDY TAILINGS FROM THE PROCESS OF CONCENTRATING IRON ORE ~71:Vale S.A., Torre Oscar Niemeyer -Praia de Botafogo nº 186, sala 701 a sala 1901, Botafogo, RIO DE JANEIRO 22250-145, RJ, BRAZIL, Brazil ~72: LAMEIRAS, Fernando Soares;VOGT, Jordanna Chamon~ 33:BR ~31:1020190180803 ~32:30/08/2019

2022/01843 ~ Complete ~54:PROCESS FOR MAKING [1.1.1]PROPELLANE ~71:Recurium IP Holdings, LLC, 10835 Road to the Cure, Suite 205, SAN DIEGO 92121, CA, USA, United States of America ~72: BUNKER, Kevin Duane;HUANG, Peter Qinhua;PINCHMAN, Joseph Robert;UNNI, Aditya Krishnan~ 33:US ~31:62/886,769 ~32:14/08/2019

2022/01807 ~ Complete ~54:FEED ADDITIVE FOR IMPROVING MATING ABILITY OF BREEDING PIGS OF NORTHEAST MIN PIGS AS WELL AS PREPARATION METHOD AND APPLICATION THEREOF ~71:HUNAN

NORMAL UNIVERSITY, NO.36 LUSHAN ROAD, CHANGSHA, People's Republic of China;INSTITUTE OF ANIMAL HUSBANDRY, HEILONGJIANG ACADEMY OF AGRICULTURAL SCIENCES, NO. 368, XUEFU ROAD, NANGANG DISTRICT, HARBIN, People's Republic of China ~72: CHEN, Heshu;FENG, Yanzhong;HE, Haijuan;HE, Liuqin;HE, Xinmiao;LIU, Di;LIU, Ziguang;QI, Meiyu;TIAN, Ming;WANG, Wentao;WU, Saihui;YU, Xiaolong;ZHANG, Haifeng~

2022/01817 ~ Complete ~54:METHOD FOR PREPARING DEMULSIFIER SUITABLE FOR TERNARY COMPOUND FLOODING CRUDE OIL ~71:Northeast Petroleum University, No. 99, Xuefu Street, High-tech Industrial Development Zone, Daqing City, Heilongjiang Province , 163318, People's Republic of China ~72: CHEN, Shuangqing;DONG, Hang;JI, Lili;JIA, Xinlei;LIU, Yang;LU, Mengzhen;SONG, Yang;WEI, Lixin;ZHANG, Yu;ZHANG, Zhijuan;ZHAO, Jian~

2022/01826 ~ Complete ~54:MEGASTIGMUS SABINAE XU ET HE BEHAVIOR OBSERVATION DEVICE ~71:Gansu Province Academy of Qilian Water Resource Conservation Forests Research Institute, No.3, East Ring Road, Ganzhou District, Zhangye City , Gansu , 734000, People's Republic of China ~72: Chen Min;Hou Yumei;Lv Dong;Wang Guangyu;Yang Xiaohu;Yuan Hao;Zhang Hongbin;Zhao Hu;Zhao Ming;Zhao Xingpeng~ 33:CN ~31:202111528768.2 ~32:14/12/2021

2022/01834 ~ Complete ~54:METHODS OF ADMINISTERING ANTI-SIGLEC-8 ANTIBODIES AND CORTICOSTEROIDS ~71:ALLAKOS INC., 975 Island Drive, #201 Redwood City, California, 94065, United States of America ~72: BHUPINDER SINGH;HENRIK RASMUSSEN~ 33:US ~31:62/882,330 ~32:02/08/2019

2022/01846 ~ Complete ~54:IMIDAZOLYL PYRIMIDINYLAMINE COMPOUNDS AS CDK2 INHIBITORS ~71:Incyte Corporation, 1801 Augustine Cut-Off, WILMINGTON 19803, DE, USA, United States of America ~72: CHEN, Yingnan;FAVATA, Margaret;LI, Jingwei;LO, Yvonne;MUKAI, Ken;SMITH, Brandon;WU, Liangxing;YAO, Wenqing;YE, Min;YE, Qinda~ 33:US ~31:62/886,735 ~32:14/08/2019

2022/01816 ~ Complete ~54:SHIELD-TYPE RAPID TUNNELING SYSTEM AND DEVICE ~71:Shandong Dong'anyun Mining Technology Co., Ltd., Room 819, High-tech Center, Laiwu High-tech Zone, Jinan City, Shandong Province, 271100, People's Republic of China ~72: CHENG, Yunhai;HAN, Chengjian~

2022/01825 ~ Complete ~54:HIGH-EFFICIENCY XANTHOCERAS SORBIFOLIA PICKING DEVICE ~71:Gansu Province Academy of Qilian Water Resource Conservation Forests Research Institute, No.3, East Ring Road, Ganzhou District, Zhangye City, Gansu, 734000, People's Republic of China ~72: Jia Xin;Li Xiaoyan;Miao Yuxin;Wang Yilin;Zhang Juan;Zhao Yuhong~ 33:CN ~31:202111578672.7 ~32:22/12/2021

2022/01833 ~ Complete ~54:CLAD 2XXX-SERIES AEROSPACE PRODUCT ~71:ALERIS ROLLED PRODUCTS GERMANY GMBH, Carl-Spaeter-Straße 10, 56070, Koblenz, Germany ~72: ACHIM BÜRGER;ALEKSANDAR LOZANOV DAVIDKOV;PHILIPPE MEYER;SABINE MARIA SPANGEL~ 33:EP ~31:19193108.8 ~32:22/08/2019

2022/01847 ~ Complete ~54:JAK INHIBITORS ~71:VIMALAN BIOSCIENCES, INC., 662 Encinitas Blvd., Suite 250, United States of America ~72: HARRIS, Jason;MOHAN, Raju;NUSS, John;YUAN, Shendong~ 33:US ~31:62/884,593 ~32:08/08/2019

2022/01812 ~ Complete ~54:APPLICATION OF PLATEAU GREEN ALGAE IN SEWAGE TREATMENT ~71:Tibet University, 10 East Zangda Road, Chengguan District, Lhasa City, Tibet Autonomous Region, People's Republic of China ~72: Bu Duo;Chen Junyu;Li Jing;Liu Jun;Wang Jinhu;Wei Yanli~

2022/01849 ~ Provisional ~54:JIGSIMUR ~71:ABDUL NASSER OMAR, 28 6th AVENUE RONDEBOSCH EAST,, South Africa ~72: ABDUL NASSER OMAR~

2022/01809 ~ Complete ~54:COMPOUND DESULFURIZER, PREPARATION METHOD AND APPLICATION THEREOF ~71:Quzhou Ke'er Gaiye Technology Co., Ltd., Huangwuling Village, Huibu Town, Changshan County, Quzhou City, Zhejiang Province, 324200, People's Republic of China ~72: LIU, Jingen;SHAO, Yating~

2022/01818 ~ Complete ~54:WAVELENGTH DEMODULATION SYSTEM OF FIBER GRATING ACCELERATION SENSOR AND WAVELENGTH DEMODULATION METHOD ~71:Central South University, No. 932, Lushan South Road, Yuelu District, Changsha City, Hunan Province, 410083, People's Republic of China ~72: DING, Jiafeng;DING, Yipeng;SUN, Kehui;WANG, Jinhui;WEN, Jun;XU, Xuemei;YIN, Jianjin;YIN, Linzi~

2022/01821 ~ Complete ~54:NOVEL REVERSIBLE HAMMER CRUSHER WITH UNPOWERED DISTRIBUTOR ~71:SHANDONG SHANKUANG MACHINERY CO., LTD., No. 11, North Road, Ji'anqiao, Rencheng District, Jining City, Shandong Province , 272000, People's Republic of China ~72: QIU, Leiming;SUN, Hua;SUN, Shanjin;YU, Mingqiao;ZHANG, Ying;ZHENG, Zhaozong~

2022/01828 ~ Complete ~54:THERAPEUTIC FUSION PROTEINS ~71:NOVARTIS AG, Lichtstrasse 35, Switzerland ~72: IRIGARAY, Sebastien;KLEIN, Laurent;SKEGRO, Darko;VILLANI, Marco;WELZENBACH, Karl~ 33:EP ~31:19196045.9 ~32:06/09/2019

2022/01836 ~ Complete ~54:MATERIAL DELIVERY SYSTEMS AND METHODS ~71:FMC CORPORATION, 2929 Walnut Street, Philadelphia, Pennsylvania, 19104, United States of America ~72: DARRYL A MEADE;EDWARD LANG;MAGGIE LYNCH;XUAN LI~ 33:US ~31:62/885,978 ~32:13/08/2019

2022/01811 ~ Complete ~54:MULTI-GENE VECTOR SYSTEM AND ITS APPLICATION ~71:Vegetable Research Institute, Guangdong Academy of Agricultural Sciences, 66 Jinying Road, Tianhe District, Guangzhou, Guangdong Province, 510640, People's Republic of China ~72: Du Hu;He Tingting;Wang Rui;Wu Tingquan;Yao Chunpeng;Yin Yan~

2022/01822 ~ Complete ~54:PLANT BEVERAGE FERMENTED BY LACTOBACILLUS PLANTARUM SF-L-28 FOR PROTECTING LIVER AND REDUCING LIPID AND PREPARATION PROCESS THEREOF ~71:Shandong Sunflower Bioengineering Co., Ltd, No.168, Zhangyin Village, Mihe Town, Qingzhou City, Weifang City, Shandong , 262501, People's Republic of China ~72: HAN, Wenli;LI, Haijian;LIU, Yongqing;MA, Minglei;XIA, Yue;YANG, Xiaoning;ZHANG, Huanhuan~ 33:CN ~31:202111090104.2 ~32:17/09/2021

2022/01839 ~ Complete ~54:EXTRACELLULAR VESICLE-ASO CONSTRUCTS TARGETING STAT6 ~71:Codiak BioSciences, Inc., 35 Cambridge Park Drive, Suite 500, CAMBRIDGE 02140, MA, USA, United States of America ~72: BOUTIN, Adam T.;BROOM, Wendy;BURZYN, Dalia;KAMERKAR, Sushrut;SATHYANARAYANAN, Sriram;VERMA, Ajay~ 33:US ~31:62/886,944 ~32:14/08/2019;33:US ~31:62/900,138 ~32:13/09/2019;33:US ~31:62/903,518 ~32:20/09/2019;33:US ~31:62/936,216 ~32:15/11/2019;33:US ~31:62/989,477 ~32:13/03/2020;33:US ~31:63/035,392 ~32:05/06/2020

2022/01842 ~ Complete ~54:METHODS OF TREATING BREAST CANCER WITH TETRAHYDRONAPHTHALENE DERIVATIVES AS ESTROGEN RECEPTOR DEGRADERS ~71:Arvinas Operations, Inc., 5 Science Park, 395 Winchester Avenue, NEW HAVEN 06511, CT, USA, United States of America ~72: CHEN, Xin;CREW, Andrew P.;FLANAGAN, John;GOUGH, Sheryl Maxine;HASKELL III, Royal J.;MOORE, Marcia Dougan;QIAN, Yimin;TAYLOR, Ian Charles Anthony;WANG, Jing~ 33:US ~31:62/924,653 ~32:22/10/2019;33:US ~31:62/942,663 ~32:02/12/2019;33:US ~31:63/023,067 ~32:11/05/2020

2022/01808 ~ Complete ~54:PREPARATION METHOD AND APPLICATION OF COLLAGEN PEPTIDE CHELATED FERROUS HYDROGEL ~71:LANKUN MARINE BIOTECHNOLOGY (YANTAI) CO., LTD., No. 1, No. 46, Taibei North Road, Yantai Economic and Technological Development Zone, Pilot Free Trade Zone, People's Republic of China;YELLOW SEA FISHERIES RESEARCH INSTITUTE, CHINESE ACADEMY OF FISHERY SCIENCES, 106 Nanjing Road, Shinan District, Qingdao City, People's Republic of China ~72: CAO, Rong;LI, Ya;LIU, Qi;SUN, Huihui;YU, Yanfei;ZHAO, Ling~

2022/01810 ~ Complete ~54:SMART SWEEPING ROBOT AND SWEEPING EXECUTION CONTROL METHOD THEREOF ~71:ANHUI UNIVERSITY OF SCIENCE AND TECHNOLOGY, No. 168 Taifeng Road, Huainan, Anhui, 232001, People's Republic of China ~72: TIAN, Xing;WU, Yanyong;ZHU, Lewen~

2022/01819 ~ Complete ~54:RAPID IMMUNOASSAY TEST STRIP FOR RALSTONIA SOLANACEARUM AND PREPARATION METHOD AND APPLICATION THEREOF ~71:INSTITUTE OF TOBACCO RESEARCH OF CAAS (QINGZHOU TOBACCO RESEARCH INSTITUTE OF CHINA NATIONAL TOBACCO COMPANY), 11 Keyuanjing 4th Road, Laoshan District, Qingdao City, Shandong, 266101, People's Republic of China ~72: LI, Yichi;REN, Guangwei;WANG, Dongkun;WANG, Fenglong;WANG, Wenjing;WANG, Xiaoqiang;YUAN, Yuan~33:CN ~31:202110407113.3 ~32:15/04/2021

2022/01827 ~ Complete ~54:THERAPEUTIC FUSION PROTEINS ~71:NOVARTIS AG, Lichtstrasse 35, Switzerland ~72: IRIGARAY, Sebastien;KLEIN, Laurent;SKEGRO, Darko;VILLANI, Marco;WELZENBACH, Karl~ 33:EP ~31:19196045.9 ~32:06/09/2019

2022/01835 ~ Complete ~54:FUMIGANT FORMULATION FOR DRIP APPLICATION ~71:ARKEMA FRANCE, 420 rue d'Estienne d'Orves, 92700, Colombes, France ~72: PATRICK CHARLES;THIERRY FOUILLET~ 33:FR ~31:FR1909556 ~32:30/08/2019

2022/01837 ~ Complete ~54:METHODS TO DETECT MTBR TAU ISOFORMS AND USE THEREOF ~71:WASHINGTON UNIVERSITY, One Brookings Drive, St. Louis, Missouri, 63130, United States of America ~72: CHIHIRO SATO;KANTA HORIE;NICOLAS BARTHELEMY;RANDALL BATEMAN~ 33:US ~31:62/886,165 ~32:13/08/2019;33:US ~31:62/970,950 ~32:06/02/2020;33:US ~31:63/044,836 ~32:26/06/2020

2022/01844 ~ Complete ~54:MHC CLASS II MOLECULES AND METHODS OF USE THEREOF ~71:University Health Network, 101 College Street, Unit 150, TORONTO M5G-IL7, ONTARIO, CANADA, Canada ~72: GUO, Tingxi;HIRANO, Naoto;SUGATA, Kenji~ 33:US ~31:62/880,509 ~32:30/07/2019;33:US ~31:63/029,115 ~32:22/05/2020

2022/01845 ~ Complete ~54:EXTRACELLULAR VESICLE-ASO CONSTRUCTS TARGETING CEBP/BETA ~71:Codiak BioSciences, Inc., 35 CambridgePark Drive, Suite 500, CAMBRIDGE 02140, MA, USA, United States of America ~72: BOUTIN, Adam T.;BROOM, Wendy;BURZYN, Dalia;KAMERKAR, Sushrut;SATHYANARAYANAN, Sriram;VERMA, Ajay~ 33:US ~31:62/886,930 ~32:14/08/2019;33:US ~31:62/900,136 ~32:13/09/2019;33:US ~31:62/936,220 ~32:15/11/2019;33:US ~31:62/944,204 ~32:05/12/2019;33:US ~31:62/989,540 ~32:13/03/2020;33:US ~31:63/023,065 ~32:11/05/2020;33:US ~31:63/035,357 ~32:05/06/2020

2022/01840 ~ Complete ~54:SUCKING PIG FEED PREPARED BY MICROBIAL FERMENTATION AND PREPARATION METHOD THEREFOR ~71:Anhui Zhengdayuan Feed Group Co., Ltd, 168 Huaihai West Road, Fenghuangshan Industrial Park, HUAIBEI 235000, ANHUI, CHINA (P.R.C.), People's Republic of China ~72: MENG, Linglin;PENG, Cheng;ZHU, Huarong~ 33:CN ~31:202010679578.X ~32:15/07/2020

2022/01820 ~ Complete ~54:TARGET TREE MANAGEMENT THINNING TREE INTELLIGENT SELECTION ALGORITHM ~71:Institute of Forest Resource Information Techniques CAF, No. 2, Dongxiaofu, Xiangshan Road, Haidian District, Beijing, 100091, People's Republic of China ~72: PANG, Lifeng;ZHANG, Laomo~

- APPLIED ON 2022-02-14 -

2022/01893 ~ Complete ~54:PRODUCTION OF PAPER STICKS ~71:SETTER GMBH & amp; CO. PAPIERVERARBEITUNG, Reeser Straße 87, 46446, Emmerich, Germany ~72: LEO WINS;ROBERT PRAGER;ROLAND HÜLKENBERG~ 33:DE ~31:20 2019 003 550.8 ~32:27/08/2019

2022/01879 ~ Complete ~54:A DEVICE AND A METHOD FOR DETECTING SEVERE ACUTE RESPIRATORY SYNDROME (SARS) CORONAVIRUS BASED ON FILTERED COUGH SOUND SIGNALS ~71:ANUPAM, Arup, Department of Electronics and Instrumentation Engineering, National Institute of Technology Silchar, Assam, India;PATTANAYAK, Prabina, Department of Electronics and Communication Engineering, National Institute of Technology Silchar, Assam, India;SAHOO, Niranjan, Department of Forensic Medicine and Toxicology, All India Institute of Medical Sciences Bhopal, Madhya Pradesh, India;SAHOO, Sudarsan, Department of Electronics and Instrumentation Engineering, National Institute of Technology Silchar, Assam, India ~72: ANUPAM, Arup;PATTANAYAK, Prabina;SAHOO, Niranjan;SAHOO, Sudarsan~

2022/01882 ~ Complete ~54:SUPPRESSION OF WATER EVAPORATION USING FLOATING LATTICE-LIKE STRUCTURES ~71:THE STATE OF ISRAEL, MINISTRY OF AGRICULTURE & amp; RURAL DEVELOPMENT AGRICULTURAL RESEARCH ORGANIZATION, The Volcani Center, P.O.B 15159, 7528809, Israel ~72: ASSOULINE, Shmuel;NARKIS, Kfir~ 33:US ~31:62/872,711 ~32:11/07/2019;33:US ~31:62/967,622 ~32:30/01/2020;33:WO ~31:PCT/IB2020/056545 ~32:13/07/2020

2022/01896 ~ Complete ~54:METHOD AND APPARATUS FOR MOTION INFORMATION STORAGE ~71:Huawei Technologies Co., Ltd., Huawei Administration Building, Bantian, Longgang District, SHENZHEN 518129, GUANGDONG, CHINA (P.R.C.), People's Republic of China ~72: ALSHINA, Elena Alexandrovna;ESENLIK, Semih;GAO, Han;KOTRA, Anand Meher;WANG, Biao~

2022/01876 ~ Complete ~54:BIOMASS CARBON-BASED LIGHTWEIGHT ENVIRONMENTALLY FRIENDLY COMPOSITE MATERIAL ~71:DEHUA TB NEW DECORATION MATERIAL CO., LTD., Industry Zone of Luoshe Town, Deqing County, Huzhou City, People's Republic of China ~72: LIU, Xueyu;WU, Yungang;ZHAN, Xianxu;ZHANG, Liping;ZHANG, Wenbiao;ZHANG, Xiaowei~ 33:CN ~31:202110533857X ~32:17/05/2021

2022/01906 ~ Complete ~54:FLOOR PANEL AND FLOOR ~71:I4F LICENSING NV, Oude Watertorenstraat 25, Belgium ~72: PERRA, Antonio Giuseppe~

2022/01861 ~ Complete ~54:HIGH-PRECISION MICRO INDUCTANCE COIL DETECTION DEVICE ~71:Shanghai Maritime University, 1550 Haigang Avenue, Pudong New Area, Shanghai, 201306, People's Republic of China;Shanghai Ocean University, 999 Hucheng Huan Road, Pudong New Area, Shanghai, 201306, People's Republic of China ~72: CAO, Yu;CHU, Zhenhua;LUO, Ruilong;WANG, Fang;WU, Yu;YANG, Chao;ZHANG, Jinfei~

2022/01850 ~ Provisional ~54:ZOLL / DAGGA AND TOBACCO FILTERED CIGARETTES ~71:WALTERS AND KOCH (PTY) LTD, VOELVLEI DAM, South Africa ~72: HERMANUS JOHANNES WALTERS~

2022/01866 ~ Complete ~54:BIODEGRADABLE MEDICAL GLOVE AND PREPARATION METHOD THEREOF ~71:Zibo Zhongnan Pharmaceutical Packaging Materials Co., Ltd., Jinyingu Pioneer Park, Zhantai Road, Economic Development Zone, Linzi District, Zibo City, Shandong, 255400, People's Republic of China ~72: DING, Sheng;GONG, Xiaohan;LIU, Cheng;MU, Xize;TIAN, Feng;WANG, Huanyu;WANG, Yusen~

2022/01884 ~ Complete ~54:A TOPICAL ANTIBIOTIC CONTAINING PHARMACEUTICAL COMPOSITION FOR BACTERIAL INFECTIONS AND WOUND HEALING ~71:SULUR, Vishagan Vanangamudi, c/o Apex Laboratories Pvt Ltd., 3rd Floor, SIDCO Garment Complex, Guindy, Tamil Nadu, India ~72: SRINIVASAN, Madhavan;SULUR, Vanangamudi Subramaniam;SULUR, Vishagan Vanangamudi~ 33:IN ~31:201941043186 ~32:24/10/2019

2022/01897 ~ Complete ~54:ANTI-AGING AGENTS FOR ASPHALT BINDERS ~71:Ergon, Inc., 2829 Lakeland Drive, Suite 2000, JACKSON 39232-7611, MS, USA, United States of America ~72: COOLEY, Ken;DARANGA, Codrin;JOHNSON, Jerry;JOHNSON, Robert Dwayne~ 33:US ~31:62/874,320 ~32:15/07/2019

2022/01863 ~ Complete ~54:EXPERIMENTAL PLATFORM FOR MULTI-PART AND MULTI-WORKING CONDITION HEALTH MONITORING OF ROADHEADER ~71:Anhui University of Science & amp; Technology, No.168 Taifeng Street, Tianjia'an District, Huainan City, Anhui Province, 232000, People's Republic of China;Kaisheng Heavy Industry Co.,Ltd., No.18 Chaoyang East Road, Economic and Technological Development Zone, Huainan City, Anhui Province, 232000, People's Republic of China ~72: Du Fei;Liang Xiuyun;Luo Songsong;Lyu Yinghui;Ma Tianbing;Sun Duohui;Wang Xin;Xu Tongle;Yang Kai;Zhang Zhihao~

2022/01878 ~ Complete ~54:FEED ADDITIVE FOR PREVENTING AND TREATING PORCINE RESPIRATORY DISEASE COMPLEX AS WELL AS PREPARATION METHOD AND APPLICATION THEREOF ~71:INSTITUTE OF ANIMAL HUSBANDRY, HEILONGJIANG ACADEMY OF AGRICULTURAL SCIENCES, NO. 368, XUEFU ROAD, NANGANG DISTRICT, HARBIN, People's Republic of China ~72: CHEN, Heshu;FENG, Yanzhong;HE, Haijuan;HE, Liuqin;HE, Xinmiao;LIU, Di;LIU, Ziguang;QI, Meiyu;TIAN, Ming;WANG, Wentao;WU, Saihui;YU, Xiaolong;ZHANG, Haifeng~

2022/01903 ~ Complete ~54:FLUID FILTER FOR A MOTOR VEHICLE AND FILTER CARTRIDGE FOR A FLUID FILTER OF THIS KIND ~71:Daimler AG, Mercedesstraße 120, STUTTGART 70372, GERMANY, Germany ~72: SCHUMACHER, Eric~ 33:DE ~31:10 2019 004 926.8 ~32:15/07/2019

2022/01862 ~ Complete ~54:SULFONAMIDE 18 BETA-GLYCYRRHETINIC ACID DERIVATIVE AND PREPARATION METHOD AND USE THEREOF ~71:Shandong University, No.180, Wenhua West Road, Weihai City, Shandong Province, 264209, People's Republic of China ~72: HUAI, Qiyong;LI, Yi~

2022/01871 ~ Complete ~54:GROUND DIRECT INJECTION SYSTEM AND METHOD FOR MINING LIQUID CO2 ~71:Shandong University of Science and Technology, No. 579, Qianwangang Road, Qingdao Economic and Technological Development Zone, Qingdao , Shandong Province, 266000, People's Republic of China ~72: HU, Xiangming;LU, Wei;QI, Guansheng;SU, Hao;SUN, Lulu;WANG, Mingjun;XU, Chongbo;ZHANG, Maoyuan~

2022/01890 ~ Complete ~54:COMPOSITE WEAR PART ~71:MAGOTTEAUX INTERNATIONAL S.A., Rue Adolphe Dumont, 4051, Vaux-sous-Chèvremont, Belgium ~72: BENOÎT CLERMONT;DAVID MARGUILLIER;MICHEL TRAN~ 33:BE ~31:BE2020/5083 ~32:11/02/2020

2022/01894 ~ Complete ~54:METHOD FOR IN VITRO PRODUCTION OF HYALINE CARTILAGE TISSUE ~71:VANARIX SA, Avenue Mon-Repos 14, 1005, Lausanne, Switzerland ~72: VANNARY TIENG~ 33:EP ~31:19191756.6 ~32:14/08/2019

2022/01875 ~ Complete ~54:SHORT-CHAIN RIBONUCLEIC ACID INTERFERING WITH EXPRESSION OF IAG GENE OF MACROBRACHIUM ROSENBERGII AND USE THEREOF ~71:SHANGHAI OCEAN UNIVERSITY, No.999, Huchenghuan Rd, Pudong New Area, People's Republic of China ~72: FU, Yuanshuai;LIU, Xue;MA, Keyi~ 33:CN ~31:202111333421.2 ~32:11/11/2021

2022/01905 ~ Complete ~54:SYSTEM AND METHOD FOR MATERIAL DENSITY DISTRIBUTION SURVEY BASED ON COSMIC MUON DETECTION ~71:MUON SOLUTIONS OY, c/o Marko Holma, Rakkarinne 9, Finland ~72: HOLMA, Marko;KUUSINIEMI, Pasi~ 33:FI ~31:20195697 ~32:23/08/2019

2022/01873 ~ Complete ~54:ENERGY STORAGE SYSTEM AND METHOD ~71:ENERGY VAULT, INC., 4360 Park Terrace Dr., Suite 100, Westlake Village, California, 91361, United States of America ~72: ANDREA

PEDRETTI;WILLIAM GROSS~ 33:US ~31:62/700,694 ~32:19/07/2018;33:US ~31:62/800,905 ~32:04/02/2019;33:US ~31:62/800,919 ~32:04/02/2019;33:US ~31:62/800,929 ~32:04/02/2019

2022/01901 ~ Complete ~54:FLUID FILTER FOR A MOTOR VEHICLE AND FILTER CARTRIDGE FOR A FLUID FILTER ~71:Daimler AG, Mercedesstraße 120, STUTTGART 70372, GERMANY, Germany ~72: SCHUMACHER, Eric~ 33:DE ~31:10 2019 004 927.6 ~32:15/07/2019

2022/01857 ~ Complete ~54:METHOD FOR HARMLESS TREATMENT OF WATER BODY SEDIMENT ~71:Hunan Economic Geography Technology Development Co., Ltd, No. 139 Fenglin 2nd Road, Yuelu District, Changsha, 410205, People's Republic of China ~72: Dmitry Demin;Elena Bocharnikova;Pengbo ZHANG;Qiang ZHAN;Vladimir Matichenkov;Xiao WEI;Yuqiao LIU~

2022/01864 ~ Complete ~54:PREPARATION METHOD FOR CATALYST FOR CATALYZING HYDROLYSIS OF HYDROGEN CYANIDE ~71:Kunming University of Science and Technology, No. 253, Xuefu Road, Wuhua District, Kunming City, Yunnan, 650093, People's Republic of China ~72: GU, Junjie;GUAN, Qingqing;HE, Zhenquan;NING, Ping;TIAN, Senlin;YAN, Linxia;YUAN, Xin;ZHAO, Qian~

2022/01874 ~ Complete ~54:ANTI-HLA-G ANTIBODIES, COMPOSITIONS COMPRISING ANTI-HLA-G ANTIBODIES AND METHODS OF USING ANTI-HLA-G ANTIBODIES ~71:TIZONA THERAPEUTICS, 4000 Shoreline Court, Suite 200, South San Francisco, California, 94080, United States of America ~72: ACHIM MOESTA;COURTNEY BEERS;DOUG HODGES;JOHN CORBIN;JOSEPH ROBERT WARFIELD;PAUL FREDRICK WIDBOOM;VANESSA SOROS~ 33:US ~31:62/737,666 ~32:27/09/2018

2022/01880 ~ Complete ~54:A FORMULATION AND METHOD FOR BIOSORPTION OF ARSENITE AND FLUORIDE FROM AQUEOUS SOLUTIONS USING ACTIVATED CARBON-SNO2 NANOCOMPOSITES ~71:AHMARUZZAMAN, Md., Department of Chemistry, National Institute of Technology Silchar, Assam, India;NATIONAL INSTITUTE OF TECHNOLOGY SILCHAR, National Institute of Technology, Assam, India ~72: AHMARUZZAMAN, Md.~

2022/01885 ~ Complete ~54:MEDICINAL AND/OR PHARMACEUTICAL COMPOSITIONS FOR INTRAVESICAL INSTILLATION, PREPARATION AND USE THEREOF ~71:Gábor RÉNYI, Szent István park 26., Hungary;János GIBER, Városmajor u. 39/b, Hungary;Péter BIRINYI, Baross u. 44., Hungary;Sándor LOVÁSZ, Hegedüs Gyula u.8, Hungary ~72: Gábor RÉNYI;János GIBER;Péter BIRINYI;Sándor LOVÁSZ~

2022/01898 ~ Complete ~54:ANTIMALARIAL AGENTS ~71:MSD R&D (China) Co., Ltd., L2-13, No. 21, Rongda Road, Chaoyang District, BEIJING 100020, CHINA (P.R.C.), People's Republic of China;Merck Sharp & Dohme Corp., 126 East Lincoln Avenue, RAHWAY 07065-0907, NJ, USA, United States of America;The Walter and Eliza Hall Institute of Medical Research, 1G Royal Parade, PARKVILLE 3052, VICTORIA, AUSTRALIA, Australia ~72: COWMAN, Alan F.;DE LERA RUIZ, Manuel;FAVUZZA, Paola;GUO, Zhuyan;HU, Bin;KELLY III, Michael J.;LEI, Zhiyu;MCCAULEY, John A.;OLSEN, David B.;SLEEBS, Brad;THOMPSON, Jennifer K.;TRIGLIA, Tony;ZHAN, Dongmei;ZHANG, Cailing;ZHAO, Lianyun~ 33:IB ~31:2019/100781 ~32:15/08/2019

2022/01902 ~ Complete ~54:CONTAINER FOR BEVERAGE PREPARATION ~71:Société des Produits Nestlé S.A., Avenue Nestlé 55, VEVEY 1800, SWITZERLAND, Switzerland ~72: DOGAN, Nihan~ 33:EP ~31:19189304.9 ~32:31/07/2019

2022/01851 ~ Provisional ~54:NOVUS-GRILL ~71:Mark Haley, 21c 2nd Ave Parys Free state, South Africa ~72: Mark RalphHaley~

2022/01855 ~ Provisional ~54:BOARD GAME MAT ~71:Lionel Mantzivis, 1 Villa Tosca, South Africa ~72: Lionel Mantzivis~ 33:ZA ~31:2022/0214 ~32:13/02/2022

2022/01858 ~ Complete ~54:MODULAR INTELLIGENT RADIATOR ~71:Zhejiang International Maritime College, No. 268 Haitian Avenue, Lincheng New District, Zhoushan City, Zhejiang Province , 316021, People's Republic of China ~72: ZHOU, Jianmin~ 33:CN ~31:202111361346.0 ~32:17/11/2021

2022/01860 ~ Complete ~54:GREEN AND EFFICIENT NANO-CELLULOSE PREPARATION METHOD ~71:Southwest Forestry University, No. 300, Bailongsi, Kunming City, Yunnan Province , 650224, People's Republic of China ~72: LI, Xiaoping;TANG, Zhengjie;WU, Zhangkang;YAO, Yao~

2022/01877 ~ Complete ~54:ANTI-MYCOTOXIN FEED ADDITIVE FOR PIGS AS WELL AS PREPARATION METHOD AND APPLICATION THEREOF ~71:INSTITUTE OF ANIMAL HUSBANDRY, HEILONGJIANG ACADEMY OF AGRICULTURAL SCIENCES, NO. 368, XUEFU ROAD, NANGANG DISTRICT, HARBIN, People's Republic of China ~72: CHEN, Heshu;FENG, Yanzhong;HE, Haijuan;HE, Liuqin;HE, Xinmiao;LIU, Di;LIU, Ziguang;QI, Meiyu;TIAN, Ming;WANG, Wentao;WU, Saihui;YU, Xiaolong;ZHANG, Haifeng~

2022/01883 ~ Complete ~54:RETAINER SLEEVE DESIGN WITH ANTI-ROTATION FEATURES FOR A GROUND ENGAGING TOOL ~71:CATERPILLAR INC., 100 NE Adams Street, United States of America ~72: JURA, Jason Grant;SERRURIER, Douglas C.;SINN, Eric T.;WELLS, Corey Michael~ 33:US ~31:62/887,745 ~32:16/08/2019

2022/01904 ~ Complete ~54:AEROSOL PROVISION SYSTEMS ~71:Nicoventures Trading Limited, Globe House, 1 Water Street, LONDON WC2R 3LA, UNITED KINGDOM, United Kingdom ~72: BOHAM, Scott George;HUGHES, Steve~ 33:GB ~31:1912477.5 ~32:30/08/2019

2022/01870 ~ Complete ~54:APPLICATION OF PICHIA KUDRIAVZEVII IN DEGRADATION OF BIOGENIC AMINES ~71:Ocean University of China, No. 238, Songling Road, Laoshan District, Qingdao, Shandong Province, 266100, People's Republic of China ~72: LUO, Ke;MA, Shuang;SUN, Xun;WANG, Dongfeng;XU, Ying;ZHU, Cuicui~

2022/01889 ~ Complete ~54:A UROKINASE PLASMINOGEN ACTIVATOR RECEPTOR-TARGETING PEPTIDE ~71:FLUOGUIDE A/S, Ole Maaløes Vej 3, 2200, København N, Denmark;RIGSHOSPITALET, Blegdamsvej 9, 2100, København Ø, Denmark;UNIVERSITY OF COPENHAGEN, Nørregade 10 København K, 1165, Denmark ~72: ANDERS CHRISTENSEN;ANDREAS KJAER;KARINA JUHL;KASPER KILDEGAARD SØRENSEN;KNUD JØRGEN JENSEN;MICHAEL PLOUG;MORTEN ALBRECHTSEN;SOREL KURBEGOVIC~ 33:SE ~31:1950898-5 ~32:16/07/2019

2022/01854 ~ Provisional ~54:MULTI PURPOSE OUTDOOR SHADE AND COMFORT ~71:Leonie Martyn, 65 Villas on Leith, South Africa ~72: Leonie Martyn~

2022/01856 ~ Provisional ~54:MANUAL GAS SCALE ~71:Shaun Parboo, 78 Bagley Terrace, Valeriedene, South Africa ~72: Shaun Parboo~

2022/01869 ~ Complete ~54:TRANSIENT PERMEABILITY TEST SYSTEM FOR COMPACT OR EXPANSIVE ROCKS AND TEST METHOD THEREOF ~71:Central South University, No.932 Lu-shan South Street, Yue-lu District, Changsha City, Hunan Province, People's Republic of China ~72: Lv Zhihai;Ma Chunde;Peng Kang;Yang Wenyuan;Zhang Junjie;Zhou Yanan~

2022/01888 ~ Complete ~54:IMIDAZOPYRIDINE DERIVATIVE AND PHARMACEUTICAL COMPOSITION COMPRISING SAME AS ACTIVE INGREDIENT ~71:TSD LIFE SCIENCES CO., LTD., 7th Floor, 211 Mallijae-ro, Jung-gu, Republic of Korea ~72: CHOI, Sung Wook;KANG, Nam Sook;LEE, Jae Won;SON, Do Hyun~ 33:KR ~31:10-2019-0107013 ~32:30/08/2019

2022/01852 ~ Provisional ~54:SPILL-PROOF SYSTEM ~71:Mike Junior McKerson, 7 Quibeba, South Africa ~72: Mike Junior McKerson~

2022/01868 ~ Complete ~54:INTELLIGENT COMPRESSION-DRYING DEVICE FOR TOFU SKIN AND WORKING METHOD THEREFOR ~71:Linyi University, Middle Section of Shuangling Road, Lanshan District, Linyi City, Shandong Province, 276000, People's Republic of China ~72: FENG, Guifang;KANG, Yuyun~

2022/01887 ~ Complete ~54:SYSTEM AND METHOD FOR RELEASING LOOSE OR WRAPPED SOLID PRODUCTS FOR BIOLOGICAL PEST CONTROL IN AGRICULTURE USING DISPENSERS COUPLED TO OR INCORPORATED INTO MANNED OR UNMANNED VEHICLES ~71:DE OLIVEIRA MACHADO, Ricardo Antonio, Rua Barão de Capanema, 74, São Paulo, Brazil;RODWELL MATIAS, Nicholas, Alameda Ministro Rocha de Azevedo nº961, casa 06, São Paulo, Brazil ~72: DE OLIVEIRA MACHADO, Ricardo Antonio;RODWELL MATIAS, Nicholas~ 33:BR ~31:10 2019 014753 9 ~32:17/07/2019

2022/01900 ~ Complete ~54:METHOD FOR MANUFACTURING SURFACE ENHANCED RAMAN SPECTROSCOPY TAGS ~71:SICPA HOLDING SA, Avenue de Florissant 41, PRILLY 1008, SWITZERLAND, Switzerland ~72: KOWALSKI, Mark;PIOTTI, Marcelo Eduardo;SCHEFFLER, Raymond H.~ 33:US ~31:62/874,158 ~32:15/07/2019;33:EP ~31:19192040.4 ~32:16/08/2019;33:EP ~31:20163879.8 ~32:18/03/2020

2022/01859 ~ Complete ~54:BIOSENSOR FOR DETECTING PROSTATE SPECIFIC ANTIGEN IN HUMAN SERUM, PREPARATION METHOD AND APPLICATION THEREOF ~71:Qingdao Agricultural University, No. 700 Changcheng Road, Chengyang, Qingdao, Shandong Province, People's Republic of China ~72: Hui Ni;Wang Jiasheng~

2022/01865 ~ Complete ~54:DEEP-WATER HEAVY-DUTY WINCH SYSTEM ~71:DALIAN MARITIME UNIVERSITY, No. 1 Linghai Road, High-tech Park, Dalian City, Liaoning Province, 116026, People's Republic of China ~72: GE, Yangyuan;HAN, Fenghui;LI, Gen;LI, Wenhua;LIN, Shanying;LOU, Xingjian;NIU, Guobo;SUN, Yuqing;YE, Haoran;ZHOU, Xingkun~ 33:CN ~31:202120966544.9 ~32:07/05/2021

2022/01872 ~ Complete ~54:E-HEALTH MONITORING AND ATTENDANCE TRACKING SYSTEM ~71:GRAPHIC ERA (DEEMED TO BE) UNIVERSITY, 566/6, Bell Road, Clement Town, Dehradun, Uttarakhand, 248002, India;GRAPHIC ERA HILL UNIVERSITY, DEHRADUN CAMPUS, 510, Society Area, Clement Town, Dehradun, Uttrakhand, 248002, India ~72: Dr. Kumud Pant;Dr. Mahesh Manchanda;Dr. Vikas Tripathi;Umang Garg~ 33:IN ~31:202111026825 ~32:16/06/2021

2022/01891 ~ Complete ~54:CYANIDE ON DEMAND ~71:HALDOR TOPSØE A/S, Haldor Topsøes Allé 1, 2800 Kgs., Lyngby, Denmark ~72: KASPER EMIL LARSEN;KIM AASBERG-PETERSEN;PETER MØLGAARD MORTENSEN;ROBERT KLEIN~ 33:DK ~31:PA 2019 01150 ~32:01/10/2019;33:DK ~31:PA 2019 01433 ~32:06/12/2019

2022/01892 ~ Complete ~54:DIAGNOSTIC SYSTEM ~71:TALIS BIOMEDICAL CORPORATION, 230 Constitution Drive, Menlo Park, California, 94025, United States of America ~72: DAVID ALEXANDER ROLFE;DAVID GLADE;DZAM-SI JESSE NG;HÉDIA MAAMAR;JOHN DIXON;MICHAEL MCADAMS;SAYEED ANDESHMAND;THOMAS H. III CAULEY~ 33:US ~31:62/887,469 ~32:15/08/2019;33:US ~31:16/655,007 ~32:16/10/2019;33:US ~31:16/655,028 ~32:16/10/2019 2022/01853 ~ Provisional ~54:A MEDICAL SMART WATCH ~71:PIETERSE, HEINRICH LLEWELLEN, 75 WARWICK CRESCENT, STRATFORD GREN, EERSTERIVIER, South Africa ~72: PIETERSE, HEINRICH LLEWELLEN~

2022/01867 ~ Complete ~54:SAND COATED IRON MOULD PROCESS FOR PRODUCING STEEL CASTINGS OF DRIVING WHEELS ~71:LINQING JINGUANG MACHINERY MANUFACTURING CO.,LTD, Riben Industrial Park, Linqing City, Liaocheng City, Shandong Province, 252600, People's Republic of China ~72: CHEN, Guoliang;HU, Guangzhi;JIAO, Hongkai;JIAO, Honglei;JIAO, Jinguo;SHAN, Chengmin;WANG, Yang~

2022/01881 ~ Complete ~54:SYSTEMS AND METHODS FOR CONTEXTUAL IMAGE ANALYSIS ~71:COSMO ARTIFICIAL INTELLIGENCE - AI LIMITED, Riverside II, Sir John Rogerson's Quay, Dublin,, Ireland ~72: CHERUBINI, Andrea;NGO DINH, Nhan~ 33:US ~31:62/969,643 ~32:03/02/2020

2022/01886 ~ Complete ~54:CELL CULTURE METHODS ~71:THE UNIVERSITY OF MASSACHUSETTS, One Beacon Street, United States of America ~72: GALBRAITH, Shaun;KUANG, Bingyu;YOON, Seongkyu~ 33:US ~31:62/886,683 ~32:14/08/2019

2022/01895 ~ Complete ~54:METHOD FOR SYNTHESIZING 2-((6-(HYDROXYMETHYL)CHROMENE-5-YL)OXY)-1-PHENYLETHANONE DERIVATIVE ~71:GLACEUM INC., 3-906, 304, Sinwon-ro, Yeongtong-gu Suwon-si, Gyeonggi-do, 16675, Republic of Korea ~72: JEONG HO LIM;JI YOUNG KIM;JIN YOUNG KIM;JUNG WOO LEE;KU SUK KANG;SANG KU YOO~ 33:KR ~31:10-2019-0092711 ~32:30/07/2019

2022/01899 ~ Complete ~54:SUBSTITUTED AMINO TRIAZOLES USEFUL AS CHITINASE INHIBITORS ~71:OncoArendi Therapeutics S.A., Żwirki i Wigury 101, WARSZAWA 02-089, POLAND, Poland ~72: ANDRYIANAU, Gleb;BARTOSZEWICZ, Agnieszka;CZESTKOWSKI, Wojciech;GOLEBIOWSKI, Adam;JOACHIMIAK, Lukasz;KORALEWSKI, Robert;KOWALSKI, Michal;MATYSZEWSKI, Krzysztof;MAZUR, Marzena;NIEDZIEJKO, Piotr;OLCZAK, Jacek;OLEJNICZAK, Sylwia~ 33:PL ~31:P-430586 ~32:15/07/2019;33:US ~31:62/874,108 ~32:15/07/2019

- APPLIED ON 2022-02-15 -

2022/01912 ~ Complete ~54:METHOD FOR REDUCING FIBER CONTENT OF STRAWS ~71:Feed Research Institute of Xinjiang Academy of Animal Science, No.468 Alishan Street, Economic and Technological Development Zone, Urumqi, Xinjiang Uygur Autonomous Region, 830000, People's Republic of China ~72: AIMAITI, Guzailinuer;BAYINBATE;GAO, Li;GUO, Tongjun;HOU, Liangzhong;HOU, Min;WANG, Wenqi;WANG, Xu;ZANG, Changjiang;ZHANG, Junyu~

2022/01914 ~ Complete ~54:COMBINED BONE TAKING DEVICE ~71:Sanmen People's Hospital, No. 171, Renmin Road, Haiyou Street, Sanmen County, Taizhou City, Zhejiang, 317100, People's Republic of China ~72: FANG, Zejun;HONG, Zhenghua;WANG, Jiawen;YANG, Jun;ZHANG, Linting~

2022/01945 ~ Complete ~54:ANTI-FUCOSYL-GM1 ANTIBODIES ~71:Scancell Limited, John Eccless House, Robert Robinson Avenue, Oxford Science Park, OXFORD OX4 4GP, OXFORDSHIRE, UNITED KINGDOM, United Kingdom ~72: DURRANT, Linda Gillian~ 33:GB ~31:1912657.2 ~32:03/09/2019

2022/01948 ~ Complete ~54:DEFERRING CACHE STATE UPDATES IN A NON-SPECULATIVE CACHE MEMORY IN A PROCESSOR-BASED SYSTEM IN RESPONSE TO A SPECULATIVE DATA REQUEST UNTIL THE SPECULATIVE DATA REQUEST BECOMES NON-SPECULATIVE ~71:MICROSOFT TECHNOLOGY LICENSING, LLC, One Microsoft Way, Redmond, Washington, 98052-6399, United States of America ~72: ARTHUR PERAIS;RAMI MOHAMMAD AL SHEIKH;SHIVAM PRIYADARSHI;VIGNYAN REDDY KOTHINTI NARESH~ 33:US ~31:16/558,843 ~32:03/09/2019

2022/01928 ~ Complete ~54:CR2 BINDING PROTEINS AND THEIR USE IN MEDICAL THERAPY ~71:GLAXOSMITHKLINE INTELLECTUAL PROPERTY DEVELOPMENT LIMITED, 980 Great West Road, Brentford, United Kingdom ~72: BAILEY, James, Matthew;BOUMA, Gerben;BURDEN, Michael, Neil;DIMECH, Caroline, J.;DIXON, David;DOS SANTOS CRUZ DE MANTOS, Gabriela;ELLSON, Christian;HOOK, Laura, J.;KITCHEN, Semra;LEKOVA, Eleonora;MADURA, Emilie;NISTALA, Kiran;ZHANG, Jian~ 33:GB ~31:1912437.9 ~32:30/08/2019

2022/01927 ~ Complete ~54:APPARATUS, METHODS, AND SYSTEMS OF MONITORING THE CONDITION OF A WEAR COMPONENT ~71:ACTIVE CORE TECHNOLOGY PTY LTD, 4/199 Balcatta Road, Balcatta, Australia ~72: HAMILTON, Ian Hugh~ 33:AU ~31:2019902878 ~32:10/08/2019;33:AU ~31:2019902879 ~32:10/08/2019;33:AU ~31:2019903345 ~32:10/09/2019

2022/01947 ~ Complete ~54:INDIVIDUALIZED ANIMAL DRY FOOD COMPOSITION ~71:MARS, INCORPORATED, 6885 Elm Street, McLean, Virginia, 22101-3883, United States of America ~72: CLAUDE ECOCHARD;JEAN-BAPTISTE ROCHE;SALLY PEREA~ 33:EP ~31:19198990.4 ~32:23/09/2019

2022/01910 ~ Complete ~54:METHOD FOR PRODUCING PHOSPHATE FERTILIZERS FROM PHOSPHATE ROCK (PR) ~71:Hunan Economic Geography Technology Development Co., Ltd., No. 139 Fenglin 2nd Road, Yuelu District, Changsha, 410205, People's Republic of China ~72: Dmitry Demin;Elena Bocharnikova;Pengbo ZHANG;Qiang ZHAN;Vladimir Matichenkov;Xiao WEI;Yuqiao LIU~

2022/01916 ~ Complete ~54:LIGHT- AND HEAT-STORAGE COMPOSITE PHASE CHANGE MATERIAL FOR ENERGY STORAGE AND PREPARATION METHOD THEREOF ~71:China University of Geosciences, No. 388, Lumo Road, Hongshan District, Wuhan City, Hubei Province, 430074, People's Republic of China ~72: LU, Jiangtao;XIE, Dengdeng;ZHOU, Keqing~

2022/01917 ~ Complete ~54:HIGH-SHEAR REACTION KETTLE AND APPLICATION THEREOF IN PRODUCTION OF POLYETHYLENE OXIDE BY SUSPENSION POLYMERIZATION ~71:Shanghai Haosheng Chemical Technology Co.,Ltd, No.89, Jinou Road, Jinshan Second Industrial Zone, Shanghai, 201512, People's Republic of China ~72: CHU, Genchu;KONG, Meng;LU, Pingye~

2022/01920 ~ Complete ~54:DEVICE FOR AUTOMATICALLY MONITORING HYDROLOGICAL INFORMATION ~71:Chinese Academy of Geological Sciences, 26 Baiwanzhuang Street, Xicheng District, Beijing, 100037, People's Republic of China ~72: LIU, Kai;REN, Tianxiang;WANG, Zhihui;XU, Bo;YAN, Jinkai~

2022/01932 ~ Complete ~54:SUSPENDED ROTARY DISC AERATOR FOR SMALL RIVER CHANNEL AND TREATMENT METHOD THEREOF ~71:Jiangsu Lingzhi Environmental Protection Co., Ltd., Area D, Industrial Park For Environmental Science & amp; Technology, Yixing City, Wuxi, Jiangsu, 214200, People's Republic of China;Lingzhi Environmental Protection (Linquan) Co., Ltd, Linquan Economic Development Zone, Fuyang, Anhui, 236000, People's Republic of China;Lingzhi Environmental Protection Co., Ltd., Nanxin East Road, Heqiao Town, Yixing City, Wuxi, Jiangsu, 214200, People's Republic of China ~72: Dong ZHANG;Huiping LIU;Jianjun LING;Xuejiao LV~ 33:CN ~31:202110843717.2 ~32:26/07/2021

2022/01937 ~ Complete ~54:ORALLY ADMINISTERED COMBINATIONS OF BETA-LACTAM ANTIBIOTICS AND AVIBACTAM DERIVATIVES FOR TREATING BACTERIAL INFECTIONS ~71:Arixa Pharmaceuticals, Inc., 235 East 42nd Street, NEW YORK 10017, NY, USA, United States of America ~72: NICHOLLS, Andrew;SABLE, Carole;TRIAS, Joaquim~ 33:US ~31:62/893,612 ~32:29/08/2019;33:US ~31:62/953,852 ~32:26/12/2019

2022/01949 ~ Complete ~54:INDEXING AND REPLAYING TIME-TRAVEL TRACES USING DIFFGRAMS ~71:MICROSOFT TECHNOLOGY LICENSING, LLC, One Microsoft Way, Redmond, Washington, 98052-6399, United States of America ~72: JORDI MOLA~ 33:US ~31:16/573,734 ~32:17/09/2019

2022/01909 ~ Complete ~54:SUPERIMPOSED VIBRATION DEWATERING SCREEN FOR CLEANING COAL MINE SUMP ~71:Taiyuan University of Technology, No.79 West Street Yingze, Taiyuan, Shanxi, 030024, People's Republic of China ~72: Duan Zhen;Gao Guijun;Kou Ziming;Wang Yandong;Zhang Ke~

2022/01913 ~ Complete ~54:CLOSE-CONTACT UNDERCROSSING TUNNEL LINING STRUCTURE AND CONSTRUCTION METHOD THEREOF ~71:Jiangxi Fengqiang Technology Development Co., Ltd., No. 28, Chunshun Road, Economic and Technological Development Zone, Yichun City, Jiangxi Province, 336000, People's Republic of China;Yichun University, No. 576 Xuefu Road, Yuanzhou District, Yichun City, Jiangxi Province, 336000, People's Republic of China ~72: CHEN, Jiehua;CHEN, Yangzheng;HONG, Kairong;LIN, Chao;RAO, Li;TAN, Xianjun;ZHANG, Chenglin;ZHANG, Zhaojun;ZHAO, Baofeng~ 33:CN ~31:202111478969.6 ~32:06/12/2021

2022/01951 ~ Complete ~54:POLYHALITE COMPOSITE FERTILISER PELLET ~71:YORK POTASH LIMITED, 17 Charterhouse Street, London, Greater London, EC1N 6RA, South Africa ~72: ROBERT JOHN MEAKIN;TIMOTHY DAVID LEWIS~ 33:GB ~31:1910866.1 ~32:30/07/2019

2022/01925 ~ Complete ~54:METHOD FOR STRENGTHENING AND TREATING FULLY-MECHANIZED COAL MINING WORKING FACE PENETRATING THROUGH STRUCTURAL FRACTURE ZONE VIA PRE-GROUTING ~71:Anhui Jinding Security Technology Co., Ltd., North Section of Longxing Road in Circular Economy Demonstration Zone, Yongqiao District, Suzhou City, Anhui Province, 234000, People's Republic of China ~72: CAI, Changhui;MU, Junwei;WANG, Zhu~

2022/01933 ~ Complete ~54:FIXING FILLER MULTI-BED OXIDATION DITCH FOR TREATING RURAL DOMESTIC SEWAGE ~71:Jiangsu Lingzhi Environmental Protection Co., Ltd., Area D, Industrial Park For Environmental Science & Composition (Linquan) Co., Ltd, Jiangsu, 214200, People's Republic of China;Lingzhi Environmental Protection (Linquan) Co., Ltd, Linquan Economic Development Zone, Fuyang, Anhui, 236000, People's Republic of China;Lingzhi Environmental Protection Co., Ltd., Nanxin East Road, Heqiao Town, Yixing City, Wuxi, Jiangsu, 214200, People's Republic of China ~72: Jianjun LING~ 33:CN ~31:202110030921.2 ~32:11/01/2021

2022/01941 ~ Complete ~54:MANGANESE CHELATE ISOMERS ~71:GE Healthcare AS, Nycoveien 1, OSLO 0485, NORWAY, Norway ~72: BALES, Brian C;DINN, Sean R;RISHEL, Michael James~ 33:US ~31:62/895,121 ~32:03/09/2019

2022/01946 ~ Complete ~54:ANTI-BCMA ANTIBODY, ANTIGEN-BINDING FRAGMENT THEREOF AND MEDICAL USE THEREOF ~71:JIANGSU HANSOH PHARMACEUTICAL GROUP CO., LTD., Economic and Technological Development Zone, Lianyungang, Jiangsu, 222047, People's Republic of China;SHANGHAI HANSOH BIOMEDICAL CO., LTD., Building 2, No.3728 Jinke Road, Zhangjiang, Hi-Tech Park, Shanghai, 201203, People's Republic of China ~72: HAIQING HUA;RUDI BAO~ 33:CN ~31:201910695597.9 ~32:30/07/2019

2022/01921 ~ Complete ~54:OLEA EUROPAEA INTENSIVE PLANTING METHOD ~71:Mianning Yuansheng Agricultural Technology Co., Ltd, Yousheng Village, Hongmo Township, Mianning County, Liangshan Yi Autonomous Prefecture, Sichuan Province, 745000, People's Republic of China;Research Institute of Forestry Chinese Academy of Forestry, No.1 Dong Xiaofu, Xiangshan Road, Haidian District, Beijing, 100091, People's Republic of China ~72: LIN, Chunfu;WANG, Zhaoshan;ZHANG, Jianguo;ZHANG, Zihan~

2022/01943 ~ Complete ~54:METHODS OF TREATING MULTIPLE SCLEROSIS ~71:Actelion Pharmaceuticals Ltd, Gewerbestrasse 16, ALLSCHWIL 4123, SWITZERLAND, Switzerland ~72: BURCKLEN, Michel;EL AKKAD, Tarek;HENNESSY, Brian;KEENAN, Alexander;VACLAVKOVA, Andrea~ 33:US ~31:62/877,108 ~32:22/07/2019

2022/01922 ~ Complete ~54:HYPOCREA VIRENS-CONTAINING COMPOSITE MICROBIAL AGENT FOR CONTROLLING CUCUMBER FUSARIUM WILT AND PREPARATION METHOD THEREOF ~71:Jiangxi Dronephon Technologies Co. Ltd, Room 802, Area A, Chuangye Building, No.698 Jingdong Avenue, Nanchang High-tech Industrial Development Zone, Nanchang City, Jiangxi Province, 330006, People's Republic of China ~72: LI, Xiang;LIANG, Beida;WANG, Bin~

2022/01934 ~ Complete ~54:LIFTABLE PURIFICATION TANK FOR TREATING RURAL DOMESTIC SEWAGE ~71:Jiangsu Lingzhi Environmental Protection Co., Ltd., Area D, Industrial Park For Environmental Science & amp; Technology, Yixing City, Wuxi, Jiangsu, 214200, People's Republic of China;Lingzhi Environmental Protection (Linquan) Co., Ltd, Linquan Economic Development Zone, Fuyang, Anhui, 236000, People's Republic of China;Lingzhi Environmental Protection Co., Ltd., Nanxin East Road, Heqiao Town, Yixing City, Wuxi, Jiangsu, 214200, People's Republic of China;Lingzhi Environmental Protection Co., Ltd., Nanxin East Road, Heqiao Town, Yixing City, Wuxi, Jiangsu, 214200, People's Republic of China ~72: Jianjun LING~ 33:CN ~31:202110030847.4 ~32:11/01/2021

2022/01935 ~ Complete ~54:HOUSEHOLD APPLIANCE-TYPE PURIFIER FOR TREATING RURAL DOMESTIC SEWAGE ~71:Jiangsu Lingzhi Environmental Protection Co., Ltd., Area D, Industrial Park For Environmental Science & amp; Technology, Yixing City, Wuxi, Jiangsu, People's Republic of China;Lingzhi Environmental Protection (Linquan) Co., Ltd, Linquan Economic Development Zone, Fuyang, Anhui, People's Republic of China;Lingzhi Environmental Protection Co., Ltd., Nanxin East Road, Heqiao Town, Yixing City, Wuxi, Jiangsu, 214200, People's Republic of China ~72: Jianjun LING~ 33:CN ~31:202110030849.3 ~32:11/01/2021

2022/01953 ~ Complete ~54:PROCESS TO MAKE CALCIUM OXIDE OR ORDINARY PORTLAND CEMENT FROM CALCIUM BEARING ROCKS AND MINERALS ~71:BRIMSTONE ENERGY INC., 557 59th St., Oakland, California, 94609, United States of America;CALIFORNIA INSTITUTE OF TECHNOLOGY, 1200 E. California Blvd., M/C 6-32, Pasadena, California, 91125, United States of America ~72: CODY E FINKE;HUGO F LEANDRI~ 33:US ~31:62/886,137 ~32:13/08/2019;33:US ~31:62/913,620 ~32:10/10/2019;33:US ~31:62/932,200 ~32:07/11/2019;33:US ~31:63/019,916 ~32:04/05/2020

2022/01911 ~ Complete ~54:METHOD OF LACTARIUS SPP. SECT. DELICIOSI CULTIVATION AND ITS APPLICATION IN AFFORESTATION ~71:Kunming Institute of Botany, Chinese Academy of Sciences, 132 Lanhei Road, Panlong District, Kunming City, Yunnan, 650201, People's Republic of China ~72: WANG, Ran;WANG, Yanliang;YU, Fuqiang;ZHANG, Peng~

2022/01915 ~ Complete ~54:METHOD FOR QUANTITATIVELY ANALYZING ALKALI METAL BOROHYDRIDE ~71:ZHUANG, Yingjun, Specialized, Fined and Peculiar New Company, Fine Chemical Industry Park, Lanzhou New District, Lanzhou City, Gansu Province, 730300, People's Republic of China ~72: ZHUANG, Yingjun~

2022/01929 ~ Complete ~54:NKG2D FUSION PROTEINS AND USES THEREOF ~71:NOVARTIS AG, Lichtstrasse 35, Switzerland ~72: EBERSBACH, Hilmar;EGGER, Philip;RAMONDOU, Emilie;SULLIVAN, Ryan~ 33:US ~31:62/902,071 ~32:18/09/2019;33:US ~31:62/902,080 ~32:18/09/2019

2022/01940 ~ Complete ~54:PROCESS-SCALE SYNTHESIS OF A PLASMA KALLIKREIN INHIBITOR ~71:BioCryst Pharmaceuticals, Inc., 4505 Emperor Blvd., Suite 200, DURHAM 27703, NC, USA, United States of America ~72: BABU, Yarlagadda S.;EL-KATTAN, Yahya~ 33:US ~31:62/883,396 ~32:06/08/2019

2022/01944 ~ Complete ~54:POLYMORPHIC FORMS OF (R)-4-(1-((3-(DIFLUOROMETHYL)-1-METHYL-1H-PYRAZOL-4-YL)SULFONYL)-1-FLUOROETHYL)-N-(ISOXAZOL-3-YL)PIPERIDINE-1-CARBOXAMIDE ~71:MyoKardia, Inc., 1000 Sierra Point Parkway, BRISBANE 94005, CA, USA, United States of America ~72: ALIE, Jean;DUVOUX, Richard;JELIN, Jean-Philippe;MONNIER, Olivier;OCHSENBEIN, Philippe;ZHONG, Min~ 33:US ~31:62/874,855 ~32:16/07/2019

2022/01950 ~ Complete ~54:CARDIOVASCULAR RISK EVENT PREDICTION AND USES THEREOF ~71:SOMALOGIC OPERATING CO., INC., 2945 Wilderness Place, Boulder, Colorado, 80301, United States of America ~72: GARGI DATTA;MICHAEL HINTERBERG~ 33:US ~31:62/895,383 ~32:03/09/2019

2022/01919 ~ Complete ~54:HEALTHY AIR SYSTEM FOR MOTOR VEHICLE ~71:ZHANG, Tingjia, No. 85, South Section of Taihe Avenue, Taihe Town, Shehong County, Suining City, Sichuan Province, 629200, People's Republic of China ~72: ZHANG, Renxiang;ZHANG, Tingjia~

2022/01931 ~ Complete ~54:PINCTADA MARTENSII FUCATA KUNITZ-TYPE SERINE PROTEASE INHIBITOR GENE, PROTEIN ENCODED THEREBY, AND USE THEREOF ~71:GUANGDONG OCEAN UNIVERSITY, No.1 Haida Road, Mazhang District, Zhanjiang, Guangdong, 524088, People's Republic of China ~72: FANG, Xiaochen;HE, Junjun;LIANG, Haiying;LU, Jinzhao;SHEN, Chenghao~ 33:CN ~31:202010589360.5 ~32:24/06/2020

2022/01938 ~ Complete ~54:SUSPENSION ASSEMBLY ~71:Gripple Limited, The Old West Gun Works, Savile Street East, SHEFFIELD S4 7UQ, SOUTH YORKSHIRE, UNITED KINGDOM, United Kingdom ~72: DAVIS, Simon;SUNDERLAND, Oliver~ 33:GB ~31:1912932.9 ~32:09/09/2019;33:GB ~31:2011165.4 ~32:20/07/2020;33:GB ~31:2013103.3 ~32:21/08/2020

2022/02048 ~ Provisional ~54:PACS (PARK ALIGNMENT CAMERA AND SCREEN) ~71:ROBERT MOORE BRUWER, 35A GERALD DREYER STREET, OLYMPIA, NAMIBIA, Namibia ~72: ROBERT MOORE BRUWER ~

2022/01908 ~ Provisional ~54:HYDRA TECHNOLOGY ~71:thabo arnold maake, 125 vusimuzi, South Africa ~72: arnold thabo maake~

2022/01918 ~ Complete ~54:OPTIMAL CMP STACK PROCESSING TECHNOLOGY BASED ON PROBABILITY STATISTICS METHOD ~71:Shandong University of Science and Technology, No. 579, Qianwangang Road, Economic and Technological Development Zone, Qingdao City, Shandong Province, 266590, People's Republic of China ~72: FENG, Jianguo;LI, Guihua~

2022/01936 ~ Complete ~54:A LIFTING APPARATUS ~71:IP TRUST, 23 PERCHFLY CRESENT, MIDSTREAM MEADOWS, 1666 OLIFANTSFONTEIN, SOUTH AFRICA, South Africa ~72: MEINTJIES, van der Merwe, Willem, Schalk~ 33:ZA ~31:2019/04904 ~32:26/07/2019;33:ZA ~31:2019/07729 ~32:22/11/2019;33:ZA ~31:2020/01234 ~32:27/02/2020;33:ZA ~31:2020/03653 ~32:18/06/2020

2022/01939 ~ Complete ~54:PRODUCTION OF MALIC ACID ~71:Thirumalai Chemicals Limited, Thirumalai House, Plot No. 101-102, Road No. 29, Sion (East), MUMBAI 400 022, INDIA, India ~72: RANGASWAMY, Parthasarathy~ 33:IN ~31:201921028680 ~32:16/07/2019;33:IN ~31:202021009475 ~32:05/03/2020

2022/01923 ~ Complete ~54:SAFETY PROTECTION STRUCTURE OF CARRYING MANIPULATOR ~71:Qingdao University of Technology, No.777, Jialingjiang Road, Economic and Technological Development Zone, Qingdao City, Shandong Province, 266555, People's Republic of China ~72: HU, Yaozeng;LIU, Yuchen;WANG, Long;YANG, Fazhan;ZHANG, Qiang;ZHANG, Shoudong;ZHANG, Xixiao~

2022/01924 ~ Complete ~54:METAL-CHAIN TRACK SELF-PROPELLED TUNNEL DUST REMOVING AND RECONNAISSANCE EQUIPMENT ~71:The No.1 Engineering Co.,Ltd of China Railway Beijing Engineering Group, No. 259, Hangchuang Road, National Civil Aerospace Industry Base, Xi'an, Shaanxi , 710199, People's Republic of China;Xi'an University of Architecture and Technology, Xi'an University of Architecture and Technology, No. 13, Yanta Road, Beilin District, Xi'an City, Shaanxi, 710055, People's Republic of China ~72: JIAN, Faliang;JIN, Zhouhao;LIU, Chunhua;LIU, Fuqiang;LIU, Naifei;LIU, Qi;MA, Lu;PAN,

Hongwei;SONG, Zhanping;SUN, Wenqin;XU, Leilei;XU, Wangliang;YANG, Pengtao;ZHANG, Yijia;ZHANG, Yuwei;ZHANG, Zekun;ZHAO, Jianbin;ZHAO, Xinyu~

2022/01952 ~ Complete ~54:VAGUS NERVE STIMULATION SYSTEM ~71:PARASYM PTY LTD, Level 3, 155 Queen Street, Brisbane, Queensland, 4000, Australia ~72: NATHAN DUNDOVIC;SOPHIE DUNDOVIC~ 33:AU ~31:2019902913 ~32:13/08/2019

2022/01907 ~ Provisional ~54:ALOE VERA SOAP GEL AND DRINK ~71:LUTHANDO MQALU, 1394 QEQE STREET, South Africa ~72: LUTHANDO MQALU~

2022/01926 ~ Complete ~54:A DISPLAY DEVICE ~71:MDAKA, Mpimo, Archibald, 2122 BEHAUNIA ESTATE, KIEPERSOL AVENUE, DUVHA PARK, WITBANK, 1034, South Africa ~72: MDAKA, Mpimo, Archibald~ 33:ZA ~31:2021/01000 ~32:15/02/2021

2022/01930 ~ Complete ~54:LONG LIVED T CELLS FOR TREATING HIV INFECTION ~71:CASE WESTERN RESERVE UNIVERSITY, 10900 Euclid Avenue, Cleveland, Ohio, 44106, United States of America ~72: SEKALY, Rafick-Pierre;SHARMA, Ashish;ZEIDAN, Joumana~ 33:US ~31:62/875,217 ~32:17/07/2019

2022/01942 ~ Complete ~54:SHOULDER PROTECTED DRILLING ASSEMBLY ~71:Sandvik Mining and Construction Tools AB, SANDVIKEN 81181, SWEDEN, Sweden ~72: HAMMARGREN, John~ 33:EP ~31:19202722.5 ~32:11/10/2019

- APPLIED ON 2022-02-16 -

2022/01960 ~ Complete ~54:CHROMIUM-FREE TANNING PROCESS OF COLLAGEN SUTURE ~71:SHANDONG BODA MEDICAL PRODUCTS CO., LTD., East End of Shandang Road, Shan County, Heze City, Shandong Province, 274300, People's Republic of China ~72: GAO, Hongyu;ZHANG, Shuo;ZHANG, Yufu~

2022/01969 ~ Complete ~54:MAGNESIUM NIOBATE SINGLE-CRYSTAL NANOSHEET AND PREPARATION METHOD AND APPLICATION THEREOF ~71:Harbin Institute of Technology, Shenzhen, Shenzhen University Town, Taoyuan Street, Nanshan District, Shenzhen City, Guangdong Province, 518000, People's Republic of China ~72: QIN, Jingkai;XIAO, Hui;XU, Chengyan;ZHU, Chengyi~ 33:CN ~31:202111591180.1 ~32:23/12/2021

2022/01971 ~ Complete ~54:AMPLIFICATION PRIMERS FOR IDENTIFICATION OF OLEA EUROPAEA VARIETY BASED ON SINGLE NUCLEOTIDE POLYMORPHISM (SNP) SITE, SCREENING METHOD AND IDENTIFICATION METHOD ~71:Research Institute of Forestry Chinese Academy of Forestry, No.1 Dong Xiaofu, Xiangshan Road, Haidian District, Beijing , 100091, People's Republic of China ~72: WANG, Zhaoshan;ZHANG, Jianguo~

2022/01984 ~ Complete ~54:PREPARATION OF POLYURETHANE SYSTEMS ~71:EVONIK OPERATIONS GMBH, RELLINGHAUSER STRASSE 1-11, 45128 ESSEN, GERMANY, Germany ~72: BURDENIUC, Juan, Jesus;EMMRICH-SMOLCZYK, Eva;VIDAKOVIC, Mladen;WENDEL, Stephan~ 33:US ~31:62/877,904 ~32:24/07/2019

2022/01991 ~ Complete ~54:PARP1 INHIBITORS ~71:AstraZeneca AB, SÖDERTÄLJE SE-151 85, SWEDEN, Sweden ~72: DEGORCE, Sebastien Louis;HANDE, Sudhir Mahadeo;JOHANNES, Jeffrey Wallace;PACKER, Martin John~ 33:US ~31:62/876,065 ~32:19/07/2019

2022/01996 ~ Complete ~54:METHODS, COMPUTER PROGRAM AND RADIO NETWORK NODE FOR NULL-STEERING BEAMFORMING ~71:TELEFONAKTIEBOLAGET LM ERICSSON (PUBL), 164 83, Sweden ~72: GUNTUPALLI, Lakshmikanth;SUNDMAN, Dennis;WILHELMSSON, Leif~

2022/01966 ~ Complete ~54:WATERLOGGING EXPERIMENTAL DEVICE ~71:Nanjing Institute of Environmental Sciences, Ministry of Ecology and Environment, 8 Jiangwangmiao Street, Xuanwu District, Nanjing, Jiangsu , 210042, People's Republic of China ~72: CHEN, Shuifei;DING, Hui;GE, Xiaomin;GUO, Weibo;HU, Yaping;LI, Jiannan;WANG, Le;YONG, Fan;ZHANG, Wenwen;ZHOU, Xu~ 33:CN ~31:202122737170.6 ~32:09/11/2021

2022/01985 ~ Complete ~54:POLYMERIC ANION-CONDUCTING MEMBRANE ~71:EVONIK OPERATIONS GMBH, RELLINGHAUSER STRASSE 1-11, 45128 ESSEN, GERMANY, Germany ~72: CONRADI, Oliver;LUPPI, Gianluigi;MALJUSCH, Artjom;RÖGL, Harald~ 33:EP ~31:19187560.8 ~32:22/07/2019

2022/02001 ~ Complete ~54:METHOD AND SYSTEM FOR DISTRIBUTION OF A CONSISTENT LEDGER ACROSS MULTIPLE BLOCKCHAINS ~71:MASTERCARD INTERNATIONAL INCORPORATED, 2000 Purchase Street, Purchase, New York, 10577, United States of America ~72: RAKESH YADAV;STEVEN C DAVIS~ 33:US ~31:16/576,915 ~32:20/09/2019

2022/01958 ~ Complete ~54:DOUBLE-CYLINDER FERROUS SULFATE DRYING KILN ~71:BAISE CITY ROXING CHEMICAL INDUSTRY LTD., Huati Road, Liutanglv Industrial Park, Youjiang District, Baise City, People's Republic of China ~72: LI, Shilong~

2022/01977 ~ Complete ~54:POZIOTINIB COMBINATION WITH VEGFR2 INHIBITORS AND METHODS OF USE THEREOF ~71:SPECTRUM PHARMACEUTICALS, INC., 157 Technology Drive, Irvine, CA, United States of America ~72: REDDY, Guru~ 33:US ~31:62/891,021 ~32:23/08/2019

2022/01999 ~ Complete ~54:CONTAINER ~71:B.BOX FOR KIDS DEVELOPMENTS PTY LTD, Unit 5, 677 Springvale Road, Mulgrave, Victoria, 3170, Australia ~72: LISA EDLUND TJERNBERG;SYLVAIN JACQUES AMATOURY~ 33:AU ~31:2019208141 ~32:22/07/2019

2022/02006 ~ Complete ~54:COMPOSITIONS AND METHODS FOR MODULATING SPLICING AND PROTEIN EXPRESSION ~71:STOKE THERAPEUTICS, INC., 45 Wiggins Avenue, United States of America ~72: AZNAREZ, Isabel~ 33:US ~31:62/888,887 ~32:19/08/2019;33:US ~31:63/049,262 ~32:08/07/2020

2022/01997 ~ Complete ~54:SURFACE MODIFIED CELLULOSE FIBER ~71:SAPPI NETHERLANDS SERVICES B.V., Biesenweg 16, 6211, AA Maastricht, Netherlands ~72: WIM BALLET~ 33:EP ~31:19186844.7 ~32:17/07/2019

2022/02004 ~ Complete ~54:COMPOSITIONS AND METHODS FOR NON-TOXIC CONDITIONING ~71:BEAM THERAPEUTICS INC., 26 Landsdowne Street 2nd Floor, Cambridge, Massachusetts, 02139, United States of America ~72: ADAM HARTIGAN;TANGGIS BOHNUUD~ 33:US ~31:62/893,677 ~32:29/08/2019

2022/02005 ~ Complete ~54:KNEE BRACE ~71:BARROW, Michael Stuart, c/o University of Cape Town, Lovers Walk, South Africa;UNIVERSITY OF CAPE TOWN, Lovers Walk, South Africa ~72: BARROW, Michael Stuart;TRUSLER, Matthew Graham~ 33:GB ~31:1910408.2 ~32:19/07/2019

2022/01959 ~ Complete ~54:METHOD AND SYSTEM FOR CORRECTING AND OPTIMIZING INCOMING FLOW ~71:China Institute of Water Resources and Hydropower Research, A-1, Fuxing Road, Haidian District, Beijing , 100038, People's Republic of China ~72: CAO Daling;HOU Yu;LI Kuang;LIANG Lili;LIU Shu~

2022/01964 ~ Complete ~54:SPECIAL FERTILIZER FOR FRUIT MULBERRIES FOR IMPROVING YIELD AND QUALITY OF FRUIT MULBERRIES ~71:Institute of Economic Crops, Hubei Academy of Agricultural Sciences, No. 43, Nanhu Avenue, Hongshan District, Wuhan City, Hubei Province, 430072, People's Republic of China ~72: DENG, Wen;DONG, Zhaoxia;HU, Xingming;LI, Yong;MO, Rongli;YU, Cui;ZHANG, Cheng;ZHU, Zhixian~

2022/01975 ~ Complete ~54:METHOD FOR PREDICTING LIFE OF PCB UNDER ACTION OF DIFFERENT CONDUCTOR SPACINGS AND VOLTAGES ~71:YANTAI UNIVERSITY, 30 Qingquan Road, Laishan District, Yantai, People's Republic of China ~72: WANG, Yantao;XIE, Chuanning~

2022/01981 ~ Complete ~54:MEDICAL IMPLANT AND DELIVERY DEVICE FOR A MEDICAL IMPLANT ~71:HOLISTICK MEDICAL, 53 RUE DE TURBIGO, 75003 PARIS, FRANCE, France ~72: BRUNEAU, MaëIle;GARD, Marco;KEILLOR, Matthew;PAU, Antoine;POULETTY, Philippe;ROCHE, Ellen;WARNACK, Boris~ 33:IB ~31:PCT/IB2019/000967 ~32:20/08/2019

2022/02002 ~ Complete ~54:AN IMMUNOTHERAPEUTIC FOR PROSTATE CANCER TREATMENT ~71:HEXAMER THERAPEUTICS, INC., 2345 NE Hopkins Ct., Ste. B, Pullman, Washington, 99163, United States of America ~72: KEITH DOUGLAS MILLER;ROBERT BOGDEN~ 33:US ~31:62/899,553 ~32:12/09/2019

2022/01957 ~ Complete ~54:METHOD FOR FERTILIZING MODERATE-HEAVY SANDY/SANDY LOAM SALINE SOIL BY SALT LEACHING IN ARCHED SHED ~71:SHANDONG ACADEMY OF AGRICULTURAL SCIENCES, No. 202 Industrial North Road, Jinan, People's Republic of China ~72: DONG, Xiaoxia;LIU, Shenglin;MA, Zheng;SHI, Ning;TIAN, Shenzhong;XU, Xingzhen;YANG, Zhengtao;ZHENG, Fuli~

2022/01963 ~ Complete ~54:MODELING METHOD AND DEVICE FOR RAT SPINAL CORD INJURY MODEL ~71:Jilin University, No. 5333, Xi'an Road, Changchun City, Jilin Province, 130062, People's Republic of China ~72: CHEN, Jian;GENG, Yulu;QUAN, Fushi;REN, Wenzhi;YUAN, Bao;ZHU, Xiaoping~

2022/01974 ~ Complete ~54:DEVICES AND METHODS FOR THE PREPARATION OF A NUTRITIONAL FORMULA ~71:ALCRESTA THERAPEUTICS, INC., One Newton Executive Park, Suite 100, Newton, Massachusetts, 02462, United States of America ~72: ALBERT ARCHIE STONE;DAVID BROWN;ERIC FIRST~ 33:US ~31:62/556,700 ~32:11/09/2017;33:US ~31:62/643,394 ~32:15/03/2018;33:US ~31:16/123,712 ~32:06/09/2018

2022/01955 ~ Provisional ~54:COMPOSITION OF PET FOOD CONTAINING SWEET LUPIN AND A PROCESS FOR THE PREPARATION THEREOF ~71:Superlup Group Inc., 200 Continental Drive, United States of America ~72: Shenai Bridglall~

2022/01980 ~ Complete ~54:AGRICULTURAL TRENCH DEPTH SYSTEMS, METHODS, AND APPARATUS ~71:PRECISION PLANTING LLC, 23207 Townline Road, Tremont, United States of America ~72: HODEL, Jeremy;SCHLIPF, Ben;SLONEKER, Dillion~ 33:US ~31:62/910,240 ~32:03/10/2019;33:US ~31:62/910,254 ~32:03/10/2019;33:US ~31:62/910,271 ~32:03/10/2019;33:US ~31:62/934,796 ~32:13/11/2019;33:US ~31:62/934,816 ~32:13/11/2019;33:US ~31:62/934,826 ~32:13/11/2019

2022/01976 ~ Complete ~54:INHALER ARTICLE WITH FOLDED DISTAL END ~71:PHILIP MORRIS PRODUCTS S.A., Quai Jeanrenaud 3, Switzerland ~72: CAMPITELLI, Gennaro~ 33:EP ~31:19205453.4 ~32:25/10/2019

2022/01988 ~ Complete ~54:ANTIBODY-STING AGONIST CONJUGATES AND THEIR USE IN IMMUNOTHERAPY ~71:ImmuneSensor Therapeutics, Inc., 2110 Research Row, DALLAS 75235, TX, USA, United States of America;The Board of Regents of the University of Texas System, 201 West 7th Street, AUSTIN 78701, TX, USA, United States of America ~72: CHEN, Chuo;CHEN, Zhijian;QIU, Jian;SHI, Heping;SUN, Lijun;WEI, Qi;WU, Youtong~ 33:US ~31:62/876,590 ~32:19/07/2019;33:US ~31:63/019,212 ~32:01/05/2020

2022/01995 ~ Complete ~54:BROAD BAND DIRECTIONAL ANTENNA ~71:POYNTING ANTENNAS (PTY) LIMITED, Unit 4, N1 Industrial Park, Landmarks Avenue, South Africa ~72: FOURIE, Andries, Petrus, Cronje;NITCH, Derek, Colin~ 33:ZA ~31:2019/05605 ~32:26/08/2019

2022/01956 ~ Provisional ~54:COMPOSITION OF TEXTURED VEGETABLE PROTEIN (TVP) CONTAINING LUPIN AND A PROCESS FOR THE PREPARATION THEREOF ~71:SUPERLUP GROUP INC., 200 CONTINENTAL DRIVE, United States of America ~72: SHENAI BRIDGLALL~

2022/01970 ~ Complete ~54:BIFUNCTIONAL ASPHALT EMULSIFIER AND PREPARATION METHOD THEREOF ~71:WEIFANG UNIVERSITY, No. 5147 Dongfeng East Street, Weifang City, Shandong , 261061, People's Republic of China ~72: KONG, Xiangjun~

2022/01973 ~ Complete ~54:ANTI-CD39 ANTIBODIES, COMPOSITIONS COMPRISING ANTI-CD39 ANTIBODIES AND METHODS OF USING ANTI-CD39 ANTIBODIES ~71:TRISHULA THERAPEUTICS, INC., 4000 Shoreline Court, Suite 200, South San Francisco, California, 94080, United States of America ~72: COURTNEY BEERS;JOHN CORBIN;JOSEPH ROBERT WARFIELD;MARIA KOVALENKO;PAUL FREDRICK WIDBOOM;VANESSA SOROS~ 33:US ~31:62/539,527 ~32:31/07/2017

2022/01987 ~ Complete ~54:NOVEL AGROCHEMICAL COMBINATIONS ~71:UPL Limited, UPL House, 610 B/2, Bandra Village, off Western Express Highway, Bandra (East), MUMBAI 400 051, MAHARASHTRA, INDIA, India ~72: SANGLE, Prabhakar~ 33:IN ~31:201921030147 ~32:25/07/2019

2022/01990 ~ Complete ~54:FERROPORTIN-INHIBITORS FOR THE USE IN THE PREVENTION AND TREATMENT OF KIDNEY INJURIES ~71:Vifor (International) AG, Rechenstrasse 37, ST. GALLEN 9014, SWITZERLAND, Switzerland ~72: DÜRRENBERGER, Franz;MANOLOVA, Vania~ 33:EP ~31:19187247.2 ~32:19/07/2019;33:EP ~31:20174154.3 ~32:12/05/2020

2022/01992 ~ Complete ~54:NON-ORTHOGONAL MULTIPLE ACCESS POWER DISTRIBUTION METHOD AND SYSTEM ~71:NANTONG VOCATIONAL UNIVERSITY, 89 Qingnian Middle Road, Chongchuan District, Nantong, Jiangsu, 226007, People's Republic of China ~72: DUAN, Wei;JU, Jinjuan;SUN, Qiang;YAO, Juyi;ZHANG, Guoan~ 33:CN ~31:202010744645.1 ~32:29/07/2020

2022/01998 ~ Complete ~54:ELECTRODE ASSEMBLY ~71:SENSUS SPECTRUM LLC, 637 Davis Drive, Morrisville, North Carolina, 27560, United States of America;SENTEC LTD, Radio House, St Andrews Road, Cambridge, Cambridgeshire, CB4 1DL, United Kingdom ~72: ANDREW DAMES;JAMES EVETT;MATTHEW PRICE;MICHAEL CANTOR;MIKE ZIMMERMAN;PAUL DUNAWAY~ 33:GB ~31:1911971.8 ~32:21/08/2019

2022/01954 ~ Provisional ~54:S A FIRE WATCH SCHOOLS PROJECT ~71:MR YUSUF ALLIE, 175 PLANTATION ROAD, South Africa ~72: Yusuf Allie~ 33:ZA ~31:1 ~32:15/01/2019

2022/01967 ~ Complete ~54:INTELLIGENT MINIATURE ALLIUM TUBEROSUM CULTIVATION FACTORY ~71:Science and Technology Support Center, Sichuan Academy of Agricultural Sciences, No. 20, Jingjusi Road, Chengdu, Sichuan, 610066, People's Republic of China ~72: BAI, Sheng;DENG, Xianping;HU, Sixue;JIANG, Haohong;LI, Yiji;XIA, Wuqi;YANG, Shengying;ZENG, Zhi;ZHANG, Hui;ZHOU, Ni;ZHU, Liang;ZHU, Runhua~ 33:CN ~31:202111202794.6 ~32:15/10/2021

2022/02000 ~ Complete ~54:CELL-SURFACE RECEPTORS RESPONSIVE TO LOSS OF HETEROZYGOSITY ~71:A2 BIOTHERAPEUTICS, INC., 30301 Agoura Road, Suite 210, Agoura Hills, California, 91301, United States of America ~72: AGNES HAMBURGER;CARL ALEXANDER KAMB;HAN XU~ 33:US ~31:62/885,093 ~32:09/08/2019;33:US ~31:63/005,670 ~32:06/04/2020

2022/01962 ~ Complete ~54:WATERPROOF MORTAR AND PREPARATION METHOD THEREOF ~71:Beijing University of Civil Engineering and Architecture, No. 1 Zhanlanguan Road, Xicheng District, Beijing City, People's Republic of China ~72: Pan Shuo;Wang Qin~

2022/01968 ~ Complete ~54:WEB-BASED TEACHING DEVICE ~71:North China University of Science and Technology, 21 Bohai Road, Caofeidian Xincheng, Tangshan, Hebei, 063210, People's Republic of China ~72: CHEN, Hongshuo;WANG, Jianbo;WU, Hao;YANG, Meiyuan;ZHANG, Xueli~ 33:CN ~31:202210001381.X ~32:04/01/2022

2022/01978 ~ Complete ~54:SYSTEM AND METHOD FOR TESTING AN AGRICULTURAL IMPLEMENT ~71:PRECISION PLANTING LLC, 23207 Townline Road, Tremont, United States of America ~72: KLOPFENSTEIN, Matthew;SCHLIPF, Ben~ 33:US ~31:62/908,138 ~32:30/09/2019

2022/01986 ~ Complete ~54:COLLECTOR COMPOSITION ~71:BASF SE, CARL BOSCH STRASSE 38, 67056 LUDWIGSHAFEN AM RHEIN, GERMANY, Germany ~72: BUDEMBERG, Gabriela;KAMKIN, Rostislav;MICHAILOVSKI, Alexej;TROPSCH, Juergen~ 33:RU ~31:PCT/RU2019/000519 ~32:24/07/2019

2022/01965 ~ Complete ~54:INTEGRATED CRUSHING AND ANTI-BLOCKING DEVICE FOR FLOWMETER ~71:Qilu University of Technology, No.3501, Daxue Road, Jinan, Shandong Province, 250353, People's Republic of China ~72: LIU, Xinli;ZHU, Deqiang~

2022/01972 ~ Complete ~54:SYSTEM FOR MANAGING AN AGRICULTURAL OPEN SPACE ~71:AGROSOLAR EUROPE GMBH, Strasse der Freundschaft 2, Germany ~72: Franz HILBER;Markus HAASTERT~ 33:DE ~31:20 2021 100 803.2 ~32:18/02/2021;33:DE ~31:10 2021 202 392.4 ~32:11/03/2021

2022/01979 ~ Complete ~54:AGRICULTURAL TRENCH DEPTH ADJUSTMENT FOR ROW UNIT ~71:PRECISION PLANTING LLC, 23207 Townline Road, Tremont, United States of America ~72: HODEL, Jeremy;SCHLIPF, Ben;SLONEKER, Dillion~ 33:US ~31:62/910,240 ~32:03/10/2019;33:US ~31:62/910,254 ~32:03/10/2019;33:US ~31:62/910,271 ~32:03/10/2019;33:US ~31:2/934,796 ~32:13/11/2019;33:US ~31:62/934,816 ~32:13/11/2019;33:US ~31:62/934,826 ~32:13/11/2019

2022/01982 ~ Complete ~54:POSITIONING DEVICE AND METHOD ~71:HOLISTICK MEDICAL, 53 RUE DE TURBIGO, 75003 PARIS, FRANCE, France ~72: BRUNEAU, Maëlle;GARD, Marco;KEILLOR, Matthew;PAU, Antoine;POULETTY, Philippe;ROCHE, Ellen;WARNACK, Boris~

2022/01983 ~ Complete ~54:METHOD AND SYSTEM FOR DETERMINING PROPERTIES IN A VESSEL ~71:ARTEDRONE, 53 RUE DE TURBIGO, 75003 PARIS, FRANCE, France ~72: BRUNEAU, MaëIle;POULETTY, Philippe~ 33:EP ~31:19315100.8 ~32:21/08/2019

2022/01989 ~ Complete ~54:FERROPORTIN-INHIBITORS FOR THE USE IN THE TREATMENT OF TRANSFUSION-DEPENDENT BETA-THALASSEMIA (TDT) ~71:Vifor (International) AG, Rechenstrasse 37, ST. GALLEN 9014, SWITZERLAND, Switzerland ~72: ALTERMATT, Patrick;DÜRRENBERGER, Franz;MANOLOVA, Vania;NYFFENEGGER, Naja~ 33:EP ~31:19187248.0 ~32:19/07/2019;33:EP ~31:20174230.1 ~32:12/05/2020

2022/01993 ~ Complete ~54:POLY (ETHYLENE-VINYL ACETATE) COPOLYMER WITH NON-SPECIFIC SPATIAL CONFIGURATION, METHOD FOR ITS PREPARATION AND USE ~71:CHEMICAL INNOVATION LTD, 111 Bulgaria Blvd., bl. A, 3rd floor 1111, Bulgaria ~72: ARSOV, Kamen, Yordanov~ 33:BG ~31:112969 ~32:19/07/2019

2022/01961 ~ Complete ~54:METHOD FOR PREPARING WHEAT TILLERING ACCELERATOR AND APPLICATION THEREOF ~71:NANJING INSTITUTE FOR COMPREHENSIVE UTILIZATION OF WILD PLANTS, CHINA CO-OP, No. 7 Jiangyun Road, Moling Street, Jiangning District, Nanjing City, Jiangsu Province, 211100, People's Republic of China ~72: ZHANG, Huanshi;ZHANG, Weiming;ZHAO, Fei~ 2022/02003 ~ Complete ~54:METHOD OF SEPARATING DIFFERENT CONSTITUENTS OF A CONCRETE FOR DECONSTRUCTION ~71:FIVES FCB, 50 Rue de Ticleni, 59650, Villeneuve D'ascq, France ~72: ALAIN CORDONNIER;ALAIN FRUCHART;FRANÇOIS BOUDOT;JÉRÔME PORTAL;YANNICK GUIMARD~ 33:FR ~31:FR1909630 ~32:02/09/2019

2022/01994 ~ Complete ~54:PROVISIONING AND EXPOSING USER EQUIPMENT (UE) COMMUNICATION PATTERN ASSOCIATED WITH AN APPLICATION TO REQUEST TRAFFIC OF THE APPLICATION TO BE ANALYZED IN THE CORE NETWORK (CN) ~71:TELEFONAKTIEBOLAGET LM ERICSSON (PUBL), 164 83, Sweden ~72: ALVAREZ DOMINGUEZ, Rodrigo;MUÑOZ DE LA TORRE ALONSO, Miguel Angel;PUENTE PESTAÑA, Miguel~ 33:EP ~31:19382862.1 ~32:04/10/2019

- APPLIED ON 2022-02-17 -

2022/02021 ~ Complete ~54:CONSTANT TEMPERATURE AND CONSTANT PRESSURE WASHING NURSING DEVICE FOR UROLOGY ~71:Guang 'an People's Hospital, No. 1, Section 4, Binhe Road, Guang'an City, Sichuan Province, 638000, People's Republic of China ~72: Cai Zhiju;Chen Hua;Chen Jiao;Dai Zhuling;Jiang Yuanyuan;Li Jianjun;Long Chengchao;Wang Fang;Wang Li;Zeng Xin;Zhang Yan~

2022/02015 ~ Complete ~54:METEORITE ACTIVATED WATER AND PREPARATION METHOD THEREOF ~71:Zhejiang Chiyu Health Technology Co., Ltd., Room 703-1, Unit 2, Building 2, 1188, Changsheng Road, Danghu Street, Pinghu City, Jiaxing City, Zhejiang Province, 314200, People's Republic of China ~72: CHEN, Xudong~

2022/02026 ~ Complete ~54:AN ASSEMBLY OF ABRASIVE JET MACHINING ~71:Amee K. Daiya, Assistant Professor, Government Engineering College, Mavdi - Kankot Road, Rajkot, Gujarat, 360005, India; Arpit Srivastava, Assistant Professor, Chhatrapati Shahu Ji Maharaj University, Kalyanpur, Kanpur, Uttar Pradesh, 208012, India; Dr. Amarish Badgujar, Associate Professor, Navrachana University, Vadodara, Gujarat, 391410, India; Dr. Ankit Dilipkumar Oza, Assistant Professor, Institute of Advanced Research, Koba Institutional Area, Gandhinagar, Gujarat, 382426, India; Dr. Rohit Sharma, CSIR-Pool Scientist (Senior Research Associate), Indian Institute of Technology Delhi, New Delhi, Delhi, 110016, India; Gaurav Kumar Pandey, Assistant Professor, AllenHouse Institute of Technology, Kanpur, Uttar Pradesh, 208008, India;Kapil Sevantilal Banker, Assistant Professor, Government Engineering College, Modasa, Gujarat, 383315, India; Mehul Prajapati, Assistant Professor, Dwarkadas J Sanghvi College of Engineering, Vile Parle, Mumbai, Maharashtra, 400056, India: Prof. Ramesh Chandra Panda, Chief Scientist, Wegrow Private Limited, Bhubaneswar, Odisha, 751001, India; Rajnikant Chandrakant Bidajwala, Research Scholar, Institute of Infrastructure Technology Research and Management, Ahmedabad, Gujarat, 380026, India:Shashi Kalyanji Chorada, Research Scholar, Ahmedabad Institute of Technology, Ahmedabad, Gujarat, 382470, India ~72: Amee K. Daiya; Arpit Srivastava; Dr. Amarish Badgujar; Dr. Ankit Dilipkumar Oza; Dr. Rohit Sharma; Gaurav Kumar Pandey; Kapil Sevantilal Banker; Mehul Prajapati; Prof. Ramesh Chandra Panda; Rajnikant Chandrakant Bidajwala; Shashi Kalyanji Chorada~

2022/02029 ~ Complete ~54:STANDING RIGGING COMPONENT, IN PARTICULAR THE MAST OF A VESSEL, AND THE METHOD OF ITS MANUFACTURE ~71:SUNREEF VENTURE S.A., ul. Doki 1 80-863, Gdańsk, Poland ~72: VÉNEC, Loïc~

2022/02025 ~ Complete ~54:FERROUS METAL PHOSPHIDE OF HOLLOW OPENING STRUCTURE AS WELL AS PREPARATION METHOD AND APPLICATION THEREOF ~71:ANHUI UNIVERSITY OF SCIENCE AND TECHNOLOGY, NO.168, TAIFENG STREET, HUAINAN CITY, People's Republic of China ~72: LI, Ziyao;ZHANG, Lei~

2022/02044 ~ Complete ~54:MICROBIAL COMPOSITIONS FOR THE PREVENTION OR REDUCTION OF GROWTH OF FUNGAL PATHOGENS ON PLANTS ~71:BOOST BIOMES, INC., 1000 Marina Blvd, Brisbane,

California, 94005, United States of America ~72: ALEKSANDRA VIRAG;AMRUTA J BEDEKAR;CHRISTY PIAMONTE;ELIZABETH A MALINICH;JAMES PEARCE;JAMIE BACHER;JENSINA FROLAND;KELLY TRINIDAD;NATHANIEL T BECKER;SOPHIA ANDRIKOPOULOS;VERONICA GARCIA~ 33:US ~31:62/886,883 ~32:14/08/2019

2022/02033 ~ Complete ~54:PROCESSES FOR REDUCING ENVIRONMENTAL AVAILABILITY OF ENVIRONMENTAL POLLUTANTS ~71:Albemarle Corporation, 4250 Congress Street, Suite 900, CHARLOTTE 28209, NC, USA, United States of America ~72: GE, Zhongxin;KIM, Se H.;MILLER, Jon E.;WELZ, Sascha J.;ZHOU, Qunhui~ 33:US ~31:62/900,861 ~32:16/09/2019

2022/02035 ~ Complete ~54:METHODS OF DETERMINING THE SUITABILITY OF CULTURED THYMUS TISSUE FOR IMPLANTATION INTO HUMANS AND ASSOCIATED METHODS OF USE ~71:Duke University, 2812 Erwin Road, Suite 406, DURHAM 27705, NC, USA, United States of America;Enzyvant Therapeutics, Inc., 90 Broadway, Suite 204, CAMBRIDGE 02142, MA, USA, United States of America ~72: CHEATHAM, Lynn;HALE, Laura P.;KURTZBERG, Joanne;MACINTYRE, Andrew N.;MARKERT, Mary Louise;MARKS, Kristin;PIHEL, Karin;SEMPOWSKI, Gregory D.;TRACY, Alex~ 33:US ~31:62/888,799 ~32:19/08/2019;33:US ~31:63/039,153 ~32:15/06/2020

2022/02038 ~ Complete ~54:COMPOUNDS AND METHODS FOR TREATING OXALATE-RELATED DISEASES ~71:OXALURX, INC., 101 S. Hanley Road, Suite 1850, St. Louis, United States of America ~72: CLARE, Michael;KABAKIBI, Ayman;KAHRAMAN, Mehmet;LEEDOM, Thomas~ 33:US ~31:62/890,378 ~32:22/08/2019

2022/02041 ~ Complete ~54:POLYNUCLEOTIDES FOR THE AMPLIFICATION AND DETECTION OF NEISSERIA GONORRHOEAE ~71:TALIS BIOMEDICAL CORPORATION, 230 Constitution Drive, Menlo Park, California, 94025, United States of America ~72: ANDREA C DEDENT;DANA KELLY VANATTA;HÉDIA MAAMAR~ 33:US ~31:62/878,639 ~32:25/07/2019;33:US ~31:16/523,609 ~32:26/07/2019;33:US ~31:16/719,744 ~32:18/12/2019

2022/02042 ~ Complete ~54:AUTOLOGOUS THYMIC TISSUE TRANSPLANTATION ~71:UNIVERSITY OF PITTSBURGH - OF THE COMMONWEALTH SYSTEM OF HIGHER EDUCATION, 1st Floor Gardner Steel Conference Center, 130 Thackeray Avenue, Pittsburgh, Pennsylvania, 15260, United States of America ~72: ERIC LAGASSE~ 33:US ~31:62/882,887 ~32:05/08/2019

2022/02007 ~ Provisional ~54:A DEVICE FOR MOUNTING A BARRELLED WEAPON ~71:SUSANNA DORATHEA JANSEN, 25 Andries Pretorius Street, Sandbaai, South Africa ~72: JACOBUS MARTHINUS JOHANNES~

2022/02012 ~ Complete ~54:A NOVEL MODEL ON EMPLOYEES' WELLNESS FOR ENHANCED BUSINESS TURNOVER ~71:Amit Ranjan Gupta, Rustomjee Central Park, Andheri Kurla Road, Andheri East, Mumbai, Maharashtra, 400093, India;Dr. Archana Bhatia, Associate Professor and HOD-Commerce, D.A.V Centenary College, NH-3, Faridabad, Haryana, 121001, India;Dr. Kapil Pandla, Dean - Business Development & amp; Associate Professor, International Management Institute, Bhubaneswar, Odisha, 751003, India;Dr. Nimit Gupta, Professor, Department of Management, The NorthCap University, Sector- 23A, Gurugram, Haryana , 122017, India;Dr. Rachana Saxena, Professor, Jain University, 44/4, District Fund Road, Behind Big Bazaar, Jayanagar 9th Block, Bengaluru, Karnataka, 560069, India;Dr. Shilpee Aggarwal, Associate Professor, Maharaja Agrasen Institute of Management Studies, Sector-22, Rohini, New Delhi, Delhi, 110086, India;Dr. Sushil Kalyani, Associate Professor and Area Director, Management Area, NIIT University, Neemrana, Rajasthan, 301705, India;Kuldeep Kewlani, Professor, Department of Management, Apeejay School of Management, 302017, India;Mr. Anuj Kumar, Assistant Professor, Department of Management, Apeejay School of Management, Dwarka, New Delhi, Delhi, 110077, India;Ms. Nidhi Gupta, Manager, International Management Institute, Bhubaneswar, Odisha, 751003,

India;Prof. Ramesh Chandra Panda, Chief Scientist, Wegrow Private Limited, Bhubaneswar, Odisha, 751001, India ~72: Amit Ranjan Gupta;Dr. Archana Bhatia;Dr. Kapil Pandla;Dr. Nimit Gupta;Dr. Rachana Saxena;Dr. Shilpee Aggarwal;Dr. Sushil Kalyani;Kuldeep Kewlani;Mr. Anuj Kumar;Ms. Nidhi Gupta;Prof. Ramesh Chandra Panda~

2022/02013 ~ Complete ~54:MULTIFUNCTIONAL IDEOLOGICAL AND POLITICAL EDUCATION MOBILE PROPAGANDA DEVICE ~71:SUZHOU UNIVERSITY, Education Park Campus, Yongqiao District, Suzhou City, Anhui Province, People's Republic of China ~72: Huanqin Ye;Sufen Huang;Tiantian Qu;Xiaohong Yu;Xiaoman Xu~

2022/02024 ~ Complete ~54:MAGNESIA DOMESTIC FINE PORCELAIN GREEN BODY ~71:QINGDAO LIANGMEIYI CERAMIC NEW MATERIAL TECHNOLOGY CO., LTD., No. 506, Huicheng Road, Chengyang Street, Chengyang District, Qingdao City, People's Republic of China;QINGDAO UNIVERSITY OF SCIENCE AND TECHNOLOGY, No. 99, Songling Road, Laoshan District, Qingdao City, People's Republic of China ~72: MA, Zheng;WANG, Lixin;WANG, Mingyue;WANG, Zhiyi;YANG, Changyu~

2022/02039 ~ Complete ~54:NUCLEAR THERMAL PLANT WITH LOAD-FOLLOWING POWER GENERATION ~71:TERRAPOWER, LLC, 15800 Northup Way, Bellevue, Washington, 98008, United States of America ~72: BRIAN MORRIS;CHRISTOPHER A MARTIN;JESSE R CHEATHAM, III;JOHN R GILLELAND;JOSHUA C WALTER;KEVIN KRAMER;MARK R WERNER;PAVEL HEJZLAR;PHILIP M SCHLOSS;ROBERT A CORBIN;ROBERT C PETROSKI~ 33:US ~31:62/929,003 ~32:31/10/2019;33:US ~31:62/986,902 ~32:09/03/2020;33:US ~31:PCT/US2020/028011 ~32:13/04/2020;33:US ~31:17/023,230 ~32:16/09/2020

2022/02045 ~ Complete ~54:METHODS OF TREATING OCULAR NEOVASCULAR DISEASES USING AAV2 VARIANTS ENCODING AFLIBERCEPT ~71:ADVERUM BIOTECHNOLOGIES, INC., 800 Saginaw Drive, Redwood City, California, 94063, United States of America ~72: AARON OSBORNE;MEHDI GASMI;SZILARD KISS~ 33:US ~31:62/899,070 ~32:11/09/2019;33:US ~31:62/913,648 ~32:10/10/2019

2022/02016 ~ Complete ~54:DUST-EXTRACTING SYSTEM FOR LIBRARY BOOKSHELVES ~71:North China University of Science and Technology, 21 Bohai Road, Caofeidian Xincheng, Tangshan, Hebei , 063210, People's Republic of China ~72: HE, Shengtao;LIU, Yang~

2022/02049 ~ Provisional ~54:SHORT VIDEO PLUS ADS (SVPA) ~71:SAKHILE HOPEWELL NTULI, 1351 ext 05, EMPUMELELWENI WARD 29, South Africa ~72: SAKHILE HOPEWELL NTULI~

2022/02017 ~ Complete ~54:METHOD FOR CULTIVATING PLEUROTUS EDIBLE MUSHROOM WITH MARSH PHRAGMITES AUSTRALIS ~71:Jilin Agricultural University, No. 2888 Xincheng Street, Changchun City, Jilin Province, 130118, People's Republic of China;Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences, No. 4888, Shengbei Street, Changchun City, Jilin Province , 130102, People's Republic of China ~72: CHEN, Guoshuang;LI, Xiaoyu;LU, Lixin;WEN, Bolong;YAO, Fangjie~

2022/02034 ~ Complete ~54:AEROSOL PROVISION SYSTEMS ~71:Nicoventures Trading Limited, Globe House, 1 Water Street, LONDON WC2R 3LA, UNITED KINGDOM, United Kingdom ~72: BOHAM, Scott George;HUGHES, Steve~ 33:GB ~31:1912477.5 ~32:30/08/2019

2022/02043 ~ Complete ~54:MICROBIAL COMPOSITIONS FOR USE WITH PLANTS FOR THE PREVENTION OR REDUCTION OF FUNGAL PATHOGENS ~71:BOOST BIOMES, INC., 1000 Marina Blvd, Brisbane, California, 94005, United States of America ~72: CHRISTY PIAMONTE;JAMES PEARCE;JAMIE BACHER;JENSINA FROLAND;KELLY TRINIDAD;SOPHIA ANDRIKOPOULOS;VERONICA GARCIA~ 33:US ~31:62/885,114 ~32:09/08/2019 2022/02009 ~ Complete ~54:FEED ADDITIVE FOR PREVENTING AND TREATING RHEUMATISM OF MIN PIGS AND PREPARATION METHOD AND APPLICATION THEREOF ~71:INSTITUTE OF ANIMAL HUSBANDRY, HEILONGJIANG ACADEMY OF AGRICULTURAL SCIENCES, NO. 368, XUEFU ROAD, NANGANG DISTRICT, HARBIN, People's Republic of China ~72: FENG, Yanzhong;HE, Haijuan;HE, Xinmiao;LIU, Di;QI, Meiyu;TIAN, Ming;WANG, Wentao;WU, Saihui;ZHANG, Haifeng~

2022/02014 ~ Complete ~54:METHOD AND SYSTEM FOR DETERMINING OPEN-PIT MINING SCHEME IN CONSIDERATION OF EQUIPMENT CONFIGURATION ~71:Northeastern University, No. 3-11, Wenhua Road, Heping District, Shenyang City, Liaoning Province, 110819, People's Republic of China ~72: GU, Xiaowei;WANG, Hao;WANG, Qing;XU, Xiaochuan~ 33:CN ~31:202111513731.2 ~32:13/12/2021

2022/02018 ~ Complete ~54:FATIGUE LIFE MODEL OF HOIST BEARING BASED ON AXIAL LOAD ~71:Guangdong University of Petrochemical Technology, No. 139, Guandu 2nd Road, Maoming City, Guangdong Province , 525000, People's Republic of China ~72: GONG, Yongzhen;LI, Zhihai;PAN, Maosen;WANG, Baoyan;WANG, Jigang;WANG, Xingang;ZHAO, Fulei~

2022/02019 ~ Complete ~54:INTEGRATED OPTIMIZATION METHOD AND SYSTEM FOR METAL OPEN-PIT MINE BOUNDARY AND MINING PLAN ~71:Northeastern University, No. 3-11, Wenhua Road, Heping District, Shenyang City, Liaoning Province, 110819, People's Republic of China ~72: GU, Xiaowei;WANG, Hao;WANG, Qing;XU, Xiaochuan~ 33:CN ~31:202111513730.8 ~32:13/12/2021

2022/02027 ~ Complete ~54:SYSTEMS AND METHODS FOR TESTING AGRICULTURAL IMPLEMENTS ~71:PRECISION PLANTING LLC, 23207 Townline Road, Tremont, United States of America ~72: KLOPFENSTEIN, Matthew;SCHLIPF, Ben~ 33:US ~31:62/911,715 ~32:07/10/2019

2022/02032 ~ Complete ~54:SYSTEMS AND METHODS FOR ELECTRICAL EARTHING SYSTEMS ~71:GLXT Holdings, LLC, 255 Harris Drive, BLUE RIDGE 30513, GA, USA, United States of America ~72: BELK, John H.;BROCCOLI, John Louis;LABARGE, Thomas Evan;WYSONG, Gordon J.~ 33:US ~31:62/883,300 ~32:06/08/2019

2022/02036 ~ Complete ~54:ADENO-ASSOCIATED VIRUS VECTOR DELIVERY OF ALPHA-SARCOGLYCAN AND THE TREATMENT OF MUSCULAR DYSTROPHY ~71:Research Institute at Nationwide Children's Hospital, 700 Children's Drive, Room W172, COLUMBUS 43205, OH, USA, United States of America ~72: GRIFFIN, Danielle;MENDELL, Jerry R.;RODINO-KLAPAC, Louise~ 33:US ~31:62/889,749 ~32:21/08/2019;33:US ~31:63/014,934 ~32:24/04/2020;33:US ~31:63/022,843 ~32:11/05/2020

2022/02046 ~ Complete ~54:A GAS FLOW SYSTEM ~71:DUTCH INNOVATION IN AIR TREATMENT B.V., Rollecate 71B, 7711 GG, Nieuwleusen, Netherlands ~72: ARTHUR VAN DER LEE;VINCENT TRIP~ 33:NL ~31:2023734 ~32:30/08/2019

2022/02011 ~ Complete ~54:AN INTELLIGENT AUTOMATED NOVEL SECURITY CONVEYER TUNNEL TO CHECK MEDICINAL DUPLICATION IN SUPPLY CHAIN MANAGEMENT ~71:Dr Bhagabat Panda, Associate Professor, Department of Electrical Engineering, Parala Maharaja Engineering College, Berhampur , State Highway 32, Luhajhara, Odisha , 761003, India;Dr. Ashok Kumar Nanda, Associate Professor, B V Raju Institute of Technology, Vishnupur, Narsapur , Telangana, 502313, India;Dr. Fareeha Rasheed, Assistant Professor, Department of Computer Science & amp; Information Technology, Maulana Azad National Urdu University, Gachibowli, Hyderabad, Telangana, 500032, India;Dr. Kavita Arora, Assistant Professor, Manav Rachna International Institute of Research and Studies, Manav Rachna Campus Road, Gadakhor Basti Village, Sector 43, Faridabad, Haryana , 121004, India;Dr. Rajarajeswari.P, Associate Professor, Department of Computer Science and Engineering , Sreenivasa Institute of Technology and Management Studies, Bangalore-Tirupathi Bye-pass Road, Murukambattu, Chitoor, Andhra Pradesh, 517127, India;Dr. Sailesh Iyer, Professor and Dean, CSE/IT

Department, Rai School of Engineering, Rai University, Saroda, Dholka, Ahmedabad, Gujarat, 382260, India;Mr. Ashwin Perti, Assistant Professor, Department of Computer Science, ABES Engineering college, Ghaziabad, Uttar Pradesh, 201009, India;P.T.Kalaivani, Associate Professor & amp; H.O.D, Department of ECE, Vivekanandha College of Engineering For Women, Elayampalayam,Tiruchengode,Namakkal, Tamilnadu, 637205, India;Prof. Abdul Wahid, Professor, Department of Computer Science & amp; Information Technology, Dean, School of Technology, Maulana Azad National Urdu University, Gachibowli, Hyderabad, Telangana, 500032, India;Prof. Pradeep Kumar, Professor, Department of Computer Science & amp; Information Technology, Maulana Azad National Urdu University, Gachibowli, Hyderabad, Telangana, 500032, India;Prof. Ramesh Chandra Panda, Chief Scientist, Wegrow Private Limited, Bhubaneswar, odisha, 751001, India ~72: Dr Bhagabat Panda;Dr. Ashok Kumar Nanda;Dr. Fareeha Rasheed;Dr. Kavita Arora;Dr. Rajarajeswari.P;Dr. Sailesh Iyer;Mr. Ashwin Perti;P.T.Kalaivani;Prof. Abdul Wahid;Prof. Pradeep Kumar;Prof.Ramesh Chandra Panda~

2022/02023 ~ Complete ~54:NASAL CAVITY COLD COMPRESS GEL PATCH ~71:Maoming People's Hospital, No. 101 Weimin Road, Maoming City, Guangdong , 525000, People's Republic of China ~72: HUANG, Jinbo;LV, Hualiang;SONG, Yibo~

2022/02031 ~ Complete ~54:PROCESSES FOR REDUCING ENVIRONMENTAL AVAILABILITY OF ENVIRONMENTAL POLLUTANTS ~71:Albemarle Corporation, 4250 Congress Street, Suite 900, CHARLOTTE 28209, NC, USA, United States of America ~72: KIM, Se H.;MILLER, Jon E.;WELZ, Sascha J.;ZHOU, Qunhui~ 33:US ~31:62/900,876 ~32:16/09/2019

2022/02008 ~ Complete ~54:TRADITIONAL CHINESE MEDICINE COMPOSITION FOR PREVENTING AND TREATING ACARIASIS OF MIN PIGS AND PREPARATION METHOD AND APPLICATION THEREOF ~71:INSTITUTE OF ANIMAL HUSBANDRY, HEILONGJIANG ACADEMY OF AGRICULTURAL SCIENCES, NO. 368, XUEFU ROAD, NANGANG DISTRICT, HARBIN, People's Republic of China ~72: CHEN, Heshu;FENG, Yanzhong;HE, Haijuan;HE, Xinmiao;LI, Zhongqiu;LIU, Di;LIU, Ziguang;QI, Meiyu;TIAN, Ming;WANG, Wentao;WU, Saihui;YU, Xiaolong;ZHANG, Haifeng~

2022/02022 ~ Complete ~54:MULTIFUNCTIONAL INFUSION SET ~71:Guang 'an People's Hospital, No. 1, Section 4, Binhe Road, Guang'an City, Sichuan Province, 638000, People's Republic of China ~72: Chen Hua;Chen Jing;Du Jianhui;He Chan;Liu Qin;Liu Xiaoyan;Shu Xiaojuan;Su Na;Wang Huiling;Yang Lin;Yang Xiaofang~

2022/02030 ~ Complete ~54:METHOD FOR TREATING HIV WITH CABOTEGRAVIR AND RILPIVIRINE ~71:JANSSEN SCIENCES IRELAND UNLIMITED COMPANY, Barnahely, Ringaskiddy County Cork, Ireland;VIIV HEALTHCARE COMPANY, 251 Little Falls Drive, Wilmington, Delaware, United States of America ~72: CRAUWELS, Herta, Maria, Ludovica;FORD, Susan, L.;MARGOLIS, David Andrew;ROSSENU, Stefaan, Louis, F.;SPREEN, William, Robert;VAN SOLINGEN-RISTEA, Rodica, Mihaela;WILLIAMS, Peter, Evan, Owen~ 33:US ~31:62/908,882 ~32:01/10/2019;33:US ~31:62/908,995 ~32:01/10/2019;33:US ~31:63/037,782 ~32:11/06/2020;33:US ~31:63/052,214 ~32:15/07/2020

2022/02040 ~ Complete ~54:GENETICALLY ENGINEERED ONCOLYTIC VACCINIA VIRUSES AND METHODS OF USES THEREOF ~71:ASTELLAS PHARMA INC., 2-5-1, Nihonbashi-Honcho, Chuo-ku, Tokyo, 103-8411, Japan ~72: NOBUAKI AMINO;SHINSUKE NAKAO;YUKINORI ARAI~ 33:US ~31:62/893,316 ~32:29/08/2019

2022/02047 ~ Complete ~54:METHODS OF TREATING OCULAR NEOVASCULAR DISEASES USING AAV2 VARIANTS ENCODING AFLIBERCEPT ~71:ADVERUM BIOTECHNOLOGIES, INC., 800 Saginaw Drive, Redwood City, California, 94063, United States of America ~72: AARON OSBORNE;ADAM TURPCU;MEHDI GASMI;SZILARD KISS~ 33:US ~31:62/899,070 ~32:11/09/2019;33:US ~31:62/913,648 ~32:10/10/2019;33:US ~31:PCT/US2019/062066 ~32:18/11/2019;33:US ~31:62/959,784 ~32:10/01/2020;33:US ~31:62/971,835
~32:07/02/2020;33:US ~31:63/019,190 ~32:01/05/2020;33:US ~31:63/030,819 ~32:27/05/2020;33:US ~31:63/063,203 ~32:07/08/2020

2022/02010 ~ Complete ~54:A METHOD AND SYSTEM FOR ACCELERATED PROCUREMENT, SOURCING AND MONITORING OF SUPPLIERS COMPRISING SMALL, MICRO AND MEDIUM ENTERPRISES (SMES) ~71:THEKVEST GROUP (PTY) LTD, 1st Floor, Unit 4, Waterfront Office Park, South Africa ~72: Champ Thekiso~

2022/02020 ~ Complete ~54:ANTI-DROPPING DEVICE FOR OXYGEN ABSORPTION TUBE ~71:Guang 'an People's Hospital, No. 1, Section 4, Binhe Road, Guang'an City, Sichuan Province, 638000, People's Republic of China ~72: Chen Hua;Li Xiaoyan;Su Qin;Tao Chan;Xia Yuqing;Xiong Ming;Yan Dongmei;Yang Rui;Ye Qihui;Yu Zhili;Zhou Yumei~

2022/02028 ~ Complete ~54:AGRICULTURAL TRENCH DEPTH SYSTEMS, METHODS, AND APPARATUS ~71:PRECISION PLANTING LLC, 23207 Townline Road, Tremont, United States of America ~72: HODEL, Jeremy;SCHLIPF, Ben;SLONEKER, Dillion~ 33:US ~31:62/910,240 ~32:03/10/2019;33:US ~31:62/910,271 ~32:03/10/2019;33:US ~31:62/934,796 ~32:13/11/2019;33:US ~31:62/934,816 ~32:13/11/2019;33:US ~31:62/934,826 ~32:13/11/2019

2022/02037 ~ Complete ~54:COMPOSITIONS AND METHODS FOR MODIFYING A PLANT CHARACTERISTIC WITHOUT MODIFYING THE PLANT GENOME ~71:AGROSOURCE, INC., 166 Beacon Lane, Jupiter, United States of America;THE UNITED STATES OF AMERICA, AS REPRESENTED BY THE SECRETARY OF AGRICULTURE, 1400 Independence Ave., SW, United States of America ~72: GRANDO, Magali Ferrari;HECK, Michelle L.;KRYSTEL, Joseph;NIEDZ, Randall P.;PITINO, Marco;SHATTERS, Robert G.;STOVER, Eddie W.~ 33:US ~31:62/903,183 ~32:20/09/2019

- APPLIED ON 2022-02-18 -

2022/02084 ~ Complete ~54:INTELLIGENT FLOWMETER SYSTEM BASED ON INTERNET OF THINGS ~71:Chongqing College of Electronic Engineering, 76 University Town East Road, Shapingba District, Chongqing, People's Republic of China ~72: Lin Tao~

2022/02092 ~ Complete ~54:FLOOD PEAK FLOW CALCULATION METHOD AND SYSTEM BASED ON OPTIMIZED REASONING FORMULA ~71:China Institute of Water Resources and Hydropower Research, A-1, Fuxing Road, Haidian District, Beijing, 100038, People's Republic of China ~72: CHAI Fuxin;CHEN Sheng;HOU Yu;LI Kuang;LIANG Lili;LIU Kexin;LIU Shu;LIU Yesen;ZHU Jisheng~

2022/02075 ~ Complete ~54:METHOD AND SYSTEM FOR OPTIMIZING RESERVOIR FLOOD DISPATCHING ~71:China Institute of Water Resources and Hydropower Research, A-1, Fuxing Road, Haidian District, Beijing, 100038, People's Republic of China ~72: CAO Daling;LI Kuang;LIANG Lili;LIU Kexin~

2022/02082 ~ Complete ~54:PHASE ADJUSTABLE ALTERNATING CURRENT POWER SOURCE BASED ON ROTATING MAGNETIC FIELD ~71:SHAANXI INSTITUTE OF METROLOGY SCIENCE, No. 580, South Section of Shenzhou 6th Road, Aerospace Base, Chang'an District, Xi'an, Shaanxi, 710100, People's Republic of China ~72: CHEN, Yiling;FU, Lei;TANG, Yuanhui;ZHANG, Lihui;ZHANG, Lu~

2022/02088 ~ Complete ~54:ROSE JELLY AND PREPARATION METHOD THEREOF ~71:CHENGDU UNIVERSITY OF TRADITIONAL CHINESE MEDICINE, No. 1166, West Section of Liutai Avenue, Wenjiang District, Chengdu City, Sichuan Province , 610075, People's Republic of China ~72: CHEN, Dayi;CHEN, Yan;GUO, Li;JIANG, Lishi;KANG, Jinmei;LI, Hao;LI, Meifeng;LI, Runhao;MENG, Xiao;RAO, Chaolong;WANG, Juan;YE, Qiang;ZHANG, Yifeng;ZUO, Leilei~

2022/02096 ~ Complete ~54:VENTILATION DEVICE ~71:ADVANCED VALVES CC, 31 Elridge Road, South Africa ~72: WIEDERHOLD, Richard Jost~ 33:ZA ~31:2021/00614 ~32:28/01/2021

2022/02105 ~ Complete ~54:METHOD FOR APPLYING STONE DUST ~71:THASASA (PTY) LTD, UNIT 169 B104 COROBAY CORNER MENLYN, South Africa ~72: MAKHETHA, Masasa Ronald~ 33:ZA ~31:2020/07242 ~32:20/11/2020

2022/02121 ~ Complete ~54:METHOD FOR EXTRACTING TRACE DNA BASED ON DRIED BLOOD TABLETS ~71:Nanjing Yike Population Health Research Institute Co., Ltd., 10F, Building A, Phase I of Yangzi Science and Technology Innovation Center, No. 211 Pubin Road, Jiangbei New Dist., Nanjing City, Jiangsu, People's Republic of China ~72: JIANG, Yue~

2022/02129 ~ Complete ~54:PROCESS FOR THE PREPARATION OF CARBOXYLIC ACID DERIVATIVES OF 3-BROMO-4,5-DIHYDRO-1H-PYRAZOLES ~71:FMC AGRO SINGAPORE PTE. LTD., 10 Marina Boulevard #40 - 01 Marina Bay Financial Centre, Singapore, 018983, Singapore;FMC CORPORATION, 2929 Walnut Street, Philadelphia, Pennsylvania, 19104, United States of America ~72: CHUNYAN HUO;DONGJIE PENG;JIANHUA MAO;JINGYI MA~ 33:US ~31:62/888,667 ~32:19/08/2019;33:US ~31:62/890,154 ~32:22/08/2019

2022/02056 ~ Provisional ~54:THE SHIELD DESIGN ISOLATED MICROGRID TOWERS ~71:JJ Govender, 49 Allen Road, South Africa ~72: JJ Govender~

2022/02072 ~ Complete ~54:PREPARATION METHOD FOR CARBOXYMETHYLCELLULOSE COMPOSITE MATERIAL WITH HIGH STRENGTH ~71:Southwest Forestry University, No. 300, Bailongsi, Kunming City, Yunnan Province, 650224, People's Republic of China ~72: LI, Xiaobao;LI, Xiaoping;LUO, Zhinan;SUN, Zhenbing;TANG, Zhengjie;WU, Zhangkang;YAO, Yao~

2022/02094 ~ Complete ~54:METHOD OF DETERMINING THE ULTIMATE LOADS OF CONTINUOUS CONCRETE SLABS WITH DIFFERENT BOUNDARY CONDITIONS ~71:China University of mining and technology, No. 1, University Road, Xuzhou City, Jiangsu Province, 221116, People's Republic of China ~72: Bu Yixiang;Chen Zhenxing;Guo Wenxuan;Jiang Yaqiang;Ren Zhaoqing;Song Wei;Wang Gongchen;Wang Yong;Zhou Yan;Zhu Guoqing~

2022/02054 ~ Provisional ~54:COMMUNITY FOCUSED INTERACTIVE SOCIAL MEDIA PLATFORM ~71:BOOTH, Wayne, 105 VICTORIA STREET, DORMEHLS DRIFT, GEORGE, 6529, SOUTH AFRICA, South Africa ~72: BOOTH, Wayne~

2022/02063 ~ Complete ~54:BIOLOGICAL BREEDING OBSERVATION APPARATUS ~71:Henan University, 85 Minglun Street, Kaifeng City, Henan Province, 475001, People's Republic of China ~72: LI, Xiaowei;WANG, Yubang;WU, Di;ZHANG, Beibei;ZHANG, Chenlu~

2022/02068 ~ Complete ~54:MOLECULAR MARKER ASSISTED BREEDING METHOD OF DANZHOU CHICKENS ~71:Tropical Crops Genetic Resources Institute Chinese Academy of Tropical Agricultural Sciences, No.4, Xueyuan Road, Haikou, Hainan, People's Republic of China ~72: Guanyu Hou~

2022/02089 ~ Complete ~54:HYDRAULIC MULTI-CHANNEL DROPPER VIBRATION FATIGUE TEST DEVICE ~71:China Academy of Railway Sciences Corporation Limited, No. 2, Daliushu Road, Haidian District, Beijing , 100081, People's Republic of China;China Railway Test and Certification Center Limited, No. 2, Daliushu Road, Haidian District, Beijing , 100081, People's Republic of China;Standards and Metrology Research Institute, China Academy of Railway Sciences Corporation Limited, No. 2, Daliushu Road, Haidian District, Beijing , 100081, People's Republic of China;Standards and Metrology Research Institute, China Academy of Railway Sciences Corporation Limited, No. 2, Daliushu Road, Haidian District, Beijing , 100081, People's Republic of China ~72: CHEN, Liming;PAN, Like;WANG, Wei;Wang Xiaoya;XING, Tong;YANG,

Caizhi;YUAN, Yuan;ZHANG, Haibo;ZHANG, Zhiguo;ZHAO, Yingxin;ZHUANG, Nan~ 33:CN ~31:202110700527.5 ~32:24/06/2021

2022/02090 ~ Complete ~54:ORGANIC/INORGANIC COMPOSITE HEAT INSULATING MATERIAL AND PREPARATION METHOD THEREOF ~71:Guangdong Maydos Energy Saving and Environmental Protection Technology Co., Ltd, No. 11-8 Zhenxing Road, Sanzhou Community, Lunjiao Street, Shunde District, Foshan City, Guangdong Province , 528300, People's Republic of China;South China University of Technology, 381 Wushan Road, Tianhe District, Guangzhou, Guangdong , 510641, People's Republic of China ~72: CHENG, Min;FANG, Yutang;WANG, Shuangfeng;XU, Zheng~

2022/02098 ~ Complete ~54:SECURITY LOCK ~71:ULTRAFAB (PROPRIETARY) LIMITED, 13 Bunsen Street, Industria, Johannesburg, 2093, South Africa ~72: HENDRIK JOHANNES VAN NIEKERK~ 33:ZA ~31:2021/01102 ~32:18/02/2021

2022/02101 ~ Complete ~54:AN ON-DEMAND WATER RESERVOIR TRACKING SYSTEM AND A METHOD THEREOF ~71:BOSE, Rajesh, Department of Computational Science, Brainware University, 398, Ramkrishnapur Road, Barasat, Near Jagadighata Market, Kolkata,, India;KARFORMA, Sunil, Dept. of Computer Science, The University of Burdwan, Burdwan,, India;ROY, Sandip, Department of Computational Science, Brainware University 398, Ramkrishnapur Road, Barasat, Near Jagadighata, India;SARKAR, Indranil, Department of Computational Science, Brainware University, 398, Ramkrishnapur Road, Barasat, Near Jagadighata, India;SARKAR, Indranil, Department of Computational Science, Brainware University, 398, Ramkrishnapur Road, Barasat, Near Jagadighata, India;SARKAR, Indranil, Department of Computational Science, Brainware University, 398, Ramkrishnapur Road, Barasat, Near Jagadighata Market, Kolkata,, India ~72: BOSE, Rajesh;KARFORMA, Sunil;ROY, Sandip;SARKAR, Indranil~

2022/02108 ~ Complete ~54:METHODS AND IMAGING SYSTEMS FOR HARVESTING ~71:PRECISION PLANTING LLC, 23207 Townline Road, Tremont, United States of America ~72: HERRMANN, Aaron;STOLLER, Jason;SWANSON, Todd~ 33:US ~31:62/945,289 ~32:09/12/2019

2022/02114 ~ Complete ~54:USAGE OF ACCESS UNIT DELIMITERS AND ADAPTATION PARAMETER SETS ~71:Fraunhofer-Gesellschaft zur Förderung der angewandten Forschung e.V., Hansastraße 27c, MÜNCHEN 80686, GERMANY, Germany ~72: HELLGE, Cornelius;SÁNCHEZ DE LA FUENTE, Yago;SÜHRING, Karsten;SCHIERL, Thomas;SKUPIN, Robert;WIEGAND, Thomas~ 33:EP ~31:19192413.3 ~32:19/08/2019

2022/02122 ~ Complete ~54:BENEFICIATION ARRANGEMENT, METHOD AND USE OF THE ARRANGEMENT ~71:METSO OUTOTEC USA INC., 20965 Crossroads Circle, Waukesha, Wisconsin, 53186, United States of America ~72: LARS GRÖNVALL~ 33:SE ~31:1950907-4 ~32:29/07/2019

2022/02083 ~ Complete ~54:A PREMIX OF TRACE ELEMENTS FOR PENAEUS VANNAMEI AND PREPARATION METHOD AND APPLICATION THEREOF ~71:Xiamen Kehuan Marine Biotechnology Co., Ltd., No. 110-111, Siming Park, Industrial Concentration Zone, Tong'an District, Xiamen City, Fujian Province, 361000, People's Republic of China ~72: CHANG, Youmin;CHEN, Jiajia;JIANG, Qiucen;LIN, Weibin~

2022/02106 ~ Complete ~54:LOW TEMPERATURE GROUTING MATERIAL FOR REINFORCING COAL AND ROCK MASS FOR MINING, PREPARATION METHOD AND ITS APPLICATION ~71:Taiyuan University of Technology, No.79 Yingze West Street, Wanbailin District, Taiyuan, Shanxi, 030024, People's Republic of China ~72: Heng Zhang;Hongwei He;Jiahao Shen;Lan Jia;Nan Yuan;Yanlong Ma~ 33:CN ~31:202111559171.4 ~32:20/12/2021

2022/02052 ~ Provisional ~54:THE FUTURE PEG PROTOCOL ~71:Mohamed Ebrahim, 67 Ditton Avenue, Auckland Park, South Africa ~72: Mohamed Ebrahim~

2022/02055 ~ Provisional ~54:THE CSP-PV HYBRID VERTICAL SOLAR TOWERS WITH PARABOLIC TROUGHS AND HELIOSTATS ~71:JJ Govender, 49 Allen Road, South Africa ~72: JJ Govender~

2022/02059 ~ Complete ~54:UNDERWATER ACOUSTIC COMMUNICATION SIGNAL MODULATION RECOGNITION METHOD BASED ON FEATURE SELECTION AND SUPPORT VECTOR MACHINES ~71:Ocean University of China, No. 238, Songling Road, Laoshan District, Qingdao, Shandong, 266100, People's Republic of China ~72: LI, Xingshun;LIU, Weiqi;LV, Yaohui;YIN, Hao~ 33:CN ~31:202111017690.8 ~32:01/09/2021

2022/02071 ~ Complete ~54:MULTI-PHASE NANOCOMPOSITE MATERIAL OF SANDWICH STRUCTURE, PREPARATION METHOD THEREFOR AND USE THEREOF ~71:Qingdao University of Science and Technology, No. 53 Zhengzhou Road, Shibei District, Qingdao City, Shandong Province, 266045, People's Republic of China;Weifang Guanghua Fine Chemical Co., Ltd., No. 399, Xinhai Street, Binhai Economic Development Zone, Weifang City, Shandong Province, 261041, People's Republic of China ~72: BU, Ranran;LI, Bin;LIU, Jia;LIU, Kang;WANG, Lei;XIAO, Zhenyu~ 33:CN ~31:202110652520.0 ~32:11/06/2021

2022/02074 ~ Complete ~54:CONCRETE MICRO-CRACK SEALING MATERIAL, PREPARATION METHOD AND APPLICATION THEREOF ~71:Hunan City University, No.518, Yingbin East Road, Yiyang, Hunan Province, 413000, People's Republic of China;Hunan Tengda Geotechnical Engineering Technology Co., Ltd., (Changsha City Matian Phosphate Mine Plant) 1st Floor, Xin'ansi Village, Qingzhuhu Street, Kaifu District, Changsha City, Hunan Province, 410005, People's Republic of China ~72: YUAN, Hang;ZHOU, Shuming~

2022/02078 ~ Complete ~54:METHOD FOR DETERMINING PALEOWIND DIRECTION OF CARBONATE PLATFORM THROUGH REEF ~71:Xinjiang University, 666 Shengli Road, Urumqi City, Xinjiang Uygur Autonomous Region, 830046, People's Republic of China ~72: Han Changcheng;Hu Chenlin;Li Guan;Liu Geng;Qi Ming;Zhang Zizhao~

2022/02099 ~ Complete ~54:LIQUID EXPLOSIVES PUMP ~71:IPTREE TRUST (TRUST NUMBER 503/2009), 5 Libertas Road, Somerset Office Park, Bullseye Building, Bryanston, South Africa ~72: BÜHRMANN, Rudolph;BÜHRMANN, Rudolph Teodor~ 33:ZA ~31:2020/07294 ~32:24/11/2020

2022/02110 ~ Complete ~54:CONTINUOUS SAMPLING DRILL BIT ~71:BLY IP INC., 2455 S. 3600 W., United States of America ~72: CORONA, Robert Andrew;DRENTH, Christopher L.~ 33:US ~31:16/544,333 ~32:19/08/2019;33:US ~31:16/813,135 ~32:09/03/2020

2022/02119 ~ Complete ~54:FORMED MEAT ANALOGUE PRODUCT ~71:Société des Produits Nestlé S.A., Avenue Nestlé 55, VEVEY 1800, SWITZERLAND, Switzerland ~72: GADDIPATI, Sanyasi;SHAMAILA, Mawele~ 33:US ~31:62/880,881 ~32:31/07/2019

2022/02127 ~ Complete ~54:NEF-CONTAINING T CELLS AND METHODS OF PRODUCING THEREOF ~71:NANJING LEGEND BIOTECH CO., LTD., No.6 Building of Nanjing Life Science Town, No. 568 Longmian Avenue, Jiangning District, Nanjing, Jiangsu, 211100, People's Republic of China ~72: BING WANG;DAWEI YU;PINGYAN WANG;QIUCHUAN ZHUANG;XIAOHU FAN;XIN HUANG;YUNCHENG ZHAO~ 33:CN ~31:PCT/CN2019/103041 ~32:28/08/2019;33:CN ~31:PCT/CN2019/125681 ~32:16/12/2019

2022/02131 ~ Complete ~54:PYRIDINE DERIVATIVES AS TMEM16A MODULATORS FOR USE IN THE TREATMENT OF RESPIRATORY CONDITIONS ~71:TMEM16A LIMITED, 6 Falcon Way, Shire Park, Welwyn Garden City, England, AL7 1TW, United Kingdom ~72: ABDUL SHAIKH;CHRISTOPHER STIMSON;CRAIG BUXTON;JONATHAN DAVID HARGRAVE;PETER INGRAM;STEPHEN COLLINGWOOD;THOMAS BEAUREGARD SCHOFIELD~ 33:GB ~31:1910607.9 ~32:24/07/2019;33:GB ~31:2005739.4 ~32:20/04/2020

2022/02057 ~ Complete ~54:POULTRY FEED ADDITIVE, POULTRY FEED ADDITIVE POWDER AND PREPARATION METHOD AND APPLICATION ~71:GANSU ANIMAL HUSBANDRY AND VETERINARY MEDICINE INSTITUTE, NO. 143, EAST KONGTONG ROAD, PINGLIANG, People's Republic of China ~72: CAO, Yinghui;LIU, Ruisheng;MENG, Qi;XU, Jianfeng;XUE, Chunsheng;ZHANG, Xinbao;ZHAO, Qiang~

2022/02085 ~ Complete ~54:SHAMPOO WITH OIL BALANCING, ANTI-BACTERIA, ANTI-INFLAMMATION AND SCALP REPAIRING EFFECTS ~71:Shenzhen Health and Young Bio-tech Co., Ltd., Room310, Scientific Research Building, West of South Gate, No.13, Longshan Road, Songpingshan Community, Xili Street, Nanshan District, Shenzhen, 518000, People's Republic of China ~72: LIU, Haiping~

2022/02111 ~ Complete ~54:X-RAY TOMOGRAPHY SYSTEM AND METHOD ~71:ADAPTIX LIMITED, BEGBROKE SCIENCE PARK, CENTRE FOR INNOVATION AND ENTERPRISE (CIE), WOODSTOCK ROAD, BEGBROKE, OXFORDSHIRE OX5 1PF, UNITED KINGDOM, United Kingdom ~72: SOLOVIEV, Vadim~ 33:GB ~31:1911656.5 ~32:14/08/2019

2022/02118 ~ Complete ~54:NEUROMELANIN-SENSITIVE MRI FOR ASSESSING PARKINSON'S DISEASE ~71:Terran Biosciences, Inc., 507 W. 28th Street, Suite PH3A, NEW YORK 10001, NY, USA, United States of America;The Research Foundation for Mental Hygiene, Inc., 150 Broadway, Suite 301, MENANDS 12204, NY, USA, United States of America;The Trustees of Columbia University in the City of New York, 412 Low Memorial Library, 535 West 116th Street, NEW YORK 10027, NY, USA, United States of America ~72: CASSIDY, Clifford Mills;CLARK, Samuel;HORGA HERNANDEZ, Guillermo;WENGLER, Kenneth~ 33:US ~31:62/889,300 ~32:20/08/2019

2022/02130 ~ Complete ~54:RFID-EQUIPPED PRESSURE CHAMBER FOR KEG ~71:CARLSBERG BREWERIES A/S, J.C. Jacobsens Gade 1, 1799, Copenhagen V, Denmark ~72: PETER BACH~ 33:EP ~31:19199007.6 ~32:23/09/2019

2022/02060 ~ Complete ~54:SELF-DEFENSE INTEGRATED FIGHTING ART AUXILIARY DEVICE WITH FUNCTION OF FACILITATING MOVEMENT ~71:Shandong University, No. 27, Shanda South Road, Jinan City, Shandong, 250000, People's Republic of China ~72: LI, Yuan;PAN, Yang;SUN, Chuanning;SUN, Qian;ZHU, Xidong~ 33:CN ~31:202110497483.0 ~32:08/05/2021

2022/02076 ~ Complete ~54:PORTABLE ULTRAVIOLET DISINFECTION CONTACT DEVICE ~71:Sanmen People's Hospital, No. 171, Renmin Road, Haiyou Street, Sanmen County, Taizhou City, Zhejiang, 317100, People's Republic of China ~72: CHU, Haida;DENG, Qinglin;FANG, Zejun;HONG, Zhenghua;JIN, Peng;LU, Xiao;WANG, Jiawen;YANG, Jiang;YANG, Jun;YAO, Xin;ZHOU, Tingjie~

2022/02113 ~ Complete ~54:USER DATA TRANSPORT OVER CONTROL PLANE IN COMMUNICATION SYSTEM USING DESIGNATED PAYLOAD CONTAINER TYPES ~71:NOKIA TECHNOLOGIES OY, KARAKAARI 7, 02610 ESPOO, FINLAND, Finland ~72: LIU, Jennifer, J-N.~ 33:US ~31:62/879,875 ~32:29/07/2019

2022/02070 ~ Complete ~54:EUROPIUM METAL ORGANIC FRAMEWORK MATERIAL AND PREPARATION METHOD AND APPLICATION THEREOF ~71:Qingdao University of Science and Technology, No. 53 Zhengzhou Road, Shibei District, Qingdao City, Shandong Province, 266045, People's Republic of China ~72: DU, Yunmei;JIAO, Shaoshao;LI, Shaoxiang;LIU, Kang;MA, Dingxuan;WANG, Lei~

2022/02066 ~ Complete ~54:SIGNAL PROCESSING SYSTEM AND METHOD BASED ON FIELD PROGRAMMABLE GATE ARRAY (FPGA) FOR LASER VELOCIMETER ~71:TIANSHUI NORMAL UNIVERSITY, South Xihe Road, Qinzhou District, Tianshui, Gansu Province, 741000, People's Republic of China ~72: DANG, Wenqiang;LI, Xiangbing;LING, Weijun;LIU, Qing;ZHANG, Lijun;ZHAO, Limin;ZHAO, Yuxiang~

2022/02069 ~ Complete ~54:HIGH FIDELITY NOISE REDUCTION SOUND BOX SYSTEM ~71:Guangxi University, Guangxi University No. 100, Daxuedong Road, Xixiangtang District, Nanning, Guangxi, 530004, People's Republic of China ~72: BU Zhaohui;FAN Zeping;LIU Kai;WANG Lie;WEI Wei;ZHANG Xuejun~

2022/02100 ~ Complete ~54:A SEALING DIAPHRAGM ~71:IPTREE TRUST (TRUST NUMBER 503/2009), 5 Libertas Road, Somerset Office Park, Bullseye Building, Bryanston, South Africa ~72: BÜHRMANN, Rudolph;BÜHRMANN, Rudolph Teodor~ 33:ZA ~31:2021/01132 ~32:19/02/2021

2022/02103 ~ Complete ~54:WIND TUNNEL EXPERIMENTAL DEVICE FOR SAILBOAT ~71:SHANDONG JIAOTONG UNIVERSITY, No. 5, Jiaoxiao Road, Jinan City, People's Republic of China ~72: ZHOU, Jia~

2022/02116 ~ Complete ~54:CEMENT MIXTURES FOR PLUGGING HONEYCOMB BODIES AND METHODS OF MAKING THE SAME ~71:Corning Incorporated, 1 Riverfront Plaza, CORNING 14831, NY, USA, United States of America ~72: BERGMAN, Richard;CHANG, Theresa;SAKEKAR, Kunal Upendra;YUAN, Shu~ 33:US ~31:62/885,940 ~32:13/08/2019

2022/02126 ~ Complete ~54:YEAST FOR PREPARING BEVERAGES WITHOUT PHENOLIC OFF-FLAVORS ~71:CARLSBERG A/S, J.C. Jacobsens Gade 1, 1799, Copenhagen V, Denmark ~72: JOCHEN FÖRSTER;MARC SERRA COLOMER;NATALIA Y SOLODOVNIKOVA;ROSS FENNESSY;ZORAN GOJKOVIC~ 33:DK ~31:PA 2019 70542 ~32:30/08/2019;33:DK ~31:PA 2019 70543 ~32:30/08/2019

2022/02093 ~ Complete ~54:RECOMBINANT PLASMID OF CTENOPHARYNGODON IDELLUS INTERFERON IFNALPHA WRAPPED BY LIPOSOME, PREPARATION METHOD AND APPLICATION THEREOF ~71:Zhejiang Institute of Freshwater Fisheries, 999 South Hangchangqiao Road, Huzhou City, Zhejiang Province, 313001, People's Republic of China ~72: Huang Lei;Lin Lingyun;Pan Xiaoyi;Shen Jinyu;Yao Jiayun;Yuan Xuemei~

2022/02109 ~ Complete ~54:FORMULATION OPTIMIZATION FOR BISPECIFIC ANTIBODIES ~71:REGENERON PHARMACEUTICALS, INC., 777 Old Saw Mill River Road, Tarrytown, United States of America ~72: LIU, Dingjiang;WANG, Wenhua;ZHOU, Chen~ 33:US ~31:62/889,354 ~32:20/08/2019

2022/02117 ~ Complete ~54:PROCESS FOR MANUFACTURING A FORMED MEAT ANALOGUE PRODUCT ~71:Société des Produits Nestlé S.A., Avenue Nestlé 55, VEVEY 1800, SWITZERLAND, Switzerland ~72: ERLE, Ulrich Johannes;GADDIPATI, Sanyasi;SHAMAILA, Mawele;SOMERVILLE, Jeremy~ 33:US ~31:62/880,981 ~32:31/07/2019

2022/02051 ~ Provisional ~54:THE FUTURE PEG PROTOCOL ~71:Mohamed Ebrahim, 67 Ditton Avenue, Auckland Park, South Africa ~72: Mohamed Ebrahim~

2022/02062 ~ Complete ~54:BOOKSHELF BOOK TAKING DEVICE ~71:North China University of Science and Technology, 21 Bohai Road, Caofeidian Xincheng, Tangshan, Hebei, 063210, People's Republic of China ~72: HE, Shengtao;LIU, Yang~

2022/02067 ~ Complete ~54:POROUS ORGANIC FRAMEWORK MATERIAL AND PREPARATION METHOD THEREOF, AND APPLICATION IN SELECTIVE SEPARATION OF PERRHENATE RADICALS ~71:Qingdao University of Science and Technology, No. 53 Zhengzhou Road, Shibei District, Qingdao City, Shandong Province, 266045, People's Republic of China ~72: DU, Yunmei;JIAO, Shaoshao;LI, Shaoxiang;LIU, Kang;MA, Dingxuan;WANG, Lei~

2022/02079 ~ Complete ~54:STABLE SODIUM NEW HOUTTUYFONATE ESTER COMPOUNDS ~71:Inner Mongolia University of Science And Technology, No. 7 Arding Street, Baotou City, Inner Mongolia, 014010,

People's Republic of China; Shandong University of Science and Technology, No. 579 Qianwangang Road, Huangdao District, Qingdao City, Shandong, 266590, People's Republic of China ~72: DONG, Shen; WANG, Bo~

2022/02080 ~ Complete ~54:MAKING PROCESS OF A PAPER DIAPER SURFACE LAYER MATERIAL WITH URINE TEST FUNCTION ~71:Anhui Polytechnic University, Beijing Middle Road, Jiujiang District, Wuhu City, Anhui Province, 241000, People's Republic of China ~72: FENG, Quan;HAN, Xu;WANG, Yong;WANG, Zhen;WEI, Anfang;XIE, Yanxia;ZHAO, Baobao~

2022/02102 ~ Complete ~54:FEATURE DIVISION-BASED METHOD OF DIMENSIONALITY REDUCTION AND SIMPLIFIED REPRESENTATION FOR STREAMING TIME SERIES ~71:LINGNAN NORMAL UNIVERSITY, No. 29, Cunjin Road, Chikan District, Zhanjiang City, People's Republic of China ~72: CHEN, Yongheng;LI, Hua;LI, Xin;LIU, Yong~

2022/02104 ~ Complete ~54:EARLY WARNING METHOD OF ROADWAY ROOF INSTABILITY AND COLLAPSE WITH ANCHOR CABLE SUPPORTING ~71:SHANDONG UNIVERSITY OF SCIENCE AND TECHNOLOGY, No. 579, Qianwangang Road, Huangdao District, People's Republic of China ~72: TAN, Yunliang;YIN, Yanchun;YU, Fenghai;ZHAO, Tongbin~

2022/02107 ~ Complete ~54:SOIL WATER COLLECTION AND ANALYSIS SYSTEMS AND RELATED METHODS ~71:PRECISION PLANTING LLC, 23207 Townline Road, Tremont, United States of America ~72: KOCH, Dale;MINARICH, Nicholas;NELSON, Rachel;SWANSON, Todd;VACCARI, Adam~ 33:US ~31:62/916,180 ~32:16/10/2019;33:US ~31:62/934,049 ~32:12/11/2019

2022/02115 ~ Complete ~54:REACTOR FOR THE HYDROTHERMAL TREATMENT OF BIOMASS ~71:Nederlandse Organisatie voor toegepast-natuurwetenschappelijk onderzoek TNO, Anna van Buerenplein 1, DA 'S-GRAVENHAGE 2595, THE NETHERLANDS, Netherlands ~72: PELS, Jan Remmert;VAN DER MEIJDEN, Christiaan Martinus~ 33:EP ~31:19192881.1 ~32:21/08/2019

2022/02053 ~ Provisional ~54:BROAD BAND DIRECTIONAL ANTENNA ~71:POYNTING ANTENNAS (PTY) LIMITED, Unit 4, N1 Industrial Park, Landmarks Avenue, South Africa ~72: MOYCE, Shane Alexander;NITCH, Derek, Colin~

2022/02065 ~ Complete ~54:SEEDER TERMINAL DRIP IRRIGATION TAPE TRACTION FIXING DEVICE ~71:Inner Mongolia Academy of Agricultural & amp; Animal Husbandry Sciences, No.22 Zhaojun Road, Yuquan District, Hohhot, Inner Mongolia Autonomous Region, People's Republic of China ~72: CAO, Fenghai;CHEN, Liyu;CHENG, Yuchen;JIANG, Xiaoping;LI, Wencai;LIU, Zhi;LU, Zhanyuan;MENG, Wenhui;SU, He;WANG, Jianguo;XIAN, Feng;XU, Jianfang;YANG, Jianqiang~ 33:CN ~31:202111544249.5 ~32:16/12/2021

2022/02058 ~ Complete ~54:INTELLIGENT DYNAMIC OPTIMIZATION EQUIPMENT FOR LARGE-SCALE WINTER JUJUBE BASED ON PRE-POSITION OF GRID STRUCTURE ~71:Qingdao University of Technology, No. 777, Jialing River Road, Huangdao District, Qingdao City, Shandong Province, People's Republic of China ~72: Che Qinglun;Li Yang;Liang Siqi;Liu Yuying;Lu Jinkai;Wang Yuxuan;Xu Huiqun;Zhang Jianjun~

2022/02073 ~ Complete ~54:PREPARATION METHOD FOR BACTERIAL CELLULOSE-BASED ANTIBACTERIAL COMPOSITE MATERIAL ~71:Southwest Forestry University, No. 300, Bailongsi, Kunming City, Yunnan Province, 650224, People's Republic of China ~72: LI, Xiaobao;LI, Xiaoping;SUN, Zhenbing;TANG, Zhengjie;WU, Zhangkang;YAO, Yao;ZHENG, Qingzhuang~

2022/02086 ~ Complete ~54:METHOD FOR INVESTIGATING SOURCE OF ACCUMULATED WATER IN COAL MINING SUBSIDENCE ~71:China University of Mining and Technology, No1 Daxue Rd, South Lake Campus of CUMT, Quanshan District, Xuzhou City, Jiangsu Province, 221116, People's Republic of China;Xuzhou Institute

Of Ecological Civilization Construction, 7-8/F, C-2-B, Xuzhou Software Park, CNUSP, Quanshan District, Xuzhou City, Jiangsu Province, 221008, People's Republic of China ~72: CHEN Yong;CHEN Zhuang;HUANG Jie;QIU Yong;QU Junfeng;SHAN Jinxia;TAN Min;WANG Kun;XU Zhou;ZHANG Ruiying~

2022/02091 ~ Complete ~54:MANIHOT ESCULENTA FRESH-KEEPING AGENT ~71:Tropical Crops Genetic Resources Institute Chinese Academy of Tropical Agricultural Sciences, No.4, West Xueyuan Road, Haikou City, Hainan Province, 570216, People's Republic of China ~72: AN Feifei;CAI Jie;CHEN Songbi;DENG Fuming;HU Wei;LI Kaimian;LU Xiaojing;LUO Xiuqin;LUO Ying;OU Wenjun;XUE Maofu;YU Shan~

2022/02095 ~ Complete ~54:EXPLOSIVES PUMP ELECTRICITY SUPPLY AND CONTROL ~71:IPTREE TRUST (TRUST NUMBER 503/2009), 5 Libertas Road, Somerset Office Park, Bullseye Building, Bryanston, South Africa ~72: BÜHRMANN, Rudolph;BÜHRMANN, Rudolph Teodor~

2022/02112 ~ Complete ~54:AN X-RAY TOMOGRAPHY SYSTEM AND METHOD ~71:ADAPTIX LIMITED, BEGBROKE SCIENCE PARK, CENTRE FOR INNOVATION AND ENTERPRISE (CIE), WOODSTOCK ROAD, BEGBROKE, OXFORDSHIRE OX5 1PF, UNITED KINGDOM, United Kingdom ~72: SOLOVIEV, Vadim~ 33:GB ~31:1911759.7 ~32:16/08/2019;33:GB ~31:1918798.8 ~32:19/12/2019

2022/02120 ~ Complete ~54:OPTIMIZATION METHOD FOR TRACE CFDNA EXTRACTION AND DOCKING HIGH-THROUGHPUT SEQUENCING LIBRARY ~71:Nanjing Yike Population Health Research Institute Co., Ltd., 10F, Building A, Phase I of Yangzi Science and Technology Innovation Center, No. 211 Pubin Road, Jiangbei New Dist., Nanjing City, Jiangsu, People's Republic of China ~72: JIANG, Yue~

2022/02124 ~ Complete ~54:HETEROARYL-SUBSTITUTED PYRAZOLO-PYRIDINE PROTEIN KINASE INHIBITORS FOR PROMOTING LIVER REGENERATION OR REDUCING OR PREVENTING HEPATOCYTE DEATH ~71:HEPAREGENIX GMBH, Wilhelmstrasse 16, 72074, Tübingen, Germany ~72: BENT PFAFFENROT;ROLAND SELIG;STEFAN LAUFER;WOLFGANG ALBRECHT~ 33:EP ~31:19188876.7 ~32:29/07/2019;33:EP ~31:20172253.5 ~32:30/04/2020

2022/02064 ~ Complete ~54:A PARALLEL ANALYSIS METHOD OF WATER BASIN FLOW DIRECTION AND ACCUMULATED CONFLUENCE BASED ON CUDA ARCHITECTURE D8 ALGORITHM ~71:Nanchang Institute of Technology, No.289 Tianxiang Avenue, High-tech Zone, Nanchang, People's Republic of China ~72: BAI, Hua;GUI, Faliang;KANG, Chuanxiong;LI, Erhui;LIU, Zhijie;WU, Shaofei~ 33:CN ~31:202111432703.8 ~32:29/11/2021

2022/02081 ~ Complete ~54:METHOD AND DEVICE FOR CALCULATING RIVER WATER LEVEL AND DISCHARGE COMBINED WITH GROUNDWATER INFILTRATION ~71:China Institute of Water Resources and Hydropower Research, A-1, Fuxing Road, Haidian District, Beijing, 100038, People's Republic of China ~72: LI Kuang;LIU Kexin~

2022/02087 ~ Complete ~54:AROMATIC FURFURYL ALCOHOL COMPOUND AS WELL AS PREPARATION METHOD AND APPLICATION THEREOF, AND METHOD FOR IDENTIFYING HONEY ADULTERATED WITH CORN SYRUP ~71:WU, Yuchen, No. 37 Zhongguancun Street, Haidian District, Beijing, 100089, People's Republic of China ~72: LIU, Yibing;WU, Yuchen~

2022/02123 ~ Complete ~54:METHOD FOR TREATING MUSCULAR DYSTROPHY BY TARGETING LAMA1 GENE ~71:MODALIS THERAPEUTICS CORPORATION, 3-11-5, Nihonbashi-Honcho, Chuo-ku, Tokyo, 1030023, Japan ~72: TETSUYA YAMAGATA;YUANBO QIN~ 33:US ~31:62/887,863 ~32:16/08/2019;33:US ~31:63/008,059 ~32:10/04/2020 2022/02061 ~ Complete ~54:COMPUTER-CONTROLLED CHEMICALLY-DEWATERING DRUG-FEEDING EQUIPMENT ~71:Inner Mongolia University of Technology, No.49, Aimin Road (North), Xincheng District, Hohhot, Inner Mongolia Autonomous Region, 010051, People's Republic of China ~72: Li Xuehua;Luo Yuhang;Ma Yingying~

2022/02077 ~ Complete ~54:SELF-SERVICE URINE MEASURER PREVENTING CROSS INFECTION ~71:Sanmen People's Hospital, No. 171, Renmin Road, Haiyou Street, Sanmen County, Taizhou City, Zhejiang, 317100, People's Republic of China ~72: CHU, Haida;DENG, Qinglin;FANG, Zejun;HONG, Zhenghua;LU, Xiao;WANG, Jiawen;YANG, Jiang;YANG, Jun;YAO, Xin;ZHOU, Tingjie~

2022/02097 ~ Complete ~54:AMINO PYRIMIDINE SSAO INHIBITORS ~71:ELI LILLY AND COMPANY, Lilly Corporate Center, Indianapolis, Indiana, 46285, United States of America ~72: DAVID ANDREW COATES;JINGYE ZHOU;LUO HENG QIN;YI WEI~ 33:CN ~31:PCT/CN2016/094833 ~32:12/08/2016

2022/02128 ~ Complete ~54:COMPOSITIONS AND METHODS USING NON-STEROIDAL ANTI-INFLAMMATORY DRUGS ~71:APPLIED BIOLOGICAL LABORATORIES, INC., 760 Parkside Avenue Room 317, Brooklyn, New York, 11226, United States of America ~72: NAZLIE LATEFI~ 33:US ~31:62/890,517 ~32:22/08/2019

2022/02125 ~ Complete ~54:NANOEMULSION OF 18 BETA-GLYCYRRHETINIC ACID ~71:ATSO CORPORATE AFFAIRS S.A. DE C.V., Meseta No. 232, Col. Jardines del Pedregal, Ciudad de México, 01900, Mexico ~72: ULISES ZENDEJAS HERNÁNDEZ~ 33:MX ~31:MX/a/2019/009482 ~32:08/08/2019

Application Number	Assignor	Assignee
2021/05831	AURELIUS ENVIRONMENTAL LIMITED	EVER RESOURCE LIMITED
2009/07373	FLSMIDTH A/S	FLSMIDTH (PTY) LTD
2020/01323	TENKIV, INC.	ZACHARY JUHASZ
2020/01323	ZACHARY JUHASZ	BFPOWER LLC
2014/07173	ADVANTA INTERNATIONAL BV	ADVANTA HOLDINGS B.V.
2018/05775	GONGQINGCHENG DAOLE INVESTMENT MANAGEMENT PARTNERSHIP (LLP)	GUANGDONG GOLDEN LEAF TECHNOLOGY DEVELOPMENT CO., LTD.
2018/04614	GONGQINGCHENG DAOLE INVESTMENT MANAGEMENT PARTNERSHIP (LLP)	GUANGDONG GOLDEN LEAF TECHNOLOGY DEVELOPMENT CO., LTD.
2021/00723	F-STAR BETA LIMITED	F-STAR THERAPEUTICS LIMITED
2021/00721	F-STAR BETA LIMITED	F-STAR THERAPEUTICS LIMITED
2021/00718	F-STAR BETA LIMITED	F-STAR THERAPEUTICS LIMITED
2021/00717	F-STAR BETA LIMITED	F-STAR THERAPEUTICS LIMITED
2020/07570	F-STAR BETA LIMITED	F-STAR THERAPEUTICS LIMITED
2018/08184	F-STAR BETA LIMITED	F-STAR THERAPEUTICS LIMITED
2021/07502	SONJA PRETORIUS TO COMPANY	TECH PULSE (PTY) LTD
2020/03975	FOURIE EUGENE	TEQNOVO (PTY) LTD
2017/01380	SIEMENS AKTIENGESELLSCHAFT	SIEMENS ENERGY GLOBAL GMBH & CO. KG

# ASSIGNMENTS IN TERMS OF SECTION 60-REGULATIONS 58-60 AND 64 (1)

Application Number	Assignor	Assignee	
2016/08343	SIEMENS AKTIENGESELLSCHAFT	SIEMENS ENERGY GLOBAL GMBH & CO. KG	
2015/07258	SIEMENS AKTIENGESELLSCHAFT	SIEMENS ENERGY GLOBAL GMBH & CO. KG	
2013/00186	SIEMENS AKTIENGESELLSCHAFT	SIEMENS ENERGY GLOBAL GMBH & CO. KG	
2019/00302	SIEMENS AKTIENGESELLSCHAFT	SIEMENS ENERGY GLOBAL GMBH & CO. KG	
2021/05035	NORTIC HOLDINGS INC.	GRACE THERAPEUTICS INC.	
2018/08596	ORBITAL AUSTRALIA PTY LTD	PPK MINING EQUIPMENT PTY LTD.	
2018/07776	YOEL, SEFI	DUSTOSS LTD	
2009/06488	PQ CORPORATION	ECOVYST CATALYST TECHNOLOGIES LLC	
2017/00016	TIGENIX, S.A.U.	TAKEDA PHARMACEUTICAL COMPANY LIMITED	
2013/09393	PQ CORPORATION	ECOVYST CATALYST TECHNOLOGIES LLC	
2012/09485	PQ CORPORATION	ECOVYST CATALYST TECHNOLOGIES LLC	
2017/02853	HUANG, JIANPING	TS CONDUCTOR CORP.	
2016/03168	DESIGNERSCOPE LIMITED	HAFELE SE & CO KG	
2012/03819	ABB SCHWEIZ AG	ABB POWER GRIDS SWITZERLAND AG	
2021/05831	AURELIUS ENVIRONMENTAL LIMITED	EVER RESOURCE LIMITED	
2021/00693	MARIZYME BIOTECH	MARIZYME, INC.	
2018/08410	SETEVOX (PTY) LTD	SALTUS MINING AFRICA (PTY) LTD	
2012/03165	VYNE PHARMACEUTICALS LTD.	VYNE THERAPEUTICS INC.	
2021/09329	JOSE CANCHO VERA and FRANCISCO SANCHEZ MATAMOROS	COBRA INSTALACIONES Y SERVICIOS, S.A.	
2006/07922	SIEMENS AKTIENGESELLSCHAFT	SIEMENS ENERGY GLOBAL GMBH & CO. KG	
2010/03479	TITAN AUTOMOTIVE SOLUTIONS NV	TITAN INTELLIGENCE TECHNOLOGY LIMITED	
2009/08601	TITAN AUTOMOTIVE SOLUTIONS NV	TITAN INTELLIGENCE TECHNOLOGY LIMITED	
2014/06288	SANDVIK INTELLECTUAL PROPERTY AB	SANDVIK HYPERION AB	
2021/05511	ASSOCIATION MARIE LANNELONGUE	FOUNDATION HOPITAL SAINT-JOSEPH	
2019/01121	SHANGHAI GREEN VALLEY PHARMACEUTICAL CO., LTD.	GREEN VALLEY (SHANGHAI) PHARMACEUTICALS CO., LTD.	
2019/04467	PINNACLE RISK SOLUTIONS PTY LTD	FORWOOD ENTERPRISE PTY LTD	
2012/09494	INQPHARM GROUP SDN BHD	BIONEXAS LLC	
2012/03406	MORU INVEN CO., LTD	MORU INDUSTRIAL SYSTEMS CO., LTD.	
2003/09575	ANNA ELIZABETH GEZINA POTGIETER	COGNITIVE SYSTEMS PTY LTD	
2021/03898	ROGER KOCH	KOCH & GSELL AG	
2016/05434	ANDREA BARAUSSE	THE TRUSTEES FOR THE TIME BEING OF THE BARAUSSE FAMILY	
2014/00209	ABGENOMICS COOPERATIEF U.A.	ALTRUBIO, INC.	

Application Number	Assignor	Assignee	
2003/04341	ANTHROGENESIS CORPORATION	CLARITY ACQUISITION II, LLC	
2003/04341	ANTHROGENESIS LLC	CELULARITY INC.	
2010/09134	OBERTHUR TECHNOLOGIES	OBERTHUR FIDUCIAIRE SAS	
2010/09134	OBERTHUR FIDUCIAIRE SAS	OBERTHUR FIDUCIAIRE SAS (PREVIOUSLY KNOWN AS FCO 2 SAS)	
2016/05820	BANKRUPTCY ESTATE OF PERFORMANCE SK8 HOLDING INC.	TECHNOVATION AB	
2017/06095	ORTHOSPINE GLOBAL LLC	ROYAL ORTHO (PTY) LTD	
2007/10014	CRYSTAL LAGOONS B.V.	CRYSTAL LAGOONS (CURACAO) BV	
2017/03489	DALMAZZO, ENZO	3Z TELECOM, INC	
2017/03489	3Z TELECOM, INC	VIAVI SOLUTIONS, INC.	
2018/04001	GONGQINGCHENG DAOLE INVESTMENT MANAGEMENT PARTNERSHIP (LLP)	GUANGDONG GOLDEN LEAF TECHNOLOGY DEVELOPMENT CO., LTD. and BROADFAR (SHANGHAI) MANAGEMENT CONSULTING CO., LTD.	
2007/03351	MINE SUPPORT PRODUCTS (PTY) LTD	MSP MINE SUPPORT PRODUCTS (PTY) LTD	
2010/04808	TRANWALL HOLDINGS LIMITED	TRANWALL TECHNOLOGIES PTY LTD	
2021/07605	WUHAN YOUNGSEN BIOTECH CO., LTD.	FUWAI HOSPITAL CHINESE ACADEMY OF MEDICAL SCIENCES	
2016/08103	CHINA UNIVERSITY OF MINING AND TECHNOLOGY	BEIJING TIANMA INTELLIGENT CONTROL TECHNOLOGY CO., LTD and BEIJING CCRI- TIANMA AUTOMATION TECHNOLOGY CO. LTD.	
2010/07873	DYAX CORPORATION	TAKEDA PHARMACEUTICAL COMPANY LIMITED	
2015/02783	IGNYTA, INC.	CANCER RESEARCH TECHNOLOGY	

# CHANGE OF NAME IN TERMS OF REGULATION 39

Application Number	In the name of	New name	
2016/00312	SOM INNOVATION S.L.	SOM INNOVATION BIOTECH S.A.	
2012/03165	FOAMIX LTD.	FOAMIX PHARMACEUTICALS, LTD.	
2012/03165	FOAMIX PHARMACEUTICALS, LTD.	VYNE PHARMACEUTICALS LTD.	
2016/01848	SOMALOGIC INC.	SOMALOGIC OPERATING CO., INC.	
2015/06441	SOMALOGIC INC.	SOMALOGIC OPERATING CO., LTD.	
2014/01778	SOMALOGIC INC.	SOMALOGIC OPERATING CO., INC.	
2018/04846	SOMALOGIC INC.	SOMALOGIC OPERATING CO., INC.	
2021/00324	SOMALOGIC INC.	SOMALOGIC OPERATING CO., INC.	
2014/01476	SOMALOGIC INC.	SOMALOGIC OPERATING CO., INC.	
2020/07791	RECOGNITION ANALYTIX LLC	RECOGNITION ANALYTIX, INC.	
2012/03165	FOAMIX LTD.	FOAMIX PHARMACEUTICALS, LTD.	
2012/03165	FOAMIX PHARMACEUTICALS, LTD.	VYNE PHARMACEUTICALS LTD.	

Page | 119

Application Number	In the name of	New name	
2010/03479	TELIT AUTOMOTIVE SOLUTIONS NV	TITAN AUTOMOTIVE SOLUTIONS NV	
2009/08601	TELIT AUTOMOTIVE SOLUTIONS NV	TITAN AUTOMOTIVE SOLUTIONS NV	
2014/08409	SOMALOGIC, INC.	SOMALOGIC OPERATING CO., INC.	
2014/06288	SANDVIK HYPERION AB	HYPERION MATERIALS & TECHNOLOGIES (SWEDEN) AB	
2021/09433	MOLECULIN, LLC	MOLECULIN BIOTECH, INC.	
2021/09432	MOLECULIN, LLC	MOLECULIN BIOTECH, INC.	
2009/00445	ALCOA WARRICK LLC	KAISER ALUMINUM WARRICK, LLC	
2003/04341	CLARITY ACQUISITION II, LLC	ANTHROGENESIS LLC	
2010/07873	BIOGEN HEMOPHILIA INC	BIOVERATIV THERAPEUTICS INC.	

### PATENT LICENSES IN TERMS OF SECTION 53 (7)-REGULATIONS 62 AND 63

Application Number	Licensor	Licensee
2009/07373	FLSMIDTH A/S	FLSMIDTH SOUTH AFRICA (PTY) LTD
2009/07373	FLSMIDTH A/S	FLSMIDTH SOUTH AFRICA (PTY) LTD
2021/05156	SICHUAN KELUN-BIOTECH BIOPHARMACEUTICAL CO. LTD.	ELLIPSES PHARMA LTD
2016/03310	CRYSTAL LAGOONS TECHNOLOGIES, INC.	CRYSTAL LAGOONS B.V.
2016/04076	CRYSTAL LAGOONS TECHNOLOGIES, INC.	CRYSTAL LAGOONS B.V.
2014/002000	CRYSTAL LAGOONS TECHNOLOGIES, INC.	CRYSTAL LAGOONS B.V.
2013/06553	CRYSTAL LAGOONS TECHNOLOGIES, INC.	CRYSTAL LAGOONS B.V.

#### PATENT APPLICATIONS ABANDONED OR WITHDRAWN

No records available

# APPLICATION FOR RESTORATION OF A LAPSED PATENT

# THE PATENTS ACT, No. 57 OF 1978

APPLICATION FOR THE RESTORATION OF A LAPSED PATENT UNDER SECTION 47 OF THE ACT

Notice is hereby given SOREMARTEC S.A., A COMPANY ORGANISED UNDER THE LAWS OF LUXEMBOURG OF VON SEIDELS 4 EAST PARK CENTURY CITY CAPE TOWN 7441 that made application for the THE LAWS OF LUXEMBOURG an invention PROCESS FOR MAKING A SHEET FOR PACKAGING FOODSTUFF PRODUCTS numbered 2015/03547 dated 20/05/2015 which became void 13/12/2018 owing to the non-payment of the prescribed renewal fee.

Any notice of opposition (on patent Form P19) must be closed at the Patent Office within 2 months from the date hereof.

# **Registrar of Patents**

Notice is hereby given ARB GLOBAL PROPRIETARY LIMITED OF ADAMS & ADAMS, LYNNWOOD BRIDGE OFFICE PARK 4 DAVENTRY STREET LYNNWOOD MANOR PRETORIA that made application for the Restoration of the Patent granted to said ARB GLOBAL PROPRIETARY LIMITED an invention CABLE SUPPORT numbered 2010/07869 dated 02/11/2010 which became void 02/11/2020 owing to the non-payment of the prescribed renewal fee.

Any notice of opposition (on patent Form P19) must be closed at the Patent Office within 2 months from the date hereof.

#### **Registrar of Patents**

Notice is hereby given P2W CY LTD OF P2W CY LTD OF DENNEMEYER & ASSOCIATES, SUITE 415 HYDE PARK CORNER OFFICES CORNER OF JAN SMUTS AND WILLIAM NICOL, HYDE PARK, JOHANNESBURG that made application for the Restoration of the Patent granted to said P2W CY LTD an invention INTEGRATED ELECTROLYTIC AND CHEMICAL METHOD FOR PRODUCING CLEAN TREATED WATER WHEREIN CYANIDE SPECIES CONCENTRATION IS LESS THAN 1 MILLIGRAM PER LITER numbered 2010/08108 dated 12/11/2010 which became void 26/04/2019 owing to the non-payment of the prescribed renewal fee.

Any notice of opposition (on patent Form P19) must be closed at the Patent Office within 2 months from the date hereof.

#### **Registrar of Patents**

Notice is hereby given **BRYAN SIDDERS OF BREDENKAMP ATTORNEYS INC.**, **PRETORIA**. 0001 that made application for the Restoration of the Patent granted to said **BRYAN SIDDERS** an invention **INFORMATION SYSTEM** numbered **2014/07388** dated **13/10/2014** which became void **13/10/2017** owing to the non-payment of the prescribed renewal fee.

Any notice of opposition (on patent Form P19) must be closed at the Patent Office within 2 months from the date hereof.

#### **Registrar of Patents**

#### THE PATENTS ACT, No. 57 OF 1978

APPLICATION FOR VOLUNTARY SURRENDER OF PATENTS UNDER SECTION 64 (1), REGULATION 67 OF THE ACT

No records available

#### APPLICATIONS TO AMEND SPECIFICATION

THE PATENTS ACT, 1978

#### APPLICATIONS TO AMEND SPECIFICATION

Applicant: SOCIETE DES PRODUITS NESTLE S.A. Entre-deux-Villes, 1800 Vevey, Switzerland. Request permission to amend the specification of letters patent no: 11/12/2012 Patent Application No: 2012/09384 for SUPPORT, CAPSULE, SYSTEM AND METHOD FOR PREPARING A BEVERAGE BY CENTRIFUGATION.

A copy of the original specification on which the proposed amendment is indicated inred, is now available for public inspection at the Patent Office .

Any notice of opposition (on patent Form P19) must be closed at the Patent Office within 2 months from the date hereof.

#### **Registrar of Patents**

Applicant: Syngenta Participations AG Rosentalstrasse 67, BASEL 4058, SWITZERLAND Switzerland. Request permission to amend the specification of letters patent no: 31/01/2020 Patent Application No: 2020/00681 for METHODS OF CONTROLLING OR PREVENTING INFESTATION OF SOYBEAN PLANTS BY PHYTOPATHOGENIC MICROORGANISMS.

A copy of the original specification on which the proposed amendment is indicated inred, is now available for public inspection at the Patent Office .

Any notice of opposition (on patent Form P19) must be closed at the Patent Office within 2 months from the date hereof.

### **Registrar of Patents**

Applicant: TECHNICAL SYSTEMS (PTY) LTD Ampere Street, Stikland, Bellville Cape Town, 7530 South Africa. Request permission to amend the specification of letters patent no: 09/03/2016 Patent Application No: 2016/01623 for CORELESS AUGER MANUFACTURE.

A copy of the original specification on which the proposed amendment is indicated inred, is now available for public inspection at the Patent Office .

Any notice of opposition (on patent Form P19) must be closed at the Patent Office within 2 months from the date hereof.

#### **Registrar of Patents**

Applicant: GLAXOSMITHKLINE INTELLECTUAL PROPERTY DEVELOPMENT LIMITED 980 Great West Road, Brentford, Middlesex TW8 9GS United Kingdom. Request permission to amend the specification of letters patent no: 23/10/2017 Patent Application No: 2017/07176 for HETEROCYCLIC AMIDES AS KINASE INHIBITORS.

A copy of the original specification on which the proposed amendment is indicated inred, is now available for public inspection at the Patent Office .

Any notice of opposition (on patent Form P19) must be closed at the Patent Office within 2 months from the date hereof.

#### **Registrar of Patents**

# Applicant: PAYJOY INC. of 655 4TH STREET, SAN FRANCISCO, CALIFORNIA, 94107, UNITED STATES OF AMERICA. Request permission to amend the specification of letters patent no: 2020/07919 of 18 DECEMBER 2020 for METHOD AND SYSTEM FOR REMOTE MANAGEMENT OF ACCESS TO APPLIANCES

A copy of the original specification on which the proposed amendment is indicated inred, is now available for public inspection at the Patent Office .

Any notice of opposition (on patent Form P19) must be closed at the Patent Office within 2 months from the date hereof.

# **Registrar of Patents**

# INSPECTION OF SPECIFICATIONS

A complete specification may, after acceptance is advertised, be inspected during office hours at the Patent Office, Pretoria, at a charge of **R4**, **00**. Please note, that in terms of section 43 (3) if the acceptance of an application which claims priority in terms of section 31 (1) (c) is not published in terms of section 42 within 18 months from the earliest priority claimed from the relevant application in a convention country, it shall be opened to public inspection after the expiration of 18 months from the earliest priority so claimed.

# COPIES OF DOCUMENTS

The Patent Office, Private Bag X400, Pretoria, supplies copies of all patent and trade mark documents at the following rate:

# Photocopies: R1, 00 per page

(Payment to be affected by means of revenue stamps only.)

# COMPLETE SPECIFICATIONS ACCEPTED AND ABRIDGEMENTS OR ABSTRACTS THEREOF

Complete specifications in respect of the under mentioned applications for letters Patent have been accepted by the Registrar of Patents.

# THE PATENTS ACT, 1978 (ACT NO. 57 OF 1978)

In terms of section 42 (b) of the Patents Act, 1978, a patent shall be deemed to have been sealed and granted as from the date of publication of the acceptance.

The numerical references denote the following: (21) Number of application. (22) Date of application. (DA) Date of acceptance. (51) Class. (71) Name of applicant(s). (72) Name of all inventors. (33) Country. (31) Number and (32) Date of convention application. (54) Title of invention. (00) Number of sheets.

#### **Registrar of Patents**

21: 2015/04218. 22: 2015-06-11. 43: 2022-01-31 51: G06Q 71: GIESEN, Heinz 72: GIESEN, Heinz

#### 33: DE 31: 10 2012 220 774.0 32: 2012-11-14 54: METHOD FOR CARRYING OUT TRANSACTIONS

00: -

The invention relates to a process for performing transactions among a number of participants, in which every participant has a unique pseudonym assigned to him and the assignment of a pseudonym to a participant and the participant's transaction data are stored on a notary server.



- 21: 2016/05314. 22: 2016-08-01. 43: 2017-07-24 51: G06Q
- 71: IMAGOTAG GMBH

72: RÖßL, Andreas, HECHENBLAICKNER, Andreas, FRIEßNEGG, Christian 54: SYSTEM FOR TIME SLOT COMMUNICATION 00: -

A system, comprising a communication station for communicating with a number of radio tags in a time slot communication process, in which a number of time slots per time slot cycle in a repeating sequence are available for communication, and each time slot is characterized by a distinct time slot symbol, wherein the communication station is designed to send out a synchronization data signal comprising the time slot symbol for the currently present time slot, and wherein a radio tag is designed for changing from a sleep state into an active state at a wakeup instant, and for receiving the synchronization data signal in the active state and, if the received time slot symbol indicates a time slot intended for it, for defining a new wakeup instant corresponding to the next appearance of the time slot intended for it in a time slot cycle that follows the currently present time slot cycle.



21: 2016/07596. 22: 2016-11-03. 43: 2022-01-17 51: A01N; B65D 71: TESSARA (PTY) LTD 72: VAN JAARSVELD, Alwyn Jacobus 33: ZA 31: 2014/03242 32: 2014-05-06 54: FLOWER PRESERVATION METHOD AND DEVICE 00: -

This invention relates to a method of preserving one or more cut flowers with the use of a sulphur dioxide (SO2) generating device. The method further relates to an SO2 generating device for the preservation of one or more cut flowers. The device may be in the form of a strip for attachment to a flower sleeve or in the form of an article of any shape for placement inter-bunch and above the flower heads.



21: 2017/05120. 22: 2017-07-27. 43: 2021-12-15 51: A61K

- 71: CITY OF HOPE
- 72: HERRMANN, ANDREAS, YU, HUA
- 33: US 31: 62/104,653 32: 2015-01-16

54: CELL PENETRATING ANTIBODIES

Provided herein are cell penetrating conjugates. The conjugates include a non- cell penetrating protein attached to a phosphorothioate nucleic acid or phosphorothioate polymer backbone through a non-covalent linker including abiotin-binding domain and a biotin domain, wherein the phosphorothioate nucleic acid or phosphorothioate polymer backbone enhances intracellular delivery of the non-cell penetrating protein. Also provided are compositions and kits comprising the conjugates.



21: 2017/05584. 22: 2017-08-17. 43: 2022-01-10 51: C12Q

71: THE REGENTS OF THE UNIVERSITY OF CALIFORNIA

72: HASTY, Jeff, BAUMGART, Leo, Alexander, COOKSON, Scott, FERRY, Michael, GRAHAM, Garrett, HUERTA, Ramon, JOHNSON, Ryan, TSIMRING, Lev

33: US 31: 62/116,888 32: 2015-02-16 54: MICROBIAL MICROFLUIDIC BIOSENSOR 00: -

Provided are a microfluidic biosensors that are suitable for continuously monitoring toxin levels in water supplies.



21: 2017/05770. 22: 2017-08-24. 43: 2022-01-10

51: A61K; C07K; A61P

71: HEIDELBERG PHARMA RESEARCH GMBH

72: ANDERL, Jan, HECHLER, Torsten, MUELLER, Christoph, PAHL, Andreas 33: EP 31: 15000681.5 32: 2015-03-09

54: AMATOXIN-ANTIBODY CONJUGATES

The invention relates to conjugates comprising amatoxins and antibodies, in particular amatoxins linked to antibodies comprising specific cysteine residues.



	R <sub>1</sub>	R <sub>2</sub>	R <sub>3</sub>	R₄
α-amanitin	он	он	NH <sub>2</sub>	ОН
β-amanitin	он	он	он	он
γ-amanitin	н	он	NH <sub>2</sub>	он
ε-amanitin	н	он	он	он
amanin	он	он	ОН	н
amaninamide	он	он	NH <sub>2</sub>	н
amanullin	н	н	NH <sub>2</sub>	он
amanullinic acid	н	н	он	ОН

21: 2017/05870. 22: 2017-08-29. 43: 2022-01-10 51: B01D

71: MEMPORE CORP.

72: KUTOWY, Oleh, KUTOWY, Liubomyr 33: US 31: 14/997143 32: 2016-01-15 33: CA 31: 2,883,468 32: 2015-03-03 54: USED OIL RECYCLING PRETREATMENT AND FILTRATION ASSEMBLY 00: -

A filtration system suitable for recovering base stock from used lubricating oil and other applications passes feedstock over nano-filtration membranes in a serpentine flow. Pressure boosters installed in the openings separating consecutive stacks serve to restore lost pressure of the feedstock. As pretreatment a "knocking" non-blinding filter separates particulates from a feedstock by a knocking action that dislodges particulate matter which has come to rest on the screen. Further pretreatment includes a vacuum evaporator for flash evaporation of volatile components from a liquid and effecting the extraction of water and glycol from used engine lubricating oil. The liquid is heated or cooled when flowing over some of the surfaces to adjust for heat lost or acquired during exposure of the liquid surface to a gas or vacuum. Liquid moves on the surface of the discs under centrifugal force or a wiper blade guides the liquid as it moves over the support surface.



21: 2017/06882. 22: 2017-10-11. 43: 2021-12-15 51: C07D; A61K; A61P 71: NIPPON CHEMIPHAR CO., LTD. 72: NAGASE, HIROSHI, FUJII, HIDEAKI, SAITOH, AKIYOSHI, NAKATA, ERIKO, HIROSE, MASAAKI, OOI, ISAO, HAYASHIDA, KOHEI 33: JP 31: 2015-054079 32: 2015-03-17 **54: MORPHINAN DERIVATIVE** 00: -

The morphinan derivatives represented by general formula (I) (wherein R<sup>1</sup> represents hydrogen, a C<sub>1</sub>-10alkyl, a cycloalkylalkyl in which the cycloalkyl moiety has 3-6 carbon atoms and the alkylene moiety has 1-5 carbon atoms, or the like; R<sup>2</sup> represents a heterocycle including at least one carbon atom and 1-4 heteroatoms selected from among N, O and S as constituent annular atoms, with at least one set of adjacent constituent annular atoms having a double bond, said heterocycle also including at least one oxo group as a substituent; Y is bonded to a carbon atom that is a constituent annular atom of R<sup>2</sup>; R<sup>3</sup>, R<sup>4</sup> and R<sup>5</sup> represent hydrogen, hydroxy or the like; R<sup>6a</sup> and R<sup>6b</sup> represent hydrogen or the like; R<sup>7</sup> and R<sup>8</sup> represent hydrogen or the like; R<sup>9</sup> and R<sup>10</sup> are the same or different, and represent hydrogen or the like; X represents O or CH<sub>2</sub>; and Y represents C(=O)), variants and stereoisomers of the derivatives, pharmaceutically acceptable salts thereof, and solvates thereof

according to the present invention are used as antianxiety drugs, antidepressants and the like.



21: 2017/06923. 22: 2017-10-12. 43: 2021-12-15 51: A61K; C12N; C07K; A61P 71: UCL BUSINESS LTD 72: ANDERSON, JOHN, FISHER, JONATHAN, PULÉ, MARTIN, GUSTAFSSON, KENTH 33: GB 31: 1507368.7 32: 2015-04-30 54: T CELL WHICH EXPRESSES A GAMMA-DELTA T CELL RECEPTOR (TCR) AND A CHIMERIC ANTIGEN RECEPTOR (CAR) 00: -

The present invention provides a T cell which expresses a gamma-delta T cell receptor (TCR) and a chimeric antigen receptor (CAR), wherein the CAR comprises: an antigen binding domain; a transmembrane domain; and a co-stimulatory intracellular signalling domain; wherein the intracellular signalling domain provides a costimulatory signal to the T cell following binding of antigen to the antigen binding domain.

21: 2017/06945. 22: 2017-10-13. 43: 2021-12-15 51: A61K; A61P 71: ESPERION THERAPEUTICS, INC. 72: NEWTON, ROGER SCHOFIELD, ROSENBERG, NOAH LABAN, MACDOUGALL, DIANE ELAINE 33: US 31: 62/133,739 32: 2015-03-16 33: US 31: 62/277,403 32: 2016-01-11 54: FIXED DOSE COMBINATIONS COMPRISING ETC1002 AND ONE OR MORE STATINS FOR

# TREATING OR REDUCING CARDIOVASCULAR RISK

#### 00: -

Disclosed herein are compositions comprising fixed doses of ETC-1002 and one or more statins. Also disclosed herein are methods for using fixed doses of ETC-1002 and one or more statins. Uses include methods of treating cardiovascular disease or reducing the risk of cardiovascular disease in a subject. Uses also include methods of treating hypercholesterolemia in a subject.

#### 21: 2017/07313. 22: 2017-10-27. 43: 2021-12-15 51: G01N

71: IDEXX LABORATORIES, INC.

72: QUINN, John, Joseph, YERRAMILLI, Murthy, VSN

#### 33: US 31: 62/155,175 32: 2015-04-30 54: SPECIFIC DETECTION OF CLUSTERIN ISOFORMS

00: -

The invention provides methods and compositions for the detection of specific isoforms of clusterin.

21: 2017/08372. 22: 2017-12-11. 43: 2021-12-15 51: B62K

71: DOONA HOLDINGS LTD.

72: MAZAR, YOAV SHABTAI, HOLTZMAN, MAXIM

33: IL 31: 249515 32: 2016-12-12

# 54: FOLDABLE PERSONAL VEHICLE

A foldable personal such as a tricycle which can be convertible into a stroller, is configured for accommodating a child therein and for preventing, when desired, the child from being able to steer the vehicle, vehicle having an operational state and a storage state, in which it can take an extremely compact form. The vehicle has a longitudinal axis lying in its vertical plane of symmetry and having a horizontal reference plane perpendicular to the plane of symmetry, and it takes its compact form in the storage state both in the direction along its longitudinal axis and in the directions perpendicular to this axis both along the plane of symmetry.



21: 2018/07613. 22: 2018-11-13. 43: 2022-01-14 51: A61K; C07K; A61P 71: HANGZHOU DAC BIOTECH CO, LTD 72: ZHAO, Robert Yongxin, YANG, Qingliang, HUANG, Yuanyuan, GAI, Shun, YE, Hangbo, YANG, Chengyu, GUO, Huihui, ZHOU, Xiaomai, XIE, Hongsheng, TONG, Qianqian, CAO, Minjun, ZHAO, Linyao, JIA, Junxiang, LI, Wenjun, ZUO, Xiaotao, LIN, Chen, XU, Yifang, GUO, Zixiang 54: DERIVATIVES OF AMANITA TOXINS AND THEIR CONJUGATION TO A CELL BINDING MOLECULE

00: -

Derivatives of Amernita toxins of Formula (I), wherein, formula (a) R 1, R 2, R 3, R 4, R 5, R 6, R 7, R 8, R 9, R 10, X, L, m, n and Q are defined herein. The preparation of the derivatives. The therapeutic use of the derivatives in the targeted treatment of cancers, autoimmune disorders, and infectious diseases.



•••••, •••••• <sup>(a)</sup>

21: 2019/00340. 22: 2019-01-17. 43: 2021-12-10 51: B60J 71: Saint-Gobain Glass France
72: UEBELACKER, Stefan
33: EP(DE) 31: 16201027.6 32: 2016-11-29
54: LAMINATED VEHICLE SIDE WINDOW WITH A LEADTHROUGH FOR THE FASTENING OF A CLAMPING ELEMENT
00: -

The present invention relates to a side window for a vehicle, with an upper edge (O), a lower edge (U), a front edge (V) and a rear edge (H), at least comprising a first pane (1) and a second pane (2) which are connected to each other via a thermoplastic intermediate layer (3), wherein the first pane (1), the second pane (2) and the thermoplastic intermediate layer (3) each have a hole (5, 6, 7), and wherein the holes (5, 6, 7) of the first pane (1), the second pane (2) and the thermoplastic layer (3) are superimposed on one another in such a manner that a leadthrough (4) for the fastening of a clamping element (8) extends through the entire side window, and wherein the hole (5) in the first pane (1) is larger than the hole (6) in the second pane (2).

Page | 128



21: 2019/00718. 22: 2019-02-04. 43: 2021-12-15 51: C08L; F17D

71: LiquidPower Specialty Products Inc., Micro Powders, Inc.

72: SUN, Lu, OLECHNOWICZ, Michael R., JOHNSTON, Ray L., LANE, Thomas D., CZARNECKI, Richard J.

#### 33: US 31: 62/371,267 32: 2016-08-05 54: DRAG REDUCING COMPOSITION 00: -

Embodiments of the present disclosure generally relate to a drag reducing suspension capable of dissolving in cold hydrocarbon fluids at usage level. In one embodiment, the drag reducing composition comprises a drag reducing polymer, a partitioning agent comprises a one or more of a coal-tar resin, a C5 aliphatic petroleum resin, a C9 aromatic petroleum resin, C5/C9 aliphatic/aromatic petroleum resin, a cycloaliphatic diene-based petroleum resin, a pure monomer resin, a terpene resin, a terpene phenol resin, a styrenated terpene resin, a rosin resin, a rosin resin derivative, one or more of an alkylphenol resin, a modified alkylphenol resin, and fully or partially hydrogenated form thereof, and suspending fluid medium. The partitioning agent has a good solubility (greater than 8 ppm) in a hydrocarbon stream, such as in a cold refined hydrocarbon stream, for example a diesel stream at a temperature of 0C or less.

# 21: 2019/00719. 22: 2019-02-04. 43: 2021-12-15 51: A61K

#### 71: ALPHAMED FORMULATIONS PVT. LTD 72: ALPHAMED FORMULATIONS PVT. LTD 33: IN 31: 201641023129 32: 2016-07-05 54: SOLID COMPOSITION CONTAINING ORAL ANTICOAGULANT 00: -

The present invention relates to the field of Oral pharmaceuticals. The invention specifically relates to solid oral anticoagulant compositions and methods for the preparation of the same. The present invention more specifically relates to composition and process for preparation of Rivaroxaban Oral tablets prepared by drug layered spheres.

21: 2019/00724. 22: 2019-02-04. 43: 2021-12-15 51: B28C

71: SAROJ VANIJYA PRIVATE LIMITED 72: SAROJ VANIJYA PRIVATE LIMITED 33: IN 31: 201631027942 32: 2016-08-17 54: SYSTEM AND PROCESS FOR PRODUCING DRY MIX CONSTRUCTION MATERIALS WITH IMPROVED ENGINEERING PROPERTIES 00: -

The present invention discloses a system and process for producing a variety of dry mix construction and ancillary construction materials (DMC) with improved structural properties. The said system and process employs a material classification unit (204) that classifies atleast one of plurality of raw materials (A, B, ...., N) based on their particle size and physical properties. These classified raw materials are stored separately in material handling compartments (260) and are selected according to the construction grade requirements of the end user. The invention further involves the use of a material selection unit (210) which controls the functioning of various components of present invention. The said system and process also provides an easy means of

reutilization of industrial waste products like fly ash, blast furnace slag to produce a variety of construction and ancillary construction materials.



21: 2019/00793. 22: 2019-02-07. 43: 2021-11-25 51: C07C

71: UNIVERSITY OF KWAZULU NATAL 72: THIRUMALA GOVENDER, MAHANTESH JADHAV, RAHUL KALHAPURE, CHUNDERIKA MOCKTAR, SANJEEV KUMAR RAMBHAROSE 33: ZA 31: P532641GB/BLD 32: 2016-08-18 54: PH-RESPONSIVE LIPIDS

#### 00: -

The invention provides for a synthesised ester intermediate of formula 1. Formula 1 wherein and wherein r may be a saturated or unsalturated fatty acid (c12-c20).





$$X = \bigvee_{OR}^{AW} \text{ or } \bigcup_{OR}^{AW} OR \text{ or } RO \bigcup_{RO}^{AW} OR$$

- 21: 2019/00911. 22: 2019-02-11. 43: 2021-12-15 51: B01J C02F
- 71: CSIR

72: KALOMBO, Lonji, SETSHEDI, Katlego, Zebedius, NOMADOLO, Nomvuyo 54: COMPOSITE ACTIVATED CARBON AND CONDUCTIVE POLYMER ADSORPTION MEDIA

The invention provides composite adsorption media, which media includes granular activated carbon (GAC) and a layer of a conductive polymer selected from a group having heavy metal absorptive capacity. The layer may preferably be applied to a portion of the surface of the grains to provide a Janus type particle.



# 21: 2019/01145. 22: 2019-02-22. 43: 2021-11-23 51: G06Q

71: Alibaba Group Holding Limited

72: ZHENG, Ji, LU, Tianshun, SUN, Xi, PAN, Yong, ZHENG, Qiaojian, FENG, Jiaqi

#### 54: MANAGING SERVICES ASSOCIATED WITH URL-BASED TWO DIMENSIONAL CODES 00: -

Implementations of the present disclosure provide a service processing method, device, and system associated with unified resource locator (URL) based two-dimensional (code). In an implementation, a URL is received from a first service institution. The URL is obtained by a mobile device from scanning a 2D code provided by a service provider and sent to the first service institution. The URL is then parsed to identify one or more data elements including a service network identifier, a service institution identifier, and a payload including a service object identifier. The one or more data elements is sent to the second service institution based on the service institution identifier. Service information associated with the service object is received from the second service institution based on the service object identifier, and the service information is sent to the first service institution for presenting on the mobile device.



21: 2019/01249. 22: 2019-02-26. 43: 2021-11-25 51: A01M; E04F; H01Q 71: PUBLICIDAD EXTERIOR S.R.L., JAVIER ANDRES EGUIA TERRADAS 72: ENRIQUE ALBERTO UMBERT 33: US 31: 62/379,486 32: 2016-08-25 54: BILLBOARD CONCEALING A MOBILE TELEPHONY ANTENNA 00: -

The invention relates to a billboard capable of completely concealing mobile telephony antennae or the like in its interior, without hindering the entry and exit of electromagnetic waves for the telephony service, in that a discrete quantity of windows that are permeable to electromagnetic waves are provided, all metallic materials being removed from the area of these windows. The windows are covered with flat patches of non-metallic material that is permeable to electromagnetic waves, preferably glass fibre reinforced plastics (GFRP); instead of the conventional metallic sections, substitute sections made of a non-metallic material that is permeable to electromagnetic waves are provided inside the area of the window or opening, on the framework covering, these combined measures being aimed at enabling the antennae inside the billboard to operate normally even though they are concealed inside the billboard.



21: 2019/01525. 22: 2019-03-12. 43: 2022-01-17 51: A61B; G09B; G06Q 71: KOTZE, Ian Kincaid 72: KOTZE, Ian Kincaid 33: ZA 31: 2018/01666 32: 2018-03-12 54: INTEGRATED PSYCHOMETRIC ASSESSMENT METHOD AND SYSTEM 00: -

An integrated method of conducting a psychometric assessment which includes defining a character profile, defining a challenge for the character profile, the challenge represented by a series of actions to be performed by a candidate, defining a standardized value-based and work-related expected performance, capturing the candidate's value-based and work-related performance through the series of actions, and evaluating and reporting the candidate's performance to a customer.



21: 2019/03711. 22: 2019-06-10. 43: 2021-12-02

- 51: A01G
- 71: PepsiCo, Inc.

72: PUDDEPHAT, Ian James, MCWILLIAM, Simon Charles, SHAHAK, Yosepha, SADKA, Avi, GAL, Elazar Zari

#### 33: GB 31: 1713976.7 32: 2017-08-31 54: LIGHT SPECTRUM-MODIFYING NETTING FOR USE IN CITRUS FRUIT PRODUCTION 00: -

A photo-selective light spectrum-modifying net for use in citrus fruit production, the net comprising a woven array of parallel and mutually spaced first threads and an array of parallel and mutually spaced second threads, the second threads being inclined to the first threads to define an array of openings between the first and second threads, wherein the first threads are uncolored and composed of a first polymer which is selected from a polymer incorporating a white pigment or dye, a transparent polymer or a translucent polymer, and the second threads are colored red and composed of a second polymer which incorporates a red pigment or dye, the second threads being adapted to transmit, scatter and reflect electromagnetic radiation in the wavelength range of from 640 to 680 nm. Also disclosed is a method of producing citrus fruit using the net.



21: 2019/03727. 22: 2019-06-11. 43: 2021-12-08 51: A01N 71: UPL LTD 72: SHIRSAT, Rajan Ramakant, SHROFF, Jaidev Rajnikant, SHROFF, Vikram Rajnikant 33: IN 31: 201831021756 32: 2018-06-11

# 54: PESTICIDAL COMPOSITION FOR PROTECTING SEEDS

00: -

Provided herein is a composition comprising a GABA-gated chloride channel antagonist, an Acetylcholine receptor (nAChR) agonist and a blend of surfactant(s).

21: 2019/03804. 22: 2019-06-12. 43: 2021-12-15 51: C08F; C14C

71: LANXESS Deutschland GmbH 72: JANSEN, Bernhard, REINERS, Juergen, GROSCH, Rafael, KASTER, Günter, BOROWSKI, Uwe

# 33: EP(DE) 31: 16203590.1 32: 2016-12-13 54: METHOD FOR PRODUCING HYDROPHOBISING LEATHER TREATMENT AGENTS

00: -

The invention relates to a method for producing hydrophobising leather treatment agents. containing the steps: a) radically initiated copolymerisation of i) at least one ethylenically unsaturated carboxylic acid or derivatives thereof, and ii) at least one (meth)acrylate of a primary, saturated C8 to C22 alcohol; b) mixing the reaction mixture obtained in step a) with water: c) salification of at least some of the carboxyl groups of the reaction mixture obtained in step b) with a base; and d) shearing of the reaction mixture obtained in step c) to an average particle size of 0.05-10 µm. Step a) is carried out in oil as the reaction medium, and the atmosphere in step a) contains less than 0.1 vol% of an oxidising gas.

21: 2019/03873. 22: 2019-06-14. 43: 2021-12-02 51: A61K

71: Pipeline Therapeutics, Inc. 72: LORRAIN, Daniel Scott, POON, Michael Mingyuan, STEBBINS, Karin Joy 33: US 31: 62/435,629 32: 2016-12-16

# 54: METHODS OF TREATING COCHLEAR SYNAPTOPATHY

00: -

The present application describes the use of gamma secretase inhibitors and gamma secretase modulators for the treatment of cochlear synaptopathy.



21: 2019/04046. 22: 2019-06-21. 43: 2021-12-15 51: A61K; C07K

71: Serum Institute of India Private Limited 72: MHALASAKANT, Dhere Rajeev, SHANKAR, Pisal Sambhaji, REDDY, Peddi Reddy Srinivas, CHAHAR, Singh Digamber, RAVINDRA, Yeolekar Leena, SINGH, Chouhan Pankaj, DATTATRAY, Avalaskar Nikhil

#### 33: IN 31: 201621044139 32: 2016-12-23 54: IMPROVED METHODS FOR ENHANCING ANTIBODY PRODUCTIVITY IN MAMMALIAN CELL CULTURE AND MINIMIZING AGGREGATION DURING DOWNSTREAM, FORMULATION PROCESSES AND STABLE ANTIBODY FORMULATIONS OBTAINED THEREOF

00: -

The invention, describes an efficient platform for antibody manufacturing and formulation, that provides i) cell culture process with improved feeding strategy resulting in high antibody titer between 2 gm/L to 5 gm/L; ii) improved purification process showing optimal percentage recovery, high purity monomer content, minimum aggregation/particulate formation, minimum impurity levels; and iii) high concentration stable liquid formulation with optimal osmolality and low viscosity across different temperature excursions and devoid of aggregation. The preferred antibodies include IgG1 monoclonal antibody specific to the Dengue virus epitope in domain III of the E protein and IgG1 monoclonal antibody specific to the rabies virus surface G glycoprotein.



21: 2019/04154. 22: 2019-06-26. 43: 2021-12-15 51: A01H

#### 71: UNIVERSITY OF LIMPOPO

72: NIKOLOVA, Roumiana Vassileva, MAPHETO, Makgahlela Wilson, MOKWALA, Phatlane William 33: ZA 31: 2018/04886 32: 2018-07-20 54: IN VITRO PROPAGATION OF CRITICALLY

# ENDANGERED EUPHORBIA SPECIES

The invention provides an in vitro method of propagating a plant species of Euphorbia groenewaldii or Euphorbia clivicola, including in vivo propagation to produce an explant source by growing a parent plant under controlled environmental conditions, treating the parent plant with a chemical agent and multiplying the parent plant in vivo from a tuber and/or a shoot cutting in the presence of an auxin for rooting in soil culture; excising a shoot explant from the in vivo propagated parent plant and preparing the excised shoot for in vitro culture by surface sterilising and treating with an antioxidant to obtain an apical or basal shoot explant; multiplying the plants in vitro by inoculating the shoot explant on a liquid and/or solid artificial nutrient medium supplemented with a cytokinin for inducing shoot multiplication and/or an auxin to induce root formation; and acclimatising the in vitro produced plants under controlled environmental conditions.

21: 2019/04164. 22: 2019-06-26. 43: 2022-01-17 51: A61K; C12N; A61P 71: BEIJING 302 HOSPITAL 72: YANG, Penghui, WANG, Xiliang, ZHANG, Shaogeng, REN, Tianyu, ZHANG, Peirui, WANG, Zhaohai, SUN, Fang

#### 33: WO 31: PCT/CN2017/080010 32: 2017-11-04 33: CN 31: 201611253359.5 32: 2016-12-30 54: PREPARATION METHOD AND APPLICATION OF RECOMBINANT ONCOLYTIC INFLUENZA VIRUS 00: -

The present invention discloses a preparation method and application of a recombinant oncolytic influenza virus. The recombinant oncolytic influenza virus provided by the present invention expresses HTRP1 and HTRP2; the HTRP1 is: A1) a protein with the amino acid sequence as shown in SEQ ID NO: 1; A2) a protein derived from A1), which is obtained by substitution, deletion and/or addition of one or more amino acid residues in SEQ ID NO: 1; A3) a fusion protein obtained by ligating tags to the N-terminus or/and C-terminus of A1) or A2); the HTRP2 is: B1) a protein with the amino acid sequence as shown in SEQ ID NO: 3; B2) a protein derived from B1), which is obtained by substitution, deletion and/or addition of one or more amino acid residues in SEQ ID NO: 3; B3) a fusion protein obtained by ligating tags to the N-terminus or/and Cterminus of B1) or B2). The recombinant oncolytic influenza virus provided by the present invention can realize targeted killing of liver cancer cells without significantly influencing normal host cells and can be applied to the targeted therapy of liver cancer.

#### 21: 2019/04166. 22: 2019-06-26. 43: 2021-12-15 51: B60R 71: MILES, Shane Robert

72: MILES, Shane Robert

33: AU 31: 2016904946 32: 2016-12-01 54: VEHICLE MIRRORS

### 00: -

A towing mirror including: a mount adapted to be mounted to a vehicle cabin; an extension component including a first member or portion extending from said mount and a second member operatively connected to said first member or portion for movement relative thereto from a retracted position to an extended position; and a mirror component operatively connected to said second member for pivoting movement relative thereto about a generally horizontal axis extending substantially in the intended direction of travel of the vehicle cabin to which the mirror is to be mounted.



- 21: 2019/04168. 22: 2019-06-26. 43: 2021-12-15
- 51: F24F; F28C

71: Starklab

- 72: ZEMMOURI, M. Jaouad
- 33: FR 31: 1663416 32: 2016-12-27

#### 54: FACILITY FOR PRODUCING AND TREATING A GAS STREAM THROUGH A VOLUME OF LIQUID

00: -

The facility (1A) comprises at least two treatment devices (2) each comprising an exchange chamber (20) intended to contain a liquid bath in the bottom part and at least one injection line (21). It comprises aeraulic means (4), which are connected to all the discharge openings of the exchange chambers or which are connected to all the intake openings of the injection lines (21), and which make it possible, in operation, to create, by suction or by blowing, simultaneously and in parallel for each treatment device (2), an incoming gas stream (F) originating from outside the exchange chambers (2), so that each incoming gas stream (F) is introduced into the injection line (21) of the corresponding treatment device (2), and passes through the discharge opening of the injection line (21) by being introduced into the liquid bath contained in the bottom part of the exchange chamber (20), below the surface (S) of said liquid bath, and so that an outgoing gas stream (F'), treated by direct contact with said liquid bath rises up inside the exchange chamber and is discharged out of said exchange chamber (20) by passing through the discharge opening (20f) of the exchange chamber (20). The exchange chambers (20) communicate hydraulically with one another so that when the aeraulic means (4) are shut down, each exchange chamber (20) is suitable for containing or contains, in the bottom part, an initial volume (Vinitial) of liquid, with an initial liquid level (Hinitial) that is identical in all the exchange chambers (2).



21: 2019/04510. 22: 2019-07-09. 43: 2021-12-13 51: A47G; F16M; G06F; H04B; H04W 71: YUAN, Chen-Kee 72: YUAN, Chen-Kee 33: US 31: 15/799,200 32: 2017-10-31 33: CA 31: 2955524 32: 2017-01-20 54: SUPPORT FOR A MOBILE ELECTRONIC DEVICE 00: -

A support for a mobile electronic device includes a base strip having a first end, a second end, an upper surface, and a lower surface. A layer of material is secured to the upper surface of the base strip. The layer of material has micro-suction cups. A rigid support member is provided that in an operative position extends substantially vertically from the upper surface at the second end of the base strip.



21: 2019/04705. 22: 2019-07-17. 43: 2022-01-10 51: C07K; C12N 71: LIU, Jun, CHENGDU YONGAN PHARMACEUTICAL CO., LTD. 72: LIU, Jun 54: RECOMBINANT BCG OVEREXPRESSING PHOP-PHOR

#### 00: -

Provided are a live recombinant Mycobacterium bovis-BCG strain and a tuberculosis (TB) vaccine or immunogenic composition comprising a nucleic acid capable of overexpression, the nucleic acid encoding PhoP and PhoR proteins. A method for treatment or prophylaxis of a mammal against challenge by Mycobacterium tuberculosis or Mycobacterium bovis using the strain is also provided.

21: 2019/05079. 22: 2019-07-31. 43: 2021-12-06 51: E02F; E21C; F15B

71: Sandvik Intellectual Property AB

72: POGATSCHNIGG, Reinhold, UMUNDUM, Christian

# 54: METERING HYDRAULIC CONTROL SYSTEM FOR MINING MACHINE

00: -

A hydraulic system to control at least two hydraulic actuators via a metering control valve assembly. The hydraulic system is particularly advantageous to control a pivoting arm of an undercutting mining machine according to at least two modes of operation including an idling mode and a cutting mode. In particular, the hydraulic actuators may be controlled by quantitative variation of fluid flow speed and pressure.



21: 2019/05581. 22: 2019-08-23. 43: 2021-12-15 51: B65B

71: Perfo Tec B.V.

72: VAN NISPEN, Harm, GROENEWEG, Bastiaan Rinke Antony, DE BRUIN, Martijn Willem 33: NL 31: 2018335 32: 2017-02-08 54: METHOD AND APPARATUS FOR PACKAGING RESPIRING PRODUCE 00: -

A method of manufacturing a modified atmosphere package is provided which comprises the steps of: providing a portion of packaging material; providing a portion of produce; forming, from the portion of packaging material and the portion of produce, a closed package defining a package volume and containing in the package volume the portion of produce and a modified atmosphere. The modified atmosphere is modified with respect to the ambient atmosphere. The method comprises providing the modified atmosphere in the package volume by providing a gas mixture of at least one atmosphere modification gas and pressurised air in the package volume. An associated apparatus is also provided.



21: 2019/06149. 22: 2019-09-18. 43: 2021-11-09 51: G06K: G06T

71: Agricultural Information Institute of CAAS 72: ZHANG, Yongen, XU, Shiwei, DI, Jiaying, WANG, Qiang, WANG, Shengwei, LIU, Jiajia, GUO, Shutao

# 33: CN 31: 201910135760.6 32: 2019-02-25 54: PLANT ORGAN IMAGE SEPARATION METHOD AND SYSTEM

00: -

This invention discloses a plant organ image separation method which includes the steps of: acquiring an image of a plant captured by various camera; acquiring a three-dimensional point cloud under the perspective of each camera; unifying all 3D point clouds into a global coordinate system for splicing; projecting the point cloud of the plant onto an OXY plane of the global coordinate system, to obtain a 2D projection point image of the plant; locating stem and leaf regions of the plant in the 2D image of the to plant using a segmentation model; acquiring a stem point cloud region and a leaf point cloud region of the plant in the ; and performing organ point cloud segmentation of the plant by a Kmeans clustering algorithm, to obtain a 3D point cloud region corresponding to each organ of the plant. The present invention also discloses a corresponding system.



21: 2019/07099. 22: 2019-10-28. 43: 2021-11-23 51: A41D; A62B; A62D 71: KAPPLER, INC. 72: BAUSKAR, AKSHAY S. 33: US 31: 62/479,949 32: 2017-03-31 54: LAYERED, COMPOSITE LENS AND METHODS OF CONSTRUCTION 00: -

A protective lens is provided having a first layer, a second layer and a third layer. The first, second and third layers each comprises a first surface and a second surface. The first layer comprises a substantially non-reactive material. The first surface of the second layer is positioned adjacent to the second surface of the first layer. The second layer comprises a substantially fire resistant material. The first surface of the third layer is positioned adjacent to the second surface of the second layer. The third layer is positioned adjacent to the second surface of the second layer. The third layer comprises a substantially hydrophobic material.



21: 2019/07104. 22: 2019-10-28. 43: 2021-12-02 51: GO6Q

71: Alibaba Group Holding Limited 72: LI, Hui, HU, Kailiang, SONG, Le

### **54: STRATEGY SEARCHING IN STRATEGIC** INTERACTION BETWEEN PARTIES 00: -

Disclosed herein are methods, systems, and apparatus, including computer programs encoded on computer storage media, for performing counterfactual regret minimization (CRF) for strategy searching in strategic interaction between two or more parties. One of the methods includes: storing multiple regret samples in a first data store, wherein the multiple regret samples are obtained in two or more iterations of a CRF algorithm in strategy searching in strategic interaction between two or more parties; storing multiple strategy samples in a second data store; updating parameters of a first neural network for predicting a regret value of a possible action in a state of a party based on the

multiple regret samples in the first data store; and updating parameters of a second neural network for predicting a strategy value of a possible action in a state of the party based on the multiple strategy samples in the second data store.

21: 2019/07283. 22: 2019-11-01. 43: 2022-01-17 51: A61K

- 71: THOMAS JULIUS BORODY
- 72: Thomas Julius BORODY

#### 33: US 31: 62/545,989 32: 2017-08-15 54: COMPOSITIONS, DEVICES AND METHODS FOR TREATING AUTISM

00: -

The present invention relates to a method for treating, ameliorating, reversing and/or preventing autism or an autism spectrum disorder (ASD) via the administration of a formulation, a pharmaceutical preparation or a pharmaceutical composition comprising or consisting of: (a) a rifaximin (optionally a XIFAXAN, XIFAXANTA or NORMIXT), an extended intestinal release (EIR) rifaximin, a rifamycin derivative, a rifampicin (or rifampin) (optionally RIFADIN), a rifabutin (optionally MYCOBUTIN), a rifapentine (optionally PRIFTIN), a rifalazil, a bicozamycin, or a mixture or combination thereof, or (b) a rifaximin (optionally a XIFAXAN, XIFAXANTA or NORMIX) and at least one additional antimicrobial or antibiotic agent, wherein optionally the at least one additional antimicrobial or antibiotic agent comprises a vancomycin, a metronidazole (optionally FLAGYLTM, METROTM), a tinidazole (optionally FASIGYN, SIMPLOTAN, TINDAMAX) or a combination thereof

21: 2019/07392. 22: 2019-11-07. 43: 2022-01-10 51: C03C

71: SCHOTT KAISHA PVT. LTD.

72: NARVEKAR, Anil Narayan, POTDAR, Pratul Prakash

33: IN 31: 201821042154 32: 2018-11-08 54: APPARATUS AND PROCESS FOR PROCESSING OF GLASS CONTAINERS AND PROCESS FOR MANUFACTURING GLASS CONTAINERS INCLUDING SUCH A PROCESSING 00. -

The invention relates to an apparatus and process for processing outer surfaces of glass containers (50) for use in pharmaceutical, medical or cosmetic applications, said glass containers (50) having a cylindrical main body (52). The process comprises: providing (S1) a plurality of containers (50); separating individual containers from said plurality of containers (50); and sequentially conveying said individual containers (50) through a processing station (1; 61). In the processing station (1; 61), the individual containers (50) are rotated about a longitudinal axis thereof while outer surfaces of the cylindrical main bodies (52) are in contact with a scrubbing member (27; 30, 35), for reducing an adhesive surface behavior of the outer surfaces of the cylindrical main bodies (52) of the individual containers. In this manner the surface properties of glass containers may be enhanced significantly with a cost-efficient and simple processing to thereby prevent undesired 'stickiness behavior' of the glass containers.



21: 2019/07525. 22: 2019-11-13. 43: 2021-12-08 51: A61K; A61P 71: H. LUNDBECK A/S 72: WINDFELD, KRISTIAN 33: DK 31: PA201700313 32: 2017-05-24 33: DK 31: PA201700538 32: 2017-09-29 54: COMBINATION OF A 5-HT6 RECEPTOR ANTAGONIST AND AN ACETYLCHOLINESTERASE INHIBITOR FOR USE IN THE TREATMENT OF ALZHEIMER'S DISEASE IN A PATIENT SUBPOPULATION CARRYING APOE4 ALLELES 00: -

The present invention relates to 5-HT<sub>6</sub>receptor antagonists for use in the treatment of Alzheimer's disease, wherein the Alzheimer's disease patient carries one or two ApoE4 alleles, comprising administering an effective dose of a 5-HT<sub>6</sub>receptor antagonist to improve or augment the effect of an acetylcholinesterase inhibitor. 21: 2019/08036. 22: 2019-12-03. 43: 2022-01-17 51: A01G

71: LONGNAN GREEN GARDEN SUPPLIES CO., LTD.

72: Pingzhong, WU, De, YUE

33: CN 31: 201811476490.7 32: 2018-12-05 54: MOUNTAIN LAND FRUIT TREE PLANTING SYSTEM AND PLANTING METHOD THEREOF 00: -

A mountain land fruit tree planting system comprising an insect-proof net capable of covering fruit trees, a grass-proof cloth and a mountain land track transportation system, wherein the insect-proof net can cover the upper surface and the periphery of an orchard, and the grass-proof cloth of the mountain land fruit tree planting system can cover the ground of the orchard; the mountain land track transportation system is transversely provided with a horizontal track in the orchard and a trolley capable of running on the horizontal track; the mountain land track transportation system comprises a slope track and a tractor, wherein the tractor is provided with a horizontal hanging bracket with the bottom being kept horizontal; the mountain land fruit tree planting system of the present invention can prevent pests like psyllids from entering fruit trees so that yellow shoot disease can be effectively prevented; the trolley can be kept horizontal when transporting fruits or production tools; as the trolley no longer tilts backwards during the process of going up and down a mountain, the fruits can be protected from falling off or being damaged, bringing convenience to farmers and enhancing the transportation efficiency.



21: 2019/08037. 22: 2019-12-03. 43: 2022-01-17 51: B60M

71: LONGNAN GREEN GARDEN SUPPLIES CO., LTD.

72: Pingzhong, WU, De, YUE

33: CN 31: 201811476506.4 32: 2018-12-05 54: MOUNTAIN LAND TRACK TRANSPORTATION SYSTEM

00: -

A mountain land track transportation system, which relates to the technical field of mountain land agricultural transportation, comprising a slope track and a tractor, wherein the tractor is provided with a horizontal hanging bracket with its bottom being kept horizontal; the mountain land track transportation system is provided with a driving system, and the tractor is driven by the driving system to run on the slope track; the mountain land track transportation system further comprises a horizontal track and a trolley capable of running on the horizontal track; a trolley accommodating device is arranged at the bottom of the horizontal hanging bracket, and a positioning device capable of being connected with the trolley accommodating device is arranged on the horizontal track; according to the present invention, the trolley can be kept horizontal so that the technical problem in the prior art can be solved; as the track trolley no longer tilts backward during the process of going up and down, the fruits can be protected from falling off or being damaged and the mechanization degree of the mountainous orchard

management can be improved, bringing convenience to farmers and enhancing the transportation efficiency.



21: 2020/00139. 22: 2020-01-09. 43: 2022-01-10 51: B62B

71: BABYZEN

72: CHAUDEURGE. Jean-Michel

33: FR 31: 1900316 32: 2019-01-14

33: FR 31: 1909819 32: 2019-09-06 54: STROLLER ACCESSORY AND DOUBLE STROLLER ASSEMBLY

00: -

This stroller accessory, which is connectable to a stroller to form a double stroller together, includes a frame, a connection mechanism for reversibly connecting the accessory to the stroller while defining a tilting axis around which the front part of the frame of the accessory and the rear part of the frame of the stroller tilt freely relative to one another, two wheels coupled to a rear part of the frame so as to pivot, a pushing member borne by the rear part of the frame, a control mechanism for controlling a rolling blocking of the double stroller, borne by the front part of the frame and suitable, when the accessory is connected to the stroller by the connection mechanism, for cooperating mechanically with a rolling blocking system, integrated into the stroller, so as to control this

blocking system, and an actuating member, which is coupled to the control mechanism



21: 2020/00596. 22: 2020-01-29. 43: 2021-11-25 51: B65G; F16C

71: INDUSTRIA METALMECANICA RIVET S.A. 72: CELEDON VALENZUELA, Enrique, CELEDON FERNANDEZ, Jaime

33: WO 31: PCT/CL2018/050010 32: 2018-02-16 54: SEAL FOR PREVENTING CONTAMINATION FROM ENTERING A ROLLER BEARING 00: -

The invention relates to a seal for preventing contamination from entering roller bearings used in conveyor belts. The seal comprises a labyrinth seal formed by four structural bodies: a first body is a front cover; a second body is an exterior adjustment rotor; a third body is an electronic container formed by two parts, namely, a support base and a cover; and a fourth body consists of an internal protection cover, wherein the front cover is attached to a shaft of the roller. At the level of the ends of the roller casing, from an exterior corner of the front cover, emerges an edge, which together with a structured housing containing the labyrinth seal, forms a first containment chamber.



21: 2020/01471. 22: 2020-03-09. 43: 2022-01-20 51: B61L; G01D 71: THALES MANAGEMENT & SERVICES DEUTSCHLAND GMBH 72: Kai SCHICKER, Kassen OLDEWURTEL, Rainer KLEMM, Florian MUSCHAWECKH, Lars HOFFMANN 33: EP 31: 17192644.7 32: 2017-09-22 54: STRAIN GAUGE ASSEMBLY,

# PARTICULARLY FOR AN AXLE COUNTER 00: -

The invention relates to a strain gauge arrangement (1), in particular for an axle counter (91), comprising at least one strain sensor element (5), in particular an optical fibre (6) having a fiber Bragg-grating (6a, FBG), a carrier (2) on which the strain sensor element (5) is secured, and a structure (4) that is to be monitored, in particular a railway line, on which the carrier (2) is secured. At least one part of the carrier (2) is maintained in an elastically deformed state by the structure (4) when the carrier (2) is secured to the structure (4). The invention is characterized in that the carrier (2) is formed from a first carrier piece (T1) and a second carrier piece (T2), which lie opposite one another at a distance from one another, and in that the strain sensor element (5) comprises at least one first fixing point (7) which is fixed to the first carrier piece (T1), and at least one second fixing point (8) which is fixed to the second carrier piece (T2), and a middle section (5a) mounted between the fixing points (7, 8) which are not fixed to either the first or to the second carrier piece (T1, T2). The invention provides a strain gauge arrangement which is simple to handle and in which a drop can be reliably detected and a strain state of the strain sensor element can be predetermined more easily.



21: 2020/02312. 22: 2020-05-04. 43: 2022-01-17 51: B23K; B32B; C22C

71: ARCELORMITTAL

72: Quentin BERNARDI, Tuan A. MAI, Nicolaas VAN DER BORGHT

#### 54: METHOD FOR PRODUCING A PRECOATED STEEL SHEET AND ASSOCIATED SHEET 00: -

Method for producing a precoated steel sheet (1) comprising the steps of: - providing a precoated steel strip comprising a steel substrate carrying, on at least one of its faces, a precoating, the precoating comprising an intermetallic alloy layer and a metallic alloy layer extending atop the intermetallic alloy layer, the metallic alloy layer being a layer of aluminum, a layer of aluminum alloy or a layer of aluminum-based alloy; - laser cutting said precoated steel strip so as to obtain at least one precoated steel sheet (1), said precoated steel sheet (1) comprising at least one cut edge surface (13), the cut edge surface (13) comprising a substrate region (14) and a precoating region (15) and the thickness of the precoated steel sheet (1) being comprised between 1 mm and 5 mm. The laser cutting is carried out such that it results directly in a reducedaluminum zone (20), extending over the entire height (h) of the cut edge surface (13) and over a length smaller than or equal to the length thereof, the surface fraction of aluminum on the substrate region (14) of the reduced-aluminum zone (20) directly resulting from the laser cutting operation being comprised between 0.3% and 6%.



21: 2020/03567. 22: 2020-06-12. 43: 2021-11-29 51: A01K; A61D 71: WTA - WATANABE TECNOLOGIA APLICADA EIRELE – EPP 72: YOSHIME WATANABE, OSNIR 33: BR 31: BR 10 2017 026941 8 32: 2017-12-14 54: AUTOMATICALLY ADJUSTABLE DEVICE FOR AFFIXING TO THE NOSE OF ANIMALS 00: -

The invention relates to an automatically adjustable device (20, 30) for affixing to the noses of animals, which may be used simultaneously for administering medicinal or non-medicinal substances and/or for capturing and transmitting information about the animal by means of onboard sensors, the device (20, 30) being composed of a flexible support body (2, 2') and a pair of adjustable members (1, 1') that are connected by a system of swivel joints (3, 3'), allowing the articulation of the members in all directions. The system of swivel joints (3, 3') enables the adjustable members (1, 1') to automatically adjust to the wall of the nasal septum of each animal, which affords greater comfort and offers a larger area of contact between the face of the adjustable members (1, 1') of the device (20, 30) and the nasal mucous membrane of the animal.



21: 2020/04013. 22: 2020-07-01. 43: 2022-01-17 51: A61J 71: FOUCHE, HENDRIK S V D M

72: FOUCHE, HENDRIK S V D M

# 54: HYGIENIC DEVICE FOR CONTAINER 00: -

The invention relates to a hygienic device for a container, wherein the device comprises of a body being shaped and configured to be mounted to a container so as to at least partially obscure an opening thereof and wherein the body further has a passage through which items dispensed from a dispensing means passes into the opening of the container when so mounted; and wherein the passage and body being further shaped and configured to inhibit the passage of pathogens into the container when so mounted.



21: 2020/04566. 22: 2020-07-23. 43: 2022-01-10 51: A01N; A01P

71: BUCKMAN LABORATORIES INTERNATIONAL, INC.

72: BUYONDO, John P., REED, Mark L., JANSE, Bernard

33: US 31: 62/623,628 32: 2018-01-30

# 54: SYNERGISTIC COMBINATIONS OF MONOCHLORAMINE AND ORGANIC ACID, AND METHODS OF USING THE SAME FOR MICROBIAL CONTROL

00: -

Methods for controlling the growth of microorganisms in or on a product, material, or medium, such as a fermentable or fermenting medium, susceptible to attack by a microorganism, by treating with aqueous solution comprising monochloramine and at least one organic acid in a synergistically microbicidally effective combined amount to control unwanted microbial growth. Microbicidal aqueous solutions containing monochloramine and at least one organic acid in a synergistically microbicidally effective combined amount to control the growth of at least one microorganism are also described.



21: 2020/04617. 22: 2020-07-27. 43: 2022-01-17 51: B05B

71: HENNINGS, CRAIG ANTHONY 72: HENNINGS, CRAIG ANTHONY 54: SPRINKLER HOUSING 00: -

The present invention relates to a sprinkler housing for supporting, protecting and providing access to a sprinkler wherein the housing has a body, wherein said body defines walls and a bottom for housing a sprinkler, wherein the bottom has an internal receiving formation connected thereto for receiving a fluid, wherein the walls have a receiving formation for receiving a lid, and wherein the lid has a central aperture for allowing a nozzle of the sprinkler to protrude therethrough when the sprinkler is actively dispensing fluid.



21: 2020/04955. 22: 2020-08-11. 43: 2022-01-20 51: A61B

71: PROSYS INTERNATIONAL LIMITED 72: NOE, Gunter 33: GB 31: 1801892.9 32: 2018-02-06

# 54: SURGICAL TOOL

00: -

A surgical tool (1) for laparoscopic insertion into a subject (13), the tool being expandable from a smaller collapsed configuration to a larger deployed configuration, the tool comprising an extendable barrier (5), and an expandable support (3) that is coupled to the barrier (5); wherein expansion of said support (3) extends said barrier (5).



21: 2020/04981. 22: 2020-08-12. 43: 2022-01-10 51: A01G 71: INTERNATIONAL PLANT PROPAGATION

TECHNOLOGY LTD 72: COOLEY, John 33: GB 31: 1801097.5 32: 2018-01-23 54: PLANT-GROWING TRAY

#### 00: -

A plant-growing tray (102) comprises an array of cells (108) for containing stabilised media for propagating plants. The tray comprises a tray top (110), and each cell comprises a base (116) and an inclined side wall (114) extending from the base to the tray top. Each cell is configured to receive a stabilised medium, and comprises a plurality of projections (123), positioned around the side wall and facing into the cell, and a plurality of openings (125) defined in the side wall below the projections. The projections (123) are configured in use to support an upper portion of the stabilised medium. In a further aspect, a plant-growing tray for containing stabilised media for propagating plants is configurable in a nesting configuration with a similar tray, and comprises: a tray base configured to support a base portion of a stabilised medium; a support member, configured to support an upper portion of the stabilised medium; and an inclined tray wall connecting the support member to the tray base.



21: 2020/05029. 22: 2020-08-05. 43: 2022-01-10

51: A61K; C07D; A61P

71: SABRE THERAPEUTICS LLC

72: HUTCHINSON, John Howard, LONERGAN, David

33: US 31: 61/907,965 32: 2013-11-22

33: US 31: 62/038,121 32: 2014-08-15

54: AUTOTAXIN INHIBITOR COMPOUNDS 00: -

Described herein are compounds that are autotaxin inhibitors, methods of making such compounds, pharmaceutical compositions and medicaments comprising such compounds, and methods of using such compounds in the treatment of conditions, diseases, or disorders associated with autotaxin activity.

21: 2020/05148. 22: 2020-08-19. 43: 2022-01-10
#### 51: A61M

# 71: NEW MEDTEK DEVICES PTY LTD 72: LUBOWSKI, David Zachary, TILLER, Robert 33: AU 31: 2018900653 32: 2018-02-28 54: METHOD AND APPARATUS FOR RECTAL ANAESTHESIA

00: -

A system and method for delivering a medicament to a target tissue site in a patient over a period of time. A catheter is configured for implantation in different target tissue sites and extends from a proximal end to a distal end and has a sidewall which defines an internal lumen. The distal end has one or more apertures either in the sidewall or at a distal end for the release of the medicament into the target tissue site; the system also comprises a medicament reservoir fluidly communicable with the internal lumen of each catheter, an adhesive member configured to adhere to the skin of the patient around the exit wound and having an opening therein to allow the catheters to pass through the adhesive member and a retaining member configured to be overlaid on the adhesive member and comprising a guide surface configured to receive a length of the two or more catheters and a plurality of retaining portions to retain the catheters against the guide surface.



21: 2020/05175. 22: 2020-08-20. 43: 2022-01-17 51: G06F

- 71: OPERR TECHNOLOGIES, INC.
- 72: WANG, Kevin, Sunlin 33: US 31: 62/621,988 32: 2018-01-25
- 33: US 31: 16/026,996 32: 2018-07-03

#### 54: SYSTEM AND METHOD FOR A CONVERTIBLE USER APPLICATION 00: -

Provided is a convertible software application management system for a shared data-access layer in a distributed structure system linked to a database for customizable data processing at least in the transportation, home healthcare, hotel, e-commerce, delivery, and other goods and / gold service industries. Provided is a dispatching service provider (DSP) application for dispatching objects of service companies to provide an efficient mobile app to promote a cooperative relationship between a DSP and service companies using white label apps and a streamlined / efficient dispatching system. Customers only need to download or use a single mobile app to access service providers from a plurality of service companies, white label companies, and / or a DSP, all using the same dispatch software



21: 2020/05233. 22: 2020-08-21. 43: 2022-01-20 51: A61K

- 71: PANOPTES PHARMA GES.M.B.H.
- 72: SPERL, Stefan, OBERMAYR, Franz
- 33: EP 31: 18160981.9 32: 2018-03-09

**54: OPHTHALMIC FORMULATION** 00: -

The present invention provides an ophthalmic composition comprising an active pharmaceutically compound non-covalently bound to albumin. The composition of the present invention is useful for treatment of ophthalmic diseases and disorders.

21: 2020/05258. 22: 2020-08-24. 43: 2022-01-10 51: D21H 71: BUCKMAN LABORATORIES INTERNATIONAL, INC.

#### 72: TAN, Jian, GLOVER, Daniel E. 33: US 31: 62/646,419 32: 2018-03-22 54: MODIFIED CREPING ADHESIVE FORMULATION AND CREPING METHODS USING SAME 00: -

A modified creping adhesive formulation is described that includes at least one creping adhesive, and modifier, wherein the modifier is or includes an emulsion of polypropylene glycol, at least one quaternary ammonium compound, and at least one non-ionic surfactant. The present invention is directed to the modifier itself as well. Methods of creping using the formulation are also described.



21: 2020/05298. 22: 2020-08-20. 43: 2022-01-20 51: C07K

71: CHECKMATE PHARMACEUTICALS, INC.

- 72: KRIEG, Arthur M.
- 33: US 31: 62/098,568 32: 2014-12-31
- 33: US 31: 62/106,526 32: 2015-01-22
- 33: US 31: 62/118,165 32: 2015-02-19

# **54: COMBINATION TUMOR IMMUNOTHERAPY** 00: -

Provided are methods for treating cancer using local administration of certain CpG oligonucleotides (CpG ODN) and systemic administration of a checkpoint inhibitor such as an anti-PD-1 antibody, an anti-PD-Ll antibody, and/or an anti-CTLA-4 antibody. In preferred embodiments, the CpG ODN are selected based on their propensity to induce high amounts of interferon alpha (IFN-a) and T-cell activation relative to interleukin-10 (IL-10) and B-cell activation. In certain embodiments, the methods further include pretreatment with radiotherapy, to potentiate the combination immunotherapy.



21: 2020/05320. 22: 2020-08-26. 43: 2022-01-10 51: A61K; C07K 71: EQUILLIUM, INC. 72: CONNELLY, Stephen, NG, Cherie 33: US 31: 62/636,092 32: 2018-02-27 54: ANTI CD6 ANTIBODIES FOR TREATING SEVERE ASTHMA 00: -

The disclosure provides compositions and methods related to treating, ameliorating, and preventing asthma, and in particular steroid resistant or refractory severe asthma, with an anti-CD6 antibody, itolizumab, or an antigen binding portion thereof, alone or in combination with other agents useful in treating asthma.



- 21: 2020/05414. 22: 2020-08-31. 43: 2022-01-20
- 51: A61K; C07K; C12N
- 71: BIOLOGICAL E LIMITED
- 72: SRIRAMAN, Rajan, MATUR, Ramesh Venkat,

MANTENA, Narender Dev, DATLA, Mahima, KAMIREDDY, Swetha 33: IN 31: 201841007814 32: 2018-03-01 54: EXPRESSION OF PNEUMOCOCCAL

#### SURFACE PROTEIN A (PSPA) 00: -

The present invention relates to expression of Pneumococcal Surface Protein A (PspA). The invention represents an advancement in the field of genetic engineering and vaccine technology. The invention discloses expression vectors and recombinant host cells for expression of truncated PspA peptide. The invention also discloses vaccine compositions comprising the truncated peptides as carrier protein.

21: 2020/05446. 22: 2020-08-31. 43: 2022-01-20 51: F25B

71: SUNAMP LIMITED

72: BISSELL, Andrew John, OLIVER, David, MCCAHEY, Andrew William, ZAGLIO, Maurizio 33: GB 31: 1803841.4 32: 2018-03-09 54: A VAPOUR COMPRESSION APPARATUS 00: -

The present invention describes a vapour compression apparatus wherein an intermediary located heat battery is capable of releasing charge (i.e. discharging) and/or charging and thereby controlling the temperature of a heat source or heat sink temperature in a vapour compression cycle. More particularly, the present invention describes vapour compression apparatus wherein an intermediary located heat battery comprising Phase change material (PCM) is capable of releasing charge (i.e. discharging) energy and/or charging and thereby controlling the temperature of a heat source and/or heat sink temperature in a vapour compression cycle in a range of refrigeration and/or heating systems including: air conditioning in both domestic and industrial uses; transportation of food/materials in vehicles, trains, air, etc. The present invention also relates to a methodology for selecting phase change materials (PCMs) and/or refrigerants for a vapour compression apparatus.



21: 2020/05452. 22: 2020-09-01. 43: 2022-01-10 51: E21B

71: ODFJELL PARTNERS INVEST LTD 72: HENDERSON, Scott, RANKIN, Greg, DSOUZA, Johnson

33: GB 31: 1802223.6 32: 2018-02-12 54: DOWNHOLE CLEANING APPARATUS 00: -

Disclosed herein is a downhole cleaning apparatus and a method of cleaning a wellbore. The downhole cleaning apparatus has a body and a cleaning element coupled to the body. The cleaning element is selectively moveable in relation to the body from a retracted position to an extended position. When the cleaning element is in the retracted position it is retained by retention formations internal to the tool that are coupled together. The retention formations can be slideably released from one another to enable the cleaning element is able to move to the extended position. The force required to slideable release the retention formations exceeds any forces encountered when the apparatus is run in, preventing premature extension of the cleaning element.



### 21: 2020/05719. 22: 2020-09-15. 43: 2022-01-20 51: G01N

#### 71: AEGIRBIO AB

72: SRIVASTAVA, Sudha, SAXENA, Rahul 33: IN 31: 201811012008 32: 2018-03-29 54: AN IMPROVED ELECTRODE FOR ELECTROCHEMICAL DEVICE 00: -

The present disclosure is on a premise that the inventors of the present disclosure surprisingly observed that an electrode attached with graphenepolypyrrole based nano-composites can significantly improve the conductivity of the electrode, which in turn can significantly improve limit of detection (LOD) of the electrochemical device enabling quantitative detection of biological target in a sample to the tune of 0.5 fg/mL. Accordingly, an aspect of the present disclosure relates to an improved electrode for an electrochemical device, the electrochemical device capable of detecting a biological target in a sample, wherein at least part of a surface of the electrode is attached with a graphene-polypyrrole based composite, and wherein the graphene-polypyrrole based composite is attached with at least one biological targeting moiety. Aspects of the present disclosure also provide a method of the fabrication of the advantageous electrode of the present invention, an electrochemical device including the advantageous electrode and method of detection of a biological target.



21: 2020/05780. 22: 2020-09-17. 43: 2022-01-20 51: B07B 71: METSO OUTOTEC FINLAND OY 72: KYKYRI, Tommi, SALO, Lasse 33: FI 31: 20180063 32: 2018-05-08 54: MOBILE SCREEN BODY AND MOBILE MINERAL MATERIAL PROCESSING PLANT WITH SUPPORT LEGS

#### 00: -

A mobile screen body and a mobile mineral material processing plant are disclosed having: a platform frame (110); a plurality of legs (119) for supporting the platform frame (110) to ground; a screen support frame (120) supported by the platform frame (110) movably between a transport position in which the screen support frame (120) is adjacent to the platform frame and an operating position in which the screen support frame (120) is elevated from the transport position; and a plurality of supports (114, 114') having first ends (114a) configured to be structurally coupled with the screen support frame (120), and second ends (114b) configured to be structurally coupled with respective ones of the plurality of legs (112), when the screen support frame (120) is in the operating position. The supports (114) are arranged in pairs that reside outside the platform frame (110) in sideways direction.



21: 2020/05901. 22: 2020-09-23. 43: 2022-01-17 51: A47C

- 71: BOSHOFF, Lizhan
- 72: Boshoff, Lizhan

33: ZA 31: 2018/01970 32: 2018-03-26 54: ORTHOPEDIC BABY SEAT

00: -

The invention relates to an orthopedic baby seat. The seat comprises a relatively inflexible base, having a substantially triangular planar cushion, of a resiliently flexible, support material, the cushioned base tapering towards a front end to provide a substantially fish-tail shaped planar configuration. The base is suitably dimensioned and configured to receive and support a baby's bottom thereon. The seat further comprises a back support, extending upwardly from and at least partially around the base, in a substantially C-formation and to a height of at least to the bottom of the baby's ribcage, with the opening of the C-formation directed towards the front of the seat. The back support comprises at least one layer of at least partially flexible sheet material, having a number of spaced, upwardly extending retaining formations, and a number of elongated battens, retained by the retaining formations and extending longitudinally upwardly from the base, providing a substantially rigid, vertically, and flexible, laterally, support to a baby occupying the seat. The seat also comprises two opposing leg openings, extending outwardly from the base, and two opposed, cushioned thigh support formations, separating the base from the two leg openings and dimensioned and configured to allow the hips to fall and spread naturally apart to the side, with the thighs at least partially supported towards the knee joints and the hips and knees bent, allowing the legs

to spread outwardly in a supported manner while moving relatively freely in the seat.



21: 2020/06175. 22: 2020-10-05. 43: 2021-07-14 51: A61N

71: APPLIED BIOPHOTONICS LTD, WILLIAMS, Richard, K.

72: WILLIAMS, Richard, K, LIN, Keng-Hung, WILLIAMS, Laura, E

33: US 31: 62/653,846 32: 2018-04-06 54: DISTRIBUTED PHOTOBIOMODULATION THERAPY SYSTEM AND METHOD 00: -

A phototherapy system includes a channel driver, a first microcontroller and a pad comprising a string of light-emitting diodes (LEDs). The pad also comprises a second microcontroller that autonomously controls the string of LEDs such that the LEDs are controlled even if communication between the first microcontroller and the pad is interrupted.



21: 2020/07102. 22: 2020-11-13. 43: 2021-12-10 51: C12M

71: LANZATECH, INC.

72: CONRADO, ROBERT, SIMPSON, SEAN, MIHALCEA, CHRISTOPHE 33: US 31: 62/660,298 32: 2018-04-20

54: INTERMITTENT ELECTROLYSIS STREAMS 00: -

The invention provides for methods by which the economics of the gas fermentation process are improved. The invention provides for the integration of a fermentation process, with an industrial process and an electrolyzer process. The invention provides for the intermittent supply of electrolyzer feedstock from the electrolyzer process to the bioreactor for fermentation. The electrolyzer feedstock may displace at least a portion of the C1 feedstock from the industrial process. The electrolyzer feedstock may supplement the C1 feedstock from the industrial process. Whether or not the electrolyzer feedstock supplements or displaces the C1 feedstock with electrolyzer feedstock may be based upon a function of the cost per unit of the C1 feedstock, the cost per unit of the electrolyzer feedstock, and the value per unit of the fermentation product.



21: 2020/07230. 22: 2020-11-19. 43: 2021-12-10 51: B01D; B01J

71: ANHUI UNIVERSITY OF TECHNOLOGY 72: LONG, HONGMING, YU, ZHENGWEI, ZHANG, HONGLIANG, SHI, QI, WANG, PING, CHUN, TIEJUN, MENG, QINGMIN, LI, ANQI, GAO, ZHIFANG, DI, ZHANXIA 33: CN 31: 201810361856.X 32: 2018-04-20

# 54: METHOD FOR REDUCING EMISSION OF NITROGEN OXIDES AND DIOXINS OF SINTERING FLUE GAS ON BASIS OF CERIUM-BASED CATALYST

00: -

A method of the present invention for reducing the emission of nitrogen oxides and dioxins of sintering flue gas on the basis of a cerium-based catalyst, relating to the technical field of sintering flue gas treatment. The flue gas of the present invention passes through an emission reduction device that is loaded with a cerium-based catalyst, and NH<sub>3</sub>and air are blown into the emission reduction device, wherein the cerium-based catalyst comprises Ce:Mn and Fe, the molar ratio of Ce:Mn is 0.25-1, and Fe is an auxiliary agent; the molar ratio of the added ratio range Fe:Mn is 0.25-0.5, and the specific surface area of the catalyst is 80-90m<sup>-2</sup>/g; the catalyst has a pore volume of 0.16-0.20cm<sup>-3</sup>/g and a pore diameter of 5.0-6.0nm. The present invention reduces the emission of pollutants of sintering flue gas by means of a cerium-based catalyst, improves the removal efficiency of dioxins and nitrogen oxides, and may reduce the emission of dioxins and nitrogen oxides in the flue gas.



21: 2020/07464. 22: 2020-11-30. 43: 2021-12-08 51: E02B; E02D; E21C 71: CHINA UNIVERSITY OF MINING AND TECHNOLOGY, XUZHOU TIANLUZHONGKUANG MINING TECHNOLOGY CO., LTD 72: CHEN, SHUZHAO, HAN, LIU, XIAO, CANGYAN, SHANG, TAO

# 33: CN 31: 2019105357107 32: 2019-06-20 54: A METHOD FOR CONSTRUCTING INNER DUMP OPEN-PIT MINE BOTTOM RESERVOIRS SECTION BY SECTION

00: -

The present invention discloses a method for constructing inner dump open-pit mine bottom reservoirs section by section, specifically including the following steps: S1: processing end slopes: discarding clay at the lowest steps of an inner dump in an open-pit mine, so as to form a dump isolation layer; S2: discharging concrete to slope faces of the lowest steps of two end slopes in the bottom, so as to form an end slope isolation layer; S3: sealing the bottom, so as to form a bottom isolation layer; S4: discarding gravel into the bottom of open-pit mine; S5: laying geotextile, so as to form a roof isolation layer, and complete capping; S6: re-adopting clay at the lowest step of an inner dump in an open-pit mine, so as to form a reservoir-sealing isolation layer; S7: constructing more reservoirs step by step in the advancing direction of open-pit mine; S8: completing installation of water storage wells to store water resource; S9: completing installation of water fetching wells; S10: storing water resource. The method of present invention achieves deep in-situ storage of water resource and provides water resource guarantee for environmental governance of open-pit mine.



21: 2021/00291. 22: 2021-01-15. 43: 2021-11-29 51: G06F

71: International Business Machines Corporation 72: AKHALWAYA, Ismail Yunus, KHAN, Naweed Aghmad, LUUS, Francois Pierre, MAKONDO, Ndivhuwo, RIEGEL, Ryan, GRAY, Alexander 33: US 31: 17/039,133 32: 2020-09-30 54: WORD SENSE DISAMBIGUATION USING A DEEP LOGICO-NEURAL NETWORK 00: -

Word sense disambiguation using a glossary layer embedded in a deep neural network includes receiving, by one or more processors, input sentences including a plurality of words. At least two words in the plurality of words are homonyms. The one or more processors convert the plurality of words associated with each input sentence into a first vector including possible senses for the at least two words. The first vector is then combined with a second vector including a domain-specific contextual vector associated with the at least two words. The combination of the first vector with the second vector is fed into a recurrent deep logico-neural network model to generate a third vector that includes word senses for the at least two words. A threshold is set for the third vector to generate a fourth vector including a final word sense vector for the at least two words.



21: 2021/00431. 22: 2021-01-20. 43: 2022-02-03

- 51: B66F
- 71: Derek John Gordon
- 72: Derek John Gordon

#### 33: ZA 31: 2018/05169 32: 2018-08-01 54: SCISSOR JACK 00: -

In general, a scissor jack is described. A typical embodiment includes four arms (4) hingedly arranged to provide two opposite elbows between a base (10) and a load support (11), a pair of trunnions (2, 2.1), one at each elbow connected by a partially threaded shaft (12) with one end of the shaft rotatably engaged in the threaded trunnion (2.1) to extend beyond the outer corner of the elbow. Located on the shaft and between the outer two trunnions is an assembly comprising a pair of levers (3) pivotally assembled on a third trunnion (5) which forms the one end of a double yoke (1) comprising two rods slideably passing through the outer trunnnion (2) and beyond the elbow. In contact with and operating against the inner trunnion (5) is a thrust bearing (9) fixed in position on the shaft by means of a flange. Springs (6) are attached to individual levers and the corresponding arms for alignment purpose. Fully collapsed the angle of operation of the first stage of the lever in contact with the pivot point (8) is such that it simulates the same optimum angle of a typical scissor jack at approximately 75% of it's range. Once the first stage of the lever is fully extended the second stage takes over at pivot point (7) when it is again at the optimum angle. Once the second stage of the lever is fully extended, the jack itself is in an optimum height for further lifting. Thus the jack is able to utilise the full extent of it's range of motion.

21: 2021/00512. 22: 2021-01-25. 43: 2021-12-08 51: A61K

71: Dr. Falk Pharma GmbH 72: WILHELM, Rudolph, PRÖLS, Markus, GREINWALD, Roland, NACAK, Tanju, BÖGERSHAUSEN, Ansgar 33: EP(DE) 31: 18190638.9 32: 2018-08-24 54: PELLETS HAVING A MULTI-LAYER STRUCTURE FOR DELAYED RELEASE OF THE ACTIVE SUBSTANCE IN THE DISTAL COLON 00: -

An optimized pharmaceutical formulation for the treatment of inflammatory diseases of the colon is disclosed, wherein the pharmaceutical formulation is a capsule containing pellets, which capsule is suitable for oral administration and delivers the active substance in a targeted manner to the site of action, namely the colon. This is achieved by a complex and multiple coating of pellets, which permit a modified release of active substance. The release of the active substance is at its maximum only in the colon, with at the same time low blood plasma levels. The results of the pharmaceutical tests concerning in vitro release are corroborated by the results in pharmacokinetic and clinical studies and the clinical efficacy demonstrated by these. The formulation according to the invention has very good medicinal safety.

#### 21: 2021/00695. 22: 2021-02-01. 43: 2022-01-31 51: C09D; F04D

71: Hanjiang Hongyuan Xiangyang Silicon carbide special ceramics Co. LTD

72: Qiunan Li, Kai Liu, Huimin Wang, Jing Chen, Tao Huang, Baimei Yang, Yu Xing, Zaiyong Li, Xiaofeng Yu, Hongfei Zhao, Honggang Wang, Shuai Pan, Lijun Zhang, Jun Jia, Zhengkun Hu 33: CN 31: 201910571704.7 32: 2019-06-28 54: SLURRY PUMP CAPABLE OF RESISTING ACIDIC AND HIGH-TEMPERATURE ENVIRONMENT, AND PRODUCTION METHOD THEREFOR

#### 00: -

A slurry pump capable of resisting an acidic and high-temperature environment, comprising a housing (1), a front protective plate (2), an impeller (3), and a rear protective plate (4). Each of the housing (1), the front protective plate (2), the impeller (3), and the rear protective plate (4) comprises metal bodies (a), ceramic layers (b), and silicon carbide composite adhesive layers (c) positioned therebetween; the volume density of the silicon carbide composite adhesive layer (c) is 2.65-2.9 g/cm3; the outer surfaces of the metal bodies (a) and the inner walls of the ceramic layers (b) facing the metal bodies (a) are provided with treatment layers; each treatment layer comprises the following components in parts by mass: 20-40 parts of silicon carbide powder less than 200 meshes, 60-80 parts of vinyl ester resin, 0.1-0.5 part of an accelerant, 0.5-1 part of a curing agent, 0.2-0.5 part of a defoaming agent, 0.2-0.5 part of a flatting agent, and 1-2 parts of a coupling agent. The slurry pump is applicable to different working conditions.



21: 2021/00696. 22: 2021-02-01. 43: 2022-01-07 51: B03C

71: MICHAEL JOHN FLANAGAN, RORY MICHAEL FLANAGAN

72: MICHAEL JOHN FLANAGAN

33: ZA 31: 2019/01683 32: 2019-03-19

54: MATERIAL FEED PROCESS AND ASSEMBLY FOR A ROTARY MAGNETIC SEPARATOR 00: -

The invention provides a material feed process for magnetically separating magnetic and non-magnetic particles from a material feed by means of a magnetic roller separator wherein the process is characterised therein that particle separation is independent of centrifugal force, and where the process can equally well be applied to both wet and dry particle separation. The process specifically provides feeding the particles at an incident zone above the horizontal axis centre line, and separating the magnetic and non-magnetic particles at opposite rotational sides of the roller.



21: 2021/00767. 22: 2021-02-03. 43: 2021-12-08 51: C12C; C12H 71: Heineken Supply Chain B.V. 72: GERNAT, Deborah Casandra, BROUWER, Eric Richard, OTTENS, Marcel 54: NON-ALCOHOLIC FERMENTED BEER HAVING IMPROVED FLAVOUR 00: -

The invention provides a process of producing a non-alcoholic beer comprising the steps of: • fermenting the wort with live yeast to produce a fermented wort; · subjecting the fermented wort to one or more further process steps to produce a nonalcoholic beer; and • introducing the non-alcoholic beer in a sealed container; wherein either the fermentation produces a non-alcoholic fermented wort or wherein the fermentation produces an alcoholic fermented wort and alcohol is subsequently removed to produce a non-alcoholic fermented wort or a non-alcoholic beer; and wherein the heated wort, the non-alcoholic fermented wort and/or the non-alcoholic beer is contacted with a hydrophobic silicate-based molecular sieve. Flavour substances contributing to undesirable flavour notes in nonalcoholic beer can be removed effectively during production by contacting wort before or after fermentation with a hydrophobic silicate-based molecular sieve, provided the wort contains virtually no alcohol.

21: 2021/00781. 22: 2021-02-04. 43: 2021-11-25 51: A43B; D04B

71: Lonati S.p.A.

72: LONATI, Ettore, LONATI, Fausto, LONATI, Francesco

33: IT 31: 102018000007798 32: 2018-08-03 54: METHOD FOR PROVIDING BLANKS FOR THE PRODUCTION OF INSHOES, FOOTLETS, NO-SHOW SOCKS, SHOES OF THE LIKE WITH DOUBLE LAYERS, WITH A CIRCULAR HOSIERY KNITTING MACHINE, AND INTERMEDIATE MANUFACTURE OBTAINED WITH THE METHOD 00: -

A method for providing intermediate manufactures for the production of manufactures such as an inshoe, footlet, no-show sock, shoes or the like with double thickness, with a circular hosiery knitting machine and an intermediate manufacture obtained with the method. The method has the particularity that it comprises at least the following steps: - a step (A) of providing a first tubular portion (2) of knitted fabric by actuating the needle cylinder of the machine with a continuous rotary motion about its own axis in one direction of rotation; - a casting-off step (B), in which a portion (3) of knitted fabric is provided by moving to knit a group of contiguous needles at the at least one feed, actuating the needle cylinder within an alternating rotary motion about its own axis and progressively decreasing the number of needles moved to knit at the at least one feed, excluding, according to a preset sequence, needles located at the lateral ends of the group of needles and retaining, by means of the needles excluded from knitting, the last formed loop of knitting, in order to form first partial rows of knitting; a casting-on step (C), in which a portion (4) of knitted fabric is provided by moving to knit a group of contiguous needles at the at least one feed, actuating the needle cylinder with an alternating rotary motion about its own axis and progressively increasing the number of needles moved to knit at said at least one feed, returning to knit, according to a preset sequence which is the reverse of the sequence of the casting-off step (B), the needles previously excluded from knitting in the casting-off step (B), in 23 order to provide second partial rows of knitting joined with said first partial rows of knitting; - a step (D) of providing a second tubular portion (5) of knitted fabric by actuating the needle

cylinder with a continuous rotary motion about its own axis in one direction of rotation. In the castingoff step (B) and in the casting-on step (C) the respective preset sequences, according to which the number of needles of the group of needles moved to knit is first decreased and then increased, are such as to achieve the joining of the first tubular portion (2) and of the second tubular portion (5) with a lateral portion thereof at the loops of knitting, arranged at the ends of the first partial rows of knitting and of the second partial rows of knitting, formed by the needles previously excluded from knitting in the casting-off step (B) and then returned to knit in the casting-on step (C), with the axes (2a, 5a) of the two tubular portions (2, 5) forming between them an angle that is substantially less than 90°.



- 21: 2021/00909. 22: 2021-02-10. 43: 2021-12-08 51: A23L
- 71: LANXESS Deutschland GmbH
- 72: TAUPP, Marcus, BRODA (Deceased), Ingo
- 33: EP(DE) 31: 18182926.8 32: 2018-07-11

#### 54: PROCESS FOR SANITIZING AND PRESERVING FOODSTUFFS AND BEVERAGES 00: -

The invention relates to a mixture of natamycin and mycosamine and to the use of these mixtures for sanitizing and subsequently preserving foodstuffs and beverages, and to a process for incorporating the claimed mixtures into foodstuffs and beverages.

21: 2021/01012. 22: 2021-02-15. 43: 2021-11-25 51: A61M

71: University of Washington

72: HINDS, Bruce, SHAO, Guozheng

#### 33: US 31: 62/719,549 32: 2018-08-17 54: APPARATUS AND METHOD FOR UREA PHOTO-OXIDATION 00: -

Apparatus and method for photo-chemical oxidation are disclosed herein. In one embodiment, a dialysis fluid regeneration system includes: a nanostructured anode; a source of light configured to illuminate the anode; and a cathode that is oxygen permeable.



21: 2021/01082. 22: 2021-02-17. 43: 2022-01-17 51: B21D; C21D 71: ARCELORMITTAL

# 72: Sadok GAIED

#### 33: IB 31: PCT/IB2018/056841 32: 2018-09-07 54: METHOD FOR IMPROVING THE FORMABILITY OF STEEL BLANKS 00: -

The invention deals with a method to improve the formability of steel blanks 1, for steels containing at least 5% martensite, and possibly some ferrite, bainite and residual austenite and having an ultimate tensile strength of at least 500MPa and possibly having a metallic coating layer 14 on at least one side, wherein the steel blank 1 is heat-treated on at least part of its peripheral thickness 6 using a at least one heat source 16, which heats the steel in a heat-treated zone to a temperature between 400°C and 1500°C without melting the steel in any points of said heat-treated zone 22.



21: 2021/01286. 22: 2021-02-25. 43: 2021-12-08 51: B65D

71: Creanova Universal Closures Ltd.

72: DRUITT, Rodney, SMITH, Mark, DIMOND, James

33: CH 31: 00926/18 32: 2018-07-26 54: CLOSURE

## 00: -

A closure (1) for a liquid container according to the invention comprises a base portion (2) and a top portion (8). The base portion (2) comprises a top deck (3) and an outer skirt (5) extending from an outer end (6) of the top deck (3) in a lower direction away from the top deck (3). The outer skirt (5) comprises a fastening means (7) to interconnect the closure (1) to the container neck. The top deck (3) further has a spout (4) extending in an upper direction away from the top deck (3). The top portion (8) comprises an annular base (9) interconnectable to the base portion (2) and a cover (1 0) having an

outer wall (11). At least one tamper element (13) extends from the annular base (9) in the upper direction above the annular base (9) along the outer wall (11) but spaced a distance apart from said outer wall (11). The tamper element (13) is also initially interconnected to the outer wall (11) by a predetermined breaking linkage (14).



21: 2021/01306. 22: 2021-02-25. 43: 2021-12-08 51: F42D

71: OMNIA GROUP (PROPRIETARY) LIMITED 72: POSTHUMUS, Andries Willem, RORKE, Anthony John

#### 33: ZA 31: 2019/05419 32: 2019-08-16 54: IDENTIFYING POTENTIAL MISFIRES IN AN ELECTRONIC BLASTING SYSTEM 00: -

An electronic blasting system includes a plurality of detonators connected to at least one blaster unit via a wire network. The detonators are, in use, positioned according to a blast design. Prior to firing of the detonators, the system collects or obtains data from a detonator. The system determines whether a charged voltage of the detonator is sufficient to sustain a programmable electronic module of the detonator in a blasting countdown for the duration of a programmed firing time of the detonator so as to permit firing of a fuse head of the detonator at the programmed firing time. If it is determined that the charged voltage is insufficient to sustain the electronic module of the detonator so as to permit firing of the fuse head at the programmed firing time, the system identifies and/or reports a potential misfire in respect of the detonator.



- 21: 2021/01441. 22: 2021-03-03. 43: 2022-01-13 51: G01N
- 71: Qingdao Agricultural University

72: Tian, Xia, Zheng, Qingzhu, Shi, Yanxi 54: APPARATUS FOR DETECTING PHTHALATE ESTER CONTENT IN GASES AND METHOD THEREOF

#### 00: -

The present invention relates to detection equipment and a detection method, in particular to an apparatus for detecting phthalate ester content in gas and method thereof. The apparatus comprises a vacuum pump, an exhaust pipe, a buffer tank, a particle filtering device and adsorption towers, wherein the particle filtering device is connected with the adsorption towers; the adsorption towers are connected with the buffer tank; the vacuum pump is connected with the buffer tank by virtue of the exhaust pipe; a first porous barrier is transversely arranged in the particle filtering device; an activated glass fiber filter is tiled on the first porous barrier; at least one adsorption tower is arranged; a second porous barrier is transversely arranged in each

adsorption tower; stainless steel wire meshes are arranged on the second porous barriers; and adsorbent resins are borne on the stainless steel wire meshes. According to the apparatus disclosed by the invention, the detected concentration is close to real concentration to the greatest degree, the apparatus can adapt to different detection environments, the flow velocity and flow of injection gases can be kept stable, the apparatus is simple in structure, easy to mount and operate, and environmental-friendly, not liable to foreign contamination, without polluting samples or consuming a lot of organic solvents.



21: 2021/01748. 22: 2021-03-16. 43: 2021-12-08 51: E04H

71: Intex Industries Xiamen Co. Ltd.

72: HUANG, Zhi Xiong, TAN, Ai Ming, HSU, Yaw Yuan

33: CN 31: 201821518351.1 32: 2018-09-17 54: JOINT FOR ABOVE GROUND POOL FRAME 00: -

An above ground frame pool (10) includes a frame assembly (20) and a liner (40) supported by the frame assembly (20). The frame assembly (20) includes a plurality of horizontal pipes (22), a

plurality of vertical pipes (24), and a plurality of Tshaped joints (30). The joints (30) may lack mechanical fasteners with adjacent pipes or corresponding apertures. The joints (30) may be one-piece or multi-piece structures. Such joints (30) maybe water-resistant and convenient to manufacture, assemble, disassemble, and store.



- 21: 2021/01774. 22: 2021-03-17. 43: 2021-11-25 51: G01B
- 71: SMITH, Wehrner
- 72: SMITH, Wehrner

# **54: A WHEEL ALIGNMENT ADAPTOR FASTENER** 00: -

The invention relates to a wheel alignment adaptor fastener 10 for securing a wheel alignment adaptor 20 to a vehicle wheel for the purpose of performing wheel alignment on the vehicle. The fastener includes a chain 12 comprising a plurality of interconnected chain links 12.1. Each fastener 10 also includes an L-shaped bracket 13 for securing one end of the chain to the wheel alignment adaptor 20. Furthermore, each fastener 10 includes a springloaded V-shaped clip 14 which is connected to an opposite end of the chain. When depressed, the clip 14 is configured to hook or clip onto a wheel rim 26 by passing gripping arms of the clip through an opening 28 in the rim 26 thereby to hold the wheel alignment adaptor captive to the wheel rim 26. Use of the fastener simplifies mounting/dismounting of the wheel alignment adaptor to the vehicle wheel and prolongs equipment life.



21: 2021/01791. 22: 2021-03-17. 43: 2022-01-17 51: D01F

71: CENTROTHERM INTERNATIONAL AG 72: Manuel CLAUSS, Andreas KELLER, ERIK FRANK, VOLKER BAUCH, FRANK HERMANUTZ, MICHAEL R. BUCHMEISER, GUNTER FAUTH 33: DE 31: 10 2018 217 354.0 32: 2018-10-10 54: METHOD AND DEVICE FOR STABILIZING PRECURSOR FIBERS OR FILMS FOR PRODUCING CARBON FIBERS OR FILMS 00: -

The invention relates to a method for stabilizing precursor fibers for producing carbon fibers. The method has the following steps: continuously introducing, guiding, and discharging precursor fibers into, through, and out of a processing chamber; adjusting a specified processing gas atmosphere, the composition of which differs from that of the surrounding air, in the at least one processing chamber, wherein the processing gas atmosphere contains at least one reactive component and/or a catalyst at a specified partial pressure; and heating the precursor fibers to at least one first temperature and maintaining the first temperature for a specified duration when the precursor fibers are located in the processing chamber.



21: 2021/01976. 22: 2021-03-24. 43: 2022-01-17 51: C21D; C22C

71: ARCELORMITTAL

72: Patrice ALEXANDRE, Magali BOUZAT, Anirban CHAKRABORTY, Hassan GHASSEMI-ARMAKI, Olga GIRINA, Ronan JACOLOT, Alexey KOLTSOV, Aude NADLER, Damon PANAHI, Michel SOLE 33: IB 31: PCT/IB2018/060251 32: 2018-12-18 54: COLD ROLLED AND HEAT-TREATED STEEL SHEET AND METHOD OF MANUFACTURING THE SAME

00: -

The invention deals with a cold rolled and heattreated steel sheet having a composition comprising, by weight percent: C 0.3 - 0.4 %, Mn 2.0 - 2.6 %, Si: 0.8 - 1.6 %, Al 0.01 - 0.6 %, Mo 0.15 - 0.5 %, Cr 0.3- 1.0 %, Nb = 0.06 %, Ti = 0.06 %, Ni = 0.8 %, S = 0.010 %, P = 0.020 % and N = 0.008 %, the remainder of the composition being iron and unavoidable impurities resulting from the smelting, and having a microstructure consisting of, in surface fraction: between 15% and 30% of retained austenite, said retained austenite having a carbon content of at least 0.7%, between 70% and 85% of tempered martensite, at most 5% of fresh martensite and at most 5% of bainite. It also deals with a manufacturing method thereof.

71: BOMBARDIER TRANSPORTATION GMBH 72: Achim HAASE, Matiko MAFUMO, Antonio SENATORE

# 54: SIDE MIRROR FOR RAIL VEHICLE 00: -

The invention relates to a side mirror (10) for a rail vehicle, wherein the side mirror (10) comprises: - a mirror member (26); - an elastic member (30); - a rigid member (32); - a frame (16); wherein the mirror member (26), elastic member (30) and rigid member (32) are arranged to form a stacked assembly (18) and wherein the frame (16) receives at least a section of a circumference of said stacked assembly (18).

<sup>21: 2021/02001. 22: 2021-03-25. 43: 2022-01-17</sup> 51: B60R



21: 2021/02008. 22: 2021-03-25. 43: 2022-01-17 51: C21B; F27D; G01B

71: ARCELORMITTAL

72: Michel PICARD, Sami-Alex ZAIMI, DIANBING HUANG, Mouna ABBANA BENNANI

33: IB 31: PCT/IB2018/058187 32: 2018-10-22 54: METHOD FOR MONITORING THE WEAR OF A REFRACTORY LINING OF A BLAST FURNACE 00: -

A method for monitoring the wear of a refractory lining of a blast furnace using modelling of a part of the blast furnace and thermal field calculation. Computer program allowing to perform such a method.



21: 2021/02060. 22: 2021-03-26. 43: 2022-01-17 51: B62D

71: ARCELORMITTAL

72: Nicolas SCHNEIDER

33: IB 31: PCT/IB2018/060168 32: 2018-12-17 54: FRONT FLOOR REINFORCEMENT STRUCTURE FOR A VEHICLE HAVING A BATTERY PACK IN THE TUNNEL



The invention deals with the design and the production method of a front floor reinforcement structure (1) for a vehicle (3) having a battery pack (5) in the tunnel (7) designed to improve the energy absorption of the vehicle during a side impact by involving the front floor panel (11) in the energy absorption during the side impact. The front floor reinforcement structure (1) comprises a front floor cross member (13) having a non-deformable portion (14) located on the end of the front floor cross member (13) closest to the side sill (9) and a deformable portion (16) located on the end of the front floor cross member (13) closest to the tunnel (7). The resistance to plastic deformation of the nondeformable portion (14) is greater than the resistance to plastic deformation of the deformable portion (16), which is itself greater than the resistance to plastic deformation of the front floor panel (11).



21: 2021/02180. 22: 2021-03-31. 43: 2021-12-08 51: G06F; G06Q

71: Zensar Technologies Limited 72: KULKARNI, Sumant, TIWARI, Mukul 33: IN 31: 202021048381 32: 2020-11-05 54: METHOD AND SYSTEM FOR FACILITATING SYSTEMATIC ESCALATION OF AN EVENT IN AN ORGANIZATIONAL HIERARCHY 00: -

Disclosed herein is method and system 104 for facilitating systematic escalation of information related to an event in an organizational hierarchy. The system 104 extracts organization data 106 pertaining to plurality of events from plurality of data sources associated with an organization. Each of the plurality of events is categorized into a category of plurality of categories. For each event belonging to each category a criticality score is assigned based on the content of each event. Each category is also assigned a criticality threshold. Once, it has been determined that the event must be escalated, the system determines one or more entities involved in the event. The system 104 then identifies first point of contact from the organizational hierarchy database 108 to whom the event must be escalated. Post escalating to the first point of contact, the system 104 monitors for predefined time-period, a resolve status of the event.



21: 2021/02204. 22: 2021-03-31. 43: 2022-01-17 51: C21D; C22C; C23C

71: ARCELORMITTAL

72: Blandine REMY, Thierry STUREL, Emmanuel LUCAS, Gianni BOI

33: IB 31: PCT/IB2018/060219 32: 2018-12-18 54: A PRESS HARDENED PART WITH HIGH RESISTANCE TO DELAYED FRACTURE AND A MANUFACTURING PROCESS THEREOF 00: -

The invention relates to a press hardened coated steel part with high resistance to delayed fracture, the coating containing (Fex-Aly) intermetallic compounds resulting from the diffusion of iron into an aluminum or an aluminum-based alloy, or an aluminum alloy of a precoating, wherein the chemical composition of the steel comprises, in weight: 0.16% = C = 0.42%, 0.1% = Mn = 3%, 0.07% = Si = 1.60%, 0.002% = AI = 0.070%, 0.02% = Cr = 1.0%, 0.0005 = B = 0.005%, 0.002% = Mg =0.007%, 0.002% =Ti = 0.11%, 0.0008% =O = 0.005%, wherein (Ti) x (O)2x107 = 2, 0.001% =N = 0.007%, 0.001% = S = 0.005%, 0.001% = P =0.025% and optionally one or more elements selected from the list of: 0.005% = Ni = 0.23%, 0.005% = Nb = 0.060%, the remainder being Fe and unavoidable impurities, and wherein the microstructure comprises at least 95% martensite.

21: 2021/02327. 22: 2021-04-08. 43: 2021-12-02 51: A61B; A61F; A61M 71: Perrydigma Research Ltd. 72: MAMO, Shay Joseph, SOPHER, Ran S., STERN-PERRY, Michal 33: IL 31: 262450 32: 2018-10-17 **54: CATAMENIAL FLUID REMOVAL** 00: -

The invention provides a device for aspirating uterine fluid of a woman in her period, enabling her, without using tampons, pads or synthetic hormones, to be free of menstrual flow for six or more hours and to be involved in even the most demanding activities entirely undisturbed.

21: 2021/02328. 22: 2021-04-08. 43: 2022-01-17 51: F03D

71: ARCELORMITTAL

72: Beatriz VENTURA GARCIA, Michaël GREMLING, Emilie DUPONT 33: IB 31: PCT/IB2018/058467 32: 2018-10-30 54: WIND TURBINE TOWER SECTION, WIND TURBINE TOWER AND ASSEMBLY METHOD 00: -

The invention relates to a mast section (1) for a wind turbine, comprising a wall that has an inner surface (12) and an outer surface (13), the mast section comprising at least two tubular mast elements (14) that are stacked on top of each other and connected to each other by element connectors (36), each of which spans said two mast elements, each mast element comprising at least two wall segments (16) that are connected to each other by segment connectors (26), the element connectors being arranged only on one of the surfaces of the wall and the segment connectors being arranged only on the other surface of the wall, and no element connector extending at least partially across from a segment connector in a radial direction such that the wall is at no point placed between said element connector and a segment connector.

21: 2021/02456. 22: 2021-04-14. 43: 2021-11-25 51: B01J; C07C

71: Dalian Institute of Chemical Physics, Chinese Academy of Sciences

72: JIAO, Feng, LI, Na, PAN, Xiulian, BAO, Xinhe 33: CN 31: 201811575053.0 32: 2018-12-21 54: CATALYST AND METHOD FOR PREPARING

LOW AROMATIC HYDROCARBON LIQUID FUEL BY DIRECT CONVERSION OF SYNTHESIS GAS 00: -

Disclosed are a catalyst and a method for preparing low aromatic hydrocarbon liquid fuel by direct conversion of synthesis gas. According to the method, synthesis gas is used as a raw material of reaction and is subject to conversion reaction on a stationary bed or a moving bed; the catalyst is a composite catalyst by mechanically mixing component I and component II, the active ingredients in component I being metal oxides, component II including one or more than two molecular sieves having one-dimensional ten-membered ring pore passage, and a weight ratio of the active ingredients in component I to the active ingredients in component I to the active ingredients in component I to the active ingredients in component I being within a range of 0.1-20 times. The reaction process has high product yield and selectivity; the liquid fuel composed of C  $_{\rm e}{\rm C}$  in has a selectivity lower than 40%; and side product methane has a selectivity lower than 15%; therefore, the method has good application prospect.

#### 21: 2021/02519. 22: 2021-04-16. 43: 2021-12-08 51: H01H

71: MICROELETTRICA SCIENTIFICA S.P.A.

72: BOSSONI, Carlo, FAIONI, Davide 33: EP 31: 18194804.3 32: 2018-09-17 54: GRIPPING GROUP FOR A SWITCH HAVING AN INTERNAL COMPACT STRUCTURE 00: -

The present invention relates to a gripping group (31, 32) for a switch, changeover switch,

disconnector or generally a power switch (1), said power switch (1) being mounted inside an insulated switch body (2) and comprising at least a movable contact (29) providing an electrical connection, said gripping group (31, 32) being configured to grip said at least a movable contact (29) of said power switch (1), wherein a modular structure comprising a plurality of caliper-like elements (60) being parallelly mounted on a supporting frame (46) and in turn including respective terminal finger elements (45) being angularly movable one with respect to the other, mutually approaching and moving away in contrast with elastic returning means (47).



21: 2021/02520. 22: 2021-04-16. 43: 2021-12-08 51: H01H

71: MICROELETTRICA SCIENTIFICA S.P.A.
72: BOSSONI, Carlo, FAIONI, Davide
33: EP 31: 18194811.8 32: 2018-09-17
54: ELECTRICALLY CONTROLLED SWITCH FOR
HIGH CURRENT SWITCHING OPERATIONS WITH
DIFFERENT CONFIGURATIONS OF FIXED
TERMINAL CONTACTS

00: -

The present invention relates to an electrically controlled switch for high current switching operations and with different configurations of fixed terminal contacts comprising: a switch body, a couple of moving contacts, a guide means to drive the couple of moving contacts up to an abutting position, a housing groove running perimetric in the switch body. The electrically controlled switch further comprises at least one contact bar for connecting each of the moving contact to a respective fixed terminal contact of the switch, the contact bar being hosted within the housing groove and having a free end projecting from the switch body to form the fixed terminal contact through a corresponding aperture of the switch body located on a same lateral side or on opposite lateral sides, or on the base support, respectively.



21: 2021/02575. 22: 2021-04-19. 43: 2022-01-14 51: B64C 71: BINZHOU UNIVERSITY 72: ZHANG, Xin, FEN, Weiwei, MA, Guoli

33: CN 31: CN202010333988.9 32: 2020-04-24 54: MULTI-ROTOR UAV INTELLIGENT PATROL SYSTEM 00: -

The present disclosure provides a multi-rotor UAV intelligent patrol system, how to analyze and calculate patrol values of primarily selected UAVs to obtain a patrol UAV, and monitor communication signals of the patrol UAV and control a flight altitude of the patrol UAV to solve the problem of the influence on communication transmission of the patrol UAV due to its proximity to a transmission line; in which includes a data acquisition module, a server, a patrol assignment module, a path storage module, an intelligent patrol module, and a patrol power supply module; communication signals of the patrol UAV are monitored and a flight altitude of the patrol UAV is controlled, so as to facilitate the patrol UAV for power patrol, and at the same time, a patrol image is transmitted to a background terminal, so as to avoid the influence on communication transmission of the patrol UAV due to its proximity to a transmission line; the patrol power supply module monitors electric quantity and supplies power for the patrol UAV, so as to facilitate the patrol UAV for timely power supply.

71: XUZHOU UNIVERSITY OF TECHNOLOGY

<sup>21: 2021/02599. 22: 2021-04-20. 43: 2022-02-09</sup> 51: E02D

72: YU YANG, CHEN Dingchao, ZHAO Xiangqian, LIANG Yanxiang, HAN Yuheng, PAN Yuxin, ZHANG Haiyan, CHEN Cheng, LU Jianfei, ZHU Siyu 33: CN 31: 202110339956.4 32: 2021-03-30 54: MULTI-SECTION ROD SUITABLE FOR CRUMBLY ROCK STRATUS OF MINE AND USING METHOD THEREOF 00: -

The present invention discloses a multi-section expansion anchor rod suitable for a crumbly rock stratum of a mine. A multi-section expansion structure of the anchor rod is formed by way of combining an anchor rod main body, an upper expansion tube and a lower lateral expansion device. When the anchor rod main body is propelled into a hole to be pulled back, a transition section of an upper rod body struts the upper expansion tube to form a positive pressure on a peripheral surface of the upper expansion tube, so that frictional selflocking among a surrounding rock, the upper expansion tube and the anchor rod main body is formed, and therefore, the upper portion is expanded and fixed; the bottom end of a bottom wing of the lower lateral expansion device is kept invariable, the fixed head drives an upper wing to be in a downward moving trend, a connection between the upper wing and the lower wing deforms, and an angle between the upper wing and the lower wing is diminished gradually till the lower wing is in a horizontal state to form the positive pressure on the peripheral surface of the lower lateral expansion device to achieve a fixing effect. The integral anti-drawing effect is improved greatly, so that the supporting effect of the anchor rod is guaranteed. A using method is simple and convenient in step and easy to operate and solves the problem that the anchoring force of the anchor rod under a condition of the crumbly rock stratum is solved.

21: 2021/02614. 22: 2021-04-20. 43: 2022-01-17 51: A01N; A01P

72: Filippo QUAGLIA, Federico DE PELLEGRINI, Giovanni FLORIDI, Giuseppe LI BASSI 33: IT 31: 102018000010481 32: 2018-11-23 54: DITHIOCARBAMATE OIL DISPERSIONS 00: -

Dithiocarbamate oil dispersion comprising a polyamide obtained by reacting a fatty acid, a

polyamine and a di- or tri-carboxylic acid in a specific molar ratio and use thereof in agriculture.

21: 2021/02615. 22: 2021-04-20. 43: 2022-01-17 51: F03D

71: ARCELORMITTAL 72: Beatriz VENTURA GARCIA, Michaël GREMLING, Emilie DUPONT 33: IB 31: PCT/IB2018/058488 32: 2018-10-30 54: WIND TURBINE MAST SECTION, WIND TURBINE MAST AND ASSEMBLY METHOD 00: -

Disclosed is a mast section (1) comprising a wall, the section (1) comprising two tubular mast elements that are stacked on top of each other and arranged edge-to-edge in a joining plane (P), each element (14) comprising two wall segments (16) that are connected by segment connectors (26) extending along the longitudinal edges of the segments (16). The mast section (1) comprises element connectors (36), each of which spans the elements (14) and connects same to each other. The element connectors (36) are arranged either on the inner surface (12) or the outer surface (13) of the wall, and the segment connectors (26) are arranged on the other surface, each element connector (36) extending at least partially across from at least one of the segment connectors (26) in a radial direction of the mast section (1) such that the wall is placed between said element connector (36) and the segment connector (26).

- 21: 2021/02643. 22: 2021-04-21. 43: 2021-11-25
- 51: E05B; E06B
- 71: Channell Commercial Corporation

72: BURKE, Edward J.

33: US 31: 16/855,820 32: 2020-04-22

54: SHIELDED SELF-LATCHING LOCKING ASSEMBLY FOR A UTILITY VAULT 00: -

A shielded locking system for securely closing a lid on an enclosure, such as a grade level utility vault, including an L-bolt connected to a spring-biased slide member positioned on the underside of the lid that rotates in a slotted housing that securely retains the L-bolt under the lid, the slide member engaging an abutment on the inside of the enclosure when the lid is forced down over an opening in the enclosure by downward force on the lid which progressively causes the latch to retract against the spring-bias

<sup>71:</sup> LAMBERTI SPA

from contact with the abutment and then snaps the latch into a spring-biased locking position under the abutment, and a non-conductive cover positioned over and connected to the locking system to shield the L-bolt from electrical conductivity from within the enclosure.



- 21: 2021/03022. 22: 2021-05-05. 43: 2022-01-17 51: B21B; C21D
- 71: ARCELORMITTAL

72: Hassan GHASSEMI-ARMAKI, Vikas Kanubhai PATEL, Timothy GUSTAFSON 33: IB 31: PCT/IB2018/059513 32: 2018-11-30

# 54: A METHOD OF MANUFACTURING MARTENSITIC STEEL AND A MARTENSITIC STEEL THEREOF

00: -

A martensitic steel comprising of the following elements, expressed in percentage by weight  $0.1\% \le C \le 0.4\%$ ;  $0.2\% \le Mn \le 2\%$ ;  $0.4\% \le Si \le 2\%$ ;  $0.2\% \le Cr \le 1\%$ ;  $0.01\% \le Al \le 1\%$ ;  $0\% \le S \le 0.09\%$ ;  $0\% \le P \le 0.09\%$ ;  $0\% \le N \le 0.09\%$ ; and can contain one or more of the following optional elements  $0\% \le Ni \le 1\%$ ;  $0\% \le Cu \le 1\%$ ;  $0\% \le Mo \le 0.1\%$ ;  $0\% \le Nb \le 0.1\%$ ;  $0\% \le Ti \le 0.1\%$ ;  $0\% \le V \le 0.1\%$ ;  $0.0015\% \le B \le 0.05\%$ ;  $0\% \le Sn \le 0.1\%$ ;  $0\% \le Pb \le 0.1\%$ ;  $0\% \le Sb \le 0.1\%$ ;  $0\% \le Ca \le 0.1\%$ ; the remainder

composition being composed of iron and unavoidable impurities caused by processing, the microstructure of said steel having microstructure by area percentage comprising of cumulative presence of residual austenite and bainite between 0 % and 25%, the remaining microstructure being martensite at least 70%, and with an optional presence of ferrite between 0% and 10%

21: 2021/03091. 22: 2021-05-07. 43: 2022-01-17

- 51: B23K; C21D
- 71: ARCELORMITTAL

72: Dinesh PATEL, Vikas Kanubhai PATEL, Alan POLING

33: IB 31: PCT/IB2018/059096 32: 2018-11-19 54: DUAL PASS, DUAL ANNEAL WELDING METHOD FOR JOINING HIGH STRENGTH STEELS 00: -

A dual pass seam welding method for steels having a Ceq of greater than about 0.45. The first pass welds the immediately anneals the weld. On the second pass, the welder is disengaged, and the weld is subjected to a second anneal.

- 21: 2021/03130. 22: 2021-05-10. 43: 2022-01-17 51: G01T
- 71: NEUTRINO DEUTSCHLAND GMBH
- 72: Holger Thorsten SCHUBART
- 33: DE 31: 10 2018 009 125.3 32: 2018-11-21 54: FILM MADE OF METAL OR A METAL ALLOY
- 00: -

The invention relates to the interaction of elementary particles, in particular neutrinos and matter in the form of metals or metal alloys, in particular of a film of metal or a metal alloy which has a nonmetallic nano coating, wherein at least one electrically conductive structure or at least one electrically conductive structural element with a thickness in the nanometre range is arranged over the known coating.

21: 2021/03315. 22: 2021-05-17. 43: 2022-01-17 51: E02D

71: HWS CONCRETE TOWERS, S.L. 72: Jesús MONTANER FRAGÜET, José Manuel SORAZU ECHAVE, MARIANO ABADÍA PÉREZ 33: ES 31: P201831175 32: 2018-12-03 54: FOUNDATION FOR WIND TURBINE TOWERS 00: -

The invention relates to a foundation for wind turbine towers, of the type used to support both metal

towers and concrete towers of wind turbines and which uses prefabricated concrete or metal beams combined with small footings constructed in situ with concrete, the beams being structurally connected to the central part of the foundation by means of elements for joining and supporting the tower. The invention provides the main advantage of achieving a significant reduction in the volume of materials used, both concrete and rebar, with a large reduction in assembly time and the consequent large economic saving, in addition to easy adaptation to different terrains.

21: 2021/03383. 22: 2021-05-19. 43: 2022-01-17 51: D04H

71: REIFENHÄUSER GMBH & CO. KG MASCHINENFABRIK, PFNONWOVENS CZECH S.R.O, PFN - GIC A.S.

72: Jana KROUTILOVA, Michael MAAS, Zdenek MECL, Tobias WAGNER, Frantisek KLASKA, Pavlina KASPARKOVA

#### 33: CZ 31: 2018-647 32: 2018-11-23 54: BULKY NONWOVEN FABRIC WITH ENHANCED COMPRESSIBILITY AND RECOVERY 00: -

A nonwoven fabric and a method of production of said nonwoven fabric are disclosed, wherein the nonwovens fabric comprises at least one layer, said layer comprising endless filaments, - which comprise at least a first polymeric material (A) and a second polymeric material (B) having its melting point lower than the first polymeric material A, - wherein the second polymeric material (B) extends in the longitudinal direction of the filament and forms at least a part of the surface of the filament and - the at least one layer of endless filaments comprises filament-to-filament bonds formed of the second polymeric material (B), wherein all components of the filaments are arranged across the cross-section of the filament in a non-crimpable configuration and the nonwoven fabric has a structural softness of at least 80 (m4mm2g-2).

21: 2021/03425. 22: 2021-05-20. 43: 2022-01-17 51: C21D; C22C 71: ARCELORMITTAL 72: Irène DE DIEGO CALDERON, Jean-Christophe HELL 33: IB 31: PCT/IB2018/059625 32: 2018-12-04

# 54: COLD ROLLED AND ANNEALED STEEL SHEET, METHOD OF PRODUCTION THEREOF AND USE OF SUCH STEEL TO PRODUCE VEHICLE PARTS

00: -

A cold rolled and annealed steel sheet comprising by weight: 0.6 < C < 1.3%, 15=Mn<35%, 6 = Al < 15%, Si = 2.40 %, S = 0.03%, P = 0.1%, N = 0.1%, possibly one or more optional elements chosen among Ni, Cr and Cu in an individual amount of up to 3% and possibly one or more elements chosen among B, Ta, Zr, Nb, V, Ti, Mo, and W in a cumulated amount of up to 2.0%, the remainder of the composition making up of iron and inevitable impurities resulting from the elaboration, the microstructure of said sheet comprising of ordered ferrite between 1% and 10%, optionally of up to 10% of kappa carbides, the remainder being made of austenite, and, the density of said steel sheet being equal or below 7.2 and the FWHM for the austenite matrix is between 0.700 and 1.100.

# 21: 2021/03502. 22: 2021-05-24. 43: 2022-01-17 51: C14B; C14C

71: TFL LEDERTECHNIK GMBH 72: Dr. Jens FENNEN, Rodolfo AMPUERO, Dr. Nina SCHULTE-GAUCZINSKI, Dr. Lorenzo MEJIAS 33: DE 31: 10 2018 131 624.0 32: 2018-12-10 54: DEVICE, EXCHANGE UNIT, KIT, AND METHOD FOR REDUCING THE ODOR OF TANNED LEATHER 00: -

The invention relates to a device (1) for reducing the odor of tanned leather, comprising a treatment chamber (2), which is designed to dry tanned leather and/or treat dried leather, and at least one odor reducing reservoir (3), wherein the at least one odor reducing reservoir (3) has at least one odor-neutralizing substance (4), and a gas-exchange connection (5) is provided between the treatment chamber (2) and the odor reducing reservoir (3).

21: 2021/03638. 22: 2021-05-27. 43: 2022-01-10 51: C07C; A61P 71: WUXI NO.2 PEOPLE'S HOSPITAL 72: PEI, Zejun, SUN, Xin 33: CN 31: 202010405895.2 32: 2020-05-14 54: ANTIFUNGAL COMPOUND, AND SYNTHESIS METHOD AND USE THEREOF 00: - The invention belongs to the technical field of medicine synthesis, which relates to an antifungal compound, particularly to an antifungal compound, a synthesis method and an applications thereof, theantifungal compound is an amino acid carbon ester or a pharmaceutically acceptable salt thereof, and the amino acid carbon ester has the following structural formula: wherein R1 is one of a C5-C17 alkane group or a C5-C17 olefin group; R2 is an amino acid side chain group; the invention also provides a synthesis method of the antifungal compound and the application of the antifungal compound in the antifungal field.

21: 2021/03680. 22: 2021-05-28. 43: 2022-01-17 51: B63G; H01F

71: STL SYSTEMS AG

72: Wolfgang LUDWIG, Stefan LUDWIG, Christoph LUDWIG, Sezgin KAMA, Adrianus J. STEINFORT 33: DE 31: 10 2018 131 564.3 32: 2018-12-10 54: DEMAGNETIZATION AND SIGNATURE MEASUREMENT SYSTEM

00: -The inv

The invention relates to an apparatus (2) for the demagnetization and magnetic signature measurement of a stationary hull (4) and for the simulation of a magnetic field, having a demagnetization coil arrangement (8), a magnetic field sensor arrangement (10) and a simulation coil arrangement (12a, 12b, 12c) which can be positioned horizontally on one side beside the hull (4), and wherein the cross-sectional areas of the demagnetization coils (8) and of the simulation coils (12a, 12b, 12c) are arranged with horizontally oriented surface normals in the longitudinal direction of the hull (4). The demagnetization coils (8) generate an alternating magnetic field, and the simulation coils (12a, 12b, 12c) generate a stationary simulation magnetic field in all three spatial directions.

21: 2021/03794. 22: 2021-06-02. 43: 2022-01-17 51: G05B 71: ARCELORMITTAL

72: Gaël MATHIS 33: IB 31: PCT/IB2018/060250 32: 2018-12-18 54: METHOD AND ELECTRONIC DEVICE FOR CONTROLLING A MANUFACTURING OF A GROUP OF FINAL METAL PRODUCT(S) FROM A GROUP OF INTERMEDIATE METAL

# PRODUCT(S), RELATED COMPUTER PROGRAM, MANUFACTURING METHOD AND INSTALLATION

#### 00: -

This method for controlling a manufacturing of final metal product(s) from intermediate metal product(s) is implemented by an electronic controlling device and comprises, for each intermediate metal product: - acquiring a set of intermediate characteristic(s) for said intermediate metal product; - determining a current estimated set of final characteristic(s) with a prediction model, according to the set of intermediate characteristic(s) and a current manufacturing route; - comparing the current estimated set of final characteristic(s) with a current target set of final characteristic(s); and if a deviation between the current estimated set of final characteristic(s) and target set of final characteristic(s) is above a threshold: - obtaining new target set(s) of final characteristic(s) for new final metal product(s); and - calculating a new manufacturing route according to the set of intermediate characteristic(s) and to the new target set(s) of final characteristic(s).

21: 2021/03811. 22: 2021-06-03. 43: 2022-01-17 51: B23K; C22C 71: ARCELORMITTAL 72: Murali MANOHAR 33: IB 31: PCT/IB2018/059988 32: 2018-12-13 **54: METHOD OF LASER CUTTING A STEEL** 00: -A method for laser cutting a steel alloy sheet/plate having a composition comprising, in wt. %: C: 0.01

having a composition comprising, in wt. %: C: 0.01 - 0.29; Mn: 0.50 -1.35; P: 0.04 max; S: 0.05 max; Si: 0.40 max; Cr: 0.5 - 0.75, and the remainder being iron and impurities, the steel alloy is free from intentional additions of Cu and Ni and containing less than 0.05% of total cumulated amounts of Cu and Ni.

21: 2021/03896. 22: 2021-06-07. 43: 2022-01-17 51: B21B; C21D; C22C 71: ARCELORMITTAL 72: Raymond UHRIN, Zachary ROYER, Jason MCCULLOUGH, Richard L PERRY, Bruce STEVENSON 33: IB 31: PCT/IB2018/060411 32: 2018-12-20 54: METHOD OF MAKING A TEE RAIL HAVING A HIGH STRENGTH BASE

# 00: -

A method of making a high strength base-hardened tee rail and the tee rail produced by the method. The method comprises the steps of providing a carbon steel tee rail, said steel tee rail provided at a temperature between 700 and 800 deg C; and cooling said steel tee rail at a cooling rate that the temperature in deg C of the surface of the base of said steel tee rail, is maintained in a region between: an upper cooling rate boundary plot defined by an upper line connecting xy-coordinates (0 s, 800 deg C), (80 s, 675 deg C), (110 s, 650 deg C) and (140 s, 663 deg C); and a lower cooling rate boundary plot defined by a lower line connecting xy-coordinates (0 s, 700 deg C), (80 s, 575 deg C), (110 s, 550 deg C) and (140 s, 535 deg C).

21: 2021/03898. 22: 2021-06-07. 43: 2022-01-17 51: A24C

71: Roger KOCH

72: Roger KOCH

33: CH 31: 01485/18 32: 2018-12-03 54: CIGARETTE-MAKING MACHINE AND METHOD FOR PRODUCING CIGARETTES 00: -

The invention relates to a method for producing cigarettes (68) in a cigarette-making machine (11), wherein the separated tobacco (16) is suctioned in a suction stream (28) onto an underside (38) of a first air-permeable conveyor belt (34) in that above an upper side (36) of the first conveyor belt (34) a suction bar (22) is arranged that is connected to an air suction unit (26); the tobacco (16) is formed, on the underside (38) of the first conveyor belt (34), into a tobacco rod (40) by being compressed, on the underside (38) of the first conveyor belt (34), by the suction stream (28); the tobacco rod (40) is transferred from the underside (38) of the first conveyor belt (34) to an upper side (44) of a second conveyor belt (42), on which upper side (44) a cigarette paper web (46) is arranged; the cigarette paper web (46) is glued along the longitudinal direction of the rod (40) and the tobacco rod (40) is cut into cigarettes (68). A smokable additional substance (13) is added in metered fashion to the suction stream (28) containing tobacco (16), and the tobacco rod (40) is formed on the underside (28) of the first conveyor belt (34) from the tobacco (16) and the additional substance (13).

21: 2021/04147. 22: 2021-06-17. 43: 2022-01-17 51: B62B 71: SHOPPACART PTY LTD.

72: O'DONNELL, Jeanne Louise, KHOURY, Edward Joseph, KHOURY, Ross

33: AU 31: 2018904492 32: 2018-11-26 33: AU 31: 2018904510 32: 2018-11-27

33: AU 31: 2019901845 32: 2019-05-29

33: AU 31: 2019903768 32: 2019-10-07

# 54: SHOPPING TROLLEY

00: -

A shopping trolley (10) comprising a basket (12) having first and second side walls (22, 23), first and second end walls (20, 21) and a base wall (18). The basket 12 includes first and second front legs (26, 27) and first and second rear legs (28, 29). The first and second front legs (26, 27) are rotatable from an extended position, in which they extend downwardly from adjacent a front of the basket 12, to a collapsed position, in which they are located adjacent outer sides of the first and second side walls (22, 23). The rear legs (28, 29) are rotatable from an extended position, in which they extend downwardly from adjacent a rear of the basket, to a collapsed position, in they are located adjacent and above upper edges of the first and second side walls (22, 23) of the basket (12).

21: 2021/04235. 22: 2021-06-21. 43: 2022-02-04 51: B01D; E21C 71: ANHUI UNIVERSITY OF SCIENCE AND TECHNOLOGY 72: HUI LI, CHAO WANG, JINBO ZHU, YONG ZHANG, KE YANG 33: CN 31: 202011208976.X 32: 2020-11-03 54: UNDERGROUND RAW COAL AND GANGUE DISCHARGE SYSTEM 00: -

The present invention relates to the field of coal and gangue sorting equipment, in particular to an underground raw coal and gangue discharge system. The gangue discharge system includes a distribution queuing device, a coal and gangue identification device, a coal and gangue tracking unit and a coal and gangue separation device; the distribution queuing device is used to input mineral aggregate into the coal and gangue identification device; the coal and gangue identification device is used to measure a volume and a weight of the mineral aggregate and identify the mineral

aggregate according to the volume and the weight; and the coal and gangue tracking unit is used to track the identified mineral aggregate according to an identification result of the coal and gangue identification device.



21: 2021/04387. 22: 2021-06-25. 43: 2022-02-10 51: E05F

71: Anhui University of Science and Technology 72: XIE, Tian, WANG, Chuanli, DENG, Haishun, WANG, Yongtao

# 54: HYDRAULIC INTELLIGENT AUTOMATIC WINDOW

#### 00: -

The present invention discloses a hydraulic intelligent automatic window. The weather condition of an external environment is recognized by a sensor, and the window can be opened under the condition of sensing proper external air humidity and wind power; and the window can be automatically closed under the conditions of strong wind and rainy weather, so that worries of a user are eliminated. A piston rod of a hydraulic cylinder of the hydraulic intelligent automatic window is connected with a rod shaft connecting component through a fixed support frame; a long connecting rod is disposed in an upper side frame of a window main body framework, left and right ends of the long connecting rod are respectively connected with upper ends of a left connecting shaft and a right connecting shaft, and the left connecting shaft and the right connecting shaft are connected with a left window and a right window through window shaft connecting components. A connecting rod mechanism formed by the long connecting rod, the connecting shafts, the window shaft connecting components and the windows is used as a transmission mechanism, the hydraulic cylinder is used as a driving mechanism, the sensor of the hydraulic intelligent automatic window gives out a signal to control the driving mechanism, and the driving mechanism drives the

window through a connecting rod structure to realize automatic opening and closing functions.

21: 2021/05471. 22: 2021-08-02. 43: 2021-12-23 51: A61K; A61P

71: West China Hospital, Sichuan University 72: TAO, Zhiyan

#### 54: PRIMERS, REAGENTS, KITS FOR IDENTIFYING RETINOPATHY OF PREMATURITY WITH/WITHOUT MENTAL RETARDATION AND APPLICATION THEREOF 00: -

Disclosed are primers, reagents, kits for identifying retinopathy of prematurity with/without mental retardation and an application thereof. The primers are used to identify whether the gene to be tested has at least one of the following mutations compared with the full-length sequence of the KIF11 gene: c.1271dupA, IVS11+5G>A and c.C247T, wherein the KIF11 gene is the ENSG00000138160 gene; the primers comprise at least one set of sequences as follows: SEQ ID NO.1 and SEQ ID NO.2: SEQ ID NO.3 and SEQ ID NO.4: SEQ ID NO.5 and SEQ ID NO.6. Proposed is a method for identifying simple ROP and ROP with mental retardation through the pathogenic gene KIF11, provides three new mutation sites, and discloses related primers. The primers can be used to amplify related genes and detect related disease-causing gene mutations provides a basis for the diagnosis and differentiation of simple ROP and ROP with mental retardation.



21: 2021/05541. 22: 2021-08-06. 43: 2022-02-10

# 51: A61B

71: Anhui University of Science and Technology 72: HU, Dong, WU, Jing, LIU, Yafeng, ZHOU, Jiawei, WANG, Wenyang, XING, Yingru, GUO, Jianqiang, WANG, Qingsen 54: CT RADIOMICS-BASED AUXILIARY

# ASSESSMENT METHOD AND SYSTEM FOR LUNG CANCER PROGNOSIS

The present invention discloses a CT radiomicsbased auxiliary assessment method and system for lung cancer prognosis. The method includes: collecting and screening original medical images and clinical information of lung cancer patients undergoing radiotherapy; outlining focal zones in the original medical images by means of high-resolution computed tomography, and extracting radiomics features from the focal zones to obtain preliminary radiomics features; analyzing and screening the preliminary radiomics features to obtain target radiomics features; and training the prediction model for target radiomics features in the training set by using a machine learning algorithm, to construct a radiomics evaluation model, and verifying the model in the verification set. By means of the present invention, qualitative and quantitative analysis may be performed on a radiotherapeutic effect of a patient, so as to assist a doctor in formulating a personalized treatment plan and in evaluating a survival time period and a recurrence time of the patient, and performance of an obtained radiomics evaluation model is verified, which ensures an accuracy of the radiomics evaluation model.



#### 21: 2021/05543. 22: 2021-08-06. 43: 2022-02-10 51: C12N

71: Anhui University of Science and Technology 72: HU, Dong, WU, Jing, ZHOU, Jiawei, WANG, Wenyang, LIU, Yafeng, GUO, Jianqiang, SU, Yixin, XING, Yingru

#### 54: APPLICATION OF REGULATING PEROXIDASE FAMILY GENES IN FIBROSIS-RELATED DISEASES 00: -

The present invention discloses application of regulating peroxidase family genes in fibrosis-related diseases. The present invention has the beneficial effects: in different fibrosis diseases, PRDXS family protein is used to adjust the production of inflammatory cell factors or/and fibrocyte factors secreted by matrix cells and immune cells in tissue, so as to affect the differentiation of growth of fibrosis-related cells, thereby achieving the effect of regulating fibrosis.



21: 2021/05556. 22: 2021-08-06. 43: 2022-02-10 51: F16D

71: Anhui University of Science and Technology 72: HE, Tao, FANG, Siyuan, DENG, Haishun, LUO, Gang, ZHAO, Kaiping, DONG, Xinqiang, LI, Zhipeng, CHEN, Qiangman

#### 54: DOUBLE-ROW AXIAL PLUNGER PUMP BASED ON DIGITAL VARIABLE DISPLACEMENT 00: -

The present invention relates to the technical field of hydraulic pumps, and discloses a double-row axial plunger pump based on a digital variable displacement. The double-row axial plunger pump is specifically composed of a swash plate, a cylinder body, a pump housing, an inner-row plunger assembly, an outer-row plunger assembly, a transmission shaft, an inner-row pressing mechanism, an outer-row pressing mechanism, high-speed switch valves, and an angular displacement sensor. The present invention adopts a structure in which double rows of plungers and the swash plate are rotatable. The swash plate is connected to the transmission shaft by using splines. The inner-row plunger assembly and the outer-row plunger assembly are snugly pressed on the swash plate respectively by using the inner-row pressing mechanism and the outer-row pressing mechanism. The inner-row plunger assembly and the outer-row plunger assembly each are composed of a plunger, a one-way valve, and a slipper. The one-way valve is mounted to the plunger. The high-speed switch valves are mounted to tail ends of the outer-row plunger hole and inner-row plunger hole of the cylinder body. The angular displacement sensor is coaxially arranged with the transmission shaft. By means of the present invention, problems such as poor lubrication, abrasion, cavitation, and flow pulsation of an existing axial plunger pump can be effectively alleviated, and functions such as a digital variable displacement, multiplexed output, synchronous drive, and systemic energy conservation can also be achieved.



21: 2021/05557. 22: 2021-08-06. 43: 2022-02-10 51: B66C

71: Anhui University of Science and Technology 72: YAN, Xuanxuan, JIN, Huawei, KOU, Ziming, ZHANG, Lixiang, WANG, Ding, ZUO, Ruiling, WANG, Guorong, XU, Jishun, XU, Huan, ZHANG, Liang

# 54: CONVEYING ROBOT HAVING MONORAIL CRANE FOR COAL MINE WITH COMPLEX GEOLOGICAL CONDITIONS

00: -

The present disclosure belongs to the technical field of monorail cranes, and specifically discloses a conveying robot having a monorail crane for a coal mine with complex geological conditions. The conveying robot includes a hanger rail. A first driving unit and a second driving unit are respectively movably connected to a left side and a right side at a bottom of the hanger rail. By means of the first driving unit and the second driving unit, a monorail crane can perform a dual driving operation, increasing power for travelling. By means of a brake mechanism, a friction disk is moved under control and brakes by rubbing with the hanger rail. In addition, by means of a shock absorbing and cushioning mechanism, when a shock absorbing plate comes into contact with a barrier, a pressure sensor feeds back information and is interlinked to the brake mechanism after receiving a signal. By means of rotation of an output end of a motor, a speed of the monorail crane during braking can be controlled. In this way, neither excessively fast braking nor excessively slow braking occurs, increasing safety and automation of the monorail crane during travelling.



21: 2021/05558. 22: 2021-08-06. 43: 2022-02-10 51: A01G

71: Anhui University of Science and Technology 72: YANG, Xudong, ZHANG, Ruijie, HU, Yaru, FENG, Yongqi, ZHANG, Ziang

# 54: DEVICE FOR TRIMMING THICK BRANCHES OF TREE

00: -

The present invention discloses a device for trimming thick branches of a tree. The trimming device includes a movable base. A movable member is disposed on the movable base. A cutting member is rotatably disposed on the movable member. The movable base includes a base plate, a fixing member is disposed on the base plate, and a support shaft is rotatably disposed on the fixing member. A straight rod is disposed on the support shaft. The movable member includes a mounting rod. A mounting frame is disposed on one end of the mounting rod, a U-shaped frame is rotatably disposed on one side of the mounting frame, and a rotary shaft is rotatably disposed on the U-shaped frame. The cutting member includes a rotary plate. Mounting plates in an array distribution are disposed on one side of the rotary plate, a toothed disc is rotatably disposed on one side of each of the mounting plates, and an arcuate pressing rod is disposed on one side of each of the toothed discs. According to the trimming device of the utility model, the movable member is extendable to adjust a length, the cutting member is rotatable to facilitate contact with a branch, the arcuate pressing rod holds the branch to prevent the branch from suddenly fracturing and falling during trimming, thereby enhancing safety, and the cutter is movable

to facilitate cutting and movement. The trimming device has a simple structure and can reduce workloads of workers and improve working efficiency.



21: 2021/06151. 22: 2021-08-25. 43: 2021-12-23 51: G01F; G01N; H04L

71: JOYO SCIENCE AND TECHNOLOGY CO. LTD. 72: BI, JIANGUANG

33: CN 31: 202010650370.5 32: 2020-07-08 54: INTERNET OF THINGS-BASED MONITORING SYSTEM FOR SPECIAL ITEMS, METHOD THEREOF AND DEVICE THEREOF 00: -

The present invention relates to an Internet of Things-based monitoring system for special items, a method thereof and a device thereof which comprises an Internet of Things platform and a field monitoring apparatus provided at the domestic sewage inlet of a sewage plant. The Internet of Things platform and the field monitoring apparatus

carry out data communication through the Internet of Things. The field monitoring apparatus monitors the information of special items in domestic sewage and the Internet of Things platform analyses the information of special items and sends the analysis result to a pre-accessed third-party terminal device. The intake amount of special items can be obtained by automatically analysing the information of special items in sewage, the manual collection and monitoring of samples are not required. The information of special items can be transmitted in real time and great convenience is provided for the detection of special item cases.



21: 2021/06406. 22: 2021-09-02. 43: 2022-02-10 51: C02F

71: Qingdao University of Technology, Liaoning Technical University, Qingdao Ouyi Tiancheng Environmental Engineering Co., Ltd. 72: XIAO, Liping, LI, Yan, BAI, Jichi, WANG, Zhamang, SHEN, Bachua, LAN, Yunlang, TAO

Zhemeng, SHEN, Baohua, LAN, Yunlong, TAO, Guiqing 33: CN 31: 202010922853.6 32: 2020-09-04

# 54: NOVEL COMPOUNDING METHOD FOR HIGH-EFFICIENTLY REMOVING PHOSPHORUS

The present disclosure discloses a novel compounding method for high-efficiently removing phosphorus, comprising using a calcium carbide slag and polyferric sulfate (PFS) for coagulationflocculation and sedimentation of a water sample in two stages, firstly adding a certain amount of the calcium carbide slag to a phosphorus-containing water sample for pretreatment, and removing a sediment after the pretreatment is completed, to obtain an effluent; then adding a certain amount of polyferric sulfate (PFS) to the effluent for further reaction, and taking the effluent otained for determination and analysis, the concentration of phosphorus in the effluent reaches a Tier-1A discharge standard. The present disclosure uses the calcium carbide slag as a water treatment material,

which effectively solves the problem of environmental pollution caused by its accumulation in a large amount, and brings good economic and social benefits.

21: 2021/06561. 22: 2021-09-07. 43: 2022-01-14 51: G01C

71: University of Electronic Science and Technology of China

72: Xing Jianchuan, Sun Junshu, Chang Wanxing, Wang Xiang, Wang Bo, Zhang Luping, Lu Quan, Zhang Yurui

33: CN 31: 202010309876.X 32: 2020-04-20 54: INDOOR POSITIONING ALGORITHM BASED ON SWARM INTELLIGENCE PERCEPTION AND MULTI-FUSION TECHNOLOGY 00: -

The present invention discloses an indoor positioning algorithm based on swarm intelligence perception and multi-fusion technology, comprising the following steps: calculating the pedestrian waypoint, performing pace detection using pace detection algorithm, then calculating the step length based on the pace detection result to obtain the directional angle data of the cell phone using the weighted average method, calculating the pedestrian's directional angle; correcting the error of the calculated pedestrian waypoint; constructing the location fingerprint map and online positioning. The indoor positioning algorithm of the present invention has high accuracy and good practicality in actual verification. The algorithm of the present invention improves the accuracy of the location fingerprint map by setting potential landmarks in the environment and correcting the accumulated error in the projected pedestrian heading, which solves the problem of absolute dependence on site survey in the current offline positioning stage and makes the Wi-Fi location-based fingerprint indoor positioning technology really have commercial application value.



21: 2021/07010. 22: 2021-09-17. 43: 2022-01-13 51: A23L; A61K

71: HEBEI NORMAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

#### 72: LIU, Suwen, SHI, Donglin, FU, Mengfan, ZHANG, Dong, CHANG, Xuedong, ZHAO, Xiyan 54: ANTIFATIGUE HAW POLYPHENOL TABLET AND METHOD FOR PREPARING SAME 00: -

The present invention discloses an antifatigue haw polyphenol tablet and a method for preparing the same, and belongs to the technical field of food processing. By specially processing a haw polyphenol freeze-dried powder, a haw submicron powder and a sorbitol powder and tabletting the powders with lactoferrin, stevioside, magnesium stearate and sodium carboxymethylcellulose, a finally obtained haw polyphenol table product is reddish in color and luster, bright, good in taste, rich in nutrition and has edible and healthcare functions.

21: 2021/07192. 22: 2021-09-27. 43: 2022-02-03 51: A01H

71: Jiangxi Agricultural University 72: Xu Jie, Song Yongping, Liu Jialong, He Haohua, Zhou Dahu, Zhu Changlan, He Xiaopeng, Peng Xiaosong, Lin Xiaoli, Jiang Zhishu, Peng Limei 54: OLIGO DNA GROUP OF SGRNA FOR TARGETED KNOCKING-OUT OSAUR2 GENE OF RICE BASED ON CRISPR-CAS9 TECHNOLOGY 00: -

The invention provides an oligo DNA group for knocking-out sgRNA of rice gene OsAUR2. The sgRNA sequence is designed based on CRISPR/Cas9 for that rice OsAUR2 gene, a DNA fragment containing the sgRNA sequence is connected onto a vector carrying the CRISPR/Cas9 for rice transformation and realizing knocking-out of the rice gene OsAUR2, wherein the nucleotide sequence of the sgRNA-acted site is shown in SEQ ID NO.1. The present invention obtains OsAUR2 knocked-out mutants by editing the endogenous gene OsAUR2 in rice by CRISPR-Cas9 technology. The sgRNA prepared in the present invention can targeted knocking-out rice gene OsAUR2 efficiently, rapidly and precisely, which is of significance in basic research of rice mitosis and practical production of rice variety breeding of high-yield and resistance.



- 21: 2021/07257. 22: 2021-09-28. 43: 2022-01-27
- 51: G05B
- 71: Wenlan Qingjiang (Beijing) Technology Co., Ltd. 72: Fang Xiang

# 54: INTELLIGENT ROBOT

00: -

The embodiment of the utility model discloses an intelligent robot, belonging to the technical field of robots. The intelligent robot comprises a head and a machine body rotatably connected with the head, wherein the head is provided with an image acquisition module; the machine body is provided with a tracking module and a sensor, the interior of the machine body is provided with an analysis module, the surface of the machine body is provided with a display module, and the bottom of the machine body is provided with a moving module. The utility model adjusts the angle of view in all directions through the image acquisition module, so that the image acquisition module can collect the

operation content image of the target object during operation, and the analysis module analyzes the operation content image, and when the alarm information is detected from the obtained analysis result, the analysis module obtains the solution information that matches with the alarm information, and the solution information is displayed through the display, so that the target object of the operation can obtain the solution to solve the problem in time, which is convenient for the target object to solve the problem quickly and improves the operation efficiency of solving the problem.



21: 2021/07258. 22: 2021-09-28. 43: 2022-01-27 51: B64C: G05D

- 31. D040, G03D 71. Jilin Institute of Ch
- 71: Jilin Institute of Chemical Technology

#### 72: Zhou Lirong 54: UNMANNED AERIAL VEHICLE PATROL INSPECTION SYSTEM

#### 00: -

The invention discloses an unmanned aerial vehicle (UAV) patrol inspection system, which comprises an unmanned aerial vehicle, a control terminal and a communication unit; UAV is intended for conducting power line patrol inspection and collecting environmental information according to the control instructions sent by the control terminal; the control terminal is used for sending control instructions to

the UAV, receiving information collected by the UAV, and generating a inspection report and updating control instructions according to the information collected by the UAV; the communication unit is designed for information transmission for the control terminal and UAV. The invention achieves autonomous planning of the inspection route, keeps away from obstacles autonomously, and the UAV is effectively prevented from damaging the power lines or being damaged by colliding with obstacles, so that the safety of the UAV is ensured in the process of inspecting; meanwhile, the flight endurance of the UAC is improved, and manpower and material resources required by the power lines are effectively reduced.



21: 2021/07259. 22: 2021-09-28. 43: 2022-01-27 51: A01H

71: Jiangxi Agricultural University

72: Xu Jie, Gan Cong, He Haohua, Bian Jianmin, Jiang Wenxiang, Hu Lifang, Ouyang Linjuan, Sun Xiaotang, Song Yongping, Jiang Zhishu, Peng Limei 54: OLIGO DNA GROUP OF SGRNA FOR SITE-DIRECTED KNOCKOUT OF RICE OSAURORA1 GENE

#### 00: -

The invention provides a sgRNA for targeted knockout of rice OsAurora1 gene. Aiming at the coding region sequence of rice OsAurora1 (LOC\_Os01g09580) gene, the sgRNA sequence based on CRISPR/Cas9 technology is designed, and the DNA fragment encoding the sgRNA sequence is inserted into the vector carrying CRISPR/Cas9 to transform rice, so as to realize the editing of the genome sequence of rice OsAurora1 and knockout of the gene. Thereinto, the nucleotide sequence of sgRNA action site is shown in SEQ ID NO.1. According to the invention, the endogenous gene OsAurora1 of rice is edited by CRISPR/CAS9

technology, and the OsAurora1 knockout rice plant is obtained. The sgRNA prepared by the invention can efficiently, rapidly and accurately target the rice OsAurora1 gene, and has certain significance in the basic research of rice cell biology and the practice of rice breeding and production.



#### 21: 2021/07260. 22: 2021-09-28. 43: 2022-01-27 51: G09B

- 71: Suzhou University
- 72: Man Qin, Yanling Zhang, Juan Han 54: AN AUXILIARY DEVICE FOR COLLEGE ENGLISH TRANSLATION PRACTICE

00: -

The invention discloses an auxiliary device for college English translation practice, including a base and a support column arranged on the upper part of the base. The top of the support column is rotatably connected with the first table, and the middle of the support column is connected with a second table through additional adjusting components. One side of the base is also provided with a recorder device, which is connected with a headset component. The invention can separate the original text from the translation practice by setting the first table and the second table, and the height of the first table, the Angle of the first table and the second table can be adjusted to facilitate the use of different users; Through the reading auxiliary device on the first table, it is convenient for the original text to be fixed and displayed. The invention also provides a recorder component, which can not only practice translation, but also practice interpretation. The invention has a reasonable structure, diversified

functions, convenient operation and can improve the efficiency of translation practice.



# 21: 2021/07261. 22: 2021-09-28. 43: 2022-01-27 51: A10C

71: Zhejiang Institute of Garden Plants and Flowers (Zhejiang Xiaoshan Institute of Cotton and Bast Fiber Crops Research), Lu'an Academy of Agricultural Sciences

72: AN, Xia, HU, Wanqun, JIN, Guanrong, LUO, Xiahong, CHEN, Changli, LI, Wenlue, LIU, Tingting, ZHU, Guanlin

# 54: PRECISE SOWING DEVICE FOR KENAF 00: -

The present disclosure discloses a precise sowing device for kenaf. which includes a fixed disk outer ring. The inside of the fixed disk outer ring is rotatably connected with a movable disk inner ring; the movable disk inner ring is fixedly connected with a seed discharging pipe; the fixed disk outer ring is fixedly connected with a discharging box; the discharging box is matched with the seed discharging pipe; the movable disk inner ring is fixedly connected with a pressing wheel; a placement slot is formed in the fixed disk outer ring; the placement slot is rotatably connected with a first roller and a second roller; the first roller and the second roller are connected through a first belt; a sliding chute is formed in the first belt; the sliding chute is matched with the seed discharging pipe;

and the placement slot is matched with the pressing wheel.



21: 2021/07262. 22: 2021-09-28. 43: 2022-01-27 51: G06N

71: Capital Medical University

72: Guo Xiuhua, Feng Wei, Zhang Haiping, Wu Zhiyuan, Wang Guiqi, Liu Yong, Liu Xiangtong, Tao Lixin

## 54: MULTI-FACTOR-BASED CANCER RISK ASSESSMENT AND GRADING MODEL FOR HIGH-RISK POPULATION OF GASTRIC CANCER 00: -

The invention discloses a multi-factor-based cancer risk assessment and classification model method for high-risk population of gastric cancer, which comprises the following steps: acquiring factor index data of normal, percancerous and gastric cancer participants; pre-processing the factor index data, and constructing a cancer risk assessment and classification model for high-risk population of gastric cancer by adopting the adaptive LASSO-XGboost method based on the pre-processed data and training the classification model through training data sets. In addition, according to the relevant indexes, the contribution degree of each index data included in the model to the model is given. Finally, the trained cancer risk classification model for high-risk groups of gastric cancer is applied to classify gastric

cancer. The method can quickly and accurately identify early pulmonary nodules. According to the method, the time consumption of model calculation can be effectively reduced, the cancer risk assessment and classification of high-risk groups of gastric cancer can be achieved, the interpretability of the model is improved, and the convincing degree of clinical professionalism is enhanced.



## 21: 2021/07263. 22: 2021-09-28. 43: 2022-01-27 51: C01G

71: Anhui University of Science and Technology, Guangxi University of Science and Technology 72: Tao Yulun, Cheng Hao

## 54: NANO TIO2/ POLYANILINE/GRAPHENE COMPOSITE MATERIAL WITH HIGH INSTANTANEOUS PHOTOCURRENT AND PREPARATION METHOD THEREOF 00: -

The disclosure provides a preparation method of nano TiO2/ polyaniline/graphene composite material with high instantaneous photocurrent, which comprises the following steps: step 1, uniformly mixing graphene dispersion liquid, aniline and H2SO4 aqueous solution, stirring and reacting them in an ice bath, filtering, washing the filter cake and drying the mixture to obtain polyaniline/graphene material; step 2, uniformly mixing a titanium source, ethanol and polyaniline/graphene materials, adding water into the mixture, following by uniformly mixing, heating and keeping the temperature, and centrifuging the mixture to obtain a precipitate; adding the precipitate into HCI aqueous solution following by mixing uniformly, performing hydrothermal reaction, centrifuging, washing the

precipitate, and drying the mixture to obtain the nano TiO2/ polyaniline/graphene composite material with high instantaneous photocurrent. The disclosure also provides a nano TiO2/ polyaniline/graphene composite material with high instantaneous photocurrent according to the above method. The spectral response range of the disclosure can be extended to visible light, and the synergistic effect of graphene, polyaniline and titanium dioxide effectively prevents the electron-hole recombination.



21: 2021/07264. 22: 2021-09-28. 43: 2022-01-27 51: C07C

71: Hebei University of Engineering

72: Liu Meiyu, Zhang Xi, Lian Zhaohui, Lian Haiping 54: METHOD FOR PREPARING CALCIUM CITRATE FROM EGGSHELL 00: -

The invention discloses a method for preparing calcium citrate from eggshells, and belongs to the field of chemical treatment technologies. The method for preparing calcium citrate includes the following steps: the eggshell is washed and crushed to obtain eggshell powder, added with glacial acetic acid for reaction, suction filtered, freeze-dried to obtain calcium acetate, then added with citric acid for reaction, vacuum filtered, dried and ground to obtain calcium citrate. The present invention uses a two-step acid method to replace calcium acetate to prepare calcium citrate, effectively solving the problem of direct reaction between eggshells and citric acid to prepare calcium citrate, the yield rate of the prepared calcium citrate is above 80 percent, and another product in the displacement reaction is an acetic acid solution, which can realize the

recovery and utilization of acetic acid. The method is simple, efficient, and is suitable for industrial production.



21: 2021/07265. 22: 2021-09-28. 43: 2022-01-27 51: A62B

71: Shandong Kuanyuan New Material Technology Co., Ltd

72: Zhu Bo, Qiao Kun, Liu Yulan, Zhang Min, Wang Yongwei, Yu Junwei

# 54: CARBON FIBER BACTERIOSTATIC ULTRA-FILTRATION MASK AND PREPARATION METHOD THEREOF

#### 00: -

The invention discloses a carbon fiber bacteriostatic ultra-filtration mask and a preparation method thereof. The mask body of the carbon fiber bacteriostatic ultra-filtration mask consists of an inner layer, a bacteriostatic ultra-filtration layer, a filter layer and an outer layer, and the outer layer can block larger pollution particles in the environment; The filter layer can filter most pollution particles in the environment; The bacteriostatic ultrafiltration layer can filter toxic and harmful substances in the atmosphere, and the activated carbon felt is adopted for filtration, so that secondary pollution such as particle shedding can not be formed, and the growth of bacteria can also be inhibited, thereby improving the applicable range and practical safety of the mask; The inner layer is in contact with human body, and comfortable cotton cloth or non-woven fabric is adopted to improve human comfort.



21: 2021/07266. 22: 2021-09-28. 43: 2022-01-27 51: B29C

71: Shandong Kuanyuan New Material Technology Co., Ltd

72: Zhu Anping, Qiao Kun, Wang Yongwei, Luo Zengshu, Di Chengrui, Zhu Bo

# 54: FLEXIBLE ULTRASONIC GUM DIPPING DEVICE

# 00: -

The invention relates to a flexible ultrasonic gum dipping device, which comprises a tank body, wherein the tank body is provided with an inner concave chamber for containing liquid resin; the tank body has a double-layer structure and comprises an inner tank body and an outer tank body; a space for storing circulating media is formed between the inner tank body and the outer tank body; a liquid inlet and a liquid outlet are respectively arranged on the outer tank body, and both the liquid inlet and the liquid outlet are communicated with the space, a flexible ultrasonic device with adjustable frequency, power and other parameters is arranged on the outer wall of the outer tank body; the ultrasonic wave emitted by the ultrasonic device of the invention uniformly acts on fibers and liquid resin through the circulating medium to realize gum dipping, and when the gum dipping tank is cleaned after the gum dipping procedure is completed, the ultrasonic wave acts on the dirt in the tank body, therefore, for the gum dipping and cleaning processes, the invention adopts physical means, and on the basis of realizing gum dipping, improves the cleaning effect, simplifies the cleaning process and avoids influencing the reuse effect of the gum dipping tank.



21: 2021/07267. 22: 2021-09-28. 43: 2022-01-27 51: G02F

71: Anhui University of Science and Technology 72: Tao Yulun, Huang Ya'nan

#### 54: POLYANILINE PHOTOSENSITIVE CHIP AND PREPARATION METHOD THEREOF 00: -

The present invention discloses a polyaniline photosensitive chip and the preparation method thereof, the polyaniline used is polyaniline powder doped with protonic acid, wherein the protonic acid is any one of citric acid, hydrochloric acid or acetic acid. The protonic acid doped polyaniline of the present invention is used as active photosensitive semiconductor material to develop a photosensitive chip through the subsequent processing, the obtained photosensitive chip can distinguish color of purple, red, blue, green, white and no light with high sensitivity and selectivity, and the implement method is simple and easy.



21: 2021/07275. 22: 2021-09-28. 43: 2022-01-27 51: A61K; A61P

71: Hangzhou Haolin Agricultural Development Co., Ltd., Zhejiang Fisheries Technology Extension Station, Zhejiang Tonglu Agricultural Technology Extension Center, Zhejiang Agricultural Technology Extension Center

72: JIN, Jianrong, ZHOU, Fan, XU, Lijun, QIN, Yebo, WANG, Jie, JIN, Hao, ZHOU, Yanping

#### 54: TRADITIONAL CHINESE MEDICINE FORMULATION FOR PREVENTING DISEASES IN ECOLOGICAL CULTURE OF SOFTSHELL TURTLES, PREPARATION METHOD AND METHOD FOR USE THEREOF 00: -

Disclosed is a traditional Chinese medicine formulation for preventing diseases in ecological culture of softshell turtles, and a preparation method and a method for use thereof. The traditional Chinese medicine formulation comprises the following ingredients in mass percentages: Radix Isatidis: 8-12%, fried Fructus Aurantii: 8-12%, fried Endothelium Corneum Gigeriae Galli: 8-12%, Rhizoma Imperatae: 8-12%, Plantaginis Herba: 8-12%, Glycyrrhizae Radix et Rhizoma: 8-12%, Astragali Radix: 6-9%, Poria cocos: 6-9%, Fructus Amomi: 6-9%, Phellodendri Chinensis Cortex: 6-9%, Radix Paeoniae Alba: 5%, and Rhei Radix et Rhizoma: 5%.The present disclosure has the following obivious advantages: the formulation has small side effects, low toxicity, good overall effect on preventing and curing diseases of the softshell turtles; the sources of the traditional Chinese medicines are abundant, the cost is low, and there are no antibiotic residues in the body of softshell turtles.

# 21: 2021/07292. 22: 2021-09-28. 43: 2022-01-27 51: G01C; G01S

71: Jiangsu Maritime Institute

72: Lv Taizhi, Feng Maoyan, Zhao Tao, Zhang Jun, Chen Yong, Sun Jiongning
33: CN 31: 201910174544.2 32: 2019-03-08
54: PATH PLANNING METHOD AND SYSTEM

#### 54: PATH PLANNING METHOD AND SYSTEM BASED ON DISTRIBUTED PARALLEL COMPUTING 00: -

A path planning method employing distributed parallel computation and a system thereof. The method comprises the following steps: a mobile robot regularly reading data from a lidar sensor by means of a data acquisition module, then formatting and storing the data in a local database; the mobile robot encapsulating the sensor data as a message, and calling a remote interface to submit the message to a cloud; the cloud executing a path planning method employing distributed parallel computation, extracting the message from a message queue, separating the lidar data into groups and having all groups generate environment maps in parallel, constructing a search interval by connecting starting points, improving an A\* algorithm and constructing a visibility graph and searching for paths in parallel, merging the paths, encapsulating the merged path into a message, and returning the message to the mobile robot; and the mobile robot acquiring the returned path, and moving towards a target point. The path planning method is completed at high-speed, and resolves an issue of the mobile robot having insufficient onboard capability during path planning.



21: 2021/07308. 22: 2021-09-29. 43: 2022-01-27 51: G01N

71: Shandong Jianzhu University

72: Yu Kuan, Zhu Bo, Wang Yongwei, Lu Jianpeng, Qiao Kun, Zhang Min, Liu Yulan

# 54: METHOD FOR IMPROVING ACCURACY OF NONDESTRUCTIVE TESTING OF CARBON FIBROUS WIRES

#### 00: -

The invention relates to a method for improving the accuracy of nondestructive testing of carbon fibrous wires, which comprises the following steps: adding resin and developer into high carbon fibers to form a carbon fiber composite wire mandrel by extrusion, or coating the developer on the surface of the wire mandrel made of carbon fibers and resin, and then performing nondestructive testing by X-ray. The invention can directly develop, has good development effect, is convenient to store, and can perform one-time flaw detection during flaw detection, which is convenient and quick.



21: 2021/07309. 22: 2021-09-29. 43: 2022-01-27 51: G06N

71: Capital Medical University

72: Guo Xiuhua, Zhang Haiping, Feng Wei, Liu Fen, Niu Chen, Zang Zhaoping, Wang Guiqi, Liu Yong, Tao Lixin, Wu Zhiyuan, Wang Xiaonan, Liu Xiangtong

# 54: MULTI-FACTOR-BASED CANCER RISK ASSESSMENT AND GRADING MODEL FOR HIGH-RISK POPULATION OF ESOPHAGEAL CANCER

#### 00: -

The disclosure provides a multi-factor-based cancer risk assessment and grading method for high-risk groups of esophageal cancer, which comprises the following steps: acquiring epidemiological survey data and physical examination data of people in areas with high incidence of upper digestive tract tumors; Get the pathological examination results of esophageal endoscopy and biopsy in high-risk groups; Carry out database linking and data cleaning on the collected baseline information, guestionnaire information, physical examination information and pathological diagnosis results, and construct a database for identifying high-risk groups of esophageal cancer and its precancerous lesions; based on univariate and multivariate Logistic regression models, the feature variables of the data set were screened to obtain the demographic, environmental, behavioral and host factors of esophageal cancer and its precancerous lesions; a classification model for cancer risk assessment of high-risk population of esophageal cancer is constructed based on the eXtreme Gradient Boosting (XGBoost) algorithm, and the risk assessment model is trained through the training set to classify and diagnose normal esophagus and
esophagitis, low-grade intraepithelial neoplasia, high-grade intraepithelial neoplasia and esophageal squamous cell carcinoma; the trained risk assessment model is verified in the test set, and the prediction performance index of the test set is calculated. In order to evaluate the performance of the model, the training results are evaluated based on the confusion matrix. Draw the area enclosed by receiver operating characteristic curve (ROC curve) and coordinate axis (AUC value) to judge the accuracy of pairwise classification results of the model; according to the classification effect of the model in the training set and the test set; the cancer risk assessment and grading model of the high-risk population of esophageal cancer with optimized parameters was externally verified to evaluate the efficiency of the model.



21: 2021/07310. 22: 2021-09-29. 43: 2022-01-27 51: H01F: H02H

- 71: Shenyang Institute of Engineering
- 72: Xing Junqiang

#### 54: MAGNETIC SATURATION CONTROLLABLE SHUNT REACTOR WITH AC AND DC EXCITATION

00: -

The invention relates to a magnetic saturation controllable shunt reactor with AC and DC excitation, which comprises an oil tank, magnetic core columns arranged in the oil tank, left and right side magnetic yokes and upper and lower magnetic yokes of iron core magnetic circuit structure composed of the magnetic core columns, wherein a control winding, a compensation winding and a line side winding are sequentially sleeved on the magnetic core column from the column surface outward. The line side winding is connected with the transmission line, the compensation winding is connected with the input terminals of the rectifier and filter devices, and the control winding is connected with the output terminals of the rectifier and filter devices. Each line side winding is sleeved on two magnetic core columns, and each compensation winding is located at the inner side of the line side winding, and is also sleeved on the two magnetic core columns, and each magnetic core column is sleeved with a control winding. The invention has flexible control and fast response time, which can not only smoothly adjust the reactive power of the system and realize real flexible transmission, but also inhibit power frequency and operating overvoltage, reduce line loss and greatly improve the stability and safety of the system.



21: 2021/07311. 22: 2021-09-29. 43: 2022-01-27 51: F24C

71: Luoyang Guoqi Electromechanical Technology Co., Ltd

72: Huang Huiying, Huang Huimin, Wu Qianqiong, Li Jing, Zheng Yuli, Chang Xinyue

54: NO-CLEAN RANGE HOOD MECHANISM WITH VORTEX WIND AND LARGE SUCTION FORCE 00: -

The invention discloses a no-clean range hood mechanism with vortex wind and large suction force, which comprises a gas-collecting hood and an

exhaust mechanism fixed on the top of the gascollecting hood, wherein the exhaust mechanism comprises a first gap and a second gap; a wind shield mechanism is arranged on the gas-collecting hood; air enters the first gap through a fan connected with the exhaust mechanism to form vortex wind; a negative pressure is formed in the center of the vortex wind; cooking oil fume is trapped in the center of vortex and exhaust with air, and part of clean air overflows from the second gap and flows along the inner wall of the gas-collecting hood to form an air curtain to isolate cooking oil fume from contacting the inner wall of the gas-collecting hood; after the air of the wind curtain is folded back to the air pumping port area through the wind blocking mechanism, it is extracted into the vortex wind center along with the cooking oil fume and exhaust out of the room. The invention does not require oil and smoke separation, all the oil and smoke is exhaust, the oil and smoke gas does not need to pass through the motor and fan, avoiding the motor and fan to be adhered by oil, which saves the postcleaning work; the use of direct exhaust greatly improves the extraction power of the hood; the inner wall of the exhaust mechanism is flat or curved, which is extremely easy to clean at a later stage.



21: 2021/07312. 22: 2021-09-29. 43: 2022-02-09 51: A23F

71: Shanxi Academy of Forestry and GrasslandSciences, Anze County Heqingyuan TeaDevelopment Co., Ltd.72: Shi Minhua, Chen Liuming, Liu Xin, Gao

Jindong, Liu Jin, Ren Xiaohong 54: PREPARING METHOD OF FORSYTHIA SUSPENSA GREEN TEA 00: - The invention discloses a preparing method of Forsythia suspensa green tea, which comprises the following steps: (1) tea harvesting; (2) air-drying; (3) sunning; (4) fixation; (5) stir fixation; (6) rolling; (7) warping up-keading-breaking up; (8) baking; (9) picking up in dustpans; and (10) finished product packaging. Specifically, in early and mid-May, the whole Forsythia suspensa leave less than 3 cm are picked, followed by air-drying at 20~22 degree Celsius for 8-10 hours and sunning for 20~50 min; the obtained leaves are subjected to fixation for 5-10 min at 260-280 degree Celsius and stir fixation for 3~5 min at 70 degree Celsius; rolling for 30~40 min; kneading for 4~6 times until they are formed. The Forsythia suspensa green tea prepared by the method of the invention is not astringent in taste, clear in yellow and green, fresh in smell and sweet in aftertaste. It has health care effects such as antibacterial, antiviral, heart tonifying, diuretic, liver protection, blood pressure reduction, antiemetic and analgestic, antidiabetic, anti-influenza virus, etc..

21: 2021/07313. 22: 2021-09-29. 43: 2022-01-27 51: E03B

71: Jinan Changxing Construction Group Co., Ltd. 72: LIU, Jiandong

54: INSTALLATION PROCESS AND METHOD FOR BUILDING WATER SUPPLY PIPELINE 00: -

An installation process and method for a building water supply pipeline is disclosed. Installation problems caused by the occurrence of differentiation are prevented. A standard is also given when a water supply pipe is tested. A stable operation of the water supply pipe is ensured. Economic losses of people are prevented.

21: 2021/07314. 22: 2021-09-29. 43: 2022-01-27
51: E04B; E04H; G05B; H04L
71: Hebei Normal University
72: WU, Lihong, QIU, Zhiyu, ZHAO, Shuliang, ZHANG, Peixin, WANG, Ye, ZHOU, Hongxia, WANG, Yanjun, SHEN, Chunpu, CHEN, Dong, TIAN, Liang
54: SPLICED BUILDING WITH INTELLIGENT HOME SYSTEM
00: The invention relates to a spliced building with an intelligent home system. The invention consists of a

spliced building assembly and an intelligent home

control system. The spliced building assembly consists of a base course arranged in a room frame, and a decorative layer and a clapboard arranged on the base course. The intelligent home system consists of a server terminal, a security system, an environment regulating and controlling system, a network system, and a remote terminal. According to the invention, based on the most basic framework provided by a building developer, a house buyer can flexibly change the internal structure and customize it. The implementation can be constructed by other professional suppliers according to functions (a professional division of labor has been assigned for the integral kitchen and bathroom) and no cement is needed to be used to fix the tiles such that the replacement is simple and lossless.



21: 2021/07315. 22: 2021-09-29. 43: 2022-02-11 51: C02F

71: Jingmen Tuoda Technology Co., Ltd. 72: LIU, Yinsong, LIU, Qingshan, LIU, Yinzhi 54: SEWAGE TREATMENT EQUIPMENT 00: -

The present invention discloses sewage treatment equipment, including a main rod piece. The bottom of the right side of the main rod piece is symmetrically provided with left and right pipe barrels; a stick body is threaded into each pipe barrel in which a first bearing is also arranged; two ends of each stick body extend to the outside of the barrel pipe; parts of each stick body extending to the two ends outside the pipe barrel are provided with walking wheels; the top of a middle point position of the main rod piece is fixedly provided with a motor; the top of the right side of the main rod piece is fixedly provided with an oil storage tank; the oil storage tank is connected with the motor through a hose; and the bottom of the left side of the main rod piece is fixedly provided with a dustproof sleeve.



- 21: 2021/07317. 22: 2021-09-29. 43: 2022-01-27 51: A61F 71: SIGABE, Mulweli 72: SIGABE, Mulweli
- 33: ZA 31: 2020/07269 32: 2020-11-23
- **54: A SANITARY GARMENT** 00: -

THIS invention relates to a sanitary garment. More specifically, the invention relates to a diaper-type sanitary garment with a re-usable pant-like article and a plurality of disposable articles stacked therein, with soiled disposable articles being removable from the re-usable pant-like article for disposal without the need for removing the re-usable pant-like article from a wearer.



21: 2021/07318. 22: 2021-09-29. 43: 2022-01-27 51: B02C

# 71: SHANDONG UNIVERSITY OF SCIENCE AND TECHNOLOGY

#### 72: SUI, Xiuhua, MIAO, Dejun, LI, Meng, LI, Zhicheng, LI, Zhuangzhuang, XIU, Xiaojian 54: COAL CRUSHING DEVICE FOR CONVEYOR AND UNDERGROUND COAL CONVEYING SYSTEM

00: -

Disclosed is a coal crushing device for a conveyor and an underground coal conveying system, the coal crushing device comprises a crushing unit; a shell connected with the conveyor comprises a top wall and a bottom wall, and an mounting cavity is arranged between the top wall and the bottom wall; a lifting unit is arranged in a mounting cavity, the lifting unit has a connector extending out of the mounting cavity, and the crushing unit is connected to the connector; a dust cover is matched with the shell to close the mounting cavity, the dust cover includes a first dustproof section and a second dustproof section, the first dustproof section is respectively connected with the top wall and the connector, and the second dustproof section is respectively connected with the bottom wall and the connector, both of them can expand and contract along the vertical direction. The lifting unit is enclosed in a closed chamber, and only the crushing unit is located outside the mounting cavity, the shell and dust cover can block impurities in the air, so as to ensure the cleanness of the mounting cavity, the lifting unit always works in a clean environment, which increases the service life of the lifting unit and reduces the probability of malfunction of the lifting unit.



#### 21: 2021/07319. 22: 2021-09-29. 43: 2022-01-27 51: A01N

71: Institute of Horticulture, Sichuan Academy of Agricultural Sciences

72: Li Jing, Liu Jia, Sun Shuxia, Chen Dong, Jiang Guoliang, Tu Meiyan, Song Haiyan, Zhang Guowei 54: METHOD FOR PREVENTING AND TREATING SCAB DISEASE

00: -

The invention discloses a method for preventing and treating scab disease, which adopts a chemical method for prevention and treatment, and the specific operations are as follows: before the flower buds of the fruit tree swell to show red, the whole fruit tree is sprayed with crystal sulfur mixture; after the fruit tree has faded and before bagging, spraying the following chemicals: difenoconazole with a concentration of 10 percent by mass percentage, polymanganese zinc, Fuxing emulsion, penkejunkang after the rain. In order to reduce the losses caused by scabs to the majority of fruit farmers in production, and to provide the market with high-quality and safe fruit, according to the present invention, through field investigation and field pesticide test, it is found that the prevention and control of scab disease should be based on the biological characteristics of the pathogen, mastering

the pathogenesis and transmission route, selecting disease-resistant varieties and chemicals with high efficiency, low toxicity and low residue, at the same time, physical and cultivation methods are used for comprehensive prevention and control. The prevention and control effect is remarkable, the fruit safety is up to standard, and the prevention cost is

low.

21: 2021/07320. 22: 2021-09-29. 43: 2022-01-27 51: C12Q

71: Forensic Medicine School of Guizhou Medical University

72: Jin Xiaoye, Huang Jiang, Zhang Hongling, Ren Zheng, Wang Qiyan, Liu Yubo, Xia Bing 54: NGS-BASED MULTIPLEX PANEL FOR SIMULTANEOUSLY DETECTING 22 MICROHAPLOTYPES AND 7 COMPOUND MARKERS

00: -

The invention discloses a NGS-based simultaneous typing detection system for 22 microhaplotypes and 7 compound markers. The simultaneous typing detection system comprises a total of 29 loci, of which 22 are microhaplotype loci and 7 are compound marker loci. The present invention takes microhaplotypes and compound markers as research objects, and uses the next-generation sequencing technology, develops a multiplex system of microhaplotypes and compound markers that show high polymorphism in East Asian population, which provides an efficient and practical tool for forensic individual identification, paternity analysis and mixed sample analysis of East Asian population.

21: 2021/07637. 22: 2021-10-11. 43: 2022-01-27 51: A47B 71: Glen Clifton Kruger 72: Glen Clifton Kruger 33: ZA 31: 2020/06331 32: 2020-10-13 **54: TABLE** 00: -

A table includes: (i) a base; (ii) an elongate spine that: defines a rack on a first side of the spine, along a portion of the length of the spine; and is securable at a first axial end of the spine to the base; (iii) a leg that is securable: at a first end of the leg to the base; and at an opposite second end of the leg to the spine; (iv) a support surface defining a slot sized and shaped to receive: an axial end of the spine; and the portion of the length of the spine that defines the rack, therethrough; and (v) a flap hingedly secured to the operative underside of the support surface, the flap being engageable with the rack defined by the spine. In use: (i) the support surface may cantilever from the spine, along the portion of the length of the spine that defines the rack, with: a first portion of the support surface bearing against a side of the spine opposite the first side of the spine; and a second portion of the support surface engaging the rack defined by the spine; and (ii) the flap may engage the rack defined by the spine to provide additional support to the cantilevered support.



21: 2021/07642. 22: 2021-10-11. 43: 2021-11-24 51: A63B

71: SHANDONG NORMAL UNIVERSITY

72: TIAN, Lei, LI, Guohua, WANG, Zhongyong, LIU, Xiaoyi

#### 33: CN 31: 202110350560.X 32: 2021-03-31 54: HANDSTAND ROLLER SKATING FITNESS TRAINING DEVICE

00: -

The present invention relates to a handstand roller skating fitness training device, comprising a support table and a roller skating wear equipment. The support table is arranged above the ground and provided with a slide cavity, a bottom plate of the slide cavity is provided with a slide opening,

sawtooth structures are arranged on the bottom plate on two sides of the slide opening, the roller skating wear equipment comprises wearable roller skates each comprising a foot fixing component and a roller component connected to each other, the roller component comprises an upper roller set and a lower roller set, the upper roller set stands on the bottom plate of the slide cavity, the lower roller set located below the slide cavity, and the upper roller set and the lower roller set connected to each other; a balance component is arranged between the upper and the lower roller set.



21: 2021/07779. 22: 2021-10-13. 43: 2022-01-19 51: H04M; G06Q

71: NANGIA, Rajender Kumar, JUNEJA, Rajvir Slngh, PATHAK, Santosh

72: NANGIA, Rajender Kumar, JUNEJA, Rajvir Slngh, PATHAK, Santosh

#### 33: IN 31: 201911022264 32: 2019-06-05 54: METHOD AND SYSTEM FOR PLAYING MEDIA CONTENT IN TELECOMMUNICATION NETWORK

00: -

A method of playing media content in a telecommunication network is disclosed. The method involves uploading media contenton a server (100) by a caller device (400). The method further includes selecting at least one callee device (500) from a contact list of the device (400) via a predefined application (300). Further, the method includes forwarding the content from the server to a selected callee device (500). The method is followed by outputting the content by the application (300) on the selected device (500). The content is selected by the device (400), and the content is output at least one of when the selected device (500) is receiving a call from the device (400) or the selected device (500) is commencing the call to the device (400), the content being played on the selected device (500) by

capturing ring signal via a ring signal capturing module (250).



21: 2021/07854. 22: 2021-10-15. 43: 2022-02-09 51: A61H

71: Affiliated Hospital of YouJiang Medical University for Nationalities

72: Wang Jianyuan, Huang Cuimai, Qin Jinyan, Huang Xiaozhen, Chen Qiuping

#### 54: MULTIFUNCTIONAL SWALLOWING EXERCISE DEVICE FOR REHABILITATION NURSING

#### 00: -

This invention discloses multifunctional swallowing exercise device for rehabilitation nursing, which comprises box body, the bottom of the box body is fixedly connected with shell, the inner wall of the box body is fixedly connected with partition plate, the bottom of the inner cavity of the box body is fixedly connected with a cylindrical shell on the right side of the partition plate, the inner cavity of the cylindrical shell body is provided with piston, and the surface of the piston contacts with the inner wall of the cylindrical shell body. This invention realizes the purposes of exercising swallowing, medicine feeding and video demonstration through the cooperation of box body, shell, partition plate, cylindrical shell, piston, electric telescopic rod, standpipe, first hose and air bag. On the basis of realizing the ability of exercising swallowing, this invention can also feed medicine to patients and play video information, which not only provides correct swallowing demonstration, but relieves patients' mental stress, thus, meeting the needs of current market by improving the practicability and usability of the current swallowing exercise device, and solving the problem of its single function.



21: 2021/07855. 22: 2021-10-15. 43: 2022-02-09

51: B32B; E21B

71: Shandong University

72: Qiao Kun, Cao Weiwei, Wang Yongwei, Zhang Min, Zhu Bo

# 54: COMPOSITE SUCKER ROD WITH SELF-ADJUSTING ANTI-IMPACT STRUCTURE

The invention provides a composite sucker rod with self-adjusting anti-impact structure. The composite sucker rod consists of a composite rigid core layer of central hybrid fiber reinforced thermosetting resin, a composite self-adjusting anti-impact layer of middle reed structure hybrid toughness fiber reinforced thermoplastic resin and a carbon fiber corrosionresistant layer with surface honeycomb sandwich structure from inside to outside. By reasonably adopting the hybrid combination of various fibers in each structure, the comprehensive characteristics of various fibers are effectively brought into play, so that the sucker rod of the invention has the corrosion resistance characteristics of the rigidity of the sucker rod core, the self-adjusting protection of the middle layer to the underground impact force and the weight reduction of the hollow structure on the surface, thereby effectively improving the adaptability of the sucker rod to the underground complex environment and effectively prolonging the service life of the sucker rod.



21: 2021/07856. 22: 2021-10-15. 43: 2022-02-09
51: A01H; C07K; C12N; C12R
71: Institute of Grain and Oil Crops, Hebei Academy of Agriculture and Forestry Sciences
72: LV, Liangjie, CHEN, Xiyong, LI, Hui, ZHAO, Aiju, DONG, Ce, ZHANG, Yelun
33: CN 31: 202110031466 .8 32: 2021-01-11
54: WHEAT QUALITY-RELATED PROTEIN PDIA3, ENCODING GENE AND USE THEREOF
00: The present disclosure provides a wheat quality-

related protein PDIA3, an encoding gene and use thereof. The protein PDIA3 has an amino acid sequence shown in SEQ ID No. 1, a full-length DNA sequence is shown in SEQ ID No. 2, and a cDNA sequence is shown in SEQ ID No. 3. The gene shown in SEQ ID NO. 3 is overexpressed in wheat to breed high-quality transgenic wheat, accelerating the molecular breeding process of the high-quality wheat and having great significance in improving wheat quality.

21: 2021/07857. 22: 2021-10-15. 43: 2022-02-09 51: C03B; C03C

71: SHANDONG LEHE HOUSEWARES CO., LTD 72: XU, Zhengben, WANG, Hongyan, ZHANG, Chao 33: CN 31: 202110514593.3 32: 2021-05-11 54: GLASS CAPABLE OF ENHANCING THERMAL SHOCK RESISTANCE AND PREPARATION METHOD THEREOF 00: -

The present disclosure provides glass capable of enhancing thermal shock resistance and a

preparation method thereof, where the glass is, prepared from the following raw materials in parts by weight: 620-680 parts of quartz sand, 180-230 parts of sodium carbonate, 20-25 parts of aluminum hydroxide, 35-40 parts of borax, 50-60 parts of limestone, 10-15 parts of potassium carbonate, 6-10 parts of barium carbonate and 30-36 parts of titanium dioxide. In the technical schemes of the present disclosure, an appropriate amount of borax is added, such that the glass contains an appropriate amount of B2O3 to reduce the melting temperature, improve the internal quality and strengthen the mesh structure, thereby enhancing the thermal shock resistance. An appropriate amount of aluminum hydroxide is added, such that the glass contains an appropriate amount of Al2O3 to improve the chemical strengthening performance and further enhance the thermal shock resistance.

- 21: 2021/07858. 22: 2021-10-15. 43: 2022-02-09 51: C01B
- 71: Zaozhuang University
- 72: Jiang Peng, Yuan Fei, Cheng Li, Zheng Yi, Jiang Xianmiao

#### 54: LIQUID SODIUM SILICATE ENERGY-SAVING PRODUCTION DEVICE AND PRODUCTION METHOD

00: -

The invention relates to the technical field of liquid sodium silicate manufacturing, in particular to a liquid sodium silicate energy-saving production device and a production method. The production equipment includes a sodium sulfate production system, a production water circulation system and a storage tank backwash system; silicate of soda is produced in the reaction kettle, and the hightemperature silicate of soda flowing out of the reaction kettle enters the heat exchange device through the pipe. After cooling, silicate of soda enters into the silicate of soda storage tank for storage, and the preheated production water enters the storage tank; the silicate of soda storage pool uses boiler high pressure steam to backwash the bottom of the storage tank through the cleaning pipeline, and the backwashed liquid is discharged through the pipeline under the storage tank below. The invention realizes the maximum energy saving to produce liquid silicate of soda, uses the pressure of the reaction kettle to transport the produced

silicate of soda to a high-level storage tank, and cancels the pumping process in the later loading. The high pressure steam pressure of the boiler is used to backwash the storage tank to reduce the difficulty of cleaning up the sediment. The device has the advantages of energy saving, environmental protection, simple structure, convenient operation and the like.



21: 2021/07909. 22: 2021-10-18. 43: 2022-02-09 51: G01N

71: Qingdao Agricultural University

72: Li Jiandong, Wang Xiangyu, Yan Weilan, Zhang Yu

# 54: FORAGE GRASS SAMPLING SCISSORS 00: -

The innovation discloses forage grass sampling scissors. It also relates to the field of animal husbandry equipment. When the forage grass sampling scissors are in use, the outer cylinder can be sleeved on the inner cylinder, and then the outer cylinder can be rotated so that the outer shearing groove and the inner shearing groove are staggered to prevent forage grass from entering the inner cylinder. The user holds two handles to insert the outer cylinder into the forage grass bag to a proper depth, and then rotates the inner cylinder inside the outer cylinder so that the inner shearing groove coincides with the outer shearing groove, and the forage grass enters the inner cylinder through the outer shearing groove and the inner shearing groove. The user inclines the sampling bottle downwards, and the forage grass can slide down from the inner cylinder and the threaded pipe into the sampling bottle to complete the forage grass sampling work. The forage grass sampling scissors can be simply and conveniently inserted into the forage grass bag for sampling, and can freely control the timing of sampling and the timing of ending sampling. The operation is very flexible and convenient.

21: 2021/07915. 22: 2021-10-18. 43: 2022-02-10 51: E04B

71: QINGDAO UNIVERSITY OF TECHNOLOGY 72: YU, Yousheng, WANG, Xuan, YE DECAI, YU, Dehu, YUAN, YONGLIN, LIU, Jie, ZHOU, Qilin 33: CN 31: 201910839585.9 32: 2019-09-06 54: METHOD FOR DETERMINING AN OPTIMAL ARRANGEMENT OF CIRCULAR PIPE SUPPORTS OF STEEL SILO COMPOSITE SHEAR WALL 00: -

A method for determining an optimal arrangement of circular pipe supports of a steel silo composite shear wall, including: designing a set of steel silo composite shear wall model including parameters of interval of the circular pipe supports, axial-load ratio, steel ratio and aspect ratio; establishing an ABAQUS finite element model including initial defect; performing force analysis by the finite element software ABAQUS and calculating a horizontal ultimate bearing capacity; fitting formulas of the horizontal ultimate bearing capacity of the steel silo composite shear wall by applying least square method; drawing a relationship curve between the interval of the circular pipe supports and the horizontal ultimate bearing capacity; determining the optimal arrangement of the circular pipe supports of the steel silo composite shear wall according to a critical point of the relationship curve between the interval of the circular pipe supports and the horizontal ultimate bearing capacity.



21: 2021/07928. 22: 2021-10-18. 43: 2022-01-27 51: G06Q

71: Zhuo'erkang (Beijing) Biotechnology Co., Ltd. 72: YANG, Zhaoyong, JIN, Yuanyuan, FENG, Xiao, ZHANG, Zhifei, SHI, Beichen, HAN, Qiang, WANG, Zhongbo

33: CN 31: 202011329998.1 32: 2020-11-24 54: IMMUNOASSY-BASED TUMOR MEDICATION GUIDANCE SYSTEM AND METHOD 00: -

The present disclosure relates to an immunoassaybased tumor medication guidance system and a method, belonging to the technical field of information processing. The system comprises a document database management subsystem, a medication knowledge management subsystem and a report generation management subsystem; the document database management subsystem is used to retrieve external databases according to immune indices to obtain retrieval results; the medication knowledge management subsystem is used to

consolidate and hierarchically manage the retrieval results in the document database management subsystem, obtain and save target knowledge; the report generation management subsystem is used to call the target knowledge according to personalized data provided by a user, and generate a tumor medication interpretation report based on the target knowledge and the primary medication interpretation report. The present disclosure can improve the availability of guiding medication and meet the needs of clinical guidance.



21: 2021/07961. 22: 2021-10-19. 43: 2022-01-25 51: G07C 71: Linyi University 72: LI, Kaicai **54: STUDENT SEAT SIGN-IN DEVICE** 00: -The utility model discloses a student seat sign-in

device, comprising: a body and a base; a magnetic card reading area located at a top of the body, wherein an electromagnetic induction coil is provided in a body shell of the magnetic card reading area; a fingerprint recognizer located on one side of the magnetic card reading area, wherein the fingerprint recognizer uses a press-type sensor as a data collection element, which is embedded in the body shell; an answer button located at a top of the fingerprint recognizer, wherein a spring structure is provided in the answer button; the student seat signin device is small in size and easy to install. A magnetic card recognition and a fingerprint recognition are used for double verification on an identity of an appropriate sign-in person, so that a teacher can confirm a position of the student according to a sign-in device number.



#### 21: 2021/07977. 22: 2021-10-19. 43: 2022-01-25 51: A01N; C12N

71: QINGDAO AGRICULTURAL UNIVERSITY 72: XIAN Hongquan, LI Yahua, ZHANG Qihang 33: CN 31: 202110196171.6 32: 2021-02-22 54: BACILLUS SUBTILIS, MICROBIAL INOCULUM, AND USE THEREOF IN CONTROLLING PLANT DISEASES 00: -

The present invention discloses a Bacillus subtilis, a microbial inoculum and use thereof in controlling a plant disease, wherein the Bacillus subtilis is Bacillus subtilis QNJK01 deposited with an accession number of CGMCC 20376. The present invention also provides a fermentation medium for culturing the aforementioned Bacillus subtilis, which includes the following ingredients: 200 g/L of potato, 10-50 g/L of glucose, 1-5 g/L of ammonium chloride, 0.1-0.5 g/L of manganese sulfate, and 0.1-0.5 g/L of magnesium sulfate. A novel strain of Bacillus subtilis QNJK01 as provided by the present invention has a broad-spectrum control effect on plant root diseases, especially peanut root fungal diseases and root-knot nematode diseases, and it has been proven by pot experiments and field experiments that the Bacillus subtilis QNJK01 can not only effectively control various common peanut fungal diseases, but also effectively control peanut root-knot nematode diseases, and greatly improve the full fruit rate and yield of a peanut plant; the Bacillus subtilis QNJK01 also has a good control effect on fungal diseases and root-knot nematodes in fruits and vegetables.



21: 2021/07982. 22: 2021-10-19. 43: 2022-01-25 51: B65B

71: BEIJING INSTITUTE OF GRAPHIC COMMUNICATION

72: ZHANG, Yongbin, QI, Yuansheng, CHENG, Qian, ZHANG, Yazhou, LI, Xin, LIU, Shilu 33: CN 31: 202110615855.5 32: 2021-06-02 54: AN AUXILIARY BUNDLING DEVICE FOR PLASTIC PACKAGING BAGS 00: -

The invention discloses an auxiliary bundling device for plastic packaging bags, which comprises the main bracket, transmission unit, count sensing device, transverse alignment unit, longitudinal alignment device, control end, and bundling device. The count sensing unit is mounted at the head end of the main bracket, the transmission unit is mounted horizontally on the main bracket, the transverse alignment unit is mounted at the head end of the bundling device, and the bundling device is mounted at the middle part of the main bracket, the longitudinal alignment unit is mounted at the tail end of the bundling device, the control end is mounted at the bottom of the main bracket and is electrically connected with the count sensing unit, the transverse alignment unit, the longitudinal alignment unit and the bundling device, respectively.



21: 2021/08117. 22: 2021-10-21. 43: 2022-02-07 51: B23K

71: Beijing Institute of Petrochemical Technology, Beijing ShengLong BoRui Science and Technology Co., Ltd

72: HUANG Jiqiang, XUE Long, LIANG Yajun, ZOU Yong, CAO Yingyu, HUANG Junfen 54: SURFACING ROBOT AND RING-SHAPED DIAPHRAGM SURFACING SYSTEM

00: -

Disclosed is a surfacing robot and a ring-shaped diaphragm surfacing system, which solves the technical problem of low surfacing efficiency of ringshaped diaphragms during surfacing treatment. The device comprises a welding machine, a welding gun position adjusting device and a control device, wherein the welding gun is connected to the position adjusting device capable of at adjusting the position of the welding gun in the vertical and horizontal direction relative to the part to be surfaced, and the welding machine is capable of carrying out surfacing operation on the part to be surfaced through the welding gun; the welding machine and the position adjusting device are both electrically connected with the control device, the welding gun position adjusting device is capable of changing the position of the welding gun relative to the part to be surfaced being turned on and off under the control of the control device.



21: 2021/08118. 22: 2021-10-21. 43: 2022-02-07 51: B23K

71: Beijing Institute of Petrochemical Technology, Beijing ShengLong BoRui Science and Technology Co., Ltd

72: ZOU Yong, XUE Long, LIANG Yajun, HUANG Jigiang, CAO Yingyu, HUANG Junfen

#### 54: GUIDE RAIL-FREE AUTOMATIC TRACKING FLEXIBLE CRAWLING ROBOT APPLIED TO UNDERWATER LOCAL DRY WELDING 00: -

Disclosed is a guide rail-free automatic tracking flexible crawling robot applied to underwater local dry welding. The guide rail-free automatic tracking flexible crawling robot applied to underwater local dry welding mainly comprises a welding robot body, a welding gun pose adjusting mechanism and a small-sized draining device, wherein the welding robot body consists of a rigid connecting plate and a magnetic wheel travelling mechanism; and an axial sensing device, a transverse moving mechanism, a welding gun height adjusting mechanism, a welding gun angle swinging mechanism, a draining cover body, a small-sized welding gun, a driving motor and the like are provided on the welding robot body. The guide rail-free automatic tracking flexible crawling robot applied to underwater local dry welding can meet requirements of all kinds of engineering such as welding, detection, repair and the like of various weld joints of underwater pipelines.



21: 2021/08121. 22: 2021-10-21. 43: 2022-02-07 51: B23K; B62D

71: Beijing Institute of Petrochemical Technology
72: XUE Long, LIANG Yajun, HUANG Jiqiang, ZOU
Yong, CAO Yingyu, HUANG Junfen
54: GUIDE RAIL-FREE AUTOMATIC TRACKING
FLEXIBLE CRAWLING ROBOT

# 00: -

A guide rail-free automatic tracking flexible crawling robot comprising a traveling mechanism, a rigid connecting plate, a magnetic wheel rotating shaft and an axial sensing device, wherein the traveling mechanism provided with two sets of magnetic wheels is provided with a combined structure in which an upper and a lower pressing plate of a compression spring are sandwiched therebetween. Both ends of the rigid connecting plate are fixedly connected to form a whole crawling robot, a sector gear and a pinion are provided on the robot, and an angle sensor is fixedly connected with a rotating shaft of the pinion. The present disclosure is used in various engineering practices such as welding of inner and outer circumferential joints and longitudinal joints of pipelines, groove processing, weld detection, all-position welding of spherical tanks, tank spraying and the like.



21: 2021/08122. 22: 2021-10-21. 43: 2022-02-07 51: B23K

71: Beijing Institute of Petrochemical Technology 72: HUANG Junfen, XUE Long, LIANG Yajun, ZOU Yong, CAO Yingyu, HUANG Jiqiang

### 54: FLEXIBLE WELDING AND CUTTING ROBOT FOR SPECIAL-SHAPED CROSS-SECTION WORKPIECES

00: -

A flexible welding and cutting robot for specialshaped cross-section workpieces comprising a flexible transmission device and a workpiece fixing device, wherein an annular guide rail is fixed on a base plate, a transmission chain is embedded in the annular guide rail, a transmission motor is provided below the base plate and is capable of driving a transmission sprocket, two pressing wheels for pressing the transmission chain are provided at the depression of the workpiece, a welding gun support frame is connected with the transmission chain and is capable of following the transmission chain, a pressing static plate is fixed under the base plate, and a pressing movable plate is capable of being pressed against a fixed workpiece by a pressing knob. The robot can perform flexible-profiling on special-shaped cross-section workpieces, which is suitable for cutting various special-shaped crosssection workpieces, surface flaw detection of workpieces and weld detection.



21: 2021/08136. 22: 2021-10-22. 43: 2022-02-10 51: G01M; G01N

71: Shandong Provincial Bureau of Geology and Mineral Resources (SPBGM); 801 Institute of Hydrogeology and Engineering Geology, SPBGM; Second Institute of Hydrogeology and Engineering Geology, SPBGM; Shandong No.3 Exploration Institute of Geology and Mineral Resources; and Shandong Lunan Geological Engineering Survey Institute

72: Kang Fengxin, Zhang Pingping, Sui Haibo, Zheng Tingting, Shi Meng, Bai Tong, Liu Zhitao, Zhao Jichu, Wei Shanming, Shi Qipeng, Ma Zhemin 54: METHOD FOR SIMULATING THE BLOCKAGE MECHANISM OF GEOTHERMAL WATER REINJECTION

00: -

The invention relates to a method for simulating the blockage mechanism of geothermal water reinjection, which comprises the following steps: (1) laying a simulated sand tank, wherein clay is used as a water-resisting layer at the upper part, sandstone is used as a geothermal reservoir at the lower part, and a plurality of pressure sensors are arranged in the sandstone and numbered; a plurality of water intake points are arranged in the geothermal reservoir, and tracer detection sampling water pipes are buried at each water intake point and numbered; tracer detection sampling pipes located on the same straight line have different lengths, etc. The invention has the advantages of simple structure and convenient construction. It can solve the problem that the core of geothermal reservoir cannot be collected due to economic investment and site restrictions in actual production and reinjection projects, and is convenient for testing and obtaining the undisturbed core of geothermal reservoir after recharging, thus improving the real

reliability of test results and providing support for study the blockage mechanism.

21: 2021/08148. 22: 2021-10-22. 43: 2022-02-10 51: H04W

71: DESHMUKH, Amol, JAJULWAR, Kapil K., BRAMHANE, Lokesh Kumar, KADBE, Premanand, PATIL, Balasaheb Hanumantrao 72: DESHMUKH, Amol, JAJULWAR, Kapil K., BRAMHANE, Lokesh Kumar, KADBE, Premanand, PATIL, Balasaheb Hanumantrao 54: A SIMULTANEOUS LOCATION AND MAPPING BASED AUTONOMOUS NAVIGATION SYSTEM

00: -

The present invention relates a simultaneous location and mappingbased autonomous navigation system. The object of the proposed invention is tonavigate an unmanned vehicle to execute certain task in a known or unknown environment. Proposed invention is a combination of autonomous robot and SLAM technology which determines a mobile robot location via sensors, maps, or information from external sources. Simultaneous localization and mapping (SLAM) technique for mobile robots is use for building a map of an unknown environment by a mobile robot while at the same time navigating the environment using the map.Following invention is described in detail with the help of Figure 1 of sheet 1 illustrates block diagram of proposed invention.



21: 2021/08191. 22: 2021-10-25. 43: 2022-02-09 51: A23C

71: Qingdao Agricultural University 72: ZHANG, Shuangling, XIU, Tiantian, WANG, Fengwu, JIANG, Wenli, XUE, Changhui, DU, Dehong, YANG, Shuo, HU, Yue, LIU, Peng 33: CN 31: 202111067360.X 32: 2021-09-13 54: PREPARATION METHOD AND APPLICATION OF POLYPHENOL COMPLEXES WITH ANTIOXIDANT AND AMYLASE INHIBITION FUNCTIONS

00: -

A preparation method and application of polyphenol complex with antioxidant and amylase inhibition

functions. The method comprised: 1) preparation of de-fat powder: the grain powders were mixed with nhexane, stirred and left standing. After filtration, the precipitates were collected and naturally dried. The experiment was repeated three times, then de-fat grain powders were obtained. 2) the de-fat grain powders were placed in ethanol. They underwent oscillating pre-extraction, then shear homogenization extraction by a high-speed shear homogenizer. The samples were subsequently centrifuged, and the supernatant was collected. The process was repeated twice and the supernatants were combined. The freeze-dried powder was obtained by rotating the evaporator and freeze-drying; 3) Separation and purification: the freeze-dried powder was passed through the solid phase extractor and then used for 0.22 micron membrane filtration, injection into preparative high performance liquid chromatography system, and collect the fraction for 3-10 min to obtain purified polyphenol compounds.



21: 2021/08226. 22: 2021-10-25. 43: 2022-01-25 51: G01B; G01D

71: SHANDONG UNIVERSITY

72: YANG, Zeying, QU, Jianbo, LI, Shucai, ZHANG, Qingsong, CUI, Xinzhuang, GE, Zhi, HOU, Hetao, TIAN, Li, WU, Ke, WANG, Tianmin, SHAN, Yuhui, ZHAO, Fengjin, ZHANG, Peng, LIU, Jie, SUN, Minghao, QU, Weisong, QU, Cuiping, YANG, Qianyi, ZHAO, Zhenyu, GUO, Yuntong, YU, Haoze, SUN, Yinglin

33: CN 31: 201910305365.8 32: 2019-04-16 54: MAGNETIC TAG SENSOR AND METHOD FOR MANUFACTURING SAME, AND RIVERBED SCOUR DETECTION DEVICE 00: - The present disclosure provides a magnetic tag sensor and a method for manufacturing same, and a riverbed scour detection device. A magnetic tag sensor includes a cylinder, where a threaded pipe is embedded in a wall of a cylinder, the threaded pipe is configured to simulate a magnetic dipole; two wiring interfaces of the threaded pipe are respectively connected to a first cable and a second cable and run through an outer wall of an upper cross-section of the cylinder and extend out of the cylinder; the cylinder is sleeved on a guide rail, and is disposed at a junction between a riverbed and water; an end of the guide rail inserts into the riverbed, a water sealing box is mounted on a top of the guide rail, a power supply module, a relay and a load are arranged inside the water sealing box, the first cable is connected to a positive pole of the power supply module, and the second cable is connected to a negative pole of the power supply module through the relay and load connected in series; and the threaded pipe in the wall of the cylinder moves up and down with the riverbed to generate a magnetic field signal.



21: 2021/08279. 22: 2021-10-27. 43: 2022-01-12 51: G06T 71: PEKING UNION MEDICAL COLLEGE HOSPITAL

72: WANG, Yining, YI, Yan, GUO, Yubo, XU, Cheng, JIN, Zhengyu, WANG, Cheng, LI, Xiuli, YU, Yizhou 33: CN 31: 202011442642.9 32: 2020-12-08

### 54: NON-CONTRAST CT SCANNING IMAGE-BASED AORTIC DISSECTION SEGMENTATION METHOD AND APPARATUS

00: -

The present invention discloses a non-contrast Computerized Tomography (CT) scanning imagebased Aortic Dissection (AD) segmentation method and apparatus. The method includes the following steps: extracting an aortic image from an original non-contrast CT scanning image; performing radial sectioning processing on the aortic image to obtain multiple layers of radial section images; determining a dissection region according to Hu value variations and areas of different regions in the radial section image of each layer, and/or, determining a dissection region according to an aortic long diameter in the radial section image of each layer; and when the dissection region exists in radial section images of at least nine continuous layers, segmenting and merging the dissection regions in each of the radial section images of the at least nine continuous layers to obtain an AD image. According to the present invention, an AD is automatically segmented based on a safer non-contrast CT scanning image, so that the related expenditure of a patient may be reduced, popularization and implementation are facilitated, the whole process is in no need of human intervention, and the accuracy and efficiency of clinical diagnosis may be improved greatly.



21: 2021/08283. 22: 2021-10-27. 43: 2022-01-12

#### 51: B24C

71: Dr. Shalu, Dr. Tayyab khan, Dr. Sapna Katiyar, Intyaz alam, Ms. Anchal Tyagi, Bhuprabha Bharti, Donika Umesh Chaudhari, Ms. Aakansha Garg, Dr. Priyanka Bobade, Dr. Kshama Pandey, Monika Sharma, Prof. Ramesh Chandra Panda 72: Dr. Shalu, Dr. Tayyab khan, Dr. Sapna Katiyar, Intyaz alam, Ms. Anchal Tyagi, Bhuprabha Bharti, Donika Umesh Chaudhari, Ms. Aakansha Garg, Dr. Priyanka Bobade, Dr. Kshama Pandey, Monika Sharma, Prof. Ramesh Chandra Panda 54: AN IOT ENABLED SAND AIR JET MACHINING SYSTEM 00: -

The present invention relates to IoT enabled sand air-jet machining system (100). The system (100) comprises an air compressor, a pressure regulator, a FRL unit, a mixing chamber, a working chamber, a solenoid valve, a nozzle, a control processing unit, and a display unit. The control processing unit is configured to control the function of the air compressor, pressure regulator, FRL unit, mixing chamber, solenoid valve, one or more relay units. The system (100) provides a scalable and costeffective approach. The present invention provides a real-time-based system (100) that comprises a display to show each process involved in the rough working such as deburring and rough finishing. The system (100) has a useful technique for micromachining. The system (100) comprises the display unit. The display unit is configured to provide a real-time display monitoring unit to the user. The display unit maybe, but is not limited to a laptop, tablet, and smartphone.

21: 2021/08327. 22: 2021-10-28. 43: 2022-01-12 51: C04B

71: Chinese Research Academy of Environmental Sciences

72: DANG, Chunge, HAN, Guimei, FANG, Gang, GUO, Yajing

#### 54: NON-AUTOCLAVED BAKING-FREE BRICK AND PREPARATION METHOD THEREOF 00: -

The present disclosure provides a non-autoclaved baking-free brick and a preparation method thereof. The present disclosure realizes reduction and recycling of the natural gas water-based drilling solid waste; the fly ash is fine ash in flue gas after coal combustion, and the fly ash is doped, so that a large amount of cement and fine aggregate are saved, the water consumption is reduced, the workability of the mixed slurry is improved, the pumpability of the mixed slurry is enhanced, the creep of the mixed slurry is reduced, the hydration heat and heat energy expansibility are reduced, the anti-permeability of the non-autoclaved baking-free brick is improved, and the modification of the non-autoclaved baking-free brick is increased; the cement is used as a cementing material, is powdery, and is mixed with a proper amount of water to synthesize plastic slurry, the slurry can become hard stone-shaped bodies through physical and chemical processes.



21: 2021/08328. 22: 2021-10-28. 43: 2022-01-12 51: E21B

71: Chinese Research Academy of Environmental Sciences

72: HAN, Guimei, GUO, Yajing, YAN, Jialin 54: METHOD FOR TREATING NATURAL GAS DRILLING SHALLOW WASTE AND APPLICATION 00: -

The present disclosure provides a method for treating a natural gas drilling shallow waste and an

100



application. The method is simple and low in cost, and the solid waste obtained after filter pressing can be directly used as the subgrade filler without further treatment.



21: 2021/08329. 22: 2021-10-28. 43: 2022-01-12 51: C04B

71: Chinese Research Academy of Environmental Sciences

72: FANG, Gang, HAN, Guimei, DANG, Chunge, GUO, Yajing

# 54: CERAMSITE AND PREPARATION AND METHOD THEREOF

00: -

The present disclosure provides a ceramsite and a preparation method thereof, and belongs to the technical field of resource reuse. Compared with traditional drilling solid waste stacking treatment and roadbed filling methods, the present disclosure has high treatment efficiency, no secondary pollution, can maximize the use of resources, has significant environmental protection benefits, and has high economic value. Compared with a conventional drilling well solid waste stacking treatment and roadbed filling method, the method has the advantages of high treatment efficiency, no secondary pollution, capability of utilizing resources to the greatest extent, obvious environmental protection benefit and high economic value.



#### 21: 2021/08330. 22: 2021-10-28. 43: 2022-01-12 51: B21D; G06F

71: Suzhou Research Institute of NUAA, Nanjing University of Aeronautics and Astronautics 72: Shihong LU, Qiang LI, Peihuang LOU, Zhengfang LI

33: CN 31: 202011177416.2 32: 2020-10-29 54: NUMERICAL CONTROL INCREMENTAL FORMING METHOD BASED ON SELF-RESISTANCE ELECTRIC HEATING AND INTELLIGENT ALGORITHM 00: -

The present disclosure discloses a numerical control incremental forming method based on selfresistance electric heating and intelligent algorithm, which includes the following steps: step A, establishing a calculation model of a volume change rate model of a deformation area according to spatial geometric change characteristics of a contact area between the forming tool and the plate in incremental forming; step B, establishing a calculation model of a resistance (Rs) and a contact resistance (Ri) of an area material according to circuit characteristics of the contact area in the selfresistance electric heating incremental forming; step C, establishing an instantaneous joule heat model (Q) between the forming tool and the plate contact area and an equivalent contact heat conduction coefficient calculation model (K); and step D, substituting the above related parameters into a user subroutine ABAQUS-VUINTER to obtain a local deformation temperature value.



21: 2021/08331. 22: 2021-10-28. 43: 2022-01-12 51: C01B; H01M

71: Hunan Qixian New Material Technology Co., Ltd. 72: ZHU, Jiao, LIN, Shanyu, PENG, Zhixiong 54: A METHOD FOR IMPROVING CYCLE STABILITY OF CATHODE MATERIAL FOR LITHIUM-ION BATTERY 00: -

The present invention discloses a method for improving the cycle stability of a cathode material for a lithium-ion battery. The method includes: firstly preparing a lithium iron phosphate layer, and then preparing a graphene layer; coating a lithium iron phosphate layer on the surface of a cathode material of a lithium-ion battery, after drying, then coating a graphene layer on the lithium iron phosphate layer, and after drying, then coating a lithium iron phosphate layer on the graphene layer, and so on, so as to prepare pole pieces with alternating lithium iron phosphate layers and graphene layers; the pole piece comprises at least two lithium iron phosphate layers and one graphene layer. The preparation process of the present invention has the advantages of simple operation, low cost, high efficiency, easy realization of large-scale and industrial production.



21: 2021/08332. 22: 2021-10-28. 43: 2022-01-12 51: A61K; B65B

71: Henan Medical College Hospital Workers 72: Li Qian

# 54: WESTERN MEDICINE GRANULE FORMING DEVICE

00: -

The invention discloses a western medicine granule forming device, which comprises a machine table, wherein the top end of the machine table is provided with an extrusion barrel, and the top end of the extrusion barrel is provided with a charging barrel; a first push plate which is driven and displaced by a first motor is arranged in the extrusion barrel; an extrusion plate is fixed on one side of the extrusion

barrel far away from the first motor; according to the invention, the drug slurry is extruded by the first push plate, so that the drug slurry enters the forming hole from the extrusion hole after being extruded; after the forming hole is filled, the first cylinder drives the forming cylinder to descend and cut off the drug slurry, so that drug particles are accurately defined in the forming process; the forming plate is heated by heating wires, so that the drug particles in the forming hole inside the forming plate are accelerated to form and harden; and the hardened drug particles are pushed out by the push block, which saves time and labor compared with the traditional manual collection and fetching, improves the collection efficiency of drug particles, and the forming efficiency of drug particles is improved to a certain extent.



21: 2021/08333. 22: 2021-10-28. 43: 2022-01-12 51: G06T

71: Jiangxi College of Applied Technology
72: Ling Weiwei, Zhan Zhiliang, Xiao Wenbo, Liu Chenlu, Luo Wenqiang, Lai Yuwei
33: CN 31: 202110955654X 32: 2021-08-19
54: WOOD DEFECT DETECTION METHOD
BASED ON COMPUTER IMAGE TECHNOLOGY
AND TRANSFER LEARNING

00: -

The invention discloses a wood defect detection method based on computer image technology and

transfer learning, comprising: preprocessing data; building a multi-layer convolutional neural network transfer learning model; using the built transfer learning model to train the preprocessed data; processing the trained data to obtain a batch of new image data; inputting the new image data into the transfer learning model for training to obtain the critical value; searching for defect features of new image data, building computer image technology models; quantifying the defect features; combining the critical value with the threshold of defect classification to obtain a wood defect detection model to be detected; carrying out wood defect detection according to the wood defect detection model. The invention can improve the processing speed and identification accuracy of wood defects.



The present invention discloses an early warning method of ground settlement due to subway construction based on case-based reasoning and system dynamics, and the technical solution used in the present invention is: building a case library based on knowledge in the art; making similarity searches based on case-based reasoning; establishing a risk association mining and system dynamics model based on case-based reasoning; and establishing a risk early warning model for ground settlement. Beneficial effects of the present invention are that by optimizing the case library, reliable risk decision foundation can be got so that effective prediction and early warning of ground settlement risks during subway construction can be made.



21: 2021/08335. 22: 2021-10-28. 43: 2022-01-12 51: G01N

71: Shandong University of Science and Technology 72: Feng Long, Zhang Qiang, Yin Yibing, Zang Wanshun, Su Jinpeng, Tian Ying **54: OIL CONTAMINATION DETECTOR** 00: -

The invention discloses an oil contamination detector, which comprises a shell, wherein an annular glass tube is fixedly arranged inside that shell, a plurality of groups of baffle plates are slidably connected inside the annular glass tube, and the baffle plate are arranged inside the annular glass tube at equal intervals and divide the inner cavity of the annular glass tube into a plurality of oil storage cavities; the shell is slidably provided with a motion control mechanism for controlling all the baffle plates to move along the inner wall of the annular glass tube; several groups of measuring probes are arranged in the annular glass tube, which are provided with optical glass windows at the inner and outer sides of the measuring probes;

photoelectric converters and semiconductor lasers are respectively fixedly arranged on the outer sides of the two groups of optical glass windows; lenses are arranged between the semiconductor lasers and the corresponding optical glass windows; and the photoelectric converters are electrically connected with the data processor through differential A/D converters. According to the invention, when the oil is pushed to move by the baffle plate, the oil in different oil storage cavities is divided, so that the measuring accuracy of the measuring instrument is improved.



21: 2021/08336. 22: 2021-10-28. 43: 2022-01-12 51: B01D; E21B

71: Qingdao University of Technology 72: LIU, Xinfu, HAO, Zhongxian, CHEN, Ji, YU, Chaoyong, YU, Guanghai, HAO, Aigang, WU, Xiaoming, WANG, Jianfeng, XING, Wen, SHI, Yongjun, WANG, Xiaolei, ZHANG, Ruiqiang 54: THREE-STAGE TUBULAR T-SHAPED DEGASSING DEVICE WITH MICROBUBBLE AXIAL FLOW AND SPIRAL FLOW FIELDS 00: -

A three-stage tubular T-shaped degassing device with microbubble axial flow and spiral flow fields is provided, which is applied to quick degassing of a gas-liquid two-phase flow. The three-stage tubular T- shaped degassing device adopts a quick degassing technology combining a microbubble uniform mixed rotational axial flow field and a spiral runner conical spiral flow field with layered jet collision reversing depth degassing. A microbubble uniform mixer is configured to adjust gas-liquid two-phase flow containing big bubbles into microbubble uniform mixed axial flow. A microbubble cyclone is configured to adjust the microbubble uniform mixed axial flow into multiple strands of rotational axial flows containing microbubbles. A rotational axial flow degasser implements the horizontal type microbubble uniform mixed multiple strands rotational axial flow degassing operation to remove most microbubbles to form axial flow gas and axial flow liquid.



- 21: 2021/08337. 22: 2021-10-28. 43: 2022-01-12 51: B03B; B03D
- 71: Qingdao Agricultural University

72: GUO, Yuanxin, KONG, Zhe, LÍ, Qiuyi, ZHENG, Shidong

33: CN 31: 202110468833.0 32: 2021-04-28 54: SAPONIFIED COLLECTOR FOR USE IN HIGH CARBON FLY ASH FLOTATION, PREPARATION METHOD AND APPLICATION THEREOF 00: -

The present invention provides a saponified collector for used in high carbon fly ash flotation, wherein comprising: taking the supernatant from waste cooking oil, filtering foreign matters out, removing volatile matters, and getting processed waste cooking oil; mixing the processed waste cooking oil and hydroxide sodium solution, mixing until reacting fully at a condition of 60-80C and getting reaction mixture; and filtering liquid when the reaction mixture is cooled and cured, and getting the saponified collector. The present invention further provides the

saponified collector prepared with the foregoing preparation method and application thereof. Upon test, flotation properties of the saponified collector prepared according to the present preparation method is far better than conventional nonpolar hydrocarbon collector kerosene and cost thereof is low, making the saponified collector suitable for large scale advocating.



21: 2021/08338. 22: 2021-10-28. 43: 2022-01-12 51: B01J

71: Shandong University of Science and Technology, China University of Petroleum
72: Li Xiangping, Zhang Jianguang, Liang Peng, Zhang Yaqing, Jiao Tiantian, Du Zhenyu
54: PREPARATION METHOD OF A CATALYST FOR PREPARING CYCLOALKANE BY PHENOL HYDRODEOXYGENATION

00: -

A preparation method of a catalyst for preparing cycloalkane by phenol hydrodeoxygenation provides a catalyst preparation method for preparing hydrocarbon fuel by using eugenol (C10H12O2), a typical model compound after biomass depolymerization, as a reactant in a nickel-based catalyst, which solves the problem of high oxygen content in existing bio-oil and converts it into a liquid fuel with stable properties.

21: 2021/08339. 22: 2021-10-28. 43: 2022-01-12 51: A01K

71: Northeast Agricultural University

72: Bao Jun, Liu Honggui, Fu Qin, Zhou Sitong, Li Xin, Zeng Xiangyin, Ji Wenbo, Shu Yufu, Cheng Zheng, Zhang Xiaohong

#### 54: ENRICHED DOUBLE-LAYER PLATFORM FERMENTATION BED BREEDING SYSTEM 00: -

The invention discloses an enriched double-layer platform fermentation bed breeding system. The pig house units include a fermentation bed with bedding material; there is a platform above the fermentation bed, and a layer of enriched materials is laid on the platform; there is an inclined climbing ladder between the platform and the fermentation bed; a harvesting platform is arranged on one side of the pighouse opposite to the platform; a water trough is fixed on the harvesting platform; an automatic feeding and drinking system is installed above the water trough; the fermentation bed is equipped with an automatic turning and throwing system for fermented bedding materials, including fixed on the fermentation bed; there are two parallel and symmetrical square rails, and an automatic turning and throwing device is detachably connected between the two rails; the fermentation bed is equipped with a ventilation system, and the bedding is covered above the ventilation system. The invention greatly improves the rest and activity space of pigs, increases the breeding area and the number of fat pigs, improves the number of stocks and production performance, improves the slaughter rate and economic benefits, and reduces the maintenance of the daily management of the fermentation bed by the breeder workload.



#### 21: 2021/08340. 22: 2021-10-28. 43: 2022-01-12 51: A61L

71: Zhejiang Academy of Agricultural Sciences 72: Sun Chongbo, Chen Yue, Wang Yunzhu, Zhao Kunkun, Yan Ziling

#### 54: RAPID STERILIZATION DEVICE FOR ASEPTIC OPERATION INOCULATION APPARATUS AND APPLICATION METHOD THEREOF

00: -

The invention discloses a rapid sterilization device for aseptic operation inoculation apparatus, which comprises a power control system arranged in the upper shell and an electromagnetic induction system arranged in the lower shell; the upper shell and the lower shell are connected and fixed by a connecting column; the electromagnetic induction system

comprises a ceramic cylinder for placing the appliance to be sterilized, an induction coil wound around the periphery of the ceramic cylinder and a temperature sensor arranged inside the ceramic cylinder; the power control system comprises a power supply, a controller, a high-voltage driving plate, a step-down module and a relay unit; the temperature sensor is electrically connected with the controller, the negative pole of the high-voltage driving plate is connected with the negative pole of the power supply, the positive pole of the highvoltage driving plate is connected with the relay unit, the relay unit is connected with the positive pole of the step-down module, and the relay unit is electrically connected with the controller. The aseptic operation inoculation apparatus rapid sterilization device and its application method can improve the working efficiency, enrich the types of inoculation apparatus to be sterilized, prevent some apparatus from damage, reduce energy consumption and ensure the safe production.

21: 2021/08341. 22: 2021-10-28. 43: 2022-01-12 51: A23B

71: Qingdao Agriculture University 72: Mu Hongyan, Wang Xin, Liu Hongcai, Li Xiaodan 54: CHITOSAN NANOPARTICLES FOR DELIVERING FISH OIL AND PREPARATION METHOD THEREOF 00: -

The invention relates to a method for preparing fish oil loaded nanoparticles by using chitosan and hexametaphosphate as raw materials through an ionic gelation method, belonging to the field of functional lipid encapsulation. The method comprises the following steps: mixing 0.375 percent-1.75 percent of fish oil as a core material with 0.75-1.5 percent of chitosan solution, then 0.5-2 percent sodium hexametaphosphate solution is added dropwise after high speed dispersion, and then uniform emulsion is obtained after homogenization and emulsification; finally, fish oil nanoparticles are obtained after centrifugation and freeze-drying. The fish oil nanoparticles obtained by the invention are creamy yellow, with no fishy smell and peculiar smell, and the particles are relatively uniform, the oxidation stability of the embedded lipid can be appreciably improved.



21: 2021/08342. 22: 2021-10-28. 43: 2022-01-12 51: G06F; G06N; G06Q 71: SINOSTEEL MAANSHAN GENERAL INSTITUTE OF MINING RESEARCH CO., LTD 72: NIE, Wen, DAI, Bibo, WANG, Xing, LUO, Minghua, XU, Hanhua, ZHOU, Yuxin 33: CN 31: 202110513144.7 32: 2021-05-11 54: DIGITAL TWIN EVOLUTION MECHANISM AND METHOD FOR INTELLIGENT MINE SCENES 00: -

The present invention discloses a digital twin evolution mechanism for intelligent mine scenes, including a safety control layer. According to the present invention, a digital twin technology is used to distinguish a conventional mathematical simulation model, a digital twin model emphasizes interactions between a virtual world and the real world, and can be updated and dynamically evolved in real time, so as to realize dynamic and true mapping of the physical world. An "immersive" visualization technology can help users understand mine disasters more clearly, thoroughly and richly. Based on a 3R interactive technology, a three-dimensional virtual space can be simulated by using visual display components, physical devices in an intelligent energy system will be displayed to the users in a nearly real state, and operation and control of a physical entity, an information network, and a simulation model can be indirectly realized by operating and controlling a virtual body.



#### 21: 2021/08343. 22: 2021-10-28. 43: 2022-01-12 51: C07D; C09K; G01N 71: Linyi University 72: TIAN, Lu, DAI, Zhichao 54: FLUORESCENT PROBE, PREPARATION METHOD AND APPLICATION THEREOF 00: -

The present invention provides a fluorescent probe, a preparation method and an application thereof, which can improve the accuracy of hypochlorous acid detection in complex samples.



ABSTRACT DRAWING



21: 2021/08344. 22: 2021-10-28. 43: 2022-01-12 51: A01K

71: South China Sea Fisheries Research Institute, Chinese Academy of Fishery Sciences

72: ZHAO, Wang, YU, Gang, MA, Zhenhua, WEN, Weigeng, MENG, Xiangjun

33: ČN 31: 202110312329.1 32: 2021-03-24

54: SPAT LAND-SEA RELAY TRANSPORTATION METHOD

00: -

The present disclosure discloses a spat land-sea relay transportation method, which relates to the field of spat transportation, including: loading spats in a transport net bag of a transport rack, and placing the transport rack in a pond for cultivation; screening out spats that meet transportation requirements; adding seawater to a land transport container, and transferring the transport rack carrying the spats that meet transportation requirements into the land transport device; filling up a live well of a marine transport device with filtered seawater, transferring the transport rack to the live well, turning on a second oxygen supply device, and adjusting a water control plate, so that the water control plate is always below the liquid level of the filtered seawater inside the live well to keep the water inside the live well calm.



21: 2021/08356. 22: 2021-10-28. 43: 2022-01-12 51: B01J

71: PINGXIANG FXSINO PETROCHEMICAL PACKING CO., LTD

72: XU, Zhe

33: CN 31: 201910449595.1 32: 2019-05-28 54: HONEYCOMB MESH COMBINED PACKING MATERIAL

00: -

A honeycomb mesh combined packing material, comprising a plurality of convex channels (a1, b1) arranged at equal intervals and a plurality of concave channels (a2, b2) that are each located between two adjacent convex channels(a1, b1); at least one insertion column portion (3) and a plug-in portion (4) matching the insertion column portion (3)

are provided on the convex channels (a1, b1) and the concave channels (a2, b2) respectively, and the insertion column portion (3) and the plug-in portion (4) are both provided with a plurality of support feet (21) used for interconnected connection and for connecting the convex channels (a1, b1) and the concave channels (a2, b2); and convex channel bottom cavities (7) and concave channel top cavities (8) matching one another are formed on lower sides of the convex channels (a1, b1) and upper sides of the concave channels (a2, b2) respectively.



21: 2021/08391. 22: 2021-10-29. 43: 2022-01-12 51: G01N

71: PEKING UNION MEDICAL COLLEGE HOSPITAL

72: GE, Zhitong, FENG, Penghui, LI, Jianchu, ZHANG, Zijuan, YU, Qi

33: CN 31: 202110715015.6 32: 2021-06-25 33: CN 31: 202110811846.3 32: 2021-07-19 54: BIOMARKERS FOR PREDICTING PROGRESSION OF INTRAVENOUS LEIOMYOMATOSIS

00: -

The present invention discloses a set of biomarkers for predicting the progression of intravenous leiomyomatosis. The biomarkers are hypoxanthine, glycerophosphocholine, acetylcarnitine, and hydrocortisone (cortisol). The overall trend of expression of the biomarkers hypoxanthine and glycerophosphocholine decreases with the progression of intravenous leiomyomatosis, and the overall trend of expression of acetylcarnitine and hydrocortisone (cortisol) increases with the progression of intravenous leiomyomatosis. The present invention further discloses a screening method of biomarkers for predicting the progression of intravenous leiomyomatosis. The biomarkers hypoxanthine, glycerophosphocholine, acetylcarnitine, and hydrocortisone (cortisol) for predicting the progression of intravenous leiomyomatosis have relatively high specificity, are beneficial to the early discovery and early treatment of intravenous leiomyomatosis, and have good clinical use and promotion value.



21: 2021/08400. 22: 2021-10-29. 43: 2022-01-13 51: B24B

71: Anhui University of Science & Technology 72: WANG, Pengyu, JING, Peng, YANG, Wenlong, WANG, Cunyi

### 54: ADAPTIVE FITTING DEVICE FOR MAIN SHAFT OF PERMANENT MAGNET SUSPENSION TYPE GRINDING ROBOT

00: -

The disclosure herein relates to an adaptive fitting device for a main shaft of a permanent magnet suspension type grinding robot. The device is mainly composed of a main shaft motor, a permanent magnet, an adjustment screw rod, an axial floating shell, a rod-end knuckle bearing, a grinding cutter, and the like. When a part with a complicated curved surface is ground, the grinding cutter is subjected to a non-uniform external force, the main shaft motor is deviated under the action of the external force so that the grinding cutter is adaptively fitted to a surface of the part; a second air gap changes, thus realizing adaptive radial compensation for the grinding of a slope part with a gradient; when the grinding cutter is free from the external force after the grinding is completed, the grinding cutter

automatically resets to an original symmetric position under the action of a repulsive force between a first permanent magnet and a second permanent magnet; and when a grinding amount is greater than a rated value, and an axial external force on the grinding cutter is greater than a repulsive force between a third permanent magnet and a fourth permanent magnet, a first air gap is compressed, which can effectively avoid the grinding cutter from being damaged by an extremely high external force. In the disclosure herein, the production efficiency and the grinding quality of a product are effectively improved.



21: 2021/08401. 22: 2021-10-29. 43: 2022-01-13 51: B29C; B60B

71: Weihai Junwei Composite Material Co., LTD 72: Di Chengrui, Zhu Anping, Zhu Bo, Qiao Kun 54: THREE-DIMENSIONAL BRAIDED THERMOPLASTIC COMPOSITE MATERIAL AUTOMOBILE RIM AND PREPARATION AND APPLICATION THEREOF

00: -

The invention relates to a three-dimensional braided thermoplastic composite material automobile rim and its preparation and application, belonging to the field of thermoplastic composite material automobile structural components. The automobile rim comprises three parts: a three-dimensional hybrid fiber braided automobile hub, a unidirectional/threedimensional hybrid braided composite material structural spoke and a winding/three-dimensional hybrid braided composite material structural rim. Among them, the three-dimensional hybrid fiber braided hub is reinforced by the multi-dimensional braided structure of hybrid fiber. One-way/threedimensional hybrid braided composite spokes, in which the core is made of unidirectional fiber thermosetting resin pultrusion skeleton, and the outer part is reinforced by three-dimensional hybrid fiber braided structure. The core of the rim with winding/three-dimensional hybrid braided composite structure is wound and molded with unidirectional fiber thermosetting resin to form a skeleton, and the outer part is reinforced with three-dimensional braided structure. Finally, after the fabric structure is integrally formed, it is integrally formed by hightemperature and high-pressure injection molding of thermoplastic resin or vacuum infusion of specific low-viscosity thermoplastic resin.



21: 2021/08402. 22: 2021-10-29. 43: 2022-01-13 51: A01K

71: Sichuan Animal Science Academy

72: Jiayou, Yan, Shuwei, Li, Wenjie, Tang, Shengyao, Kuang

33: CN 31: CN202110033328.3 32: 2021-01-12 54: PREMIXED FEED FOR IMPROVING ODOR OF PIG FECES AND APPLICATION THEREOF 00: -

The present application relates to the field of animal nutrition and feed science, in particular to a premixed feed for improving the odor of pig feces and application thereof. The application of the premixed feed in the present application can significantly reduce the odor intensity of pig feces, significantly reduce the irritation intensity of pig feces, significantly improve the odor quality of pig feces, and significantly reduce the concentration of ammonia and hydrogen sulfide in pig feces. 21: 2021/08403. 22: 2021-10-29. 43: 2022-01-13 51: B29B; B29C

71: Weihai Junwei Composite Material Co., LTD, Shandong University Weihai Industrial Technology Research Institute

72: Di Chengrui, Ci Shengzong, Zhu Bo, Qiao Kun, Zhu Anping

#### 54: METHOD FOR RECYCLING FIBER REINFORCED COMPOSITE SUCKER ROD 00: -

The invention discloses a method for recycling a fiber reinforced composite sucker rod, the waste fiber reinforced composite sucker rod with residual petroleum on the surface is soaked and cleaned for the first time by using a mixed solvent, secondly, the sucker rod soaked and cleaned for the first time is soaked and cleaned for the second time by adopting a low-carbon solvent, drying the sucker rod after soaking and cleaning for the second time, and crushing the sucker rod as a chopped reinforcement; the mixed solvent is composed of liquid alkane solvent, aromatic hydrocarbon solvent and polar molecular solvent. The method can not only effectively solve the problem of waste sucker rod treatment, but also recover the oil stained on the surface of the sucker rod. The composite sucker rod can also be continuously used as a chopped reinforcement, so that the waste sucker rod can be recycled 100 percent, which improves economic benefits, and at the same time do not affect the environment.



21: 2021/08404. 22: 2021-10-29. 43: 2022-01-13 51: A61K; G01N

71: The Second Affiliated Hospital of Wenzhou Medical University (Yuying Children's Hospital affiliated to Wenzhou Medical University)
72: Xu Changlong, Pan Binhui, Xu Sheng, Xu Zhihua, Wang Fangyan, Shi Jiangmin, Chen Yaoxuan
33: CN 31: 20211115108.1 32: 2021-09-23

54: THE APPLICATION OF ORAL BACTERIA LIQUID CARRIER 00: - The invention discloses the application of oral bacteria liquid carrier and refers to the field of microecology and bio-omics detection technology. The invention discloses the application of oral bacteria liquid carrier, which is placed in the oral cavity overnight under aseptic condition to extract oral bacteria liquid. Well, the mentoned oral bacterial liquid carrier includes any material that can use the vestibular sulcus of the oral cavity. The mentioned oral bacteria liquid carrier can be used in the extraction of oral bacteria liquid to study the oral microecology and the related microbial metabolites released to regulate the oral microecology. The oral bacteria liquid carrier can absorb ecological saliva in the mouth and can be used to present the oral composition of ecological characteristics through a series of biological omics technologies, including metagenomics, proteomics, transcriptomics, etc., thus further exploring the relationship between oral and systemic diseases and oral microecology. Besides, it offers a new idea for oral health and treatment of care systemic diseases by artificially intervening in the original ecological environment of the oral cavity.



21: 2021/08405. 22: 2021-10-29. 43: 2022-01-13 51: B29B 71: Shandong University, Weihai Junwei Composite Material Co., LTD

72: Wang Baoming, Zhu Bo, Yu Junwei, Qiao Kun, Di Chengrui, Fu Yunguo

#### 54: RECOVERY METHOD FOR FIBER-REINFORCED COMPOSITE MATERIAL SUCKER ROD 00: -

The present invention discloses a recovery method for fiber-reinforced composite material sucker rod, wherein the waste fiber-reinforced composite material sucker rod with residual oil on the surface is soaked and cleaned with mixed solvent to remove the residual oil on the surface, and then the sucker rod with residual oil on the surface is heated to 300-600 percent to decompose the matrix resin of the fiber-reinforced composite material, so as to recover the carbon fiber and / or glass fiber in the waste fiber-reinforced composite material sucker rod; the mixed solvent is composed of liquid alkane solvent, aromatic hydrocarbon solvent and polar molecular solvent. This method can not only effectively solve the problem of waste pumping treatment, but also recover the crude oil stained on the surface of the sucker rod, but also recover the reinforcing fiber in the sucker rod, which greatly improves the utilization rate of materials and economic benefits, but also does not affect the environment.



21: 2021/08406. 22: 2021-10-29. 43: 2022-01-13 51: E06B

71: Hunan Construction Engineering Group, Hunan University

72: CHEN, Jian, PAN, Hongwei, LI, Zhenlai, YAO, Xi, YIN, Yue, ZHONG, Yangming, FENG, Yupu 33: CN 31: 202120713807.5 32: 2021-04-08 54: TENSILE FASTENING DEVICE FOR A WOOD FRAME STRUCTURE

00: -

The invention discloses a tensile fastening device for a wood frame structure, relating to the field of tensile fastening technology, which comprises a steel strip, the steel strip is installed in the middle of the grid plate base, both sides of the grid plate base are provided with wedge tightening columns, symmetrically arranged, two wedge tightening columns are connected by adjusting bolts, the front and rear sides of the grid plate base are provided with trapezoidal plates and the upper end is connected by a support column. The invention has a clever design structure, the grid plate base and wedge tightening columns are all made of galvanized sheet metal by integral molding., process steps are reduced and production costs are very low, the interfaces of wedge tightening columns and the support column adopt dome boss design, wherein the structure is strong, the flexural capacity is strong, through the installation of adjusting bolts, the steel strip can be quickly tensed, effect is outstanding, it is very suitable for wide use in this industry.



21: 2021/08407. 22: 2021-10-29. 43: 2022-01-13 51: B32B; D06M

71: Shandong University, Weihai Junwei Composite Material Co., LTD

72: Yu Junwei, Qiao Kun, Zhu Bo, Di Chengrui 54: INTERFACIAL REINFORCED CARBON NANOTUBE SIZING AGENT FOR CARBON FIBER AND PREPARATION METHOD THEREOF 00: -

The invention discloses an interfacial reinforced carbon nanotube sizing agent for carbon fiber and a preparation method thereof, which comprises the following components in parts by weight: 60-80 parts

of water, 20-40 parts of epoxy resin, 0.01-6 parts of emulsifier and 0.002-1.2 parts of modified carbon nanotubes, wherein the modified carbon nanotubes are carbon nanotubes with epoxy functional groups grafted on the surface. The method comprises the following steps: mixing carbon nanotubes in a strong acid solution, reacting to obtain carbon nanotubes with carboxyl functional groups on the surface, mixing the obtained carbon nanotubes with carboxyl functional groups on the surface with a solvent to obtain a mixed solution A, mixing epoxy resin with the solvent to obtain a mixed solution B, mixing the mixed solution A and the mixed solution B, and heating to react to obtain the modified carbon nanotubes. he sizing agent prepared by the invention contains carbon nanotubes, and carbon nanotubes have high aspect ratio, thus improving the mechanical properties of prepared composite materials. The sizing agent adopts the core-shell structure in which the carbon nanotubes are coated with epoxy resin, which can ensure that the carbon nanotubes are effectively attached to the surface of carbon fiber.

21: 2021/08408. 22: 2021-10-29. 43: 2022-01-13 51: B29C; B33Y

71: Weihai Junwei Composite Material Co., LTD, Shandong University Weihai Industrial Technology Research Institute

72: Zhu Anping, Sun Yue, Zhu Bo, Qiao Kun, Di Chengrui

#### 54: 3D PRINTER AND ITS PRINTING METHOD ALLOWING FOR INFINITE PRINT LENGTH 00: -

The invention discloses a 3D printer and its printing method, comprising a 3D printer frame, a Z axis (Zdirection lifting system), a print head module, a feeding system and a 3D printing platform. The 3D printing platform is capable of adjusting the angle and continuously conveying products, and comprises a printing platform support plate, a printing platform transmission device, a printing platform crawler, a printing platform support and an angle adjusting system. The printing platform crawler surrounds the printing platform support plate, driving shaft and the driven shaft in the printing platform transmission device, is supported by the printing platform support plate, the driving shaft and the driven shaft in the printing platform transmission device, and is driven by the driving shaft in the printing platform transmission device to rotate clockwise or counterclockwise. The 3D printing products are formed on the upper surface of the crawler of the printing platform. The method has the characteristics of high production efficiency, continuous production, wide printable materials, easy realization, resource saving, low cost and the like, and meets the industrial requirements.



- 21: 2021/08409. 22: 2021-10-29. 43: 2022-01-13 51: F41J; F42B
- 71: Xi'an Technological University
- 72: CAI, Rongli, ZHANG, Jiawei, TAN, Linqiu
- 33: CN 31: 202110389526.3 32: 2021-04-12 54: DOUBLE-TARGET-SURFACE MULTI-LATTICE DISTRIBUTED ACOUSTIC PRECISION TARGET AND WARHEAD SHOCK WAVE MACH ANGLE TESTING METHOD

00: -

A double-target-surface multi-lattice distributed acoustic precision target and a warhead shock wave Mach angle testing method are involved in the technical field of range multi-parameter measurement. A front target surface, a rear target surface, a rear target frame, a shock wave detector array, a shock wave signal processing circuit, and a data processing upper computer are included. The front and rear target surfaces are vertically placed and parallel to each other. A front side surface of the front target surface is provided with a shock wave detector E. The shock wave detector array arranged in a regular polygon or circular array is arranged on the corresponding rear target surface in a direction perpendicular to the front target surface. The shock wave detector array includes n shock wave detection units for collecting shock wave signals of shock

waves transmitted to each detection unit when a warhead vertically enters a target surface.



21: 2021/08410. 22: 2021-10-29. 43: 2022-01-13 51: B29C

71: Shandong University, Weihai Junwei Composite Material Co., LTD

72: Qiao Kun, Di Chengrui, Zhu Bo, Yu Junwei, Zhu Anping

#### 54: THERMOPLASTIC COMPOSITE MATERIAL DIRECTLY FORMED BY LASER AND PREPARATION METHOD AND APPLICATION THEREOF

00: -

The invention relate to a thermoplastic composite material directly formed by lase and a preparation method and application thereof. Its raw materials include thermoplastic resin, laser powder and reinforcing material, and the laser powder is at least one of organic metal polymer or organic metal complex containing Mg, Al, Zn, Fe and Sn. The preparation method comprises mixing laser powder and thermoplastic resin, and then compounding the mixed resin with reinforcing material. And a thermoplastic composite material capable of applying LDS technology is prepared.



21: 2021/08411. 22: 2021-10-29. 43: 2022-01-13 51: A47C

71: North Minzu University, Hefei University of Technology

72: ZHANG, Qinwei, LIU, Zhifeng, MU, Chunyang, LI, Maoqiang

## 54: VEHICLE ORIENTED PUBLIC NURSING FACILITY

00: -

The present invention relates to a vehicle oriented public nursing facility, and belongs to the technical field of nursing facilities. A dining device is included. An automatic milk discharge device configured to automatically discharge milk is arranged on the dining device. A cleaning mechanism configured to clean a nursing bottle is arranged on one side of the dining device. The cleaning mechanism includes a cleaning plate and multiple spray nozzles. The cleaning plate is a hollow plate on which the spray nozzles configured to spray water are distributed at equal distances. The multiple spray nozzles are connected with multiple water inlet pipes one to one. The spray nozzle is shaped into a cylinder. A nursing seat is included. A folding canopy is rotatably arranged on two sides of an upper end of the nursing seat through a rotating structure. The rotating structure is a round plate.



21: 2021/08431. 22: 2021-10-29. 43: 2022-01-27 51: A43B; F28F 71: HIGHER TECHNOLOGY CO., LTD. 72: QU, TIANBIN, LIN, XIAO, SHI, CHONG, LI, JUNFENG

#### 33: CN 31: 202110906601.9 32: 2021-08-09 54: CIRCULATION COOLING DEVICE FOR COMPOSITE FOOT PAD PRODUCTION WORKSHOP AND PRODUCT COLLECTION METHOD

00: -

The present invention relates to a technology for cooling products from a production line, and particularly relates to a circulation cooling device for a composite foot pad production workshop and a product collection method. An annular rail system is arranged on a rack. It includes an annular rail, and a group of bearing sliding seats driven by an electric driving device to slide along the annular rail. One foot pad placing plate is suspended on each of the bearing sliding seats. Ventilating holes are formed in groups in each of the foot pad placing plates. A wind collecting pocket with an opening towards the movement direction of the foot pad placing plates when the annular rail system operates is arranged on the lower side of each of the foot pad placing plates. Ventilating slots are formed in the upper surface of each of the foot pad placing plates.



21: 2021/08435. 22: 2021-10-29. 43: 2022-01-27 51: B29B; B29C

71: HIGHER TECHNOLOGY CO., LTD 72: XU, Bin, LIN, Ying, MEI, Zhong, LI, Junfeng, LAI, Zhenhong, CHEN, Bainian, XU, Suping 33: CN 31: 202111203925.2 32: 2021-10-15 54: PLASTIC GRANULATION PRODUCTION LINE AND MATERIAL ROD COOLING FLUME EQUIPPED THEREFOR 00: -

A plastic granulation production including a feeder, extruder, material rod cooling flume including a flume body, a cooler below the flume body and a granulator. The cooler includes a cooling box body having a circulating water inlet which is communicated with a water outlet on the flume body, and a circulating water outlet is communicated with a water inlet on the flume body by a pump. The cooling box body has a heat dissipation air duct and the surface of an upper and lower side plates of the cooling box with group of heat dissipation fins along the length of the cooling box; inlets of the heat dissipation air ducts are respectively connected with a shunt pipe of an airflow distributor, and an inlet of the distributor is connected to a fan. There is provided a material rod cooling flume for the plastic granulation production line.



- 21: 2021/08465. 22: 2021-11-02. 43: 2022-01-13 51: C07K; C12N
- 51. CU/K, CIZN 71. Cuangui Madiaa
- 71: Guangxi Medical University

72: Huang Dongping, Qiu Xiaoqiang, Zeng Xiaoyun, Long Jinghua, Zang Ning

#### 54: QUANTITATIVE METHOD OF PROTEIN BASED ON NON-ISOTOPE LABELED PEPTIDE SEGMENT ADDITION COMBINED WITH MRM 00: -

The invention discloses a protein quantification method combining a non-isotope labeled peptide segment addition method with MRM (Multiple Reaction Monitoring), which comprises the following steps: S1, establishing and optimizing an MRM-MS method; firstly, the whole sequence of the protein is obtained by UNIPROT database, and then the peptide segment and monitoring method of MRM mass spectrometry are established and optimized by Skyline software; S2: the establishment of a new absolute quantitative method combining non-isotope

labeled peptide segment addition with MRM technology; (1) preparation of standard peptide segment standard solution: synthesize selected standard peptide segment, and dissolve dry powder of standard peptide segment of protein with 30-35 percent acetonitrile, 0.1-0.5 percent formic acid and 70-75 percent aqueous solution to prepare 100-110 pmol/L stock solution; (2) preparation of serum sample: remove high abundance protein with Agilent affinity column; (3) prepare standard peptide segment standard solution and internal standard polypeptide with proper concentration, add them into serum samples, detect them by MRM-MS method, and calculate protein content by standard extrapolation method.

21: 2021/08466. 22: 2021-11-02. 43: 2022-01-13 51: A23K

71: Guizhou University, Guizhou Qianlishan
Ecological Food Co., Ltd.
72: Yang Shenglin, Zhao Yongxiang, Yang Shihao,
Zhou Xuan, Zhu Yongcai, Luo Linli
54: MIAO MEDICINE COMPOSITION, MIAO

#### 54: MIAO MEDICINE COMPOSITION, MIAO MEDICINE FUNCTIONAL FEED, AND PREPARATION METHOD AND APPLICATION THEREOF

00: -

The invention discloses a Miao medicine composition, a Miao medicine functional feed and a preparation method and application thereof, and relates to the technical field of feed. The raw materials of the Miao medicine composition include Blumea balsamifera, Toddalia asiatica, Serissa japonica, Lysionotus pauciflorus, Verbena officinalis and Reynoutria japonica; the raw materials of Miao medicine are ground into powder, added to the basal diet, and mixed to obtain the Miao medicine functional feed. The Miao medicine composition of the present invention has scientific compatibility, comprehensive active ingredients, rich nutritional ingredients, no compatibility contraindications, and no toxic side effects, it also has significant effects on laying duck egg production performance (egg production rate, feed remuneration, egg quality), blood immunity and antioxidant indicators.

21: 2021/08467. 22: 2021-11-02. 43: 2022-01-13 51: C04B

71: Dongying Guangtong Technology Co., Ltd.

72: SONG, Liangyou, SONG, Yingxuan, JIA, Chengguang, LIU, Guilan, LIU, Hangzhi, ZHANG, Xingbo

# 54: ASPHALT CONCRETE MODIFIER 00: -

The present disclosure discloses an asphalt concrete modifier, comprising the following components in parts by weight: 100 parts of biogum, 10-20 parts of modifying additive and 5-15 parts of functional additive. The modifying additive is selected from white carbon black, hollow glass beads and mica powder. The functional additive is selected from isoprene rubber. In the present disclosure, a food-grade biogum is selected as a modifier to be added into an asphalt concrete, so that the compatibility, fatigue resistance and shear capacity of the asphalt concrete can be improved, the stability under the high-temperature condition is better, and the asphalt concrete modifier has good interlayer bonding degree. When the asphalt concrete modifier of the present disclosure is used for modifying the asphalt concrete, the modifier is simply mixed with to-be-modified asphalt and mineral powder, the uniform dispersion effect can be achieved, and no additional equipment is required.

71: Zhejiang Institute of Landscape Plants and Flowers

72: JIN, Liang, LI, Xiaobai, GE, Yaying, ZHAN, Shuxia, CAO, Qunyang, ZHAO, Zhangjian 54: METHOD FOR ESTABLISHING TILLANDSIA SIMPLE SEQUENCE REPEAT (SSR) MARKER AND USE THEREOF 00: -

The present disclosure provides a method for establishing a Tillandsia SSR marker and use thereof. Primers of SSR markers are developed based on Tillandsia usneoides transcriptome information, and these markers are subjected to a universality and polymorphism analysis to obtain seven Tillandsia polymorphic markers. These markers are highly polymorphic and very suitable in fields of the identification, population genetic diversity, genetic structure, and genetic resources conservation of main Tillandsia species.

<sup>21: 2021/08468. 22: 2021-11-02. 43: 2022-01-13</sup> 51: G01N



21: 2021/08469. 22: 2021-11-02. 43: 2022-01-13 51: A01D

71: Qingdao University of Science and Technology 72: WANG, Xianlun, CUI, Yuxia, WANG, Min, CHENG, Tao

#### 54: NEEDLING TYPE GARLIC SPROUT HARVESTER

#### 00: -

The present invention provides a needling type garlic sprout harvester, and belongs to the field of agricultural machinery. The harvester is mainly composed of cams, inverted-harrow-shaped clampers, a disc roller, a carding device, a motor, a chain, needles, a vehicle frame, Y-shaped steel forks, a needle box, a relay control switch, guide posts, springs, electromagnets, brackets, a carriage, and a central shaft. The disc roller is composed of discs and reinforcing bars and is driven by the motor. One side of the disc roller is provided with a gear. The central shaft is provided with the carding device, the inverted-harrow-shaped clampers and the cams. The needle box is located at a lower part of a front end of a vehicle body. The Y-shaped steel forks and electromagnetic relays are arranged therein. A storage battery and the motor are located at a rear part of the vehicle body.



21: 2021/08470. 22: 2021-11-02. 43: 2022-01-13 51: A23L

71: Nanjing Agricultural University

72: Gao Zhihong, Duan Chengrui, Sun Yijin 54: PRE-MIXED COCKTAIL AND RELATED PREPARATION METHOD OF JAPANESE APRICOT 00: -

The invention belongs to the field of food, and discloses a Japanese apricot pre-mixed cocktail, which is prepared from Japanese apricot steeping wine, mint water, lemon juice, water and sugar. Every 330 mL of Japanese apricot pre-mixed cocktail contains 56 mL-82 mL of Japanese apricot steeping wine, 3.3 mL-9.9 mL of lemon juice, 10 g-15 g of sugar and 33 mL-40 mL of mint water, the balance is water. The invention also discloses a preparation method of the Japanese apricot premixed cocktail, which comprises the following steps: adding lemon juice into mint water, mixing uniformly, then pouring Japanese apricot steeping wine, then adding sugar, finally pouring water, and stirring uniformly; filtering, and sterilizing by pasteurization. By reasonably controlling the dosage, the sour and bitter taste of the Japanese apricot steeping wine itself is improved, and at the same time, the nutritional substances of the Japanese apricot premixed cocktail are enriched. Japanese apricot cocktail is transparent and clear, with bright color, which improves the visual effect. The Japanese apricot pre-mixed cocktail has good taste, low alcohol content, is suitable for drinking as beverage, and can be popularized as food and beverage.

#### 21: 2021/08471. 22: 2021-11-02. 43: 2022-01-13 51: A01G

71: Shanghai Jiaotong University72: Wang Xinhua, Wang Caibo, Wang Yongkun, XuBaoping, Wu Jiaying, Chen Jie, Liu Bingcheng,Wang Jing, Qi Xing, Yang Shuo

#### 54: METHOD OF SYMBIOTIC GROWTH OF CYPERUS ESCULENTUS L. AND RHIZOPHAGUS INTRARADICES IN PLANT ROOTS AND DETERMINATION OF MOLD ACTIVITY 00: -

This invention discloses a method of symbiotic growth of Cyperus esculentus L. and Rhizophagus intraradices in plant roots and determination of mold activity, belonging to the field of biotechnology, which comprises the following steps: S1, treating seeds, S2, pre-sowing treatment, S3. treatment of seedling stage, S4. treatment for growth period. According to the invention, the dominant microflora is formed into the root system of Cyperus esculentus L.by utilizing Rhizophagus intraradices. By continuous colonization of and symbiosis of Rhizophagus intraradicesinside of the root system of Cyperus esculentus L., water is obviously saved, the root system and plant growth of Cyperus esculentus Lare promoted, and the growth amount and yield can reach 15.5-92.6%. The method can accurately evaluate the vitality of Rhizophagus intraradices in different batches of microbial agents. Meanwhile, the invention can be used for drought-resistant planting and production of Cyperus esculentus L.. It is environment-friendly, and meets the requirements of organic ecological green agriculture, and has the characteristics of easy mastering, small investment and good sustainability, which makes the invention have a broad application market.

21: 2021/08473. 22: 2021-11-02. 43: 2022-01-13 51: A23L

71: Qilu University of Technology

72: TANG, Ke, LIU, Xinli, ZHU, Wenxing 54: DENDROBIUM HUOSHANENSE ENZYME AND PREPARATION METHOD THEREOF 00: -

The present disclosure discloses a Dendrobium huoshanense enzyme and a preparation method thereof. The present disclosure uses fresh Dendrobium huoshanense as the main raw material, red dates, wolfberry, Ophiopogon japonicus, American ginseng, honey, brown sugar, rock sugar as auxiliary materials, and after multiple fermentations, the enzyme drink with good taste is prepared, with improved activity. The transfer rate of mannose, the main component of Dendrobium huoshanense, is significantly increased, that is, the absorption and utilization in the human body is improved. The added auxiliary materials increase the utilization of medicinal materials and promote the microecological balance of the digestive tract, improve the digestive functions, regulate the body metabolism, enhance immunity, eliminate fatigue, and protect the liver, with the value of promotion and application.

21: 2021/08474. 22: 2021-11-02. 43: 2022-01-12 51: A23L

71: Qilu University of Technology

72: TANG, Ke, LIU, Xinli, ZHU, Wenxing 54: PROCESS OF PRODUCING FUNCTIONAL BEVERAGE FOR ENHANCING IMMUNITY 00: -

The present disclosure discloses a process of producing a functional beverage for enhancing immunity. The present disclosure utilizes Dendrobium huoshanense as the main raw material. Dendrobium huoshanense can effectively improve the immune functions of human body and has special effects for human eyes, pharynx, and lungs, stomach, intestines, kidneys and other organs and blood, cardiovascular diseases, etc., and can resist cataracts, delay aging, resist mutations, and resist tumors. In addition, the other components added can nourish the spleen and stomach, regulate the functions of blood gas in the human body. Through a reasonable combination and weight ratio of the components, the functional beverages of the present disclosure have a very refreshing and mellow taste, with the value of promotion and application.

71: Qingdao Agricultural University 72: SUN, Jingxin, WANG, Baowei, HUANG, Ming, WANG, Shuling, LI, Yan, GUO, Liping, ZHANG, Ming'ai, LI, Fangfang, HUANG, He, YAO, Xianqi, ZHANG, Congxiang, ZHAO, Xiangjin, ZHENG, Yuandong, FENG, Yongsheng 33: CN 31: 202111032032.6 32: 2021-09-03

<sup>21: 2021/08475. 22: 2021-11-02. 43: 2022-01-12</sup> 51: A61K

#### 54: METHOD FOR PREPARING CHONDROITIN SULFATE/DIACYLGLYCEROL NANOEMULSION TO PROMOTE EFFICIENT SECRETION OF MUCOPOLYSACCHARIDE FROM CARTILAGE 00: -

The present disclosure discloses a method for preparing a chondroitin sulfate/diacylglycerol nanoemulsion to promote efficient secretion of mucopolysaccharide from cartilage. The prepared chondroitin sulfate/diacylglycerol nanoemulsion can stimulate chondrocytes to secrete mucopolysaccharide efficiently. The nanoemulsion obtained by mixing the raw material chondroitin sulfate with diacylglycerol and modifying can significantly promote the secretion of mucopolysaccharide from cartilage, to solve the problems of conventional cartilage repair materials, such as poor toughness and low support performance, failure to exert the functions of weight bearing and cushioning in a timely and effective manner after implantation, and provide an experimental basis for its application in cartilage tissue engineering.

21: 2021/08476. 22: 2021-11-02. 43: 2022-01-12 51: A01G; C05G; C12N; C12R 71: WU, Qingwang 72: WU, Qingwang 54: EDIBLE FUNGUS CONTAINING ORGANIC SELENIUM AND PREPARATION METHOD THEREOF

#### 00: -

The present disclosure relates to an edible fungus containing organic selenium and a preparation method thereof. The preparation method has a fruiting rate of at least 80%, and increases a content of selenium and zinc in the edible fungus containing organic selenium.

21: 2021/08477. 22: 2021-11-02. 43: 2022-01-12 51: B03D; F17D

71: Shandong Provincial Bureau of Geology and Mineral Resources (SPBGM), 801 Institute of Hydrogeology and Engineering Geology, SPBGM, Dizi New Energy Technology Co. LTD, Shandong No.3 Exploration Institute of Geology and Mineral Resources

72: Kang Fengxin, Zhou Qundao, Bai Tong, Zheng Tingting, Wang Xuepeng, Yang Yabin, Yang Xunchang, Sun Xiaoxiao, Sui Haibo, Shi Meng

#### 54: STRUCTURE OF REINJECTION WELL FOR IMPROVING REINJECTION ABILITY 00: -

The invention discloses a structure of a reinjection well for improving reinjection ability, wherein reinjection pipe is parallelly arranged at the outer side of a pump chamber pipe, and the bottom ends of the reinjection pipe is connected with the bottom of the pump chamber pipe and the well pipe through a tee joint; the reinjection pipes is provided with an upper connecting thread part, the pump chamber pipe is provided with a lower connecting thread part, and the lower connecting thread part supports the upper connecting thread part, so that the reinjection pipe can be supported and erected by means of a thicker pump chamber pipe, and a supporting frame is not needed to be additionally arranged in a narrow space at the bottom, and two vertical pipelines are erected and supported by means of the structure of the well body itself, thereby reducing the manufacturing cost on the basis of ensuring the strength; a fishing bottomhole is arranged at the bottom of the well pipe, and a connecting part is arranged on the fishing bottom hole, which can be connected with an external hoisting drive device in a hoisting way, so that hoisting and lifting are realized through the hoisting connection, thereby retrieving settled silt and fallen parts during service of well effectively.



21: 2021/08478. 22: 2021-11-02. 43: 2022-01-12 51: C12N; C12P; C12R

#### 71: Qingdao Agricultural University

72: SUN, Jingxin, WANG, Baowei, HUANG, Ming, WANG, Shuling, LI, Yan, GUO, Liping, ZHANG, Ming'ai, LAN, Tianchan, HUANG, He, YAO, Xianqi, ZHANG, Congxiang, ZHAO, Xiangjin, ZHENG, Yuandong, HAO, Xiaojing

#### 33: CN 31: 202111032027.5 32: 2021-09-03 54: METHOD FOR INCREASING THE TITER OF BACTERIOPHAGE T4 BY SYNERGIZING 1, 3-DIGLYCERIDE AND COLLAGEN PEPTIDE WITH HIGH-VOLTAGE ELECTROSTATIC FIELD 00: -

The present disclosure discloses a method for increasing the titer of bacteriophage T4 by synergizing 1,3-diglyceride and collagen peptide with a high-voltage electrostatic field. By adding 1,3diglyceride and collagen peptide and cultivating bacteriophage T4 under a high-voltage electrostatic field, the titer of bacteriophage T4 is increased. The bacteriophage T4 cultured in the present disclosure improves the phagocytosis effect on E. coli AMC 198 and it is expected to replace antibiotics to have a broader application prospect, moreover, it is of great significance to prevent and control bacterial contamination in clinical, food and agricultural fields.

21: 2021/08479. 22: 2021-11-02. 43: 2022-01-12 51: A01C

71: Zhejiang Institute of Garden Plants and Flowers (Zhejiang Xiaoshan Institute of Cotton and Bast Fiber Crops Research), Hangzhou Xiaoshan Agricultural (Forestry) Technology Extended Center, Zhejiang Forestry Technology Extended Station, Hangzhou Dazhan Agricultural Development Co., Ltd.

72: AN, Xia, YING, Jinyao, HE, Zhen, ZHANG, Jun, LI, Wenlue, LIU, Tingting, LUO, Xiahong, ZHU, Guanlin, CHEN, Changli, YU, Lijun, HONG, Fuying 54: QUANTITATIVE FERTILIZATION DEVICE FOR CAMELLIA SEMISERRATA 00: -

Disclosed is a quantitative fertilization device for camellia semiserrata, including a fertilization box, a top of which is provided with a fertilizer filling port and a bottom of which is provided with a fertilization pipe, and further including a partition fixedly connected to an inner wall of the fertilization box and provided with a plurality of feed openings I disposed at equal intervals; a rotating shaft rotatably connected to the partition; a pin shaft fixedly connected to an outer wall of the rotating shaft and rotatably connected with a crushing roller fitted to the partition; and crushing teeth fixedly connected to the outer wall of the rotating shaft. The present invention is simple in structure. Before fertilization, by the arrangement of the rotating shaft, the crushing teeth, the pin shaft, and the crushing roller, block fertilizer can be rolled and crushed to avoid the fertilizer from blocking the fertilization pipe.



#### 21: 2021/08480. 22: 2021-11-02. 43: 2022-01-12 51: C08B

71: Heilongjiang Bayi Agricultural University 72: Wang Kun, Zhao Jing, Sun Jingchen, Gao Yongjiao, Zheng Xiqun, Lu Baoxin, Zuo Feng, Li Dan, Cui Suping, Wang Juntong

#### 54: PREPARATION METHOD OF LACTIC ACID BACTERIA CELL-BOUND POLYSACCHARIDE CAPABLE OF IMPROVING NEMATODE ANTIOXIDANT CAPACITY 00: -

A preparation method of lactic acid bacteria cellbound polysaccharide capable of improving the antioxidant capacity of nematodes. Relate to that technical field of macromolecular polysaccharides. The method for preparing the capsule-producing Lactobacillus fermentum S1 (ACC.No. MK226442) cell-bound polysaccharide comprises the following steps: centrifugally collecting cultured lactobacillus fermentum S1 thallus, washing with normal saline, and redispersing in a certain volume of normal saline, EDTA solution or phenol solution. Method 1: ultrasonic extraction, after collecting and cleaning bacteria, dispersing them in 0.85 percent normal saline, using ultrasonic power of 10 w-100 w, ultrasonic temperature of 1-10 degree Celsius and ultrasonic time of 1-10 min; Method 2: EDTA extraction, EDTA concentration 0.01 M-0.1 M,

shaker speed 20-100 rpm, extraction time 2-10 h, extraction temperature 10-40 degree Celsius; Method 3: phenol extraction, phenol concentration 0.1-1 percent, shaking table speed 20-100 rpm, extraction time 2-10 h, extraction temperature 10-40 degree Celsius; after concentration under reduced pressure, the polysaccharide product is obtained by alcohol precipitation, dialysis, freeze-drying and protein removal. The polysaccharide can obviously improve the antioxidant level of Caenorhabditis elegans in vivo. The invention aims to solve the problem of low development and utilization of lactic acid bacteria cell-bound polysaccharide.

21: 2021/08481. 22: 2021-11-02. 43: 2022-01-12 51: A24B

71: TOBACCO RESEARCH INSTITUTE OF CHINESE ACADEMY OF AGRICULTURAL SCIENCES

72: ZHANG, Yizhi, LI, Xiaoli, WANG, Dabin, YU, Weisong, LIN, Yingnan, FANG, Song, NING, Yang, SUN, Peng

### 54: TOBACCO LEAF HORIZONTAL STACKING TYPE CURING BARN

00: -

Disclosed is a tobacco leaf horizontal stacking type curing barn. The tobacco leaf horizontal stacking type curing barn comprises a heating chamber and a tobacco loading chamber which are connected, wherein the heating chamber and the tobacco loading chamber are separated by a partition wall, cold air inlets are formed in a first side wall, moisture exhaust windows are formed in a second side wall, a hot air inlet is formed in the upper part of the partition wall, a hot air backflow port is formed in the lower part of the partition wall, a horizontal plate extending towards the second side wall is arranged on one side of the partition wall, a backflow gap is formed between the horizontal plate and the second side wall, and a backflow channel is formed between the bottom surface of the tobacco loading chamber and the horizontal plate.



21: 2021/08482. 22: 2021-11-02. 43: 2022-01-12 51: C12N; C12Q

71: Hebei Agricultural University

72: SANG, Yaxin, TAN, Jianxin, LIU, Ziwei, LAN, Qingkuo, WANG, Yong, JIA, Xinyue, LIU, Shuang, SHEN, Xiaoling

#### 54: SPECIFIC DNA SEGMENT AND PRIMER FOR SPECIES IDENTIFICATION OF MULBERRY 00: -

The present disclosure provides a specific DNA segment and primers for species identification of mulberry. The DNA segment has a gene sequence shown in SEQ ID NO: 1 of the Sequence Listing; the PCR primers are SS05-F and SS05-R, and primers and a probe for fluorescence quantitative PCR and digital PCR are SS05-QF, SS05-QR, and SS05-QP, respectively, having nucleotide sequences respectively shown in SEQ ID NO: 2, SEQ ID NO: 3, SEQ ID NO: 4, SEQ ID NO: 5, and SEQ ID NO: 6 of the Sequence Listing, respectively. Using qualitative PCR, real-time fluorescent PCR, and digital PCR technologies, the present disclosure establishes a set of mulberry species-specific qualitative and quantitative assays; furthermore, based on the condition of a pure mulberry juice and mulberry juices mixed with ingredients derived from other fruits, precise qualitative and quantitative assays for mulberry ingredients are established.


21: 2021/08483. 22: 2021-11-02. 43: 2022-01-12 51: E01C

71: Tongji University

72: LIU, Liping, SUN, Lijun, WANG, Huayu, QIN, Juze

#### 54: MIXING METHOD OF PLANT-MIX HOT RECYCLED ASPHALT MIXTURE 00: -

The present disclosure provides a mixing method of a plant-mix hot recycled asphalt mixture, which has the characteristics of easy implementation, simple and efficient mixing process, easy compaction of mixture and significantly improved performance.



21: 2021/08484. 22: 2021-11-02. 43: 2022-01-12 51: A01K; A23K

71: SOUTH CHINA AGRICULTURAL UNIVERSITY 72: WANG, Wence, XIA, Daiyang, LI, Yu, YANG, Lin, ZHU, Yongwen, FENG, Yan, YE, Hui, FU, Yang, CHEN, Jianying, LIU, Xiaoli, ZHU, Shanshan, MA, Weiqing, JIANG, Huiquan

#### 54: FEED FOR IMPROVING EGG LAYING PERFORMANCE AND HATCHABILITY OF POULTRY AND APPLICATION THEREOF 00: -

The present disclosure provides a feed for improving egg laying performance and hatchability of poultry and an application thereof, belongs to the technical field of feeds. The feed for breeding Muscovy ducks comprises the following components in parts by weight: 51.5-52.0 parts of corn, 17.5-18.0 parts of soybean meal, 7.40-7.50 parts of corn gluten meal, and 8.8-9.2 parts of wheat middlings, 1.85-1.90 parts of lard, 1.5-2.0 parts of dibasic calcium phosphate, 8-9 parts of stone powder, 0.25-0.35 part of salt, 0.12-0.16 part of organic acid, 0.05-0.10 part of choline chloride, 0.08-0.12 part of sodium bicarbonate, 0.04-0.32 part of solid methionine, 0.18-0.54 part of lysine hydrochloride, 0.00-0.82 part of bentonite, and 0.38-0.42 part of premix. The feed for breeding Muscovy ducks can improve the egg laying performance and hatching performance of the female Muscovy ducks.

72: LIU, Zhenyu, ZHAO, Bin

<sup>21: 2021/08485. 22: 2021-11-02. 43: 2022-01-12</sup> 

<sup>51:</sup> B07C; B25J

<sup>71:</sup> Shenyang University of Technology

# 54: INDUSTRIAL ROBOT SORTING SYSTEM AND METHOD

00: -

The present invention provides an industrial robot sorting system and method. The system consists mainly of four units: a workpiece platform unit, a camera platform unit, a vision sorting unit and a robot RC control unit. The camera platform unit is arranged above the workpiece platform unit and connected to the vision sorting unit. The vision sorting unit is connected to the robot RC control unit. In the present invention, workpieces of geometrical shapes are researched. The workpieces are conveniently grabbed by an industrial robot, and interference and collision are avoided when a mechanical arm grabs the workpieces. The industrial robot sorting system has good reliability, accuracy and robustness.



21: 2021/08486. 22: 2021-11-02. 43: 2022-01-12 51: G01N

71: Shaoxing College of Arts and Sciences
72: HU, Yunjin, ZHONG, Zhen, GAO, Huicai, XIA, Jialong, ZHANG, Tuowei, YANG, Shendong
54: UNSATURATED SEEPAGE TEST DEVICE
AND TEST METHOD FOR ROCK MASS
FRACTURE

00: -

The present disclosure provides an unsaturated seepage test device and a test method for a rock mass fracture. The device includes a clamp holder (6) for clamping a fracture test piece (5), a high-precision plunger pump (1), a first gas cylinder (2), a back pressure control device (7), a water-gas separation device (8), a water storage container (9), and an electronic balance (10). The first gas cylinder (2) is connected to an inlet end of the fracture test piece (5) through a first pressure regulating valve (3). The high-precision plunger pump (1) is connected to the inlet end of the fracture test piece (5). An outlet end of the fracture test piece (5). An outlet end of the fracture test piece (5), the back pressure control device (7), the water-gas separation device (8), and the water storage

container (9) are sequentially connected. The water storage container (9) is placed on the electronic balance (10).



21: 2021/08487. 22: 2021-11-02. 43: 2022-01-12 51: A01G

71: Xu Shaodong

72: Xu Shaodong, Xu Baojian, Ding Jianguo, Liu Chunqiang, Cui Yueyong, Xu Weichen 54: METHOD FOR CREATING SALT-TOLERANT AND DROUGHT-TOLERANT CORN 00: -

The invention discloses a method for creating salttolerant corn, which takes seedlings sprouted aseptically from excellent inbred lines as materials, cuts out the stem tips and conducts in vitro culture to induce cluster bud blocks, which are mutagenized by chemical mutagens, transferred to a culture medium added with sodium chloride after recovery culture for salt-tolerant screening, and the surviving tissue b blocks are transferred to a differentiation culture medium to induce seedling generation. The regenerated plants are selfed or backcrossed with the donor inbred line plants to bear seeds, and their offspring are screened for salt tolerance during seed germination and tested for salt tolerance at seedling stage, and the plants with excellent salt tolerance are selected. The selected lines were cultivated into excellent salt-tolerant inbred lines by planting in saline-alkali land, observing agronomic characters and measuring combining ability, and then the salttolerant and high-yield hybrids were cultivated. The method of the invention greatly improves the breeding speed of corn salt-tolerant inbred lines, and has important significance for corn salt-tolerant drought-tolerant breeding and agricultural production.

21: 2021/08488. 22: 2021-11-02. 43: 2022-01-13 51: A01K

71: Northeast Agricultural University 72: Zhang Yu, Shen Weizhen, Yin Yanling, Wang Yan, Zhang Yonggen, Xiong Benhai 54: METHOD FOR IDENTIFYING FEEDING AND RUMINATION OF DAIRY COWS BASED ON TRIAXIAL ACCELERATION 00: -

The invention discloses a method for identifying eating and ruminating of cows based on triaxial acceleration, and belongs to the technical field of healthy livestock and poultry breeding. The invention comprises a data acquisition module, a wireless receiving module and PC software. The application steps include: step one, fix the data acquisition module on the halter, and put it on the cow so that the data acquisition module is located in the lateral middle of the cow's jaw. After the fixation, start measuring acceleration data. Step 2: The data measured by the data acquisition module are stored in the integrated SD card, and the wireless transmitter and wireless receiver module transmit the triaxial acceleration data stored in the SD card to the PC. Step 3: The PC-side software extracts the time domain and frequency domain features of the acceleration signal with the data segment with the length of 256 as the minimum processing unit, and uses K- nearest neighbor algorithm to identify the cow's eating and ruminating behavior after standardization and feature dimension reduction.



#### 21: 2021/08489. 22: 2021-11-02. 43: 2022-01-13 51: A01C; A01G

71: Shandong Provincial Bureau of Geology and Mineral Resources (SPBGM), Shandong No.5 Exploration Institute of Geology and Mineral Resources, 801 Institute of Hydrogeology and Engineering Geology, SPBGM, Shandong No.3 Exploration Institute of Geology and Mineral Resources, Lunan Geo-engineering Exploration Institute, No.2 Hydrogeology and Engineering Geology Brigade, Shandong Exploration Bureau of Geology and Mineral Resources (Lubei Geoengineering Exploration Institute) 72: Kang Fengxin, Li Shouchang, Shi Meng, Zheng Tingting, Ma Zhemin, Sui Haibo, Zhang Pingping, Bai Tong, Yang Yabin, Shi Qipeng

#### 54: ECOLOGICAL RESTORATION SYSTEM FOR BARREN AND DAMAGED MOUNTAINS 00: -

The invention is an ecological restoration system for barren and damaged mountains, which expands the width and depth of the original rock fissures along the direction of the rock fissures to store water. Several rhombus areas are arranged along the slope of the slope, and the periphery of the rhombus area is composed of a number of local mountain rocks, which can be used to save resources; and planting vegetation in the rhombus area, the vegetation in the area is easy to survive, water and soil conservation and the ecosystem can be repaired. The restored barren or damaged mountains are not only beautiful but also conducive to ecological protection, thereby realizing the function of ecological environment.

- 21: 2021/08490. 22: 2021-11-02. 43: 2022-01-13 51: B03D
- 71: GUANGXI UNIVERSITY

72: WEI, Zongwu, WEI, Xueyan, LIAO, Xingjin, GAO, Yang, SHEN, Fang 54: FLOTATION METHOD FOR RECOVERING FINE-GRAINED CASSITERITE FROM TAILINGS 00<sup>-</sup> -

The present disclosure discloses a flotation method for a fine-grained cassiterite mineral and guartz, comprising the following step: using oxalic acid as a pH value regulator, sodium silicate, direct green and a larch tannin extract as inhibitors of quartz and fine slit minerals, salicylaldoxime as an activator of the fine-grained cassiterite mineral, and BY-9 as a collector of the fine-grained cassiterite mineral. By adopting the method, the fine-grained cassiterite mineral and gangue minerals such as guartz can be subjected to flotation, and the process structure is simple, small chemical doses are used, and the finegrained cassiterite mineral can be effectively recovered. Under a condition that an antimony content of a fed ore is 0.36-0.60%, flotation is performed to obtain a tin concentrate with a tin content of 11.35-17.24% and a recovery rate of 71.33-75.78%.

21: 2021/08491. 22: 2021-11-02. 43: 2022-01-13

#### 51: B63B

# 71: HARBIN INSTITUTE OF TECHNOLOGY, WEIHAI

#### 72: ZHANG, Min, LIU, Aijun, WANG, Tingyu, LIU, Gongliang, ZHAO, Wanlong, ZHAO, Rui 54: OCEAN EXPLORATION, TRANSMISSION, AND PROCESSING TEACHING APPARATUS 00: -

The present invention relates to a teaching experimental system for an ocean exploration technology. The specific structure of the experimental system has the characteristics of small size and relatively simple structure. In addition, various experimental boxes perform signal transmission in a wireless connection mode, which simplifies line layout, reduces the size, and meanwhile, can improve the convenience in use. In addition, various experimental boxes are arranged independently respectively. When one of the experimental box has a problem, only the experimental box needs to be repaired separately, so that maintenance is facilitated.



21: 2021/08492. 22: 2021-11-02. 43: 2022-01-13 51: C04B

71: Guangdong Sitong Group Co., Ltd 72: WANG, Zhiyi, MA, Zheng, WANG, Hui, LIU, Xuguang, LI, Xia

## 54: FLUX SYSTEM FOR LIQUID-PHASE SINTERING OF CERAMIC BODY AND PREPARATION METHOD THEREOF

## 00: -

The present disclosure relates to a flux system for liquid-phase sintering of a ceramic body and preparation method thereof, and belongs to the field of ceramic materials. The flux system comprises the following components in mole percent: 45.0-70.0% of SiO2, 1.0-8.0% of Al2O3, 1.0-10.0% of alkali metal oxide, 0.0-40.0% of alkaline earth metal oxide, and 5.0-20.0% of B2O3, further comprises any one of or any combination of titanium dioxide, zirconium dioxide, zirconium silicate, calcium fluoride, bone ash and calcium phosphate in mole percent from 0 to 10.0%. A preparation method of the flux system comprises the following steps: uniformly premixing various raw materials corresponding to the chemical components, melting at 1250-1650 degree celsius, and performing water quenching. The flux system can be used for the traditional domestic ceramics, sanitary ceramics, architectural ceramics, electronic ceramics, refractory materials, magnetic materials, alumina ceramics, zirconia ceramics, and zirconium silicate ceramics.



21: 2021/08493. 22: 2021-11-02. 43: 2022-01-13 51: B01J

71: Qingdao University of Science and Technology 72: Chen Ruixin, Liu Yong, Yang Yu, Liu Yanru, Han Jishu, Wang Lei

## 54: PREPARATION METHOD AND APPLICATION OF CUPROUS OXIDE MICRON PHOTOCATALYST WITH DIFFERENT MORPHOLOGIES

00: -

This invention relates to preparation method of cuprous oxide micron photocatalyst with controllable morphology and its application in dye degradation reaction under visible light. By the method of adding copper sulfate, sodium hydroxide and glucose into mild aqueous solution in turn, and adjusting the

amount of glucose to synthesize a series of cuprous oxide photocatalysts with different morphologies, in order to obtain the catalyst provided by this invention. The obtained catalyst is used for photocatalytic degradation reaction of dyes, and cuprous oxide with different morphologies can degrade various dyes under visible light. The method has the advantages of environmental protection, controllable morphology, uniform granularity, good dispersibility, high yield, easy separation and simple and safe operation.

#### 21: 2021/08494. 22: 2021-11-02. 43: 2022-01-13 51: C12N; C12Q; C12R 71: Northwest A and F University 72: XU, Liangsheng, HUANG, Lili, WANG, Yibo 54: LOOP-MEDIATED ISOTHERMAL AMPLIFICATION (LAMP) PRIMERS FOR VALSA MALI, AND VALSA MALI DETECTION KIT 00: -

The present disclosure discloses loop-mediated isothermal amplification (LAMP) primers for Valsa mali, and a Valsa mali detection kit. The disclosed primers are for the conservative EF-1a gene of Valsa mali. A target gene fragment is preferably used to design specific primers, such that the primers can effectively detect Valsa mali with high specificity. The disclosed kit includes: a grinding liquid tube; a RNase solution tube; a nucleic acid extraction solution A tube; a nucleic acid extraction solution B tube: a nucleic acid extraction solution C tube; an LAMP reaction liquid tube; a Bst DNA polymerase tube; a chromogenic reagent tube; a positive control nucleic acid tube; a negative control tube; and a mineral oil tube. The kit of the present disclosure and the corresponding detection method can realize the universal detection of Valsa mali, with low cost, high sensitivity, and simple operation, and can also realize fast on-site detection.

21: 2021/08495. 22: 2021-11-02. 43: 2022-02-09 51: B32B

71: Qingdao University of Science and Technology 72: Wang Debao, Wang Xiao, Mou Hongyu, Song Caixia

54: MIXED CRYSTAL TIO2/G-C3N4 HOLLOW NANOTUBE COMPOSITE MATERIAL AND PREPARATION METHOD THEREOF 00: - The invention discloses a mixed crystal TiO2/g-C3N4 hollow nanotube composite material and a preparation method thereof, the TiO2 mixed crystal/g-C3N4 hollow nanotube composite material can be used as a high-efficiency photocatalyst, urea, titanium tetrachloride and hexamethylenetetramine are used as raw materials, and g-C3N4 hollow nanotube is obtained through secondary roasting reaction, then the rutile and anatase TiO2 mixed crystal/g-C3N4 hollow nanotube composite material is obtained through the hydrothermal reaction, and the preparation and loading of the rutile and anatase TiO2 mixed crystal are completed in one step; the advantages of the present invention are: the precursors used are cheap urea and inorganic salt titanium tetrachloride, the preparation process is simple and the cost is low; the rutile and anatase mixed crystal TiO2/g-C3N4 hollow nanotube photocatalyst prepared by the method has good photocatalytic activity in the aspects of water splitting, degradation of organic pollutants in water, degradation of formaldehyde in air, bacteriostasis and antibiosis, and the like.



- 21: 2021/08496. 22: 2021-11-02. 43: 2022-02-09
- 51: G06F
- 71: Tongji University

72: SUN, Lijun, CHENG, Huailei, LIU, Liping, YANG, Ruikang

54: METHOD FOR CREATING IN-SITU MODULUS MASTER CURVE OF ASPHALT LAYER OF ASPHALT PAVEMENT 00: -

The embodiments of the present invention disclose a method for creating an in-situ modulus master curve of an asphalt layer of an asphalt pavement.

Equivalent loading frequencies of a pavement corresponding to different loading speeds are calculated according to measured transverse strains and longitudinal strains. In-situ moduli of each asphalt layer under different loading conditions are back-calculated using finite element software abaqus. An in-situ modulus master curve is created according to back-calculation results. The in-situ modulus master curve is verified with verification data to prove that the created in-situ modulus master curve is effective.



21: 2021/08497. 22: 2021-11-02. 43: 2022-02-09 51: A61K; C07K; A61P

71: Yunnan University of Chinese Medicine

72: XU, Furong, CUI, Zhiying, HE, Xiaoshan, PENG, Shoujie, ZHAO, Yanli

#### 54: SOLVENT SUITABLE FOR RAT PLASMA PROTHROMBIN TIME (PT) IN VITRO 00: -

The present disclosure provides a reagent for determining plasma prothrombin time (PT) in vitro, including one or more of a dimethyl sulfoxide (DMSO) solution, an ethanol solution, and phosphate buffered saline (PBS); when the reagent is the DMSO solution, a mass concentration thereof is 40%; when the reagent is the ethanol solution, the mass concentration thereof is 30%; and when the reagent is the PBS, a molar concentration thereof is 0.01 M with a pH of 7.4.

21: 2021/08498. 22: 2021-11-02. 43: 2022-02-09 51: A61L

71: Qingdao University of Science and Technology 72: YUAN, Xun, WANG, Xiangyu

#### 54: SILVER NANOCLUSTER-BASED CHITOSAN HYDROGEL DRESSING AND PREPARATION METHOD AND APPLICATION THEREOF 00: -

The present disclosure discloses a silver nanocluster-based chitosan hydrogel dressing and a preparation method and an application thereof, belonging to the technical field of silver nanoclusterbased chitosan hydrogel dressing.



B. subtilis E. coli P. aeruginosa S. aureus

21: 2021/08499. 22: 2021-11-02. 43: 2022-02-09 51: C09K

71: North China Electric Power University

72: Wang Zhe, Zheng Liyuan, Hu Dezhong, Tang Peijie, Wang Xiangke

#### 54: CARBON DOT/POLYURETHANE COMPOSITE MATERIAL AND PREPARATION METHOD AND APPLICATION THEREOF 00: -

The invention relates to the technical field of preparation of carbon dots and carbon dot composites, in particular to a carbon dot/polyurethane composite and a preparation method and application thereof. Dissolving neutral red in ethylene glycol, stirring and mixing uniformly, reacting at 200 degree Celsius for 4 h, centrifugally washing with mixed solution of n-hexane and acetone, taking supernatant to prepare carbon dot solution, then immersing polyurethane foam in carbon dot solution, standing, taking out, cleaning and air drying to obtain carbon dot/polyurethane composite material. The carbon dot/polyurethane composite material is simple in preparation process, environment-friendly, cheap and easy to obtain, and can accelerate the transmission of electrons and substances when being used for photocatalytic enrichment of uranium, thereby improving the photocatalytic performance; and the carbon dot/polyurethane composite material is easy to separate after the reaction is finished, which is convenient for subsequent reuse.



21: 2021/08500. 22: 2021-11-02. 43: 2022-01-14 51: A01K

71: Heilongjiang River Fisheries Research Institute, Chinese Academy of Fishery Sciences

72: Xu Gefeng, Huang Tianqing, Liu Enhui, Gu Wei, Wang Gaochao, Wang Bingqian

## 54: PNEUMATIC FISH CLEAVAGE GENERATING DEVICE AND SEEDLING INCUBATION METHOD AT CLEAVAGE STAGE

00: -

The invention relates to a pneumatic fish cleavage generating device and a seedling hatching method at the cleavage stage. The seedlings hatched by drug stimulation and temperature compensation shock have a low hatching rate and are prone to deformities, the equipment of the pressure increasing method is too heavy and the operation is complicated. The cleavage degree of the fertilized egg is difficult to control, and the mortality rate is high. The composition of the present invention includes: the columnar cleavage chamber (2), a water pump (16) is installed in the middle of the bottom surface of the columnar cleavage chamber, the upper end of the water pump is equipped with a water pipe bracket (3), and the lower end of the upper water pipe bracket is covered with a filter partition (15), the upper end of the upper water pipe bracket is covered with a filter layer (13), and fertilized eggs (14) are placed in the space between the columnar cleavage chamber, the filter partition and the filter layer. A spray pipe (12) is sleeved on the top of the upper water pipe bracket, and a positioning sealing cover (4) is placed above the columnar cleavage chamber, a ring of expansion rubber sealing ring (5) is installed on the outer side of the positioning sealing cover. The invention is used for a pneumatic fish cleavage generating

device and a seedling incubation method at the cleavage stage.



- 21: 2021/08501. 22: 2021-11-02. 43: 2022-01-14 51: B29C; C08J; C08K; C08L
- 71: Qingdao University of Science and Technology

## 72: ZHU, Haiguang, LIU, Yong, YUAN, Xun 54: METHOD FOR PREPARING TRIBLOCK POLYMER-GRAFTED REDUCED GRAPHENE OXIDE COMPOSITE MATERIAL AND APPLICATION THEREOF

00: -

The present disclosure provides a method for preparing a triblock polymer-grafted reduced graphene oxide composite material and an application thereof, belonging to the field of design and application of an intelligent material with switchable wettability. According to the present invention, a hydrophilicity-hydrophobicity switchable intelligent fog water collection material is designed, that is, hydrophilicity-hydrophobicity reversible switchover is intelligently achieved by taking the advantage of external environment change, and advantages of hydrophilicity and hydrophobicity of the material in fog water collection are fully utilized, which is of great significance to the efficient and intelligent collection of fog water. Poly(nisopropylacrylamide) (PNIPAM) fog water adsorption and desorption efficiency is improved, the

temperature around PNIPAM is rapidly increased, and phase transformation of PNIPAM is accelerated.



21: 2021/08502. 22: 2021-11-02. 43: 2022-01-14 51: C01G

71: Qingdao University of Science and Technology 72: Chen Ruixin, Han jishu, Sun Jing, Liu Yanru, Zhao Ruiyang, Wang Lei

## 54: PREPARATION METHOD AND APPLICATION OF COPPER VANADATE AS CATHODE MATERIAL FOR LITHIUM ION BATTERY

00: -

This invention relates to preparation method and application of copper vanadate as cathode material for lithium ion battery. Vanadium in the electrode material is a typical metal element with various valence states, which shows great potential as an anode for lithium ion batteries by combining with other metal elements and oxygen elements. According to the electrode material, vanadium and copper precursors with phenanthroline as an organic ligand are prepared under hydrothermal conditions, and then heat treatment is carried out at high temperature to obtain granular CuV2O6. Finally, it is used as cathode material to assemble lithium ion battery for constant current charge and discharge test. The method comprises the following steps: dispersing copper salt, organic ligand phenanthroline and vanadium source in water, then moving into a reaction kettle to react at high temperature for a span of time, and naturally cooling to obtain black cuboid crystals. CuV2O6 was obtained by heat treatment at 550 degrees Celsius. The application of CuV2O6 in the cathode material of lithium ion battery is helpful to improve the initial discharge capacity and cycle performance stability. The

functional material shows excellent electrochemical performance with low cost of raw materials, and it has simple preparation method, and is applicable for large-scale production.

- 21: 2021/08503. 22: 2021-11-02. 43: 2022-01-14
- 51: B05D: C01B: C04B

71: North China University of Science and Technology

72: ZENG, Xiongfeng, WANG, Jiansheng

54: GRAPHENE THIN FILM AND PREPARATION METHOD AND APPLICATION THEREOF 00: -

The present disclosure relates to the technical field of graphene thin films. A graphene thin film prepared by the present disclosure has a thickness of 25-46 micrometers, a light transmittance of 85-92%, and a resistance of 40-65 Ohm/sq.

21: 2021/08504. 22: 2021-11-02. 43: 2022-01-14 51: B27B

71: Shandong Sengong Machinery Manufacturing Co., Ltd

72: ZHANG, Wentao, WANG, Kun, WU, Yongxia, ZHANG, Chenzi, LI, Yu, LI, Zhengchao, WEI, Benfu, HUANGFU, Lishui

## 54: MAT CROSS-CUT SAW EQUIPMENT 00: -

The present disclosure discloses mat cross-cut saw equipment. The mat cross-cut saw equipment comprises a mat conveying device for conveying a mat, a movable cross-cut saw which is arranged above the mat conveying device and is used for cutting off a mat, and a hydraulic device for making the movable cross-cut saw return, wherein three rollers are arranged below the movable cross-cut saw and are located below the mat, and a belt of the mat conveying device sequentially bypasses the three rollers. The mat is conveyed forward by the mat conveying device, the belt bypasses the roller set below the movable cross-cut saw to provide a cutting space for a saw web. By adopting the structure, the saw web may completely cut off the mat when cutting the mat, thus guaranteeing the structural integrity of the mat, and then saving the material.



21: 2021/08505. 22: 2021-11-02. 43: 2022-01-14 51: B01J

71: Qingdao University of Science and Technology 72: Lin Jianjian, Gao Mengyou, Zheng Dehua, Sun Lei, Xu Huizhong

## 54: PREPARATION METHOD AND APPLICATION OF PHOSPHORIZED WS2 NANOSPHERE CATALYST

00: -

The invention discloses a preparation method of phosphorized WS2 nanosphere catalyst, which comprises the following steps: S101, dissolving tungsten hexacarbonyl and sulfur powder in an organic solvent under the protection of inert gas, and uniformly mixing at room temperature to obtain brown mixed solution; Fully reacting the brown mixed solution in a high-pressure reaction kettle at 100-250 degree Celsius for 10-24 hours; S102, cooling the reacted high-pressure reaction kettle to room temperature, centrifuging the mixture to obtain black precipitate, and purifying; S103, that purify black precipitate reacts with sodium hypophosphite for 2-3 hours in a tube furnace filling with inert gas at 200-300 degree Celsius, thus obtaining the product. The invention provides the WS2P nanosphere catalyst prepared by the method and application thereof. The preparation method of the WS2P nanosphere catalyst is simple, and nanosheet cluster nanoparticles with uniform size and high specific surface area are obtained.



### 21: 2021/08506. 22: 2021-11-02. 43: 2022-01-14 51: A01G

71: Qingdao Agricultural University

72: Zhou Hongxu, Tan Xiumei, Guo Yi, Wang Lingyun, Li Huifang, Teng Ziwen, Fan Yinjun, Huang Feipeng

#### 54: DEVICE AND METHOD FOR ANNUAL BREEDING WOOLLY APPLE APHID 00: -

The invention discloses a device and a method for annual breeding of woolly apple aphids. The device is an insect receiving frame, and an included angle is formed by crossing wood boards I and II, and a cultivation plastic cup is placed on the included angle; transplanting apple seedlings parasitized with woolly apple aphid and healthy apple seedlings into cultivation plastic cups respectively, and adjusting the height and angle of the inoculation device according to the heights of healthy apple seedlings and apple seedlings parasitized with woolly apple aphid, so as to ensure that healthy apple seedlings can contact apple seedlings parasitized with woolly apple aphid, and then complete the insect grafting work. The method can realize the annual planting and propagation of apple seedlings, thereby realizing the annual propagation of the woolly apple aphid, is not limited by time, and overcomes the method that the apple seedlings can only be obtained by transplanting in March-April in production; by using the method of abutment, the damage to aphids caused by catching insects with writing brush is avoided, and the success rate of inoculation is greatly improved. Meanwhile, the woolly apple aphids are easy to colonize on young apple seedlings, and the breeding of standardized test insects accelerated the experimental progress.



21: 2021/08507. 22: 2021-11-02. 43: 2022-01-14 51: A01B; A01C; A01G

71: Shandong Academy of Agricultural Sciences 72: ZHANG, Yingpeng, ZHAO, Tongkai, SUN, Ming, LI, Hongjie, ZHONG, Ziwen, LI, Yan, LIU, Zhaohui 54: FULL-PROCESS MECHANIZED HIGH-YIELD AND SYNERGISTIC PLANTING METHOD OF SUMMER CORN IN HUANG-HUAI-HAI FLUVO-AQUIC SOIL DISTRICT

00: -

The present disclosure relates to a mechanized high-yield and synergistic planting method of summer corn in the Huang-Huai-Hai Fluvo-aquic soil district. The planting method of the present disclosure adopts mechanized operation throughout the entire process, fertilization saves costs, and the fertilizer applied is mainly special compound fertilizer; it truly solve the impact of generation rural labor shortage on agricultural production, while the amount is reduced to ensure the yield, the nutrient utilization rate is significantly increased, and the risk of loss is reduced, which has good environmental and economic benefits. Plant protection control uses mechanical spraying instead of traditional manual spraying to save labor and cost.



21: 2021/08508. 22: 2021-11-02. 43: 2022-02-09 51: G06N; G06Q

71: SHANDONG UNIVERSITY OF SCIENCE AND TECHNOLOGY, Shandong Junpeng Energy Saving Technology Co., Ltd.

72: LI, Meiyan, ZHANG, Duo, LI, Haoran, FU, Yingjun, FENG, Jun, JIA, Shun, YAN, Wei, LIU, Jian, LV, Chaochao, LIU, Daoxing, ZHAO, Hongxiang, MA, Lingji

33: CN 31: 202110215879.1 32: 2021-02-26 54: METHOD AND SYSTEM FOR DETERMINING MULTI-TARGET VEHICLE DISTRIBUTION ROUTE BASED ON IMPROVED GENETIC ALGORITHM 00: -

The present invention relates to a method and system for determining a multi-target vehicle distribution route based on an improved genetic algorithm, belonging to the field of goods distribution. The method specifically includes: acquiring basic information for determining the vehicle route, the basic information including geographic locations of a distribution center node and customer nodes, the number of customers, customer's demand for goods, and a maximum load of a vehicle; calculating, according to the basic information, criterion parameters that affect the vehicle distribution route; establishing an objective function according to the criterion parameters; and determining an optimal vehicle distribution route with the objective function as a fitness function by using the improved genetic algorithm. The multi-criteria decision-making theory is introduced, and factors that affect the vehicle distribution route are comprehensively considered as vehicle routing model targets, and combined with the improved genetic algorithm to select an optimal vehicle distribution route.



#### 21: 2021/08509. 22: 2021-11-02. 43: 2022-01-14 51: A01C; G08C

71: Institute of Agricultural Machinery Research, Chinese Academy of Tropical Agricultural Sciences 72: DENG, Yiguo, CHEN, Peimin, ZENG, Zhiqiang, LIU, Qing, WANG, Yeqin, ZHANG, Yuan, YAN, Bo 33: CN 31: 202011207226.0 32: 2020-11-03 54: REMOTE CONTROL HOLE DIGGER 00: -

A remote control hole digger is provided, including a support configured to be mounted on a tractor; supporting legs mounted on the support and configured for being supported on ground; a guide slide rail vertically fixed on the support; a sliding table slidably mounted on the guide slide rail; a hydraulic motor mounted on the sliding table, wherein the hydraulic motor is configured to be connected with a hydraulic system of the tractor through a high-pressure hydraulic pipe; a digging drill bit, wherein a tip of the digging drill bit faces downwards, and a power output end of the hydraulic motor is in drive connection with the digging drill bit; a lifting driving device used for driving the sliding table to vertically move and a remote controller configured for controlling the hydraulic motor, the lifting driving device and the tractor.



- 21: 2021/08510. 22: 2021-11-02. 43: 2022-02-09 51: C12N: C12Q
- 71: KYBioStem Co. Ltd

72: LEI, Tong, WANG, Jian, ZHANG, Xiaoshuang, LIU, Yanyan, WANG, Zhishi, DU, Hongwu
33: CN 31: 202011431904.1 32: 2020-12-10
54: KIT AND METHOD FOR IDENTIFYING
PERIODONTAL LIGAMENT STEM CELLS (PDLSCS)

00: -

The present disclosure provides a kit and a method for identifying periodontal ligament stem cells (PDLSCs), and relates to the field of biotechnology. In the present disclosure, it is found through experiments that a CKB gene and/or a CKB protein have significantly high expression in the PDLSCs. Therefore, the PDLSCs can be accurately and effectively identified by detecting the expression of the CKB gene and/or the CKB protein in a cell sample to be tested.



21: 2021/08511. 22: 2021-11-02. 43: 2022-02-09 51: B01J

71: Qingdao University of Science and Technology 72: Lin Jianjian, Gao Mengyou, Zheng Dehua, Jing Zhongxin, Sun Lei

## 54: PREPARATION METHOD AND APPLICATION OF NICKEL-DOPED PYRRHOTITE FES NANOPARTICLES

00: -

The invention belongs to the technical field of electrocatalytic water splitting, and discloses a preparation method and application of nickel-doped pyrrhotite FeS nanoparticles. The one-pot method is adopted to synthesize such compounds and applied to the field of electrocatalytic water splitting. Iron pentacarbonyl, sulfur powder and nickel acetate are dissolved in a certain amount of organic solvent under the protection of nitrogen, stirred at room temperature for a period of time to fully dissolve them. The above solution is transferred to a stainless steel reactor, and the reactor is put into an oven for a period of time and then cooled. After the reactor is cooled to room temperature, the reaction solution is centrifuged to obtain a black precipitate, and the obtained black precipitate is washed several times with absolute ethanol and water under ultrasonic treatment, and then the products were collected by centrifugation. Finally, it is vacuum freeze-dried to obtain nickel-doped pyrrhotite FeS nanoparticles. The required raw materials of the present invention are cheap and easy to obtain, the preparation method is simple, and the cost is low. It is expected to play an important role in a wider range of emerging fields.



21: 2021/08553. 22: 2021-11-03. 43: 2022-02-09 51: B01D; B63B; E02B; F26B 71: Zhejiang Coolkind Intelligent Technology Co.,

Ltd.

72: HAN, Ji, HAN, Shuicheng

33: CN 31: 202110498111.X 32: 2021-05-08 54: ANHYDRATION DEVICE AND ALGA COLLECTION BOAT USING SAME 00: -

The present invention provides an alga collection boat. The alga collection boat transfers alga in a dewatering device to an anhydration cabin to help a boat body to realize smooth drainage, so that the running resistance of the boat body is reduced, and an inflow volume is increased; therefore, more algae can be collected, and water in the alga is further reduced; the weight is reduced; and the collection volume and the collection efficiency are improved.



#### 21: 2021/08554. 22: 2021-11-03. 43: 2022-02-07 51: A61K

71: The Second Affiliated Hospital and Yuying Children's Hospital of Wenzhou Medical University, Geyuan Zhishan (Shanghai) Biotechnology Co., LTD 72: Cai Zhenzhai, Shan Na, Pan Chenwei, Yu Yaojun, Zhu Yuesheng, Lin Limiao, Su Xiaoping, Li Weiying, Li Rui

#### 54: PREPARATION METHOD AND APPLICATION OF A POLYPEPTIDE VACCINE 00: -

The invention belongs to the technical field of vaccines, and discloses a preparation method and application of a polypeptide vaccine, which comprises the following steps of: cleaning the body, the bottle cap and the bottle stopper of a packaging

material penicillin bottle respectively, and then sterilizing; the mixed solution of physiological saline containing 0.5 percent DMSO and DMSO is prepared as a solvent, and the solvent is shaken and uniformly mixed for later use; adding solvent into polypeptide freeze-dried powder, blowing for 10 times, and mixing uniformly; sterilizing and filtering the solution containing polypeptide, and packaging the filtered solution into penicillin bottles. According to the invention, dry heat sterilization is utilized to remove microorganisms and residual endotoxin in a penicillin bottle, and high temperature and high pressure wet heat sterilization is used to sterilize bottle caps and bottle stoppers. The invention uses a solvent which is less destructive to polypeptide, prevents side chain oxidation and can dissolve polypeptide. The polypeptide with the concentration prepared by the invention is stored at -80 degree Celsius, has stable properties and can be stored for a long time. The process of the invention is suitable for preparing personalized vaccines and meets the sterility and safety requirements specified in pharmacopoeia.



### 21: 2021/08555. 22: 2021-11-03. 43: 2022-02-09 51: G01N

71: Anhui University of Science and Technology 72: Zhai Xiaorong, Hao Hongjun, Geng Hengyi, Wu Jiwen, Zhang Xueli

# 54: ROCK MASS MINING STRESS MONITORING DEVICE

00: -

The invention relates to the technical field of coal and rock mass stress monitoring, in particular to a rock mass mining stress monitoring device, which comprises an overall cylindrical outer cylinder, a baffle hinged with the outer cylinder, an inner cylinder fixedly arranged in the outer cylinder and a steel ball; the outer cylinder is provided with a notch; the baffle is matched with the notch; the whole inner cylinder is cylindrical and provided with an exposed surface parallel to the axis of the inner cylinder; there is a hydraulic chamber in the inner cylinder, which is two mutually communicated channels, and the two channels are respectively exposed from the exposed surface and the bottom surface of the inner cylinder; the opening of the hydraulic chamber exposed from the exposed surface is the exposed port, and the opening exposed from the bottom surface of the inner cylinder is the connecting port; the steel ball is arranged in the hydraulic chamber and exposed from the exposed port, and the diameter of the exposed port is A; the diameter of the steel ball is D; A is less than or equal to D; the baffle is in contact with the steel ball. The invention has simple structure and is convenient for machining and manufacturing; the failure rate can be reduced; the assembly is relatively simple.



21: 2021/08556. 22: 2021-11-03. 43: 2022-02-09 51: B07C

71: QINGDAO UNIVERSITY OF TECHNOLOGY 72: LIU Qingyu, NI Tingting, YANG Fazhan, SUN Shufeng

# 54: AUTOMATIC DINNER TRAY RECYCLING DEVICE

00: -

The present invention relates to an automatic dinner tray recycling device, including a driving mechanism, the driving mechanism is connected to a rotational frame, the rotational frame is provided with a plurality of placing trays, the placing trays are connected to overturning mechanisms disposed on the rotational frame, the overturning mechanisms can drive the placing trays to overturn, the driving mechanism can drive the rotational frame to rotate intermittently for implementing movement of the placing trays in a tray-receiving region, a dumping region, and a recycling region, and the placing tray is provided with a clamping mechanism configured to clamp a dinner tray placed in the placing tray; in the dumping region, a mesh belt conveying mechanism is disposed below the placing trays, a first recycling box, configured to collect leftovers leaked from the mesh belt conveying mechanism, is disposed below the mesh belt conveying mechanism, and a second recycling box, configured to recycle a little bowl in the dinner tray, is disposed at a tail end of the mesh belt conveying mechanism; and a third recycling box, configured to recycle the dinner tray, is disposed in the recycling region. By using the dinner tray recycling device in the present invention, the working efficiency is high and the workload is light.

314530

21: 2021/08557. 22: 2021-11-03. 43: 2022-02-09 51: A63B 71: Hebei Sports University 72: Shi Donglin, Xie Fengling, Guo Xijun, Cao Chuanbao 54: MULTIDIMENSIONAL DYNAMIC SKI SIMULATOR 00: - The invention discloses a multi-dimensional dynamic ski simulator, which comprises an outer fence, which is fixed on the ground through a support, and a holding hole is arranged on the bottom plate of the outer fence; a transverse support frame is provided with a ski belt mechanism placed in the holding hole, the rear middle of the transverse support frame is hinged with a lateral support frame, and both sides of the bottom of the lateral support frame are hinged with two first support plate seats fixed on the ground; two front servo cylinders, and the cylinder seats are hinged with both sides of the front side of the transverse support frame, and the telescopic ends of the two front servo cylinders are hinged with the second support plate seat fixed on the ground; two rear servo cylinders, and their cylinder seats are hinged with both sides of the bottom of the lateral support frame, and the telescopic ends of the two rear servo cylinders are hinged with both sides of the lateral support frame. The multi-dimensional dynamic ski simulator can not only realize the slope simulation training of indoor ski track, but also simulate the turning skiing action, which greatly improves the skiing experience of users.



21: 2021/08558. 22: 2021-11-03. 43: 2022-02-09 51: G01N

71: Qingdao University of Technology, China University of Petroleum 72: ZHANG, Liming, ZHAO, Tianyang, ZHANG, Yu, HE, Keqiang, SUN, Linna, CONG, Yu

33: CN 31: 202011210161.5 32: 2020-11-03 54: ROCK-LIKE MATERIAL BIDIRECTIONAL PRESSURE TESTING DEVICE AND WORKING METHOD

## 00: -

The present invention relates to a rock-like material bidirectional pressure testing device and a working method. A base, upright posts, a working platform, a pressure bearing column and a vertical loading member are included. A first confining pressure loading beam and second confining pressure loading beam fixedly connected by tie bars are further included. The first confining pressure loading beam is provided with multiple confining pressure loading members. Each of the first confining pressure loading beam and the second confining pressure loading beam may be detachably connected with one end of a connecting member. The other end of the connecting member is in rotating connection with a fixed member. The fixed member is fixedly connected with the upright post. The testing device of the present invention is high in testing efficiency.



21: 2021/08559. 22: 2021-11-03. 43: 2022-02-08 51: H01M

71: Qingdao University of Science and Technology 72: Chen Ruixin, Sun Jing, Li Binjie, Han Jishu, Wang Lei

#### 54: SYNTHETIC METHOD FOR PREPARING MICROSPHERE ZINC VANADATE AND ITS APPLICATION IN LITHIUM ION BATTERY 00: -

This invention discloses synthetic method for preparing microsphere zinc vanadate and its application in lithium ion battery, belonging to the field of battery material preparation. The invention uses zinc nitrate and ammonium metavanadate as raw materials, and ethylene glycol as a solvent. Zinc vanadate precursor is prepared by solvothermal method, and then the zinc vanadate precursor is put into vacuum tube furnace and calcined at 400-500 degrees Celsius for 4 h in air atmosphere, the obtained material composition is Zn2V2O7, its appearance is microsphere, and the first discharge capacity can reach 1075.3mAh g -1. The method provided by this invention has simple operation process with low cost. The obtained samples have good crystallinity and high purity, and have high initial charge-discharge capacity and excellent cycle stability when it is used as cathode materials for lithium ion batteries.

21: 2021/08560. 22: 2021-11-03. 43: 2022-02-09 51: A61K; A61P; B82Y

71: Linvi Universitv

72: DAI, Zhichao, KOU, Yunkai, TIAN, Lu, HU, Zunfu, SUN, Yunqiang, ZHENG, Xiuwen 33: CN 31: 202110690429.8 32: 2021-06-22 54: MANGANESE DIOXIDE/IRON-PLATINUM COMPOSITE NANOMATERIAL WITH SYNERGISTIC CATALYSIS FUNCTIONS, PREPARATION METHOD AND APPLICATION THEREOF 00: -

The present disclosure provides a manganese dioxide/iron-platinum composite nanomaterial with synergistic catalysis functions, a preparation method and an application thereof. In the present disclosure, FePt nanoparticles, an unsaturated fatty acid and a polar organic solvent are mixed ultrasonically to obtain a mixed solution of FePt nanoparticles and unsaturated fatty acid; the pre-dispersion is mixed with potassium permanganate solution to conduct a reduction reaction. The unsaturated fatty acid in the pre-dispersion reduces potassium permanganate to manganese dioxide. Because unsaturated fatty acid is attached on the surface of the FePt nanoparticles, their carboxyl groups can bind to manganese

dioxide, so that manganese dioxide grows on the surface of FePt nanoparticles, to obtain a MnO2@FePt nanomaterial. In the present disclosure, the MnO2@FePt nanomaterial is stirred and mixed with glucose oxidase, bovine serum albumin and water, so that the glucose oxidase and bovine serum albumin can be loaded on the surface of manganese dioxide.



21: 2021/08561. 22: 2021-11-03. 43: 2022-02-09 51: C12G

71: SHANXI DATONG UNIVERSITY, CUI, Naizhong 72: CUI, Naizhong, ZHANG, Hongchi, MI, Zhi, WU, Juan, ZHANG, Xun, LI, Hui, TAN, Jing 54: METHOD FOR BREWING DAYLILY BRANDY 00: -

The present disclosure discloses a method for brewing daylily brandy. The method is as follows: adding daylilys in a rectifying tower between a distillation still and a condenser during distillation, distilling twice to obtain an original brandy, then putting the original brandy into an oak barrel and aging for more than two months, finally blending the original brandy into daylily brandy after aging.

21: 2021/08563. 22: 2021-11-03. 43: 2022-02-09 51: E01D

71: China Construction Fifth Engineering Bureau
Co., LTD, Zhong Jiao Jian Ji Jiao Highway
Investment Development Co. LTD, Shijiazhuang
Rongqiao Technology Co., LTD
72: Baojia HE, Naihao TAN, Xiaojun JIANG, Xian
RONG, Xiao LIU, Changchun XU, Jitao LIN,
Shuiquan ZENG, Yongli ZHANG, Yayun LONG, Yu
WANG, Jianyu ZHONG, Jianxin ZHANG, Xiaoyang
LI

#### 33: CN 31: 202111202545.7 32: 2021-10-15 54: DOUBLE-COLUMN BRIDGE STRUCTURE WITH ENERGY- DISSIPATING AND SELF-CENTERING FUNCTIONS AND CONSTRUCTION METHOD 00: -

Disclosed in the present invention is a doublecolumn bridge structure having energy-dissipating and self-centering functions. The double-column bridge structure includes: a bent cap, a platform being arranged above the bent cap, and a groove being provided at a top of the platform; a beam body, a bottom of the beam body being connected to a first energy-dissipating support, and a side wall of the beam body being connected to a limiting device; a prefabricated pier, the prefabricated pier being connected below the bent cap by means of a second energy-dissipating support and an energydissipating steel strand; and a bearing platform, the bearing platform being connected below the prefabricated pier by means of a self-centering device and a buckling-restrained connecting member. Overall stability of the structure and antiseismic performance of a member are enhanced, service life of the member is prolonged, the member is easy to replace, and mounting operation is simple and easy, such that construction difficulty is reduced, and a construction space is saved.



21: 2021/08564. 22: 2021-11-03. 43: 2022-02-07 51: B01D

71: Leshan Normal University

72: Jiang Tao, Ma Xuguang, Chang Jiali, Li Guoxue, Huang Zhengxin, Liu Xudong, Luo Wenhai, Tang Qiong

54: GAS FILTERING SYSTEM FOR COMPOSTING 00: -

Disclosed is a gas filtering system for composting, which comprises a composting tank, wherein a first supporting plate is arranged at the bottom of the composting tank, a plurality of through holes are arranged on the first supporting plate, and a first blower is arranged below the first supporting plate; the top of the composting tank is connected with the bottom of a gaseous pollutants collecting tank through a pipeline, the top of the gaseous pollutants collecting tank is connected with the bottom of a filtering tank through a pipeline, and a first filtering layer, a second filtering layer and a third filtering layer are sequentially arranged inside the filtering tank from bottom to top; the top of the filtering tank is communicated with the bottom of the tail gas collecting tank through a pipeline. The gas filtering system has the advantages of simple structure, low filling cost, convenient operation, high removal efficiency of greenhouse gases and malodorous gases emitted in the process of composting, and has broad application prospects and high application value in large-scale composting production.



21: 2021/08565. 22: 2021-11-03. 43: 2022-02-07 51: C12N; C12Q

71: Qingdao Agricultural University

#### 72: Cao Zhi, Zhang Qiaoya 54: RAPID AND HIGHLY SENSITIVE DIFFERENTIAL DIAGNOSIS KIT FOR BRUCELLOSIS VACCINE STRAIN AND WILD STRAIN AND USING METHOD THEREOF 00: -

The invention discloses a rapid and highly sensitive differential diagnosis kit for Brucellosis vaccine strains and wild strains and an using method thereof. The invention comprises a re-dissolved solution tube, an amplification detection tube pre-loaded with detection reagents, a sample collection tube, a quantitative pipette, disposable gloves, a positive control membrane dripping with 1 microL of positive plasmid pMD18-VirB12, and a negative control membrane. The invention also demonstrates an using method of the rapid and highly sensitive differential diagnosis kit for Brucellosis vaccine strains and wild strains. The complicated pipetting operation and sample nucleic acid extraction and purification steps are omitted, and the one-step amplification from the sample to the result is truly realized. The whole process takes about 30 minutes, and the vaccine immunization and wild virus infection can be distinguished according to the VirB12 gene missing from the A19-DeltaVirB12 live vaccine.

21: 2021/08566. 22: 2021-11-03. 43: 2022-02-07 51: C04B

71: University of Science and Technology Beijing, China University of Geosciences (Beijing) 72: Zhang Siqi, Zhao Tong, Teng Guoxiang, Li Jia, Zhang Ge, Yang Huifen, Ni Wen, Yao Jun 54: PREPARATION METHOD AND APPLICATION OF CEMENTED BACKFILL MATERIAL FOR LEAD-ZINC TAILINGS 00: -

The invention relates to a cemented filling material of lead-zinc tailings and preparation method and application thereof. It is a novel cementitious material containing converter steel slag, blast furnace slag, power plant desulfurized gypsum and fly ash mainly comprises the following components in parts by weight: 10-30 parts of steel slag, 30-60 parts of slag, 0-20 parts of desulfurized gypsum and 0-30 parts of fly ash. The ratio of cementing material to aggregate in the filling material is 1:4-1:9, and the concentration is 60-80 percent. The filling material in the invention is doped with a large amount of leadzinc tailings, utilizes all solid waste instead of traditional cement as cementing material, and solidifies heavy metals in the tailings to reduce environmental pollution, and can show good compressive strength for industrial application without adding additives such as excitant and early strength agent. It is used as a filling material for mining, which solves the problem of solid waste stockpiling such as lead-zinc tailings, steel slag, slag and desulfurization by-products, reduces heavy metal pollution, reduces horizontal leaching concentration, increases heavy metal residue state, and improves resource utilization rate.

21: 2021/08568. 22: 2021-11-03. 43: 2022-02-09 51: A63B

71: Huaiyin Normal University

72: REN, Yadong, CHEN, Jiandong, CHEN, Yan, FENG, Lei

#### 54: A DATA ANALYSIS METHOD AND SYSTEM FOR AI IDENTIFYING SPORTS TRAJECTORY 00: -

The invention discloses a data analysis method and system for AI identifying sports trajectory, which comprises the following steps: the AI processing unit obtains the sports event information, the sensor unit obtains three-dimensional information of the site, wherein the AI processing unit identifies the threedimensional information to obtain the object information, and obtains the corresponding sports event information according to the object information; the AI processing unit sets the scoring block of the site according to the sports event information, and the AI processing unit obtains the scoring rules according to the sports event information; the AI processing unit obtains the sports trajectory, and the AI processing unit outputs the score to the terminal according to the sports trajectory, scoring rules and scoring block. Compared with the prior art, the invention has the following advantages: through the cooperation of the Al processing unit and sensor unit, the sports trajectory of athletes during the movement can be effectively digitized, and the score is judged through Al processing unit instead of manual score, which effectively reduces the scoring error, has good applicability and is easy to promote.

S1, the AI processing unit obtains the sports event information, the sensor unit obtains three-dimensional information of the site, wherein the AI processing unit identifies the three-dimensional information to obtain the object information, and obtains the corresponding sports event information according to the object information

S2, the AI processing unit sets the scoring block of the site according to the sports event information, and the AI processing unit obtains the scoring rules according to the sports event information

S3, the AI processing unit obtains the sports trajectory, and the AI processing unit outputs the score to the terminal according to the sports trajectory, scoring rules and scoring block

21: 2021/08598. 22: 2021-11-04. 43: 2022-01-14 51: G01N; G01V

71: QINGHAI THIRD GEOLOGICAL SURVEY INSTITUTE

72: ZHANG, AIKUI, LIU, ZHIGANG, SUN, FEIFEI, LIU, GUANGLIAN, ZHANG, YONG, MA, ZHONGYUAN, LIU, YONGLE, HE, SHUYUE, ZHANG, DAMING

33: CN 31: 202111188646.3 32: 2021-10-12 54: METHOD FOR QUICKLY DELINEATING TARGET PROSPECTING AREA FOR GOLD DEPOSIT

00: -

Disclosed is a method for delineating a target prospecting area with a low working level for a gold deposit. The method includes: dividing a metallogenic system and selecting a typical deposit; establishing a typical deposit metallogenic mode and a typical deposit prospecting mode; establishing a metallogenic-system metallogenic mode according to the metallogenic system, and extracting an anomaly series; establishing a metallogenic-system prospecting model according to the result, and accordingly determining essential metallogenetic geological conditions according to metallogenesis; calculating an anomaly threshold of Au prediction,

and performing geochemical anomaly delineation; preliminarily delineating a predicted target area according to the essential conditions and a result of the delineation; compiling a prospecting prediction map for gold deposit according to the preliminarily target area; determining key, and general target prospecting areas according to the map, performing field inspection and verification in said target area, and evaluating a prospecting potential according to the verification result



21: 2021/08607. 22: 2021-11-04. 43: 2022-01-14 51: C02F

71: China University of Petroleum (East China), Karamay Hongfeng Technology Co., Ltd., Shandong Zhongqiao Qidi Environmental Protection Equipment Co., Ltd.

72: LIN, Aiguo, WANG, Kemin, LIANG, Chuanyin, DING, Xinghua

#### 54: ROTATABLE UNIFORM AERATION APPARATUS FOR SEWAGE TREATMENT 00: -

The present invention discloses a rotatable uniform aeration apparatus for sewage treatment, which comprises an air blower and a sub-aeration mechanism, wherein the sub-aeration mechanism comprises a plurality of aeration main pipes and aeration pipes, the aeration pipes are vertically connected with the aeration main pipes, the middle parts of the aeration main pipes are connected with an intake manifold, the two ends of each aeration main pipe are respectively connected with a first aeration manifold and a second aeration manifold, the bottom of the intake manifold is arranged on a rotating shaft, the rotating shaft is connected with a rotating base, the air blower is connected with the rotating base, the bottom end of the intake manifold is connected with the air blower, and the rotating shaft can rotate 360°so as to drive the whole apparatus to rotate.



21: 2021/08608. 22: 2021-11-04. 43: 2022-01-14 51: A61K; A61P; B82Y 71: Shanghai University 72: FU, Cuiping, LIU, Jinliang 54: PHASE-CHANGE NANOCOMPOSITE FOR

## PROMOTING DRUG RELEASE BY BUBBLES AND PREPARATION METHOD AND USE THEREOF

00: -

The present disclosure discloses a phase-change nanocomposite for promoting drug release by bubbles and a preparation method and use thereof.



21: 2021/08609. 22: 2021-11-04. 43: 2022-01-14 51: B60L

71: Beihua University

72: YUAN, Guangjun, ZHOU, Zhenxiong, SUN, Jiyuan, LU, Yuxin

## 54: MAGNETIC SUSPENSION LINEAR MOTION DRIVING DEVICE

00: -

The invention discloses a magnetic suspension linear motion driving device. The magnetic suspension ruler length detection device comprises a first adjusting part and a second adjusting part which are arranged side by side and in parallel, and a driving part arranged between the first adjusting part and the second adjusting part. By adopting the magnetic suspension ruler length detection device, the friction force and the electric energy consumption can be reduced while the length can be

accurately detected.



21: 2021/08610. 22: 2021-11-04. 43: 2022-01-14 51: C04B

71: Guizhou Weijie Technology Co., Ltd.

72: WANG, Yonghong

#### 33: CN 31: 202011542578.1 32: 2020-12-23 54: PROCESS FOR PRODUCING FOAMED CERAMIC GREEN BUILDING MATERIAL BY USING MANGANESE SLAG 00: -

The present disclosure discloses a process for producing a foamed ceramic green building material by using manganese slag. The process comprises the following steps: S1, selecting raw materials, namely 60-75 parts of manganese slag, 20-30 parts of recycled glass and 3-6 parts of foaming agent; S2, grinding the manganese slag and the recycled glass in the step S1 into powder by using a vertical mill to obtain manganese slag powder and glass powder, and performing treatment on dust generated in the grinding process; S3, mixing the prepared manganese slag powder, the glass powder and the foaming agent according to a certain ratio. The foamed ceramic green building material produced in the present disclosure is low in thermal conductivity, the heat conductivity coefficient is 0.08-0.16  $W/W/(m \cdot K)$ , the heat storage coefficient is greater than or equal to 1.60 W/(m2-K), which is comparable to that of a thermal mortar.

21: 2021/08611. 22: 2021-11-04. 43: 2022-01-14 51: C04B

71: Qingdao University of Science and Technology, Qingdao Liangmeiyi Ceramic New Material Technology Co., Ltd.

72: WANG, Zhiyi, MA, Zheng, ZHANG, Jiajia, WANG, Mingyue, WANG, Lixin **54: BONE CHINA BODY WITH HIGH THERMAL** 

STABILITY 00: -

The present disclosure relates to a bone china body. The bone china body of the present disclosure is composed of bone ash or bone powder, flux, quartz, clay and other raw materials, wherein the flux is a synthetic flux, and the flux comprises the following components in mole percent: 45.0-70.0% of SiO2, 1.0-8.0% of Al2O3, 1.0-10.0% of alkali metal oxide, 0.0-40.0% of alkaline earth metal oxide, and 5.0-20.0% of B2O3. After the synthetic flux of the present disclosure is used to replace the feldspar flux in the same amount, the appearance quality of bone china does not change, but the firing temperature is significant decreased by 50-80 degrees Celsius, the flexural strength is increased to 130-140 MPa, and the thermal stability is increased from 140 degrees Celsius to 20 degrees Celsius water heat exchange without bursting to 200-220 degrees Celsius to 20 degrees Celsius water heat exchange without bursting.



21: 2021/08612. 22: 2021-11-04. 43: 2022-01-14 51: H01S 71: Nanjing Tech University 72: JIANG, Shubo, FENG, Chun 54: ENHANCEMENT DEVICE AND METHOD BASED ON HIGH NONLINEAR PHOTONIC CRYSTAL FIBER RAMAN LASER 00: - An enhancement device and method based on a high nonlinear photonic crystal fiber (HNL-PCF) Raman laser are provided. The device structurally includes an ytterbium-doped fiber laser, a Faraday isolator, a fiber combiner, a polarization controller, a single-mode fiber SM1, a single-mode fiber SM2, an HNL-PCF, first, second, third, and fourth fiber Bragg gratings (FBG1, FBG2, FBG3, and FBG4), a photonic crystal fiber, a T-shaped connector 1, a Tshaped connector 2, a spectrum analyzer, and a computer processing system.



#### 21: 2021/08613. 22: 2021-11-04. 43: 2022-01-14 51: C04B

71: Guangdong Sitong Group Co., Ltd 72: WANG, Zhiyi, MA, Zheng, WANG, Hui, LIU,

#### Xuguang, LI, Xia 54: BONE CHINA BODY WITH HIGH STRENGTH AND HIGH THERMAL STABILITY 00: -

The present disclosure relates to a bone china body, more particularly to a synthetic flux system of a bone china body. It belongs to the field of domestic ceramics. The bone china body of the present disclosure is composed of bone ash or bone powder, flux, guartz, clay and other raw materials, the flux is a synthetic flux, comprising the following components in mass percent: SiO2 15.0-95.0%, Al2O3 0-20.0%, Na2O 0-15.0%, CaO 2.5-46.0%, P2O5 2.5-39.0%. After the synthetic flux of the present disclosure is used to replace the feldspar flux in the same amount, the appearance quality of bone china does not change, but the firing temperature is significant decreased by 50-80 degrees Celsius, the flexural strength is increased to 130-140 MPa, and the thermal stability is increased from 140 degrees Celsius to 20 degrees Celsius water heat exchange without bursting to 200-220 degrees Celsius to 20 degrees Celsius water heat exchange without bursting.



21: 2021/08636. 22: 2021-11-04. 43: 2022-01-12 51: A23N

71: QINGDAO UNIVERSITY OF TECHNOLOGY, HENAN UNIVERSITY OF SCIENCE AND TECHNOLOGY, RESEARCH INSTITUTE OF AGRICULTURAL MECHANIZATION, XINJIANG ACADEMY OF AGRICULTURAL SCIENCES 72: LI, Changhe, JIA, Zhenming, LU, Chunan, LI, Xinping, LIU, Xiangdong, TULUHON•TURDI, GAO, Lianxing, YANG, Huimin, LIU, Mingzheng, ZHANG, Yanbin, WANG, Xiaoming, HOU, Yali, FENG, Yitian, MA, Yannan, MIAO, Guangzhen, WANG, Rong, FU, Hui, LI, Mingchen

#### 33: CN 31: 202010287365.2 32: 2020-04-13 54: INTELLIGENT SEPARATION DEVICE AND SEPARATION METHOD FOR PEANUT KERNEL AND PEANUT RED COAT 00: -

The invention discloses an intelligent separation device and separation method for peanut kernels and peanut red coats. The device comprises a gas explosion device, a stirring device, a drying device and a negative pressure adsorption device, the gas explosion device is used for receiving conveyed peanut materials with red coats to be removed, the peanut kernels and the peanut red coats are preliminarily separated; the stirring device is used for shifting the preliminarily separated peanut kernels and peanut red coats into the drying device; the drying device is used for compressing and heating external air, and heating and drying the preliminarily separated peanut kernels and peanut red coats, so that the peanut red coats and the peanut kernels are fully separated; and the negative pressure adsorption device is used for collecting the fully separated peanut kernels and red coats with

different densities and masses in a negative pressure adsorption mode.



- 21: 2021/08646. 22: 2021-11-04. 43: 2022-01-12 51: A01N
- 71: Sichuan Agricultural University

72: CHEN, Xuewei, HE, Min, SU, Jia, XU, Youpin, CHEN, Jinhua, LI, Weitao, WANG, Jing, YIN, Junjie, ZHU, Xiaobo

### 33: CN 31: 2019103929830 32: 2019-05-13 54: APPLICATION OF COMPOUNDS INHIBITING SYNTHESIS OF VERY LONG CHAIN FATTY ACIDS IN PREVENTING AND TREATING MICROBIAL PATHOGENS AND METHOD THEREOF

00: -

An application and a method of compounds inhibiting synthesis of very long chain fatty acids (VLCFAs) in preventing and controlling microbial pathogens are provided, which relate to the technical field of plant pathology and plant disease prevention and control. In particular, an application method of a compound for inhibiting the synthesis of VLCFAs in preventing and treating microbial pathogens is provided. Research results associated with the methods show that taking the synthesis of VLCFAs as the target, microbial pathogens can be inhibited by using compounds that inhibit the synthesis of VLCFAs. Therefore, the compounds inhibiting the synthesis of VLCFAs can be used in preventing and treating microbial pathogens diseases, which provides a new idea or strategy for the prevention and treatment of microbial pathogens diseases, and provides more choices for the types of drugs for the prevention and treatment of pathogenic diseases.

<sup>21: 2021/08650. 22: 2021-11-05. 43: 2022-01-18</sup> 51: A61K

<sup>71:</sup> Sichuan Academy of Chinese Medicine Sciences 72: ZHANG, Aijun, ZHANG, Zhimin, TAN,

Zhenghuai, YANG, Jun, CHEN, Donghui, XIE, Gang, ZHANG, Xiu, LI, Shuai, DAI, Shan

## 54: PHARMACEUTICAL COMPOSITION WITH ANTI-TUMOR EFFICACY, PREPARATION METHOD AND USES THEREOF

00: -

The present disclosure discloses a pharmaceutical composition with anti-tumor efficacy. The composition in the present disclosure is safe and effective, and has an excellent anti-tumor efficacy, a simple preparation method and a good application prospect.

## 21: 2021/08651. 22: 2021-11-05. 43: 2022-01-18 51: G06Q

71: Anhui University of Science & Technology 72: Wang Lili, Fang Xianwen, Lu Ke 54: INTELLIGENT TRANSACTION RECOMMENDATION SYSTEM BASED ON BIG DATA

00: -

The invention discloses an intelligent transaction recommendation system based on big data, which comprises a data extraction module, a data processing module, a merchant information acquisition module, a consumption comparison module and an intelligent push module. The data extraction module acquires detailed information data of all transactions of consumers based on big data; according to the invention, the transaction information of consumers is extracted based on big data, and intelligent staged multi-level classification processing is carried out, so that the intelligent push module can intelligently screen businesses with high cost performance according to the consumption preferences and consumption levels of consumers, diversified choices are provided for consumers, and consumer experience fatigue caused by recommending businesses with repeated consumption according to the historical transaction information of consumers is avoided. The data processed by intelligent multi-level classification is more detailed, so that the intelligent push module can more accurately push businesses that meet consumers' preferences.



21: 2021/08652. 22: 2021-11-05. 43: 2022-01-18 51: G06F

71: North China University of Science and Technology

72: XU, Bo, REN, Qianqian, LI, Zhihui, LONG, Yue, DU, Peipei, TIAN, Tielei, XING, Lei, ZHAO, Pengyue, CAO, Yaran

#### 33: CN 31: 202111054285.3 32: 2021-09-09 54: METHOD FOR SIMULATING FIBER-FORMING VISCOSITY OF MOLTEN RED MUD BASED ON MOLECULAR DYNAMICS 00: -

The present invention belongs to the technical field of molten red mud fiber formation, and provides a method for simulating the fiber-forming viscosity of molten red mud based on molecular dynamics. According to the present invention, a cube box of molten red mud fiber formation is constructed by Materials Studio software based on the determined content of atoms in a molten red mud fiber-forming system; then high-temperature geometric optimization is performed on the cube box to obtain an optimized cube box; cooling molecular dynamics simulation calculation is performed on the optimized cube box, and a diffusion coefficient D is determined

by the total mean square displacement distribution (Total MSD) of all atoms in the system according to the Einstein's law of diffusion; and a viscosity coefficient n is calculated through the relationship between the diffusion coefficient D and the viscosity coefficient n.

21: 2021/08653. 22: 2021-11-05. 43: 2022-01-18 51: B01J; F22B

71: QINGDAO UNIVERSITY OF TECHNOLOGY 72: ZUO, Zongliang, LUO, Siyi, QI, Chuanjia, DONG, Xinjiang, XIE, Haojie, WANG, Jinmeng, YANG, Qianhui, REN, Dongdong, ZHANG, Jingkui, YU, Qingbo

#### 33: CN 31: 202110371732.1 32: 2021-04-07 54: METALLURGICAL SLAG GRANULATION-CATALYST PREPARATION AND MODIFICATION INTEGRATED DEVICE SYSTEM AND METHOD 00: -

The present disclosure discloses a metallurgical slag granulation-catalyst preparation and modification integrated device system and method. The system mainly includes four parts of a granulation system, a catalyst modification system, a waste heat recovery system, and a separation and circulation system. A working process of the system includes four steps of metallurgical slag granulation, catalyst modification, granule waste heat recovery, and screening and recovery. By the process, catalyst granules with high added value are prepared by directly attaching catalyst modifying powder by using the secondary coagulation characteristic on the surfaces of granulated metallurgical slag granules. The system not only realizes efficient waste heat recovery of metallurgical slag granules, but also greatly improves the added value of a metallurgical slag product.



#### 21: 2021/08654. 22: 2021-11-05. 43: 2022-01-18 51: A61B

71: Second Affiliated Hospital of Chongqing Medical University, Chongqing Jiaotong University 72: Li Shengjin, Li Jun

# 54: CORING SAMPLING BIOPSY NEEDLE 00: -

The invention discloses a sampling puncture needle comprising a coring sampling needle and a steel wire flexible shaft, and relates to the technical field of medical instruments. The sampling puncture needle comprises a coring sampling needle part used for obtaining complete tissues and a steel wire flexible shaft part used for connecting the coring sampling needle. The coring sampling needle first rotates into the lesion tissue, and the obtained tissue is stored in the coring sampling needle; the steel wire flexible shaft is connected with the coring sampling needle by trapezoidal thread, and the steel wire flexible shaft is used to connect two shafts which are not on the same axis to transmit the rotary motion and torque, and it can flexibly transmit the rotary motion and torque to any position. The coring sampling needle part according to the invention partially rotates into the tissue, and the obtained tissue is stored in the coring sampling needle, so that the invention has the characteristics of complete tissue acquisition and strong practicability.



21: 2021/08655. 22: 2021-11-05. 43: 2022-01-18 51: G06F

#### 71: Zhejiang Gongshang University 72: Hong Haibo, Shu Gangqi 54: A FUZZY KEYWORDS ENABLED RANKED SEARCHABLE SCHEME IN CLOUD ENVIRONMENTS 00: -

With the rapid advancement of cloud computing and big data, more and more data owners are keen on outsourcing their data to cloud servers in encrypted form. In this megatrend, as an important cryptographic primitive, searchable encryption (SE) plays a vital role in retrieving data for data owners. Moreover, it is so meaningful that encrypted data can be shared with certain data users without violating user privacy. Therefore, we propose a new fuzzy keyword-enabled ranked searchable encryption scheme to solve the aforementioned issues. Firstly, we realize fine-grained access control and efficiently search outsourced encrypted data for data owners. Secondly, considering that there are almost certainly typographical errors in the document, we achieve fuzzy keyword search for meaningful and accurate search results. In addition, we utilize probabilistic trapdoors to resist distinguishability attacks. Furthermore, we improve the search accuracy by using weighted regional scores to rank documents. Overall, our proposal achieves fuzzy keyword search and more accurate search result ranking, also ensures data security, and saves a lot of storage and computational costs.

21: 2021/08656. 22: 2021-11-05. 43: 2022-01-18 51: G06F

71: North China University of Science and Technology

72: XU, Bo, LI, Zhihui, DU, Peipei, TIAN, Tielei, REN, Qianqian, ZHANG, Jiansong, LONG, Yue, XING, Lei, QIU, Mingwei, WANG, Zhengzheng 33: CN 31: 202111054288.7 32: 2021-09-09 54: METHOD FOR SIMULATING STRUCTURAL STABILITY OF MOLTEN RED MUD FIBER-FORMING SYSTEM BASED ON MOLECULAR DYNAMICS

#### 00: -

The present invention belongs to the technical field of molten red mud fiber formation and provides a method for simulating structural stability of a molten red mud fiber-forming system based on molecular dynamics. According to the present invention, a cube box is constructed based on the determined content of atoms in the molten red mud fiber-forming system, and high-temperature geometric optimization is performed on the cube box; cooling molecular dynamics simulation calculation is performed on the optimized cube box to obtain distances between different atoms in the Tfinal relaxation phase system; a Qn distribution of each four-coordinate Si is obtained based on the spatial point coordinates of atoms in the Tfinal relaxation phase system, the distances between different atoms, and a two-point distance formula; and the stability of a molten red mud fiber formation structure is predicted based on the proportion of Qn (indicating polymerization and complexity of slag).



21: 2021/08657. 22: 2021-11-05. 43: 2022-01-18 51: G06Q

71: Shandong University of Science and Technology 72: ZHENG, Yujie, ZHANG, Sujie, JIA, Shun, LI, Meiyan, LIU, Jiakun

## 54: EFFECTIVE AND PRACTICAL MATCHING METHOD FOR CLOUD MANUFACTURING TASKS AND SERVICE RESOURCES

00: -

The present invention discloses an effective and practical matching method for cloud manufacturing tasks and service resources, and relates to the technical field of Internet. The method includes the specific steps: recognizing satisfaction indices of a service requestor and a service provider; quantifying the satisfaction indices; evaluating the satisfaction of the service requestor and the service provider; constructing a bilateral matching model of the cloud manufacturing tasks and the service resources; and solving the matching model. According to the effective and practical matching method for the cloud manufacturing tasks and the service resources, the bilateral matching model, having the maximum

satisfaction of the service requestor and the service provider, of the cloud manufacturing tasks and the service resources is constructed by quantifying the satisfaction of the service requestor and the service provider and taking the thinking fuzziness and rationality of the service requestor and the service provider into full consideration.



21: 2021/08658. 22: 2021-11-05. 43: 2022-01-18 51: C02F

71: Qingdao University of Technology

72: XIAO, Liping, WANG, Dongxue, LAN, Yunlong, KONG, Qiaoping, CHEN, Guowei, BAI, Jichi, SHEN, Baohua, TAO, Guiqing

## 54: EFFICIENT MANGANESE REMOVAL METHOD

00: -

The present disclosure discloses an efficient manganese removal method, wherein a steel slag and polyacrylamide are combined to use and a highgradient magnetic separator is adopted to perform flocculation and over-magnetic treatment on a water sample, comprising the steps of: adding the steel slag into the water sample to perform adsorption precipitation treatment on the water sample; adding polyacrylamide for flocculation treatment, and enabling the reaction effluent to directly pass through a high-gradient magnetic separator; and performing measurement and analysis on the final effluent water sample. In the present disclosure, a steel slag is used as a water treatment material, so that the problem of environmental pollution caused by massive accumulation of the steel slag is effectively solved, waste can be treated by waste, and good economic, social and environmental benefits can be achieved.



21: 2021/08659. 22: 2021-11-05. 43: 2022-01-18 51: E01F

71: ShanDong JiaoTong University

72: Zhang Lidong

#### 54: INTELLIGENT LIFTING COLUMN SYSTEM APPLIED TO TIDAL LANE AND CONTROL METHOD THEREOF 00<sup>-</sup> -

The invention discloses an intelligent lifting column system applied to tidal lane and a control method thereof, which comprises a traffic flow measuring instrument, a SCATS system, an electromechanical lifting column, a stepping motor and a stepping motor control system, wherein the traffic flow measuring instrument is used for measuring traffic flow at road sections and transmitting measured data to the SCATS system; the SCATS system is used for processing and analyzing the measured data, and deciding whether to enable the tidal lane and its indicator light; and the stepping motor control system controls the operation of the stepping motor according to the SCATS system instruction, thereby controlling the lifting of the electromechanical lifting column. According to the road traffic conditions, the system can be remotely and automatically controlled or manually controlled, thereby greatly improving the use efficiency of the tidal lane and providing a safe and reliable guarantee for relieving traffic congestion.



21: 2021/08660. 22: 2021-11-05. 43: 2022-01-18 51: C22C; C22F

71: Shenyang University of Technology 72: ZHANG, Siqian, ZHANG, Haoyu, ZHOU, Ge, HE, Zhenghua, CHE, Xin, WANG, Xin, ZHANG, Zhipeng, CHEN, Lijia

## 54: HIGH STRENGTH, HIGH TOUGHNESS RARE EARTH MAGNESIUM ALLOY

00: -

The present invention provides a high strength, high toughness rare earth magnesium alloy, the component composition and the mass percentage content of each component of the alloy are: Zn: 7.0~12.0%, Zr: 0.5~1.9%, Y: 0.3~1.0%, Nd: 0.1~0.5%, Ce: 0.05~0.1%, the remaining is Mg. The alloy not only has characteristics of high strength and high toughness, but also has high mechanical property, oxidation resistance and good microstructure stability. It is particularly suitable for the automobile industry.



21: 2021/08661. 22: 2021-11-05. 43: 2022-01-17 51: A23L

71: Northeast Agricultural University

72: Shao Meili, Jiang Yujun, Lyu Mengling, Tang Zhenyue, Zhang Yusong

#### 54: METHOD FOR REMOVING ACRYLAMIDE BY ADSORPTION OF LACTIC ACID BACTERIA 00: -

The invention relates to a method for removing acrylamide by adsorption and/or inhibition of lactic

acid bacteria, and relates to a method for producing fried potato chips with reduced acrylamide content; at the same time, a special medium for lactic acid bacteria to improve the ability of lactic acid bacteria to adsorb acrylamide is provided, which provides a research basis for researchers in the field to further study the acrylamide adsorption characteristics of lactic acid bacteria, it is possible for the human body to remove acrylamide from the body by ingesting foods such as yogurt or beverages rich in lactic acid bacteria; the invention creatively combines the three bacteria of Lactobacillus plantarum, Lactobacillus casei and Streptococcus thermophilus according to a specific ratio, and achieves unpredictable technical effects; It is unexpectedly found that the ratio of uracil to xanthine is 3:2; the ratio of serine to cysteine is 1:2, and the ratio of calcium pantothenate to calcium carbonate is 1:1, which is more effective.

- 21: 2021/08662. 22: 2021-11-05. 43: 2022-01-17
- 51: F16F
- 71: Xi'an Jiaotong University

72: DONG, Longlei, YAN, Jian, ZHOU, Jiaming, GUAN, Wei, OUYANG, Qinshan 54: MAGNETORHEOLOGICAL DAMPER WITH TWO RING DAMPING GAPS

00: -

The present disclosure discloses a

magnetorheological damper with two ring damping gaps. An inner cylinder is arranged inside an outer cylinder; the inner cylinder includes an inner cylinder upper section, an inner cylinder middle section, and an inner cylinder lower section in sequence from top to bottom; a piston head is arranged on a piston rod; a damping generator is arranged between the piston head and a low-carbon steel disk; the upper and lower ends of the damping generator are respectively provided with non-magnetoconductive materials used for isolating a magnetic field; and a highly magnetoconductive material and a nonmagnetoconductive material which are used for changing the distribution of the magnetic field are arranged in the middle of the damping generator. The magnetic field utilization rate is increased, and the damping force range and the dynamic range are significantly enlarged.



21: 2021/08663. 22: 2021-11-05. 43: 2022-01-17 51: B63H

71: ShanDong JiaoTong University

72: GUAN, Zhiguang, ZHANG, Lin, WANG, Baoping, ZHAO, Lingyan, SUN, Qin, LIN, Mingxing, ZHANG, Dong

## 54: PROPELLER WITH THREE HOOKE HINGES AND TWO SPHERICAL HINGES

00: -

A propeller with three Hooke hinges and two spherical hinges includes a fixed platform, a column, a movable platform, a first branch chain, a second branch chain, and a propeller. The lower side of the fixed platform is provided with a seat hole for fixation with a underwater vehicle; one end of the column is fixedly installed on the fixed platform, and the other end is connected to the movable platform through a first Hooke hinge; the first branch chain and the second branch chain each consists of a linear driver; one end of the linear driver is connected to the fixed platform through a Hooke hinge, and the other end is connected to the movable platform through a spherical hinge; and the propeller is installed on the upper surface of the movable platform.



21: 2021/08664. 22: 2021-11-05. 43: 2022-01-17 51: B63B

71: ShanDong JiaoTong University

72: WANG, Yongjuan

## 54: THREE-DEGREE-OF-FREEDOM CLEANING WORKING DEVICE FOR UNDERWATER WALL SURFACE CLEANING ROBOT

A three-degree-of-freedom cleaning working device for an underwater wall surface cleaning robot includes water pipes, a water gun, a machine frame, arm rods, and linear drivers. The water pipes are rigid pipes, and include first, second, and third water pipes. The arm rods include first, second, and third arm rods. The machine frame, the arm rods, and the linear drivers form a planer three-degree-of-freedom connecting rod mechanism. The first, second, and third water pipes are respectively fixedly mounted on the first, second, and third arm rods. The first arm rod, the machine frame, and a first linear driver form a first closed loop. The first arm rod, the second arm rod, and a second linear driver form a second closed loop. The second arm rod, the third arm rod, and a third linear driver form a third closed loop. Various water pipes are communicated with one another through hoses.



21: 2021/08676. 22: 2021-11-05. 43: 2022-01-17

#### 51: F26B; F27D

71: KUNSHAN YUSHUN ENVIRONMENTAL PROTECTION TECHNOLOGY CO., LTD. 72: Jun LI, Zeyu LI, Yijing ZHAO 33: CN 31: 202010363359.0 32: 2020-04-30 54: DEVICE AND METHOD THEREOF FOR DRYING LUMP ORES IN STORAGE YARD BY USING WASTE GAS OF SINTERING RING COOLER

00: -

The present invention relates to a device and a method for drying lump ores in a storage yard by using waste gas of a sintering ring cooler. In the present invention, when the lump ores are stored in the storage yard, the waste gas of the sintering ring cooler greater than 100 degrees Celsius is introduced from underground into the uniformly distributed distribution pipe, so that the pressurized waste gas of the sintering ring cooler passes through the lump ores to be dried, and then is discharged from a part above the lump ores to be dried. Subsequently, the waste gas enters the newly set waterproof bag-type dust remover through the sliding gas-collecting hood arranged above the lump ores to be dried for an up-to-standard discharge after purification. In order to ensure an air permeability of the lump ores to be dried, a layer of dried and screened ores having a thickness of 500-1000 mm is laid above the distribution pipe as the bottoming air-permeable layer, so as to ensure a smooth flow of an air outlet and prevent a damage of the drying device during the stacking and extracting operation.



21: 2021/08700. 22: 2021-11-08. 43: 2022-01-17 51: B01J; C01B

71: Qingdao University of Science and Technology 72: JIA, Changchao, GAO, Ailin, ZHANG, Xia, WANG, Zhiyuan, ZHU, Shaoqi, LIN, Gang 54: TIO2-X-BASED PHOTOCATALYST WITH FRUSTRATED LEWIS PAIRS AS WELL AS

# PREPARATION METHOD AND APPLICATION THEREOF

00: -

The present disclosure belongs to the field of material synthesis and catalytic reaction, and specifically relates to a TiO2-x-based photocatalyst with frustrated Lewis pairs and a preparation method and an application thereof. This preparation method of the catalyst is simple, and the reaction conditions are mild.



21: 2021/08701. 22: 2021-11-08. 43: 2022-01-17 51: B01J; B22F; C01G; B82Y 71: Qingdao University of Science and Technology 72: JIA, Changchao, GAO, Ailin, WANG, Shuyi, LIU, Wengang, WAN, Bingjie, BAI, Jingwen 54: AG-AGX NANOWIRE AND PREPARATION METHOD THEREOF 00: -

The present disclosure relates to the preparation of noble metal and semiconductor heterogeneous materials, and specifically relates to an Ag-AgX nanowire and a preparation method thereof. The present disclosure prepares the Ag-AgX nanowire with uniform size and simply-adjustable anions through a one-step hydrothermal method. The method has simple operation process, low cost, good repeatability and good practicability.



21: 2021/08702. 22: 2021-11-08. 43: 2022-01-17 51: A63B 71: LI, Xiangjun

72: LI, Xiangjun

#### 54: INTERACTIVE COGNITION RECOGNITION ATHLETIC TRAINING METHOD 00: -

The present invention relates to an interactive cognition recognition athletic training method, including: (1) making appointed athletic training actions by a coach, carrying out a certain actual competition, and then performing written explanation to an athlete by the coach; (2) after the athlete repeatedly observes the athletic training actions in step 1, listening to explanation of the coach and feeding back understanding and idea of the athlete; (3) making the appointed athletic training actions by the athlete, carrying out an actual competition, raising own problems, and delivering the problems to the coach; and (4) viewing and emulating the actions of the athlete by the coach in the competition, and throwing out a suggestion and a next training direction to realize progress of an athletic level of the athlete. The interactive cognition recognition athletic training method has the advantages of simple and reasonable process, low investment and high efficiency.

21: 2021/08703. 22: 2021-11-08. 43: 2022-01-17 51: G01N

71: BAO TOU CITY SUN MANDULA CABLE CO., LTD.

72: YU, Jianfang

## 54: WATER-PERMEABLE BOX FOR MEASURING DENSITY OF CABLE FILLING CORD

00: -

A water-permeable box for measuring a density of a cable filling cord, including a box body capable of accommodating the cable filling cord and an openable and closable box cover detachably mounted on the box body; several rows of first through holes are provided in a top surface of the box body, at least three rows of second through holes are provided in a side of the box body from the bottom to the top, and a spacing between two adjacent rows of the second through holes gradually increases from the bottom to the top of the side of the box body; an opening of the first and second through holes is smaller than a diameter of the cable

filling cord. The utility model is more accurate than the prior art.



21: 2021/08704. 22: 2021-11-08. 43: 2022-01-17 51: G01B

71: BAO TOU CITY SUN MANDULA CABLE CO., LTD.

72: YU, Jianfang

#### 54: DEVICE FOR DETERMINING LIMIT SIZE POSITION OF OUTER DIAMETER OF CABLE 00: -

The present invention discloses a device for determining a limit size position of an outer diameter of a cable, and relates to the technical field of metering devices. The device includes a first position adjusting device, a second position adjusting device, two warning devices, a first contact switch, a second contact switch, and a rack. The first position adjusting device and the second position adjusting device are both slidably connected to the rack. The device further includes a telescopic rod and a nontelescopic rod. One end of the telescopic rod is fixedly arranged at a free end of the first position adjusting device. The first contact switch is fixedly arranged at the other end of the telescopic rod. One end of the non-telescopic rod is fixedly arranged at a free end of the second position adjusting device.



21: 2021/08705. 22: 2021-11-08. 43: 2022-01-17 51: E01F; E02B

71: QINGDAO UNIVERSITY OF TECHNOLOGY 72: ZHANG, Yanbin, LI, Yuji, WEI, Long, ZHU, Fenglei, SUN, Haochen, CAO, Biao, LI, Changhe, CUI, Xin, YANG, Min, YANG, Yuying, ZHAO, Xufeng, WANG, Xiaoming, GAO, Teng, LIU, Mingzheng

## 33: CN 31: 202110210753.5 32: 2021-02-25 54: HYDRODYNAMIC WATER BLOCKING DEVICE FOR UNDERGROUND GARAGE AND METHOD

00: -

The present invention relates to a hydrodynamic water blocking device for an underground garage and a method. The hydrodynamic water blocking device for an underground garage includes a water blocking plate assembly and side rail assemblies, wherein the water blocking plate assembly includes a first water blocking element, one end of the first water blocking element is rotationally connected with a base, the other end of the first water blocking element is rotationally connected with one end of a second water blocking element, the first water blocking element and the second water blocking element are provided with foamed layers, the base is provided with grooves capable of accommodating the embedded foamed layers, water inlets formed in the base communicate with the grooves, each of the side rail assemblies includes a side plate, the side plate is provided with an ascending rail.



21: 2021/08706. 22: 2021-11-08. 43: 2022-01-17
51: E03B; F24F; H02J
71: Qingdao Agricultural University
72: GUO, Tieming, LI, Qingqing
54: AIR CONDITIONER ENERGY-SAVING DEVICE
FOR BASE STATION ROOM
00: The present invention discloses an air conditioner

energy-saving device for a base station room and belongs to the technical field of air conditioner energy-saving, which solves the problems of poor heat dissipation effect and non-energy saving of the existing air conditioner. The technical points thereof includes an air conditioner external unit and an air conditioner internal unit, wherein a solar panel generates photovoltaic power into a storage battery for storage; when raining, condensed water generated by the air conditioner internal unit is discharged into a second water tank; when the condensed water is excessive, a water pump draws condensed water and sprays the same onto an air conditioner radiator for heat dissipation; and when the condensed water is not much, the water in the first water tank enters the second water tank for subsequent heat dissipation. The invention has the advantages of good heat dissipation and energy saving effect.



21: 2021/08707. 22: 2021-11-08. 43: 2022-01-17 51: G06Q

71: Guochang FANG

#### 72: Guochang FANG, Lixin TIAN, Zili YANG 54: METHOD FOR CONSTRUCTING COMPREHENSIVE MULTIDIMENSIONAL ENERGY INDEX CMEI 00: -

The invention provides a method for constructing a comprehensive multidimensional energy index CMEI and an energy economy evaluation system. The method integrates multidimensional information in an energy system to capture the complexity evolution characteristic of the energy system, which is composed of sub-indices, and the CMEI is synthesized by harmonic averaging. Like other economic and social indices, this index is comparable and consistent, and can provide important decision-making and evaluation basis for policy making and effect evaluation relating to energy system development.



21: 2021/08708. 22: 2021-11-08. 43: 2022-01-17 51: B23Q

#### 71: QINGDAO UNIVERSITY OF TECHNOLOGY, Shaanxi Jinzhao Aviation Technology Co., Ltd 72: YANG, Min, MA, Hao, LI, Changhe, WU, Xifeng, HAN, Yixue, YANG, Yuying, CUI, Xin, ZHAO, Xufeng, ZHANG, Naiqing, WU, Qidong, GAO, Teng, ZHANG, Yanbin, LU, Bingheng, LIU, Mingzheng, JIA, Dongzhou, ZHANG, Xiaowei, WANG, Xiaoming 33: CN 31: 202011529027.1 32: 2020-12-22 54: AERONAUTICAL ALUMINUM ALLOY MINIMUM-QUANTITY-LUBRICATION MILLING MACHINING DEVICE 00: -

The present invention relates to an aeronautical aluminum alloy minimum-quantity-lubrication milling machining device, including a machine tool worktable and a spindle connected with a machine tool power system. The spindle is connected with a tool holder, and the tool holder is fixed with a cutting tool. The machine tool worktable is provided with a machine tool fixture, the tool holder is connected with a minimum-quantity-lubrication mechanism, the machine tool fixture includes a fixture body, the fixture body is fixedly provided with a limit block for contact with two adjacent side surfaces of a workpiece, the fixture body is further provided with a plurality of clamping elements capable of pressing the workpiece against an upper surface of the fixture body, and a top of the clamping element is provided with a detection member for detecting a relative position between the clamping element and the spindle.



21: 2021/08709. 22: 2021-11-08. 43: 2022-01-17 51: C12N

71: Yunnan Agricultural University, Fumin County Import and Export Co., Ltd., Jacobs Douwe Egberts 72: Gao Xi, Liu Quanjun, Qin Xiaoping, Yi jing, Jia Ben, Wu Guoxing, Tang Ping, He Mingchuan, Li Jinliang, Lan Mingxian, Shi Chunlan

# 54: CORDYCEPS JAVANICA STRAIN BD01 AND APPLICATION THEREOF

00: -

The invention discloses a Cordyceps javanica strain Bd01 and an application thereof, belonging to the technical field of agricultural microorganisms. The Cordyceps javanica strain Bd01 is preserved in China general microbiological culture collection and management center in August 16th, 2021, with the preservation number of CGMCC No.23078 and the preservation address of bd01 is: institute of microbiology, Chinese academy of sciences, No.3, Courtyard 1, Beichen west road, Chaoyang district, Beijing. The Cordyceps javanica strain Bd01 is isolated from the dead larvae of Cerambycidae, and the living body or spore suspension of the strain is used as an active ingredient to prepare a biological preparation, thereby realizing the objective of preventing and controlling Cerambycidae and diseases caused by Cerambycidae, and being beneficial to improving the yield and guality of coffee.



### 21: 2021/08710. 22: 2021-11-08. 43: 2022-01-17 51: B23Q

71: Qingdao University of Technology, Shanghai Jinzhao Energy Saving Technology Co., Ltd, Shaanxi Jinzhao Aviation Technology Co., Ltd 72: WU, Xifeng, LI, Changhe, HAN, Yixue, ZHANG, Naiqing, ZHANG, Yanbin, WU, Qidong, CAO, Huajun, GAO, Teng, YANG, Min, LU, Bingheng, YANG, Yuying, CUI, Xin, ZHAO, Xufeng, LIU, Mingzheng, JIA, Dongzhou, ZHANG, Xiaowei, MA, Hao

33: CN 31: 202011240160.5 32: 2020-11-09 54: INTERNAL COOLING/EXTERNAL COOLING-SWITCHING MILLING MINIMUM-QUANTITY-LUBRICATION INTELLIGENT NOZZLE SYSTEM AND METHOD 00: - The present disclosure provides an internal cooling/external cooling-switching milling minimumquantity-lubrication intelligent nozzle system and method, relating to the field of milling lubrication. The system includes: a vision system, configured to acquire a real-time milling depth of a workpiece and send the real-time milling depth to a lubrication manner controller for processing; a lubrication system, including an internal cooling system and an external cooling system connected together to a cutting fluid supply source through a reversing device; and the lubrication manner controller, configured to communicate with the vision system and the lubrication system respectively, and control the reversing device to act according to a set milling depth threshold and data acquired by the vision system, so as to adjust and switch to the internal cooling system or the external cooling system to work.



21: 2021/08711. 22: 2021-11-08. 43: 2022-01-17 51: A01P

71: Qinghai Academy of Agriculture and Forestry Sciences

72: Ma Yongqiang

54: PREPARATION METHOD AND APPLICATION OF COATING AGENT FOR PREVENTING AND CONTROLLING POTATO BLACKLEG DISEASE 00: -

The disclosure belongs to the technical field of pesticides and provides a method for preparing a coating agent for preventing and controlling potato blackleg disease and application thereof. The seedcoating agent comprises the following substances in parts by weight: 0.1-2 parts by weight of active

ingredients; 4-20 parts by weight of film-forming agent; 1-10 parts by weight of wetting agent; 1-10 parts by weight of dispersant; 1-5 parts by weight of warning colouration; 3-10 parts by weight of antifreeze; 0.1-0.5 part by weight of preservative; 0.2-5 parts by weight of rheological agent.

21: 2021/08712. 22: 2021-11-08. 43: 2022-01-17 51: A01F

## 71: JINHUA POLYTECHNIC

72: WANG, Jinshuang, XU, Zhongwei, HONG, Youjun, ZHANG, Hengjing, XIONG, Yongsen, WANG, Zhiming, TIAN, Liquan, ZHAO, Runmao, JIN, Rendiao

## 54: COAXIAL HOMODROMOUS DIFFERENTIAL RICE-WHEAT THRESHING AND SEPARATING CHAFFCUTTER

00: -

The invention provides a coaxial homodromous differential rice and wheat threshing and separating chaffcutter which comprises a roller, wherein a main shaft, a differential assembly and a chaffcutting assembly are inserted into the roller. The differential assembly is movably sleeved on one end of the main shaft, the chaffcutting assembly is movably sleeved on the differential assembly, and when the main shaft rotates, the differential assembly drives the chaffcutting assembly to simultaneously move, so that stalks are cut by the chaffcutting assembly; the adopted differential assembly is simple in structure, and the production cost of the thresher is reduced.



#### 21: 2021/08713. 22: 2021-11-08. 43: 2022-01-17 51: A01G

71: Guizhou Horticultural Institute (Guizhou Horticultural Engineering Technology Research Center)

72: YANG, Lan, CHEN, Zhilin, YANG, Haojie, SHI, Lejuan, ZHANG, Chaojun, XU, Hongjuan, DU, Zhihui 54: METHOD FOR REGULATING RAPID COLOR CONVERSION OF SUCCULENTS 00: -

The present disclosure belongs to the technical field of succulent plant cultivation, and specifically relates to a method for regulating the rapid color conversion of succulents, including cultivating the succulents by irradiating the leaves of the succulents with light; the ratio of red and blue light to the light is 2 to 4:1 The photon flux density of the light is 600-2000 micromole/m2s; the culture time is 20-30 days. The color conversion method provided by the present disclosure regulates the succulents through the light treatment technology, can realize the rapid and uniform color conversion of the succulents, and cultivates colored, stable finished seedlings with high ornamental value. The method has great market potential and can be applied to the color regulation of the industrial cultivation of succulents.



21: 2021/08714. 22: 2021-11-08. 43: 2022-01-17 51: B01J; C02F

71: Qingdao University of Science and Technology 72: JIA, Changchao, GAO, Ailin, LIU, Wengang, WAN, Bingjie, WANG, Zhiyuan, HUA, Yutao 54: RED CARBON NITRIDE PHOTOCATALYST WITH BROAD-SPECTRAL RESPONSE AND PRODUCT THEREOF 00: -

The present disclosure discloses a method for preparing a red carbon nitride photocatalyst with a broad-spectral response and a product thereof. The method comprises using guanidinium salts and cyanamides as raw materials to mix in an acetonitrile solvent thoroughly, and then performing a solvothermal treatment; performing centrifugation and washing to obtain a product, and mixing the product with melamine to grind, and then performing a thermal polymerization to prepare the red carbon nitride photocatalyst with the broad-spectral response. The present disclosure solves the problem that the carbon nitride materials have low visible light absorption and utilization rate, and expands the light absorption response range of the carbon nitride materials from the visible light region to the near-infrared region, making full use of solar energy. The red carbon nitride photocatalyst prepared has potential applications in the fields of photocatalytic materials for energy and environment, and medical treatment.



21: 2021/08715. 22: 2021-11-08. 43: 2022-01-17 51: B29D

71: Heilongjiang Institute of Technology

72: Wang Qiang, Wu Biao, Jiang Li, Wang Guo Tian, Zhang Peng

#### 54: REMANUFACTURING ENGINEERING TECHNOLOGY OF WASTE RADIAL TIRE STEEL WIRE DISLOCATION FOR RETREADING 00: -

This invention discloses remanufacturing engineering technology of waste radial tire steel wire dislocation for retreading tire. At present, accidents, including single tire compression explosion, collision explosion and puncture explosion, often occur in engineering retreaded tires, and their service life is short. The invention relates to remanufacturing engineering of waste radial tire steel wire dislocation for retreading tire technology, which comprises the following steps: separating a steel wire layer from waste steel wire radial tire, and plating copper on the surface of the steel wire fradial tire to form reinforced steel wire cord fabric layer, cleaning the body of chosen tire and repairing and reinforcing local damage, reinforcing a layer of treated waste steel wire cord fabric between the treated old layer boby and the retreaded tread rubber layer, and then vulcanizing by segmented mold vulcanizing machine, thus forming a retreaded tire for remanufacturing engineering of waste radial tire steel wire dislocation. The service life of the retreaded tire prepared by remanufacturing engineering of waste radial tire steel wire dislocation is 1.2 times that of the ordinary retreaded tire, which is basically equal to that of the new tire of the same model, and the total cost of retreading is only 40% of the total cost of the new tire.

21: 2021/08716. 22: 2021-11-08. 43: 2022-01-17 51: G01C 71: Tianjin Research Institute for Water Transport Engineering, Ministry of Transport, Shanghai Estuarine and Coastal Science Research Center, ChangJiang Waterway Institute of Planning and Design

72: Yang Yunping, Wang Jianjun, Li Wangsheng, Liu Wanli, Shen Qi, Li Youwei

#### 54: PREDICTION METHOD OF CHANNEL SILTATION CAUSED BY HYDRODYNAMIC CHANGE OF DREDGED TRENCH 00: -

The invention provides a method for predicting channel siltation caused by hydrodynamic changes of dredged trench, which comprises the following steps: S1, building a bottom sediment transport model based on historical data of an area to be measured: S2, calculating the sediment transport amount before trenching and the sediment transport amount after trenching in the area to be measured based on the sediment transport model; and S3, calculating the siltation amount of the navigation channel based on the bottom sediment transport amount before and after the trenching. According to the method, the river with alluvial bottom sediment as the main object is taken as an object. Firstly, the unbalanced sediment transport equation of bottom sediment transport is deduced, the hydrodynamic changes (flow velocity, water depth, flow rate, etc.) of the shoal area before and after trenching are theoretically analyzed, and the flow net method is used to deduce the flow velocity changes before and after trenching, so as to obtain the siltation caused by the hydrodynamic changes of the shoal area before and after trenching, thereby realizing the protection of the beach boundary in the waterway range and improving the water depth in the navigation route.



21: 2021/08717. 22: 2021-11-08. 43: 2022-01-17 51: B23P; C21D; C23C

71: Jiangsu Huayang Xinsilu Energy Equipment Co., Ltd.

72: ZHU, Xueqin, ZHU, Guanghua, ZHU, Deyong, JIANG, Bin

#### 54: STABILIZING ROLL AND MANUFACTURE METHOD THEREOF 00: -

The present invention discloses a stabilizing roll and a manufacture method thereof, comprising the following steps: step 1, solid solution heat treating the cast roller and shaft head; step 2, rough turning the roller and the shaft head after the solid solution heat treatment; step 3, preheating; step 4, overlaying the wear-resistant layer; step 5, post-welding stress relieving heat treating,; step 6, assembling and welding; step 7, drying,; step 8, filling the fibre sheet; step 9, heat treating, and welding; step 10, machining to finished product. The structure of the present invention is novel and reasonable, the operation is convenient, the wear resistance is improved, the accident that the stabilizing roll explodes in a high temperature state is avoided, the service life is greatly improved and the production cost is reduced.


21: 2021/08718. 22: 2021-11-08. 43: 2022-01-17 51: A01B; A01C

71: Qingdao Agricultural University 72: WANG, Fangyan, LIU, Xinghua 54: PNEUMATIC PRECISION SEEDER 00: -

The present invention relates to agricultural machinery, and in particular to a pneumatic precision seeder. The invention comprises a frame, a ridge shaping device and two sowing unit assemblies. wherein the ridge shaping device comprises a central rotating shaft, two ridging barrels arranged on the central rotating shaft and an electric motor fixedly connected to the central rotating shaft, the ridging barrel comprises an inner barrel, an outer barrel and a shaping disc, the inner barrel is located at the inner side of the outer barrel, the inner barrel and the outer barrel are arranged eccentrically, an annular cavity is provided between the outer barrel and the inner barrel, the gap between the bottom of the inner barrel and the outer barrel is minimum, the annular surface of the outer barrel is in a grid shape, the inner barrel is fixed on the central rotating shaft.

21: 2021/08719. 22: 2021-11-08. 43: 2022-01-17 51: A61K

71: Zhejiang Chinese Medical University

72: Yang Qing, Ge Lijun 54: TRADITIONAL CHINESE MEDICINE PREPARATION FOR TREATING INSOMNIA AND PREPARATION METHOD THEREOF 00: -

Disclosed are a traditional Chinese medicine preparation for treating insomnia and a preparation method thereof, wherein that medicinal material comprise the following components in parts by weight: 5-10 parts of dry fruit of Schisandra chinensis, 15-25 parts of scale leaf of Lilium brownii, 15-25 parts of dry root of Salvia miltiorrhiza, 9-15 parts of seed of wild jujube, 10-20 parts of dry lotus seed, 20-30 parts of tuber fleeceflower stem, 20-30 parts of mother-of-pearl, 10-15 parts of dry albizzia flower; the present traditional Chinese medicine preparation provided in this disclosure has good therapeutic effect on clinical insomnia patients, especially for those have suffered some long-term persistent insomnia; the preparation is safe without side effects, and can promote sleep, improve sleeping quality, prolong sleeping time.

51: C12N; C12P; C12R

71: Qilu University of Technology 72: SONG, Jing, REN, Xidong, WANG, Yiping, DU, Chaofan, DONG, Yixian, LIU, Xinli 33: CN 31: 202110079151.0 32: 2021-01-21 54: ACID-TOLERANT STREPTOMYCES ALBULUS AND USE THEREOF IN EPSILON-POLY-L-LYSINE (EPSILON-PL) FERMENTATION 00: -

The present disclosure relates to a Streptomyces albulus AAE89 deposited in the China General Microbiological Culture Collection Center (CGMCC) located at NO.1 West Beichen Road, Chaoyang District, Beijing on October 12, 2020, with a deposit number of CGMCC 20880. The Streptomyces albulus AAE89 has relatively strong acid tolerance, and has a dry cell weight increased by 46.92% when cultured at an initial pH value of 4.0 for 48 h and a survival rate increased by 1.81 times after being stressed at a pH value of 3.0 for 48 h compared with original strains.

<sup>21: 2021/08720. 22: 2021-11-08. 43: 2022-01-17</sup> 



### 21: 2021/08721. 22: 2021-11-08. 43: 2022-01-17 51: G01N

71: Institute of Animal Science, Chinese Academy of Agricultural Sciences

72: Qin Tong, Zhang Guangzhi, Li Shaohan, Chen Xin

# 54: MULTIPLEX PCR METHOD FOR SIMULTANEOUSLY DETECTING CDV, CPV, CCOV-I AND CCOV-II

00: -

# Disclosed is a multiplex PCR method for simultaneously detecting canine distemper virus (CDV), canine parvovirus (CPV), canine coronavirus type I (CCoV-I) and canine coronavirus type II (CCoV-II), which belongs to the technical field of microbial detection. The disclosure also provides amplification primer pairs as shown in SEQ ID NO: 1-8 for simultaneously detecting CDV and CPV, canine coronavirus type I and canine coronavirus type II. Additionally, a multiplex PCR method for simultaneously detecting CDV, CPV, CCoV-I and CCoV-II is established therein with strong specificity, high sensitivity and good stability, which greatly shortens the detection period, and avoids the waste of reagent and consumables as well as cross contamination happened in a large number of experimental operations. Further, the method lays a foundation for future laboratory diagnosis, etiological research, pet epidemic monitoring and epidemiological investigation.



21: 2021/08722. 22: 2021-11-08. 43: 2022-01-17 51: A01D

71: JINHUA POLYTECHNIC

72: DAI, Sujiang, XIONG, Yongsen, XU, Zhongwei, LI, Hongyang, TANG, Zhong, WANG, Jinshuang, WANG, Zhiming, JIN, Rendiao

#### 54: CONTROL MECHANISM FOR SWINGING ANGLE OF HEADER IN COMBINED RICE HARVESTING EQUIPMENT 00: -

The invention belongs to the technical field of agricultural equipment, and provides a control mechanism for a swinging angle of a header in combined rice harvesting equipment, including the following components: a header stander, a header assembly, a reel, a conveying trough and a conveying threshing apparatus. The header assembly and the conveying trough are fixedly connected into a swinging whole body. A swinging driving assembly for driving the header assembly to lift and lower is provided between the conveying threshing apparatus and the swinging whole body. The swinging whole body is connected to the swinging driving assembly through a hinge point. The hinge point is located between the conveying trough and the conveying threshing apparatus. The invention has the advantages that the hinge point between the header assembly and the conveying trough is rearranged, so that the conveying trough and the header assembly are in straight line during conveying.



21: 2021/08723. 22: 2021-11-08. 43: 2022-01-17 51: A01F

71: JINHUA POLYTECHNIC

#### 72: XIONG, Yongsen, ZHOU, Yanchun, WANG, Jinshuang, HU, Huadong, WANG, Zhiming, LI, Hongyang, DING, Zhao, FANG, Hui 54: STEPLESS THRESHING AND SEPARATION ROTARY DRUM DEVICE 00: -

The present invention provides a stepless threshing and separation rotary drum device, and belongs to the technical field of harvesting machinery. The problems of unadjustable time of threshing and separation of an existing thresher and low work efficiency are solved. The stepless threshing and separation rotary drum device includes a drum cover, a guide mechanism, and a handle. In the present invention, the guide mechanism is movably mounted in the drum cover, and the drum cover is provided with the handle for driving the guide mechanism to rotate. Therefore, people can change, by rotating the handle, the guide direction of the guide mechanism for the crops needing to be threshed and separated, thus changing a movement path of the crops in the drum cover, that is, shortening or prolonging the threshing time of the crops in the drum cover, and the crops can be effectively threshed and separated.



21: 2021/08724. 22: 2021-11-08. 43: 2022-01-17 51: G01M

71: JINHUA POLYTECHNIC

72: ZHOU, Xuan, WANG, Zhiming, CHEN, Ni,

# XIONG, Yongsen, GUO, Tiezheng 54: BEDSTAND FOR WHOLE-FEED RICE-WHEAT COMBINE HARVESTER

00: -

The invention discloses a bedstand for a whole-feed rice-wheat combine harvester. A combine harvester is provided with a high-speed cylinder and a low-speed cylinder which are both provided with rotating speed sensors; a test bench is electrically connected

with the rotating speed sensors, integrates received cylinder rotating speed information, is provided with length detectors for detecting a length of the highspeed cylinder and a length of the low-speed cylinder respectively, and integrates received cylinder length information and outputs cylinder length ratio information; and a control system is capable of adjusting a rotating speed of the corresponding cylinder in real time according to the received cylinder length ratio information.



- 21: 2021/08725. 22: 2021-11-08. 43: 2022-01-17 51: A01D
- 71: JINHUA POLYTECHNIC

72: LIU, Zhenghuai, CHEN, Ni, DAI, Sujiang, WANG, Zhiming, XIONG, Yongsen, TANG, Han, TIAN, Liquan, LI, Hongyang 54: HALF-FEED ROTARY CONCAVE THRESHING DEVICE TEST BED

00: -

The present invention discloses a half-feed rotary concave threshing device test bed. The test bed regulates rotating speeds of a cylinder speed regulation motor, a chain wheel speed regulation motor, and a clamping feed chain speed regulation motor through an industrial personal computer, controls a linear speed of a threshing cylinder bow tooth, a linear speed of the outer surface of a rotary concave, and a linear speed of a clamping feed chain, synchronously collects different numerical values and numerical value ratios of the linear speed of the threshing cylinder bow tooth, the linear speed of the outer surface of the rotary concave, and the

linear speed of the clamping feed chain, and compares the influence of different numerical values and numerical value ratios on the working state of a threshing device of a harvester.



21: 2021/08726. 22: 2021-11-08. 43: 2022-01-17 51: B08B; B60S

71: Qingdao University of Technology 72: LIU, Zunnian, SONG, Yipei, WANG, Shumei, REN, Aige, SHEN, Meili, WANG, Yuchen, LI, Liangguo, LI, Hongsheng, LU, Yihong 54: ELECTROMAGNETIC INDUCTION STEAM CAR WASHING APPARATUS 00: -

The present invention discloses an electromagnetic induction steam car washing apparatus, and particularly relates to the technical field of car washing. The novel steam car washing apparatus includes a water tank, a water softening mechanism, an electromagnetic induction steam mechanism, a steam gun, a power supply and a control mechanism. The electromagnetic induction steam mechanism is provided with a water inlet. The electromagnetic induction steam mechanism includes a metal heating container. The bottom of the metal heating container is provided with a ceramic supporting table. A heating coil is arranged below the ceramic supporting table. The side wall of the metal heating container is wound with a side wall coil. The heating coil and the side wall coil generate a magnetic field when electrified. The power supply includes an AC power interface, a storage battery and a power conversion circuit. The control mechanism includes a microcontroller.



#### 21: 2021/08727. 22: 2021-11-08. 43: 2022-01-17 51: C09D

71: Chengdu Hongrun Paint Co., Ltd 72: JIANG, Yong, YANG, Ruliang, YU, Weiju, YANG, Fei, JIANG, Hebing, XIONG, Lin, HUANG, Tao, YANG, Zhongyun, TANG, Zhaohong, ZHOU, Maoying

#### 54: INORGANIC-ORGANIC HYBRID FLAME-RETARDANT MILDEW-PROOF COATING AND PREPARATION METHOD THEREOF 00: -

The present disclosure relates to an inorganicorganic hybrid flame-retardant mildew-proof coating and a preparation method thereof, pertaining to the technical field of coatings.

21: 2021/08728. 22: 2021-11-08. 43: 2022-01-17 51: G01N

71: Qingdao Agricultural University

72: Yu Ying, Cao Zhi

54: ON-SITE RAPID HIGHLY SENSITIVE DIFFERENTIAL DIAGNOSIS KIT FOR PORCINE CIRCOVIRUS (PCV) 2, PCV3 AND PCV4 AND APPLICATION METHOD THEREOF 00: -

The invention discloses an on-site rapid highsensitivity differential diagnosis kit for PCV2, PCV3 and PCV4 and a using method thereof, which comprises a plurality of amplification detection tubes, wherein detection reagents and protective agents

are pre-installed in the amplification detection tubes and freeze-drying, and the tube covers of the amplification detection tubes have paraffin wax with a melting point of 56-58 degree Celsius to preembed a pH indicator; taking pathogenic PCV2, PCV3 and PCV4 as the research objects, a field rapid and highly sensitive differential diagnosis kit for different genotypes of PCV was developed to realize the rapid differential diagnosis of PCV2, PCV3 and PCV4.



21: 2021/08729. 22: 2021-11-08. 43: 2022-01-17 51: G01N

71: Qingdao Agricultural University

72: Zhang Qiaoya, Yu Ying

# 54: ON-SITE RAPID AND HIGHLY SENSITIVE DIFFERENTIAL DIAGNOSIS KIT FOR PORCINE DIARRHEA VIRAL PATHOGENS AND APPLICATION METHOD THEREOF

00: -

The present invention relates to the technical field of virus detection, in particular to a rapid and highsensitivity differential diagnosis kit for porcine diarrhea virus-like pathogens and a method of use thereof. Including nucleic acid adsorption membrane, positive control membrane, negative control membrane, sample collection tube, rinsing tube A, rinsing tube B, amplification detection tube, sampling swab, toothpicks, filter paper strips and instructions. The kit of the present invention is simple to operate and does not require professionals, only a constant temperature device or a thermos cup can realize rapid and accurate diagnosis of diarrhea viruses in the early stage of single or mixed infection, which is of great significance for the prevention and control of clinical swine diarrhea diseases.



21: 2021/08730. 22: 2021-11-08. 43: 2022-01-17 51: G01H; G01K

71: Chinese Academy of Agricultural Mechanization Sciences, Qingdao Yongzhao New Material Science & Technology CO.LTD

72: Wang Ruijun, Zhan Hua, Lyu Mingli, Li Zhendong, Ma Xiaobin, Zhu Xiang, Bao Manyu 54: TEST DEVICE FOR EVALUATING THERMAL SHOCK LIFE OF THERMAL BARRIER COATINGS 00: -

The invention provide a thermal shock life test device of a thermal barrier coatings, comprising a heating system, a CMAS liquid material conveying system, a cooling system and a control system. Heating system provides a combustion flame jet to realize the simulation of a high-temperature environment for heating a test sample, and through the temperature closed-loop feedback control of the thermal barrier coating, the cyclic heating within a certain temperature gradient can be achieved. CMAS liquid material conveying system conveys suspension while heating by heating system, and in order to simulate the real working state of CMAS, the suspension is atomized by air jet and injected into the combustion flame at a certain set angle and rate. After the cooling system is heated, the test sample is cooled by a cooling gas path. The control system connects and controls the heating system, CMAS liquid material conveying system and cooling system, so as to simulate the service environment of thermal barrier coating under the conditions of high temperature, gradient temperature and CMAS coupling environment, and automatically control the whole process test flow.



21: 2021/08731. 22: 2021-11-08. 43: 2022-01-17 51: B05B

71: Chinese Academy of Agricultural Mechanization Sciences, Qingdao Yongzhao New Material Science & Technology CO.LTD

72: Wang Ruijun, Li Zhendong, Lyu Mingli, Zhan Hua, Bao Manyu, Du Dexin, Wang Yiqi 54: LIQUID MATERIAL PLASMA SPRAY DEVICE 00: -

The invention relates to a liquid material plasma spray device for preparing ceramic coatings with nanostructures on substrates, which comprises a plasma system and a liquid material conveying device, wherein the liquid material conveying device comprises a liquid material conveying system and a liquid material injection system; the two-stream gas atomization nozzle is connected with the liquid material conveying power device, and atomizes the liquid material in the liquid material conveying power device into liquid drops with a certain speed and sends the liquid drops into the high temperature zone of the plasma jet, and the liquid drops are heated and accelerated by the plasma jet and deposited on the substrate to form nano-structured ceramic coatings. The invention overcomes the critical problem that the traditional plasma spray cannot spray fine powder, and prepares the ceramic coatings with nano-structure characteristics by synthesizing ceramic particles in the plasma jet, which is especially suitable for preparing nanostructure thin ceramic coatings with thickness requirements between 10 microns and 100 microns.



21: 2021/08732. 22: 2021-11-08. 43: 2022-01-17 51: A01M; G01N

71: Institute of Water Resources for Pastoral Area, Ministry of Water Resources

72: GUO, Jianying, XU, Bing, YANG, Zhenqi, LIU, Yanping, LIU, Tiejun, XING, Ende, LI, Jinrong, SHAN, Dan, ZHANG, Tiegang, ZHENG, Ying **54: DUST FALL SAMPLING DEVICE FOR ARID AND SEMI-ARID AREAS** 

00: -

The present disclosure relates to a dust fall sampling device for arid and semi-arid areas. The dust fall sampling device includes a fixed support, a dust fall bucket mounted on the fixed support, and a friendly bird dropping-proof device mounted on the dust fall bucket. The bottom end of the friendly bird droppingproof device is fixedly connected to the top end of

the dust fall bucket. A first filter screen and a second filter screen are arranged in the dust fall bucket. The first filter screen is located above the second filter screen. The dust fall sampling device for arid and semi-arid areas have the advantages of simple structure, convenience in sampling, and the like, is suitable for scientific research and atmospheric dust monitoring under various conditions in arid and semi-arid areas.



21: 2021/08733. 22: 2021-11-08. 43: 2022-01-17 51: B60G

71: Shandong Detai Machinery Group CO., Ltd 72: ZHANG, Guangjin, JIANG, Weijian, ZHANG, Guanglei

#### 54: BALL-PIN TRANSVERSE STABILIZER BAR SUSPENDER, ASSEMBLING METHOD, AND TRANSVERSE STABILIZER BAR ASSEMBLY 00: -

The present invention discloses a ball-pin transverse stabilizer bar suspender comprising a tube beam. Two ends of the tube beam are provided with connecting bases, a mounting hole is provided in each connecting base, a ball-pin assembly is mounted in the mounting hole, a second gland is mounted on the lower end of the mounting hole, a spring is mounted on the upper end of the second gland, a first gland is fixed on the upper end of the spring, the upper end of the first gland abuts against the lower end of the ball-pin assembly, and the ballpin assemblies in the two connecting bases are oppositely mounted. The present invention realizes the shock absorption function of the ball-pin assembly by coordinating the first gland, the spring, and the second gland, thereby preventing a hard

collision of the ball-pin assembly with the connecting base.



- 21: 2021/08734. 22: 2021-11-08. 43: 2022-01-17 51: C09K
- 71: Jiangxi Agricultural University

72: Wen Yangping, Huang Chunlun, Wang Qiuju, Shang Qingyin, Yang Xiuxia

# 54: BIOCHAR SOIL CONDITIONER FOR HEAVY METAL POLLUTION AND PREPARATION METHOD THEREOF

00: -

The invention discloses a biochar soil conditioner for heavy metal pollution, which comprises 40-55 parts of active biochar powder, 20-40 parts of active oyster shell powder, 20-30 parts of compost powder, 8-12 parts of silicate mineral powder, 8-16 parts of nano zero-valent iron powder, 10-20 parts of sodium silicate, 20-35 parts of nitrogen fertilizer, 15-30 parts of phosphate fertilizer, 10-20 parts of potassium fertilizer and 2-8 parts of trace elements; and the preparation method of biochar soil conditioner comprises the following steps: firstly, preparing active biochar powder, active oyster shell powder and compost material powder; then, weighing and mixing uniformly; finally, granulating and drying. The biochar soil conditioner for heavy metal pollution prepared of the invention can not only passivate/stabilize the heavy metal pollution in the soil, but also improve the fertility of the soil, and is also environmentally friendly as well as efficient in fertility, thus remarkably improving the economic benefits and environmental benefits.

21: 2021/08735. 22: 2021-11-08. 43: 2022-01-17 51: A23L

71: Hubei Xianzhiling Food Co., Ltd. 72: DUAN, Wenjie, WANG, Xueping, DUAN, Guanozhi

#### 54: PUERARIAE RADIX CHAENOMELES SINENSIS TONIFYING POWDER 00: -

The present disclosure discloses a Puerariae Radix Chaenomeles sinensis tonifying powder, comprising the following raw materials in parts by weight: 40-60 parts of Puerariae Radix powder, 20-30 parts of Chaenomeles sinensis powder, 4-5 parts of Jujubae Fructus powder, 4-5 parts of Aloe vera powder, 6-8 parts of Amorphophallus konjac powder, 6-8 parts of Ganoderma lucidum powder, 3-6 parts of Gastrodiae Rhizoma powder, 5-10 parts of Terminalia spp. powder, 10-15 parts of milk powder, 5-8 parts of vegetable oil, 3-8 parts of granulated sugar and 1-3 parts of essence. The present disclosure has the advantages that the foods have good taste, high and rich nutritional value, reasonable and scientific composition ratio, and are easily absorbed in human body, with fragrant and delicious tastes.

21: 2021/08736. 22: 2021-11-08. 43: 2022-01-17 51: B01D

71: Shihezi University

72: LI, Xueqin, LV, Xia, HUANG, Lu, ZHANG, Jinli 33: CN 31: 202011389620.0 32: 2020-12-02 54: METHOD FOR PREPARING RUBBERY POLYMER BLEND MEMBRANE MODIFIED BY POLYETHERAMINE BLENDING AND APPLICATION THEREOF

00: -

The present disclosure relates to the preparation of polymer membranes, and discloses a method for preparing a rubbery polymer blend membrane modified by polyetheramine blending and an application thereof. The rubbery polymer blend membrane of the present disclosure comprises polyetheramine (PEA, with a molecular weight of 400) and a blend membrane. The blend membrane is added to PEA. A polyamide-polyether block copolymer (Pebax) is used as a membrane matrix for the blend membrane, and PEA is blended with the membrane matrix. The permeability and selectivity of the Pebax/PEA blend membrane prepared by the method of the present disclosure exceed those of the Pebax membrane, and the separation performance of the single material is improved. Therefore, using the special molecular structure of PEA to improve the permeability and selectivity of the membrane is an effective method to improve the performance of the blend membrane.

21: 2021/08795. 22: 2021-11-09. 43: 2022-02-09

71: Shandong University

72: CHEN, Shujiang, WANG, Kang, XU, Chunwang 54: HIGH-PRECISION SPINDLE ROTATION SYSTEM FOR A MACHINE TOOL AND CONTROL METHOD 00: -

The present invention discloses a high-precision spindle rotation system for a machine tool and control method, which falls within the field of machining important parts for a machine tool. The present invention greatly improves the rotation accuracy at the machining position of the spindle.



21: 2021/08796. 22: 2021-11-09. 43: 2022-02-09 51: G02B

71: Tangshan University

72: JIANG, Linghong, WANG, Chao, TANG, Wanwei 33: CN 31: 202110796709.7 32: 2021-07-14

54: BROADBAND SINGLE-POLARIZATION RESIDUAL DISPERSION COMPENSATION PHOTONIC CRYSTAL FIBER 00: -

The present invention discloses a broadband singlepolarization residual dispersion compensation photonic crystal fiber, including a fiber structure, wherein the fiber structure is provided with a fiber core area, an inner cladding and an outer cladding; the fiber core area is composed of a fiber core center hole and a peripheral quartz substrate; the fiber core center hole is filled with a liquid crystal

<sup>51:</sup> B23B; B23Q

material; the outer cladding includes second hexagonal array arrangement air holes and first hexagonal array arrangement air holes; and the first and second hexagonal array arrangement air holes and the inner cladding form micro-structural endface structures. The broadband single-polarization residual dispersion compensation photonic crystal fiber provided by the present invention is simple in structure and easy to realize; and residual dispersion in a cross-polarized direction may be compensated by changing an external electric field and then regulating a rotation angle of liquid crystal molecules.



21: 2021/08798. 22: 2021-11-09. 43: 2022-02-09 51: A61K; A61P; B82Y

71: Qilu University of Technology

72: GUO, Yingshu, CAO, Xiuping, SHANG, Xinxin 54: PROTEIN NANOCARRIER AND USE THEREOF, AND CARRIER LOADED WITH TARGETING SUBSTANCE AND PREPARATION METHOD THEREOF

#### 00: -

The present disclosure provides a protein nanocarrier and use thereof, and a carrier loaded with a targeting substance and a preparation method thereof, and belongs to the technical field of nanomaterials; the protein nanocarrier uses nucleic acid aptamer-modified apoferritin (Apn) as a shell, and is embedded with influenza virus hemagglutinin (HA).



21: 2021/08800. 22: 2021-11-09. 43: 2022-02-09 51: A61K; A61P 71: Qilu University of Technology

### 72: GUO, Yingshu, ZHENG, Xiaofei 54: CELL MEMBRANE-COATED FE3O4@MNO2 TARGETED NANOMATERIAL AND PREPARATION METHOD AND USE THEREOF 00: -

The present disclosure provides a cell membranecoated Fe3O4@MnO2 targeted nanomaterial, belonging to the technical field of targeting nano materials. In the present disclosure, Fe3O4@MnO2 is used as a catalyst for Chemodynamic therapy (CDT), and can catalyze decomposition of H2O2 in cancer cells into hydroxyl radicals, thereby killing breast cancer cells.



21: 2021/08801. 22: 2021-11-09. 43: 2022-01-14 51: H02J

71: China University of Petroleum (Huadong)

72: ZHANG, Zhihua, TIAN, Yongtao, FENG, Xingtian 33: CN 31: 202110640894.0 32: 2021-06-09 54: DIRECT CURRENT MICRO-GRID CONTROL SYSTEM, CONTROL METHOD, STORAGE MEDIUM, DEVICE AND APPLICATION THEREOF 00: -

The present invention belongs to power distribution technical field, and discloses a direct current microgrid control system, control method, storage medium, device and application thereof, comprising a rectifier parallel connection module, for connecting rectifiers in parallel so that magnitudes of power transmitted in circuits of different parameters will distribute economically; a direct current bus bar module for connecting DC sides of rectifiers of variable frequency drives in parallel to form DC bus bars, and switching in photovoltaic links and energy storage links; and an inverter parallel connection module for connecting DCs outputted from the rectifiers of the variable frequency drives in parallel, inverting and outputting the same to load sides. In

the present invention, voltage fluctuation at the direct current sides is reduced, power supply reliabilities are improved, so that power distributes economically in circuits of different parameters, economic efficiencies of the oil field power supply system are enhanced, which is beneficial to make management plans for voltage dips and short interruptions, whereby low voltage problems when circuits are long and with heavy loads are addressed, unified fed in of reverse power generation of the loads and the photovoltaic subunit can be facilitated, and the present invention is applicable to conditions such as oilfield power supply systems and floating cranes at ports.



21: 2021/08802. 22: 2021-11-09. 43: 2022-02-09 51: B01J; C02F

71: Qingdao University of Science and Technology 72: ZHU, Haiguang, LIU, Yong, YUAN, Xun 54: CMF-TIO2-PDMS COMPOSITE MATERIAL WITH SUPER-HYDROPHOBICITY AND PREPARATION METHOD AND APPLICATION THEREOF

00: -

The present disclosure relates to the technical field of CMF-TiO2-PDMS composite materials, and discloses a CMF-TiO2-PDMS composite material with super-hydrophobicity and a preparation method and an application thereof. The CMF-TiO2-PDMS composite material with super-hydrophobicity not only adsorbs the water-soluble pollutants and the oilsoluble pollutants, but also effectively solves the problem of poor hydrophobic stability of the traditional photocatalysts. Meanwhile, the CMF-TiO2-PDMS composite material with super-hydrophobicity has good durability, stability and resistance to UV oxidation.



21: 2021/08807. 22: 2021-11-09. 43: 2022-01-31 51: A01G

71: OCEAN AND FISHERY DEVELOPMENT RESEARCH CENTER OF DONGTOU DISTRICT, WENZHOU CITY

72: LI, CHANGDA, WU, JUANJIA, HU, XIAOMING, GAN, JIANJUN, DONG, JIALING **54: KANDELIA CANDEL PLANTING METHOD IN** 

TIDAL FLATS OF HIGH-WIND-WAVE AND STRONG-TIDE AREA 00: -

The present invention discloses a Kandelia candel planting cluster forest belt in Rhizophora apiculata Bl. forest in tidal flats of a high-wind-wave and strong-tide area. By controlling planting density and planting cluster spacing of planting clusters and matching with protective fences, the planting clusters may resist impact of sea water and floating objects within 1-2 years after establishment, thereby effectively increasing quantities of planktons and marine products in the tidal flats, providing habitats for birds and providing a practice foundation for tidal flat transformation.



21: 2021/08830. 22: 2021-11-09. 43: 2022-02-09 51: B65G

71: SHANDONG LINGXIYUAN SCI-TECH DEVELOPMENT CORPORATION 72: ZHANG, Xiaofeng, MA, Lanying, QI, Peng, ZHANG, Xiaoqi

33: CN 31: 202010022714.8 32: 2020-01-09 54: MATERIAL CONVEYING DEVICE AND SCRAPER

00: -

The present invention provides a scraper. The scraper includes: a scraper body, having a bottom surface and a top surface opposite to the bottom surface; and a supporting body, formed on the bottom surface of the scraper body, wherein the supporting body is provided with a mounting surface and the mounting surface forms a part of the bottom surface; the mounting surface is provided with a rolling body, and the rolling body is able to support the scraping body when the scraper is located at a mounting position; and the supporting body is a nonmetallic elastomer. Meanwhile, the present invention provides material conveying equipment using the scraper, for example a scraper conveyor. By changing a contact and friction mode of the scraper and a conveying groove, the working state of the scraper and the whole load of the conveyor are improved, idle load is reduced, and the whole service life of the scraper and even the scraper conveyor is prolonged.



21: 2021/08860. 22: 2021-11-10. 43: 2022-02-09 51: A61B 71: The First Affiliated Hospital of Zhengzhou University 72: REN, Weiguo 33: CN 31: 202111130781.2 32: 2021-09-26 54: FRCP AUXILIARY MANIPUL ATOR DEVICE

**54: ERCP AUXILIARY MANIPULATOR DEVICE** 00: -The invention relates to the field of medical auxiliary

devices, in particular to an ERCP auxiliary manipulator device, comprising a supporting base, wherein the supporting base is provided with a first sliding groove, and a supporting plate is slidably connected to the first sliding groove; the supporting base is provided with a lifting device matched with the supporting plate; a fixing base is fixedly connected to the supporting plate, and two supporting rods are slidably connected to the fixing base; a suction tube is fixedly connected to each of the two supporting rods, and the upper end of the suction tube is fixedly connected with a suction cup hand; a sliding base is fixedly connected to each end of the two supporting rods away from the suction tube. The invention is convenient for the user to move the operating table, which avoids the cumbersome and labor loss of multiple people lifting and moving. In addition, the device can adjust the position of the suction cup hand according to the width of different operating tables, which enables the suction cup hand to better dock with the middle area of the operating table, and ensures the stability during the movement of the operating table.



21: 2021/08861. 22: 2021-11-10. 43: 2022-02-09 51: G01N

71: Ocean University of China

72: WANG, Fupeng, LIANG, Rui, XUE, Qingsheng, WU, Jinghua, HAO, Xijie

#### 33: CN 31: 202110915210.3 32: 2021-08-10 54: DEGASSING-FREE UNDERWATER DISSOLVED CARBON DIOXIDE DETECTION DEVICE AND DETECTION METHOD 00: -

The present disclosure discloses a degassing-free underwater dissolved carbon dioxide detection device and a detection method. The degassing-free underwater dissolved carbon dioxide detection device includes a computer, which is used to provide the driving signal and controlling parameters for the power tuning unit; the computer is connected with a laser driving control module and the power tuning unit, respectively; the laser driving control module is connected with a laser; the laser is connected with a photo-isolator; the photo-isolator is connected with a thulium-doped fiber vertical-cavity laser system; the thulium-doped fiber vertical-cavity laser system is connected with a photoacoustic cell system through a fiber collimator; the photoacoustic cell system is connected with a pre-amplifier circuit and a lock-in amplifier in sequence, and the lock-in amplifier is connected with the computer.



21: 2021/08862. 22: 2021-11-10. 43: 2022-02-09 51: G01V

71: Ocean University of China, Sinopec Chongqing Fuling Shale Gas Exploration and Development Co., Ltd.

72: XING, Lei, LIU, Hongwei, WAN, Yunqiang, LI, Qianqian, LIU, Huaishan, YE, Xin, XU, Xiang 33: CN 31: 202110963944.9 32: 2021-08-21 54: SEISMIC-WHILE-DRILLING MULTI-CHANNEL CONTINUOUS ACQUISITION SYSTEM, DATA STORAGE AND DATA PROCESSING METHOD THEREOF

#### 00: -

The present invention belongs to seismic while drilling exploration technology, and discloses a seismic while drilling multichannel continuous acquisition system, data storage and data processing method, wherein acquisition stations comprise geophones, multicore shielded cables, seismic while drilling digital packets, and GPS modules etc.. The geophones are connected to the seismic while drilling digital packets by the multicore shielded cables; the GPS modules provide accurate time information for the digital packets; the seismic while drilling digital packets are connected to an indoor host computer by network wires, the seismic while drilling digital packets and the host computer are tandem connected with at least one fiber optical transceiver to realize long distance transmission, it is even possible to use ports of existing network base stations without laying long distance optical fibers; a plurality of acquisition stations can be tandem connected so as to realize extension of the acquisition stations; the host computer is connected with a single-point vibration acquisition host by at least one USB port, and the single-point vibration acquisition host is connected with at least one threecomponent geophone installed on well frames to collect pilot signals. In the present invention multichannel signal long distance real time seismic

data acquisition during seismic while drilling of horizontal wells is realized.



21: 2021/08863. 22: 2021-11-10. 43: 2022-01-19 51: A23K

71: College of Animal Science, Shanxi Agricultral University

# 72: HU, Guangying, CAO, Riliang, CAO, Xuanya 54: NATURAL CHINESE HERBAL MEDICINE FORMULATION FOR IMPROVING PORK QUALITY

00: -

The present invention relates to Chinese herbal medicine additive for pigs, and in particular to a good natural herbal formulation for improving pork quality, the formulation is used for comprehensively improving pork quality. The present invention has a reasonable design, and improves pork quality from various aspects.

21: 2021/08864. 22: 2021-11-10. 43: 2022-01-19 51: C08J; C08K; C08L 71: Wuhan University of Technology 72: SHI, Minxian, HUANG, Zhixiong, QIN, Yan, DING, Jie, WANG, Yanbing, DONG, Chuang, YANG, Xueyuan, MEI, Qilin 54: LOW DENSITY AND LOW PRESSURE SHEET MOLDING COMPOUND AND PREPARATION METHOD THEREOF

00: -

The present disclosure provides a low density and low pressure sheet molding compound and a preparation method thereof. According to the lowdensity low-pressure sheet molding compound and the preparation method thereof, various components cooperate with one another by using a Low Pressure Molding Compound (LPMC) technology, so that the sheet molding compound prepared by the preparation method has low density, and meanwhile, the molding pressure of the sheet molding compound can be greatly reduced. In addition, by the preparation method, a material is molded under a low pressure by taking magnesium oxide paste and crystalline resin as a combined thickening system, the density and the coefficient of thermal conductivity of the material are reduced by taking hollow microspheres as a filling material, so that a sheet molding compound which considers both low pressure and low density and has good heat insulating performance is prepared.



21: 2021/08865. 22: 2021-11-10. 43: 2022-01-19 51: A61K; A61P

71: Shanxi Weiqida Guangming Pharmaceutical Co., Ltd.

72: CHEN, Jinzhao, CHEN, Liqiong, WANG, Zeshan, HAN, Feiyu, GUO, Qingshan 54: IRON SUCROSE INJECTION AND PREPARATION METHOD THEREOF 00: -

The present disclosure relates to the technical field of medicine preparation, and discloses an iron sucrose injection and a preparation method thereof. The method for preparing the iron sucrose injection of the present disclosure has qualified content of the iron sucrose injection, low impurity content, good stability, environmentally friendly and energy-saving process, and high yield. The iron sucrose injection prepared by the method of the present disclosure has low impurity content and good quality stability.



21: 2021/08866. 22: 2021-11-10. 43: 2022-02-09 51: A61K; A61P

71: Shanxi Tongda Pharmaceutical Co., Ltd. 72: YANG, Junping, XU, Chao, CHEN, Liqiong, SHUAI, Zhiming, LIU, Guang

# 54: COMPOUND RESERPINE TABLETS AND PREPARATION METHOD THEREOF

00: -

The present disclosure provides compound reserpine tablets and a preparation method thereof, and belongs to the technical field of western medicine preparations. By adopting the preparation method provided by the present disclosure, materials are uniformly mixed, and the tablets are good in dissolution rate and meet pharmacopoeia standards of Chinese Pharmacopoeia 2015 (Volume II).

21: 2021/08867. 22: 2021-11-10. 43: 2022-01-19 51: A63F; G06F; G06Q

71: Xiangyang Tejie Feiteng Software Development Co., Ltd.

72: ZHANG, Houpu

#### 54: DIGITAL EDUCATION SOFTWARE APPLICATION TECHNOLOGY 00: -

The present invention relates to the technical field of software, especially digital education software application technology, including text ad hoc, image ad hoc, scene ad hoc, and voice ad hoc. The image ad hoc is a unique game image design according to needs, the scene ad hoc is a unique game scene design according to needs, the voice ad hoc is a unique voice design according to needs. The beneficial effects are as follows: in the process of application software entertainment, entertainment software application users can get the educational enlightenment that other entertainment software cannot achieve; the present invention focuses on the integrated application of the text, image, and voice to enable the overall software application developed to reach an unprecedented network application height and purify the network environment; compared with the market network game application software, the present invention has the features of playing, learning and practical multi-body.

21: 2021/08868. 22: 2021-11-10. 43: 2022-01-19 51: E04B; E04H

71: QINGDAO UNIVERSITY OF TECHNOLOGY 72: ZHANG, Jigang, MA, Zhehao, LIANG, Haizhi, ZHENG, Yongzheng, ZHANG, Chunwei, FU, Wei, YAN, Lei

#### 54: MULTI-SEISMIC-PROOF SELF-RESETTING ASSEMBLED TYPE FRAMEWORK-SWING WALL ENERGY CONSUMPTION STRUCTURE 00: -

The present invention discloses a multi-seismicproof self-resetting assembled type framework-swing wall energy consumption structure, including a framework structure hinged to a wall body of a swing wall, and the swing wall; the bottom of the wall body is hinged to a foundation; several controllable plastic pin-connected joints are arranged on the framework structure and include column-end short beam sections connected with concrete columns in a pouring manner and girder embedded parts connected with a girder in a pouring manner; the end parts of the sections are spherical grooves; the end parts of the embedded parts are universal balls that are matched with the spherical grooves so that the embedded parts are connected with the sections; two sides of the wall body are provided with prestressed tendons, one end of each of which is fixedly connected to the foundation and the other end of which is anchored to the swing wall.



#### 21: 2021/08869. 22: 2021-11-10. 43: 2022-01-14 51: E02B

71: Ocean University of China

72: LIAO, Xinrui, XING, Lei, ZHANG, Hongmao, LIN, Haoran, ZHANG, Zixin, LIU, Yaxin, CHE, Haohan 33: CN 31: 202011567708.7 32: 2020-12-25 54: AUTOMATIC FLOW REGULATING SYSTEM FOR BLACK AND ODOROUS WATER BODIES IN RIVER CHANNELS 00: -

Disclosed is an automatic flow regulating system for black and odorous water bodies in river channels, comprising a rotary trough G, an inlet channel E, a clean water channel F and a sewage channel H, wherein the rotary trough G comprises an arc rotary trough wall and a main rotating shaft, and on the main rotating shaft are provided three water baffle boards: when one of the water baffle boards is turned parallel to an inlet channel wall A, a leading edge of one of the water baffle boards is exactly where the rotary trough wall joins a clean water channel wall B; when one of the water baffle boards is turned to a junction of an inlet channel B and a clean water channel wall A, a leading edge of one of the water baffle boards is exactly where the trough wall joins the clean water channel wall B; on the inlet channel are arranged water quality monitoring sensors, and the water quality monitoring sensors are connected to a processor and a rotation control device by wires. Obviously, the present invention is simple in the structure and reasonable in the design. In the present invention, after the water quality are detected by the sensors, water baffle boards rotate to separate sewage from clean water, so that water resources can be fully classified, and the sewage at a separation point can be treated centrally, which has a significant effect on utilization and treatment of river water resources.



21: 2021/08870. 22: 2021-11-10. 43: 2022-01-18 51: G01N

71: Shandong Hi-Speed Construction Management Group CO. LTD., Shandong University 72: Li Tao, Wu Jianqing, Wang Guan, Han Wen, Sun Zhiping, Li ZhouYuan, Yu Miao, Liu Shijie 54: INSPECTION ROBOT AND METHOD FOR MEASURING ROAD SURFACE FLATNESS 00: -

The invention discloses a patrol inspection robot and a patrol inspection method for measuring road surface flatness, including: a robot body, the robot body is fixed on a road guardrail by a fixing device and can move along the guardrail; the robot body is respectively provided with a first multi-beam lidar and a first camera device facing the road side; the first multi-beam lidar can perform multi-beam scanning on the road surface to form road surface data in the form of a surface unit, and the first camera device synchronously records the detection area of the multi-beam lidar. The invention adopts a robot patrol method to simultaneously measure the road surface flatness and monitor the road side slope, can realize all-weather measurement, adapt to harsh environments, and avoid fatigue.



21: 2021/08871. 22: 2021-11-10. 43: 2022-01-18 51: A61B

71: Children's Hospital of Soochow University 72: Wang Xiaodong, Yao Feng, Zhen Yunfang, Zhang Fuyong, Wang Zixuan, Zhu Zhenhua, Liu Yao, Yuan Quanwen, Shen Xiaofang, Yu Wentao, Su Guanghao, Zhang Zheng, Chen Mimi, Zhuang Ting, Shan Feng, Zhao Kai, Lin Juanjuan, Wu Hongmei, Wang Lin, Tang Fei, Zou Cheng 54: DOUBLE-ENDED KIRSCHNER WIRE FOR PEDIATRIC HIP JOINT SURGERY 00: -

The invention disclose a double-ended Kirschner wire for pediatric hip joint surgery, which comprise a needle body, wherein long arm and short arm are arranged at two end of that needle body; the length of the long arm is longer than that of the short arm, and a flexible part is fixedly connected between the long arm and the short arm, and the diameter of the flexible part is smaller than that of the long arm and the short arm; the end of the long arm away from the easy-to-bend part is provided with a long arm needle tip, and the end of the short arm away from the easy-to-bend part is provided with a short arm needle tip. Screw components are fixedly connected on the outer side wall of the long arm and the outer side wall of the short arm; the thread assembly comprises multi-level thread segments fixedly connected on the outer side wall of the long arm and the outer side wall of the short arm, and the thread spacing of the multi-level thread segments is unequal; the long arm needle tip and the short arm needle tip are both provided with connecting through holes. The needle insertion device can realize

double-end needle insertion, is easy to bend with firm fixing effect, and is not easy to slide out and fall off.



21: 2021/08872. 22: 2021-11-10. 43: 2022-01-18 51: E04B; E04H

71: QINGDAO UNIVERSITY OF TECHNOLOGY 72: ZHANG, Jigang, WANG, Tao, XU, Weixiao, YU, Yousheng, YU, Dehu, CHEN, Degang, WANG, Sheng, CHEN, Pengfei

#### 54: PREFABRICATED PREFINISHED VOLUMETRIC CONSTRUCTION (PPVC) MODULAR BUILDING STRUCTURE SYSTEM AND ASSEMBLY METHOD THEREOF 00: -

The present invention belongs to the technical field of civil engineering assembly, and particularly relates to a PPVC modular building structure system and an assembly method thereof. Shear connectors are disposed between modules, steel is bonded around the shear connectors, gaps are grouted, and lower slabs are in a structural form in which prefabricated slabs and cast-in-situ slabs interlock with each other by tooth-like structures, which increase the shear, tensile, and seismic resistance of the structure system, with low cost and high construction efficiency.



21: 2021/08873. 22: 2021-11-10. 43: 2022-01-18 51: A01B; C05G

71: Institute of Coastal Agriculture, Hebei Academy of Agriculture and Forestry Sciences

72: LIU, Yahui, SUN, Jianping, ZHAO, Zijing, LV, Jingjing

#### 33: CN 31: 202110361033.9 32: 2021-04-02 54: LOW-COST AND ENVIRONMENTALLY-FRIENDLY AMENDMENT FOR COASTAL SEVERELY SALINE-ALKALI LAND AND APPLICATION METHOD THEREOF 00: -

A low-cost and environmentally-friendly amendment for a coastal severely saline-alkali land, including the following raw materials: an organic fertilizer, calcium superphosphate, urea and polyvinyl alcohol. The present disclosure further provides an application method of the amendment. The method includes the following steps when planting shallow-rooted plants: uniformly spreading the amendment, plowing soil, ridging to form a ridge, planting the plants on both sides of the ridge and watering by drip irrigation; alternatively, conducting deep tillage on soil, ridging to form a ridge, applying the amendment on the ridge by furrow application, blending the amendment with the soil evenly, planting the plants on the ridge and watering by drip irrigation. The method includes the following steps when planting deep-rooted plants: conducting deep ploughing on soil, ridging to form a ridge, conducting broadcast application or hole application of the amendment on the ridge, planting the plants and watering by drip irrigation.



#### 21: 2021/08874. 22: 2021-11-10. 43: 2022-01-18 51: A61K

71: Northeast Agricultural University 72: Yu Wenhui, Chen Hao, Jiang Xiaowen, Ma Juan, Huo Mohan, Liu Zhihui, Wang Yao, Liu Si, Sun Mengging

#### 54: COMPOUND CHINESE MEDICINE FOR TREATING CHICKEN COLIBACILLOSIS AND PREPARATION METHOD THEREOF 00: -

The invention discloses a compound Chinese medicine for treating chicken colibacillosis and a preparation method thereof, and belongs to the technical field of veterinary medicines. The compound Chinese medicine is composed of five Chinese medicines including isatis root, dark plum, myrobalan, astragalus and atractylodes, the preparation method is to weigh the above-mentioned raw materials according to the mass ratio, add water to decoct, filter the medicinal solution and centrifuge, take the supernatant, concentrate, add ethanol to heat, shake, the supernatant is obtained by centrifugation again and distillation under reduced pressure. The compound traditional Chinese medicine has no toxic and side effects, and chickens will not develop resistance after being used, and can replace antibiotic drugs to treat livestock and poultry colibacillosis.



21: 2021/08875. 22: 2021-11-10. 43: 2022-01-18 51: A61B

71: Children's Hospital of Soochow University 72: Yao Feng, Wang Xiaodong, Wang Zixuan, Shen Xiaofang, Yin Chunhua, Yu Wentao, Zhen Yunfang, Zhang Fuyong, Guo Zhixiong, Su Guanghao, Chen Mimi, Sun Yuhan, Liang Peirong, Hu Xiaoling, Wang Lin, Zhu Min, Ma Lili, Chen Junjun, Zhang Yiqun, Hua Yanli, Deng Shilin

# 54: ULTRASONIC STEREOSCOPIC IMAGING SCANNING DEVICE

#### 00: -

The invention discloses an ultrasonic stereoscopic imaging scanning device, which belongs to the field of medical ultrasonic stereoscopic imaging and comprises a scanning box, wherein the scanning box is internally provided with a cavity, and the top of the scanning box is provided with an opening; the cavity is filled with a coupling agent; and the front or rear side of the scanning box is provided with an ultrasonic probe which is electrically connected with a host computer. The invention realizes the threedimensional imaging of the blood vessels of the tablet hand through ultrasonic examination, and compared with invasive blood vessel examination, it avoids the trauma of patients and the radiation ionization radiation damage of patients. Compared with the traditional simple ultrasonic two-dimensional examination, it is more specific and vivid to restore the three-dimensional shape of blood vessels, more accurate and convenient to locate, and the use process is simple and convenient.



21: 2021/08876. 22: 2021-11-10. 43: 2022-01-18 51: A01F

71: Tama Group

72: Nachem Doron, Gali Cantor Peled, Erez Shani, 33: US 31: 17/093,793 32: 2020-11-10 54: WRAPPING MATERIAL FOR REDUCED CONTAMINATION 00: -

In one embodiment, a wrapping material for wrapping around an agricultural product to form a bale, including a continuous web of material including a plurality of wrapping units, each wrapping unit having a first surface and an opposing second surface, and extending lengthwise from a leading end to a tail end, the tail end of each wrapping unit terminating at the leading end of an adjacent wrapping unit. Each wrapping unit includes a nontacky portion extending lengthwise from the leading end of the wrapping unit, and having a length greater than a circumference of the bale, and a tacky portion extending lengthwise from the nontacky portion to the tail end of the wrapping unit, and having a length greater than the circumference of the bale.



21: 2021/08877. 22: 2021-11-10. 43: 2022-01-18 51: A23P

71: Tarim University

72: Lan Haipeng, Tang Yurong, Ma Jiale, Zhang Yongcheng, Liu Yang

# 54: FRAGRANT PEAR POSTURE CORRECTION DEVICE

#### 00: -

The invention discloses a fragrant pear posture correction device, which can not only transport fragrant pears in an orderly manner, but also realize the posture adjustment of fragrant pears through visual inspection and a posture adjustment mechanism during the conveying process, so as to make each of the fragrant pears are in the same posture as much as possible, and the subsequent processing of fragrant pears is packaged; the posture mechanism of the present invention can adjust the posture of the fragrant pears on it according to the detection result of the visual detection mechanism, and the visual detection mechanism is configured In order to be able to visually detect and identify the pedicle or stem of the fragrant pear, the single-channel conveying mechanism can apply a certain conveying elastic force to the outer surface of the fragrant pear from both sides, and the size of the conveying elastic force is set to the fragrant pear can be rotated and driven by the posture adjustment mechanism, so as to adjust the posture of the fragrant pear and realize the automatic processing of the fragrant pear.

21: 2021/08878. 22: 2021-11-10. 43: 2022-01-18 51: H01M; B82Y

71: Qingdao University of Science and Technology 72: LI, Zhenjiang, DING, Shiqi, DAI, Xin, MENG, Alan, SONG, Guanying

33: CN 31: 202011355673.0 32: 2020-11-27 54: CATHODE MATERIAL MO-VS4/N-GNTS OF MAGNESIUM-ION BATTERY AND USE THEREOF 00: -

The present disclosure discloses a cathode material Mo-doped VS4/nitrogen-doped graphene tubes (Mo-VS4/N-GNTs) of a magnesium-ion battery and use thereof, and belongs to the technical field of battery materials. Ammonium metavanadate and ammonium molybdate are mixed at an appropriate ratio, mixed with an excess amount of a thioacetamide solution and then transferred into an autoclave along with N-GNTs prepared by using a vapor deposition method for a thermal reaction at 200°C for 4 hours; a resulting product is separately rinsed with deionized water and absolute ethanol for 3 times and then dried to obtain the cathode material Mo-VS4/N-GNTs of a magnesium-ion battery. In the present disclosure, a Mo-doped VS4 nanosheet arrays grow in situ on an N-GNTs skeleton material by using a one-step hydrothermal method.



21: 2021/08879. 22: 2021-11-10. 43: 2022-01-18
51: A23L
71: Tarim University
72: Ma Jiale, Zhang Yongcheng, Tang Yurong, Lan Haipeng, Liu Yang
54: FERMENTED KORLA FRAGRANT PEAR
FRUIT VINEGAR BEVERAGE AND
PREPARATION METHOD THEREOF
00: -

The invention discloses a fermented Korla fragrant pear fruit vinegar beverage and a preparation method thereof. The fruit vinegar beverage is prepared from the following raw materials in parts by weight: 30-40 parts of fragrant pear fruit vinegar stock solution, 10-20 parts of Korla fragrant pear concentrated juice, 10-15 parts of potassium sorbate, 10-20 parts of Korla fragrant pear baking powder, 5-8 parts of green plum baking powder and 0.15-0.25 part of color fixative and water to make up to 500 parts. The fruit vinegar beverage obtained by the invention has good taste and rich nutrition, has a certain maintenance function for the intestinal tract of human body, and has a certain beauty effect after long-term consumption.

21: 2021/08880. 22: 2021-11-10. 43: 2022-01-18 51: A61K: C12N

71: The Fifth People's Hospital of Wuxi 72: Yan Yan

# 54: HSV-2 DNA VACCINE FOR INTRAMUCOSAL USE AND ITS PREPARATION METHOD AND APPLICATION

#### 00: -

The present invention provides a HSV-2 DNA vaccine for intramucosal use. The vaccine includes pgD, pCCL28 and immune mediators, pgD is a pcDNA3.1 (+) plasmid containing the nucleotide sequence of HSV-2 gD envelope glycoprotein, pCCL 28 is a pcDNA3.1(+) plasmid containing the nucleotide sequence of CCL 28, and the vaccine is immunized or used via mucosal membranes. The present invention also provides a method for preparing the above-mentioned vaccine; the present invention also provides an application of the abovementioned vaccine in the prevention and treatment of herpes simplex virus infection and the treatment of herpes simplex virus-related diseases. The DNA vaccine of the present invention has ideal immune protection and HSV-2 control and disease treatment effects, is easy to promote and use, easy to control quality, easy to mass-produce, store and transport, low cost, simple operation, and has a good market application prospect.



21: 2021/08881. 22: 2021-11-10. 43: 2022-01-18 51: A23N

- 71: Shanghai Ocean University
- 72: Li Yongguo, Tang Xuan

# 54: MULTIFUNCTIONAL AUTOMATIC GARLIC PEELING MACHINE

00: -

The present invention provides a multifunctional automatic garlic peeling machine, including a splitting device, an auxiliary device, a number of adsorption devices, a driving mechanism, a blocking mechanism, a transmission device, a mashing device and a slicing device; the auxiliary device is provided at the bottom of the splitting device, a peeling shell is connected to the bottom surface of the auxiliary device, the adsorption device communicates with the inner cavity of the peeling shell; the bottom surface of the peeling shell is provided with a blocking mechanism; the bottom of the transmission shaft penetrates through the blocking mechanism and is in transmission connection with the driving mechanism, and the top of the transmission shaft penetrates through the top surface of the peeling shell and is in transmission connection with the auxiliary device, several stirring rods are fixedly connected in the circumferential direction on the upper part of the outer wall of the drive shaft; the bottom surface of the peeling shell is fixedly connected with a first cone tank, the bottom surface of the first cone tank is provided with a discharging port, and the bottom surface of the peeling shell is fixed with a frame, a transmission device is arranged at the bottom of the frame, and a mashing device and a slicing device are respectively arranged on both sides of the top surface of the transmission device. The multifunctional automatic garlic peeling machine of the present invention can independently complete the overall garlic processing technology.



21: 2021/08882. 22: 2021-11-10. 43: 2022-01-18 51: C12N: C12Q: C12R

71: Beijing Animal Disease Control Center

72: WANG, Lin, WEI, Haitao, SONG, Yanjun, WU, Di, ZHANG, Qilong, DU, Juan, LI, Rui, CHENG, Rujia

# 54: PRIMER SET, RAPID VISUAL FLUORESCENT DETECTION KIT, AND METHOD FOR DETECTING AFRICAN SWINE FEVER VIRUS

00: -

The present disclosure provides a primer set, a rapid visual fluorescent detection kit, and a method for detecting African swine fever virus (ASFV). The primer set for detecting ASFV includes a pair of specific outer primers, a pair of specific inner primers, and a loop primer, where the corresponding nucleotide sequences of the primers are shown in SEQ ID NO. 1 to SEQ ID NO. 5, respectively. The rapid visual fluorescent detection kit prepared by the present disclosure can realize highly sensitive and highly specific detection of ASFV; meanwhile, because of easy and convenient operation, detection can be conducted only through a water bath capable of achieving isothermal amplification or an isothermal amplification system; because the cost is low and the equipment application range is wide, the

kit is suitable for on-site rapid diagnosis of epidemic diseases and timely treatment during the outbreak of epidemic diseases.



21: 2021/08883. 22: 2021-11-10. 43: 2022-01-18 51: C12N; C12Q; C12R

71: Beijing Animal Disease Control Center 72: WANG, Lin, WEI, Haitao, SONG, Yanjun, ZHANG, Wei, LI, Yunpeng, GAO, Xiaolong, WANG, Pei

#### 54: PRIMER SET, KIT, AND METHOD FOR FLUORESCENT LAMP ASSAY FOR AFRICAN SWINE FEVER VIRUS 00: -

The present disclosure provides a primer set, a kit, and a method for fluorescent loop-mediated isothermal amplification (LAMP) assay for African swine fever virus (ASFV). The ASFV can be detected in a highly sensitive and highly specific manner by the kit for fluorescent LAMP assay prepared by the present disclosure. The lowest limit of detection is 4 copies; because of convenient operation and low cost, the kit is suitable for on-site rapid diagnosis at the early stage of epidemic outbreak and timely control of the outbreak.



21: 2021/08884. 22: 2021-11-10. 43: 2022-01-18 51: A01C

71: SHANDONG UNIVERSITY OF TECHNOLOGY 72: CHEN, Yulong, ZHANG, Meng, LAN, Yubin, YIN, Xiang, YI, Lili, LIU, Zeqi, LIU, Jiyuan, JIANG, Yeyuan, KANG, Wangcai, ZHAO, Wenqi 33: CN 31: 202110429327.0 32: 2021-04-21 54: AIR SUCTION TYPE PRECISION SEED-METERING DEVICE CAPABLE OF ADJUSTING SUCTION HOLE SIZES 00: -

The present invention discloses an air suction type precision seed-metering device capable of adjusting

suction hole sizes, including a seed-metering shell and a seed-metering disc between which an adjusting disc and a negative pressure area adjusting assembly are arranged. The adjusting disc has a plurality of adjusting communicating holes and adjusting driving holes arranged uniformly circumferentially. The adjusting communicating holes are communicated with suction holes. The negative pressure area adjusting assembly includes a plurality of adjusting blocks arranged circumferentially. Two side surfaces of two adjacent adjusting blocks are attached. One of the adjusting blocks has an adjusting driving portion matched in the adjusting driving hole. The seed-metering disc has a plurality of sliding grooves as many as the adjusting blocks. The adjusting block has a sliding portion matched in the sliding groove. A central space of the adjusting blocks forms a variable negative pressure hole.



- 21: 2021/08885. 22: 2021-11-10. 43: 2022-01-18 51: B60Q
- 71: ShanDong JiaoTong University
- 72: Zhang Lidong

# 54: VEHICLE OVER-LIMITED EARLY WARNING SYSTEM AND METHOD

00: -

The invention discloses a vehicle over-limited early warning system and method, and the system comprises a control system, a vehicle height and width detection device, an image acquisition device and a vehicle over-limited warning device which are arranged before passing through a height limit or width limit device; the vehicle height and width detection device is used for detecting the height and width of passing vehicles; the control system is used for controlling the image acquisition device to collect vehicle pictures according to the detected height and width, recognizing license plates of vehicles with over-limited height or width, and generating vehicle over-limited alarm information including license plates; and the vehicle over-limited warning device is used to display over-height over-width alarm information. The alarm information including the license plate number is displayed on the warning sign, thus intuitively reminding the driver, reducing the harm to infrastructure, vehicles and drivers caused by the fuzziness of visual information, avoiding damage to public transport facilities and improving safety; and by setting the vehicle terminal and establishing an ad hoc network, the alarm information is released to the passing vehicles in advance, thus reducing traffic accidents.



21: 2021/08886. 22: 2021-11-10. 43: 2022-01-18

51: A47C; A61G

71: University of Shanghai for Science and Technology

72: Bingshan HU, Ke CHENG, Hongyu ZHENG, Hongliu YU, Qiaoling MENG, Huarui ZHU **54: A CENTRAL SPLIT NURSING BED** 

00: -

The invention relates to a central split nursing bed, which comprises a bed body part and a wheelchair part. The wheelchair part comprises a foot pedal, a leg module, a base module, a backrest module and a driving module; The invention relates to a central split nursing bed, which comprises a bed body part and a wheelchair part. The wheelchair part comprises a foot pedal, a leg module, a base module, a backrest module and a driving module;

The base module comprises a base main shaft, a left down turnover plate and a right down turnover plate; The backrest module comprises a backrest main shaft, a left up turnover plate and a right up turnover plate. The left down turnover plate is connected with the left up turnover plate, and the right down turnover plate is connected with the right up turnover plate. Compared with the prior art, the invention is provided with four turnover plates, which are respectively connected to both sides of the backrest main shaft and both sides of the base main shaft, users lying on the bed can more easily contact the turning board, so as to turn over alone, which is more convenient for users to use. Two handrails with adjustable height and length are set on the turnover board. Users can adjust the handrails according to actual needs to achieve better rehabilitation training effect, the anti-skid layer is set on the handrail, which further ensures the safety of users' rehabilitation training.



21: 2021/08889. 22: 2021-11-10. 43: 2022-01-18 51: A01G

71: SHANDONG INSTITUTE OF POMOLOGY 72: LI, Guixiang, GAO, Xiaolan, ZHANG, Anning, ZHANG, Jun, FU, Zhaochang, SUN, Jiazheng, LI, Miao

# 33: CN 31: 202111220445.7 32: 2021-10-20 54: ARBORIZED FRUIT TREE PLANTING METHOD APPLICABLE TO COASTAL SALINE-ALKALI LAND

00: -

The present invention relates to an arborized fruit tree planting method applicable to coastal salinealkali land, and comprises the steps: (1) ridging cultivation is conducted, the ridge spacings are 4.0 m and 4.0-6.0 m in turn, and ridges are 20-50 cm high and 2.0 m wide; (2) drainage ditches are set, primary drainage ditches are set on both sides of an orchard, and secondary drainage ditches are set between fruit tree rows; (3) fruit trees are planted, the fruit trees are planted in the middle of the ridges; (4) the orchard coverage is conducted, the ridges are covered with rice straw or wheat stalks, and the rice straw or wheat stalks are covered with horticultural ground cloth; and (5) water and fertilizer are managed; watering is carried out by means of microspray irrigation; and fertilizer is applied before ridging and during the full bearing period.



# 21: 2021/08917. 22: 2021-11-11. 43: 2022-02-09 51: G08B; G08G

71: SHANDONG HI-SPEED CONSTRUCTION MANAGEMENT GROUP CO., LTD, Shandong University

72: WU, Jianqing, PI, Rendong, LI, Tao, LI, Liping, YAN, Zongyao, YANG, Ziliang, JIANG, Qing, HOU, Fujin, LV, Chen, LIU, Shijie

33: CN 31: 202110479058.9 32: 2021-04-30 54: SYSTEM FOR WARNING CONSTRUCTION PERSONNEL AND USING METHOD THEREOF 00: -

The invention relates to a system for warning a constructor and a using method thereof. The system comprises a main rod, a monitoring system, a processing system and a power supply system, wherein the monitoring system is arranged on the main rod, the monitoring system is connected to the processing system which processes traffic volume information monitored by the monitoring system and feeds the traffic volume information back to a traffic control center, and the monitoring system and the processing system are both connected to the power supply system. According to the invention, information is automatically collected through a laser radar, motor vehicles, non-motor vehicles and pedestrians of different types of vehicles passing

through the road are counted, the road traffic quantity is monitored, and the vehicles to be driven into the construction area are warned, so that the construction safety of road constructors is guaranteed.



21: 2021/08921. 22: 2021-11-11. 43: 2022-02-09 51: G06K; G06T

71: Zhejiang Academy of Agricultural Sciences 72: HU, Jun, ZHAO, Dandan, CHEN, Wenxuan, ZHOU, Chengguan

# 54: METHOD FOR IDENTIFYING FRESHNESS OF SQUID BASED ON COLOR SPACE TRANSFORM AND PIXEL CLUSTERING

### 00: -

The present disclosure provides a method for identifying freshness of squid based on color space transform and pixel clustering, including the following steps: thawing out squid, cleaning the squid, and preparing the squid into a squid sample; stretching the squid sample on a work table which is placed in an irradiation area of a secondary light source, and collecting images of the squid sample at different angles by using a photographic apparatus to obtain an original squid image; preprocessing the image to obtain a test image; and performing color space transform and pixel clustering on the test image, extracting a red rot area in the test image and calculating a ratio of the red rot area to a total surface area of the squid, followed by dynamically analyzing meat changes of the squid and monitoring a rotting rate thereof.



# 21: 2021/08925. 22: 2021-11-11. 43: 2022-02-08 51: C12N; C12Q

71: Nanjing Medical University

72: WU, Wei, TANG, Qiuqin, JIANG, Hua, LU, Yiwen, CHEN, Liping, CHEN, Minjian, LU, Chuncheng, XIA, Yankai 54: FETAL MACROSOMIA-RELATED MIRNA MARKER AND USE THEREOF 00: -

The present disclosure provides a fetal macrosomiarelated miRNA marker or a combination and use thereof. The markers can be used to prepare a kit for the early diagnosis and monitoring of fetal macrosomia.



21: 2021/08926. 22: 2021-11-11. 43: 2022-02-08 51: B63B

71: Ocean University of China

72: YANG, Jie, CHEN, Ge, MA, Chunyong, JIN, Pingping

# 54: WAVE-DRIVEN PROFILER

00: -The present invention relates to the field of marine detection equipment, and particularly to a wavedriven profiler, which includes: a marine surface float ball, a lifting platform, a mooring, an upper trigger block, a lower trigger block, and a tensioning hammer, wherein the lifting platform includes a support column, an isolation frame, a large float block, main support plates, a mooring

single/bidirectional control unit, a lever unit, and concentric limit units.



# 21: 2021/08929. 22: 2021-11-11. 43: 2022-02-09 51: H04W

71: Dalian University of Technology

72: XU, Zichuan, XIA, Qiufen, QIAO, Haiyang 33: CN 31: 202110629979.9 32: 2021-06-07 54: METHOD FOR REQUEST SCHEDULING IN **UAV-ASSISTED MOBILE EDGE COMPUTING** (MEC) NETWORK

00: -

A method for request scheduling in an unmanned aerial vehicle-assisted mobile edge computing network: determining multiple feasible UAV deployment points based on obstruction information in a target area; randomly selecting U feasible UAV deployment points from the multiple feasible UAV deployment points as UAV deployment points; dividing each UAV into multiple virtual UAVs; allocating user requests in a central queue of a UAVassisted MEC to the virtual UAVs; using a roundrobin policy to schedule the user requests allocated to each virtual UAV; after a specified time period t, if a network pressure mitigation condition isn't met, inputting historical user request data of each feasible UAV deployment point into a trained MT-LSTM neural network model, obtaining a to-be-processed data volume of each feasible UAV deployment point in a next specified time period t; re-determining UAV deployment points; redeploying UAVs carrying small

# cell base stations based on the new UAV deployment points.



#### 21: 2021/08934. 22: 2021-11-11. 43: 2022-02-09 51: G06T

71: Guangdong Medical University 72: Zhiwei He, Longji Wu, Xia Kong, Jie Ding, Xin Liang, Wenjing Pei

#### 54: TUMOR AIDED DIAGNOSIS SYSTEM BASED **ON ARTIFICIAL INTELLIGENCE** 00: -

The invention discloses a tumor aided diagnosis system based on artificial intelligence. The invention adopts a three-dimensional reconstruction method to accurately restore the tumor tissue morphology, and can quickly identify the size, density and position of the tumor; the invention combines historical data to obtain a more accurate aided diagnosis result through big data comparison. The diagnosis effect of the invention is fast and the accuracy is high. The tumor tissue restored by the method is intuitive, and the invention can also restore the surrounding conditions of the tumor, which is convenient for the doctor to determine the next treatment plan according to the tumor position and surrounding conditions.



21: 2021/08972. 22: 2021-11-12. 43: 2022-01-19 51: A01G

71: Shandong Institute of Pomology, Shandong Academy of Grape

72: Tang Haixia, Wang Zhongtang, Pei Guangying, Huang Jian, Yin Yanlei, Tang Changxin

54: WATER-SAVING IRRIGATION SYSTEM FOR FRUIT TREES AND APPLICATION THEREOF 00: -

The invention relates to a water-saving irrigation system for fruit trees and an application thereof, which belongs to the technical field of water-saving irrigation. The system comprises a water pump unit, a filter, a primary water separator, a secondary water separator, a siphon air inlet valve, a spiral reducer and a ground nozzle, wherein one end of the water pump unit is connected to a water source, the other end is connected to a lateral water inlet of the filter, the water outlet of the filter is connected to a primary water separator, the primary water separator is connected to a secondary water separator, the secondary water separator is connected to the spiral reducer and the secondary water separator. According to the invention, the water source is treated, impurities in the water are removed, the stable work of pipelines and nozzles is ensured, and the root of fruit trees is aerated for irrigation, so that the problem of poor air permeability of the root of fruit trees after irrigation is solved, the utilization rate of irrigation water is improved, and the production capacity of fruit trees is improved.



21: 2021/08973. 22: 2021-11-12. 43: 2022-01-19 51: G06K; G06T

71: Northwest A and F University

72: LIU, Li, MA, Taian, QIU, Zhidong, LIU, Wei, SHI, Yinggang

#### 54: ONLINE FRUIT AND VEGETABLE IDENTIFICATION SYSTEM BASED ON RGB-D VISION AND METHOD THEREOF 00: -

An online fruit and vegetable identification system based on RGB-D vision and a method thereof, comprising an online loading platform, a real depth camera and an identification control system, wherein the identification control system comprises a main control computer, a point cloud processing module, a point cloud identification module and a humancomputer interaction module; the real depth camera is connected with the main control computer; the point cloud processing module comprises a point cloud image generation module, a point cloud image enhancement module, a point cloud image filtering module, a point cloud image registration module, a point cloud image segmentation module and a point cloud image sending module; the point cloud identification module comprises a point cloud image matching module and a point cloud model feature database; the point cloud model feature database comprises a point cloud color database, a point cloud outline database and a point cloud feature database.



21: 2021/08974. 22: 2021-11-12. 43: 2022-01-19 51: A61K 71: ANHUI SHENGHAITANG PHARMACEUTICAL CO., LTD 72: CHEN, Zihai, TANG, Jie, TANG, Chao, TANG, Tao

# 54: METHOD FOR INDUSTRIALLY EXTRACTING BO CHRYSANTHEMUM

00: -

The present disclosure relates to a method for industrially extracting Bo chrysanthemum, specifically including: extracting the Bo chrysanthemum by refluxing via heating in ethanol, recycling ethanol, concentrating the mixture, adsorbing Bo chrysanthemum extract onto a macroporous resin for elution, collecting the eluent, concentrating the eluent, and drying the concentrate, to provide purified total flavones in the Bo chrysanthemum. The present disclosure has the advantages that the operations of the method are simple and fast; the macroporous resin is characterized by large adsorption capacity and high desorption rate, and is cheap and nontoxic; the content of the total flavones can reach more than 55%, the reproducibility is good, and the resin can be reused.

21: 2021/08975. 22: 2021-11-12. 43: 2022-01-19 51: F16H

71: Qingdao University of Science and Technology 72: Wu Junfei, Fu Ping, Bi Jie, Bai Yang, Zhou Yuting, Wu Siyang

#### 54: RV-TYPE GEAR RETARDER FOR SUBMERSIBLE SCREW PUMP 00: -

The invention provides RV-type gear retarder for submersible screw pump, whose output form is fixed internal gear and low-speed shaft output. The retarder consists of first-stage transmission part and second-stage transmission part with less differential gear transmission, specifically comprising input shaft, central wheel 1, planetary wheel 2, crankshaft H, gear 3, gear 4 and an output mechanism. The central wheel 1 is connected with the input shaft to transmit input power and mesh with the planetary wheel 2; The planet wheel 2 is fixedly connected with the crankshaft H, and a plurality of planet wheels are evenly distributed on a circumference to play the role of shunting. Two identical gears 3 are installed on the crankshaft H through bearing connection, and the eccentric position of the two gears is 180. On the output mechanism W, the output end of the crankshaft is installed on it through bearing connection. Among them, three planetary gears are distributed around the central gear,

corresponding to three crankshafts. The invention has the advantages of high bearing capacity, high efficiency and the like



21: 2021/08976. 22: 2021-11-12. 43: 2022-01-19 51: A61K

71: ANHUI SHENGHAITANG PHARMACEUTICAL CO., LTD

72: CHEN, Zihai, TANG, Jie, TANG, Chao, TANG, Tao

### 54: PRODUCTION AND PROCESSING METHOD OF GENUINE MEDICINAL MATERIAL WHITE PEONY ROOT FOR REDUCING THE LOSS OF COMPONENT PAEONIFLORIN 00: -

The present disclosure discloses a production and processing method of genuine medicinal material white peony root for reducing the loss of component paeoniflorin, comprising the following steps: (1) selecting 4-5-year-old white peony root, chopping off buds for seed reservation, breaking off the root of the white peony root, cutting into strips, and removing basal part, fine root and lateral root raised heads; (2) cleaning; (3) putting the cleaned white peony root into a steamer for steaming to ensure that the core is steamed completely, taking out, and soaking in cold water for several minutes; (4) peeling; (5) drying; (6) moistening: taking out the dried white peony root, spraying with a proper amount of water, and covering with a plastic film for moistening; (7) slicing: slicing into 2-3mm slices; (8) secondary drying: putting the moistened white peony root into the low-temperature dryer again for drying, and sealing and packaging.



21: 2021/08977. 22: 2021-11-12. 43: 2022-01-19 51: A61K

71: ANHUI SHENGHAITANG PHARMACEUTICAL CO., LTD

72: CHEN, Zihai, TANG, Jie, TANG, Chao, TANG, Tao

# 54: PRIMARY PROCESSING METHOD OF ANEMARRHENAE

00: -

The present disclosure discloses a primary processing method of anemarrhenae, specifically including the following steps: blanching, preparing a curing agent, curing, drying, refrigeration, and peeling operation. Anemarrhenae processed using this method can be effectively prevented from the phenomena, such as decaying, mildewing, and going bad, caused by improper storage; thereby eliminating the phenomenon of sulfur fumigation, controlling the anemarrhenae quality from the source, and combining two operating steps of first dehairing and then peeling in conventional processing methods into one step, thus simplifying the process and saving the processing costs and labor forces.

21: 2021/08978. 22: 2021-11-12. 43: 2022-01-19 51: G01C

71: 801 Institute of Hydrogeology and Engineering Geology, SPBGM, Shandong Provincial Bureau of Geology and Mineral Resources (SPBGM), Dizi New Energy Technology Co., LTD, Shandong No.3 Exploration Institute of Geology and Mineral Resources, Shandong Lunan Geological Engineering Survey Institute 72: Kang Fengxin, Sui Haibo, Ma Zhemin, Zheng Tingting, Wei Shanming, Jiang Lulu, Zhou Qundao, Shi Meng, Shi Qipeng, Wang Chengming

#### 54: TECHNIQUE FOR DETECTING GEOTHERMAL WATER ENRICHMENT AREA IN PIEDMONT KARST GEOTHERMAL RESERVOIR 00: -

The invention discloses a technique for detecting geothermal water enrichment area in piedmont karst geothermal reservoir. The method of the present invention establishes a composite prospecting model of geothermal water enrichment area based on the theoretical basis of sedimentary facies, geology and genesis of carbonate reservoir. The weathering crust karst zone of the interlayer karst, the compound zone of interlayer karst and water conduction and heat convection fracture, or the contact zone with intrusive rocks and soluble rocks is determined as the dominant direction for the exploration of geothermal water enrichment area. The specific steps of the method are as follows: (1) on the basis of regional geothermal geological investigation, delineate the distribution range of geothermal fields; (2) according to the thickness of cap rock, find out the area with the cap rock thickness of 400-2700 m as the supply area of geothermal water; (3) based on the composite prospecting model of geothermal water enrichment area in karst geothermal reservoir, find the composite area of three types of geothermal water enrichment zones, and preliminarily delineate the geothermal water enrichment target area; (4) by means of comprehensive geophysical exploration, determine the nature and distribution of faults in the target area, the range of fault influence zones, etc., and determine the specific location and spatial distribution of low-resistance anomaly zones; (5) the low-resistance anomaly zone in the geothermal target area is usually a composite zone of geothermal water enrichment area, and its center position is the determined optimal location of geothermal well.



21: 2021/08979. 22: 2021-11-12. 43: 2022-01-19 51: C05G

71: Qingdao Agricultural University

72: SONG, Xiangyun, XU, Peijie, LIU, Xinwei, YU, Guiling, ZHANG, Xiaoguang, CUI, Dejie

# 54: SPECIAL CARBON-BASED FERTILIZER FOR COTTON FIELDS AND PREPARATION METHOD THEREOF

00: -

A method for preparing a special carbon-based fertilizer for the cotton fields. The special carbonbased fertilizer is prepared from the following raw materials in parts by weight: 15-18 parts of diammonium phosphate, 2-5 parts of urea, 2-5 parts of potassium sulfate, 30-45 parts of cotton stalk biochar, 8-16 parts of gypsum and 8-16 parts of bentonite. The preparation method comprises the following steps: step 1, carbonizing cotton stalks at 450-550 degree Celsius under limited oxygen to prepare biochar, and uniformly spraying wood vinegar on the prepared biochar; step 2, sieving bentonite and gypsum by a 100-mesh sieve, and sieving the cotton stalk biochar by a 60-mesh sieve; step 3, mixing various raw materials and uniformly stirring to prepare a carbon-based fertilizer mixture; step 4, primarily granulating the carbon-based fertilizer mixture to prepare fertilizer granules; step 5, drying the fertilizer granules by using a dryer to obtain the cotton stalk carbon-based fertilizer.

21: 2021/08980. 22: 2021-11-12. 43: 2022-01-19 51: B01J

71: Zhou Yao

72: Zhou Yao, Liu Fusheng, Song Xiuyan

#### 54: PREPARATION METHOD OF AG/AGCL/IL/FEOOH/AC PHOTOCATALYTIC MATERIAL AND ITS APPLICATION 00: -

This invention provides preparation method of Ag/AgCI/IL/FeOOH/AC photocatalytic material and its application is characterized in comprising the following steps: (1) Reacting activated carbon AC and FeCl3 in water with pH value of 1.5-2.0 at mass ratio of 2:(4-5) to prepare Beta-FeOOH/AC. (2) Mixing the prepared Beta-FeOOH/AC with toluene solution of N-methylimidazole ionic liquid in a mass ratio of (2-3):1, heating for reaction, repeatedly washing with acetone and drying after the reaction, and obtaining IL/Beta-FeOOH/AC. (3) Mixing the IL/Beta-FeOOH/AC prepared above with AqNO3, wherein the AqNO3 concentration is 0.04-0.1 mol/L and the mass ratio of IL/ Beta-FeOOH/AC to AgNO3 is 2:(4-5), and irradiating with xenon lamp to obtain the Ag/AgCl/IL/FeOOH/AC photocatalytic material. Compared with the prior art, the method has high degradation efficiency, stable catalyst, reusability and good environmental significance.

# 21: 2021/08981. 22: 2021-11-12. 43: 2022-01-19 51: E21C

71: Kuche Yushuling Coal Mine Co., Ltd., China University of Mining and Technology, No. 12 mine of Pingdingshan Tian'an Coal Industry Co., Ltd. 72: Shan Chengfang, Huang Peng, Zhang Qi, Deng Wuxian, Si Haitao, Li Yafeng, Wang Haiyang, Ma Xiaohong

# 54: FAST AND INTELLIGENT MINING METHOD FOR LONGWALL IRREGULAR WORKING FACES IN COAL MINE

00: -The invention relates to a fast and intelligent mining method for longwall irregular working faces in coal mines, belonging to the mining method of longwall irregular working faces. The fast and intelligent mining method of irregular working face adopts transportation equipment, transportation supports and scrapers, intelligently calculates the positions of expanding and shrinking faces according to the actual layout of the working faces, places the supports to be installed at the expected positions or directly retracts tools, then transports them to the pre-installation position, unloads them by winch or other auxiliary equipment, and then installs the

supports and scrapers. When the mining reaches the shortened working face, firstly the supports and scrapers are dismantled, transported to the corresponding roadway for loading, and finally transported out by winch or other auxiliary equipment. The fast and intelligent mining method has following advantages: the waste of resources can be reduced by maximizing the recovery of boundary coal pillar. Mining is carried out orderly, safely and efficiently. Relieve the shortage of mine replacement and the influence of working face mining, and realize the high recovery rate mining of irregular coal seam group. The whole intelligent mining method is convenient to use, safe and reliable, has strong adaptability, and has wide adaptability and field applicability.



#### 51: G06N

71: Dalian University of Technology 72: XU, Zichuan, XIA, Qiufen, LI, Dongrui 33: CN 31: 202110629960.4 32: 2021-06-07 54: UNCERTAINTY-AWARE FEDERATED LEARNING METHOD AND SYSTEM IN MOBILE EDGE COMPUTING NETWORK 00: -

An uncertainty-ware federated learning (FL) method and system in a mobile edge computing (MEC) network. The method includes: defining an average volume of a training parameter of each user equipment (UE) under an uncertainty of an MEC network based on an FL framework; determining an average model size factor during each FL task request; determining the minimum number of aggregators and the maximum number of aggregators during each FL task request; determining the number of aggregators; constructing an auxiliary graph, and determining a location decision according to the auxiliary graph; determining a total cost during each FL task request according to the location decision; and adjusting the number of aggregators according to the total cost with a resource capacity of the MEC network as a constraint to obtain the optimal number of aggregators during each FL task request, and optimizing the FL framework according to the optimal number of aggregators.



#### 21: 2021/08983. 22: 2021-11-12. 43: 2022-01-19 51: G06K

71: Southwest University

72: Dong Tao, Ji Jingmin

#### 54: A FACE RECOGNITION SYSTEM BASED ON CONVOLUTIONAL NEURAL NETWORK 00: -

The invention provides a facial recognition system based on convolutional neural network, including: shell, camera, display and control module. Before using facial recognition system, users need to input multiple user photos of different angles into the central control module. The central control module recognizes different photos of the same user and obtains face static feature data through a built-in algorithm. When using the facial recognition system, the camera collects face video information and transmits it to the central control module. The central control module selects the most suitable face image and compensates the face image by distance and brightness. In the process of comparison, the face image is divided into several regions and compared one by one with the idea of calculus. The invention comprehensively obtains human facial features through early data recognition, speeds up recognition speed during face recognition, and increases recognition accuracy through calculus and weight distribution.



21: 2021/08984. 22: 2021-11-12. 43: 2022-01-19 51: A61B

71: Children's Hospital of Soochow University 72: Yao Feng, Zhang Fuyong, Zhen Yunfang, Wang Xiaodong, Wang Zixuan, Liu Yicong, Yuan Quanwen, Zhu Zhenhua, Zhu Lunqing, Su Guanghao, Zhang Zheng, Chen Mimi, Liu Yao, Liu Ya, Liu Wendong, Liang Peirong, Zhang Yiqun, Tang Zizhen, Li Xiaoyan, Jin Jie, Wu Xinyan 54: X-RAY PERSPECTIVE THREE-DIMENSIONAL POSITIONING AUXILIARY TOOL 00: -

The invention discloses an X-ray perspective threedimensional positioning auxiliary tool. A plaster support comprises a cotton pad, and a plaster layer is fixed on the bottom surface of the cotton pad; a waterproof layer is fixed on the bottom surface of the gypsum layer, and a plurality of developing strips are fixed on the bottom surface of the waterproof layer, and the matrix types of the developing strips are different, and the developing strips comprise a first developing strip, a second developing strip and a third developing strip; and the matrix types of the first developing strip, the second developing strip and the third developing strip are different. The invention is low in cost, simple in structure, convenient to operate, safe and harmless to human body, convenient for presenting the threedimensional structure of bone, reducing the difficulty of identifying and diagnosing diseases, avoiding missed diagnosis and misdiagnosis, and improving the diagnosis and treatment efficiency of clinicians.

654

21: 2021/08985. 22: 2021-11-12. 43: 2022-01-19 51: C07D 71: Linyi University 72: LI, Jixing, CONG, Wenxia 54: PREPARATION METHOD OF 2-METHYLQUINOLINE

00: -

A preparation method of 2-methylquinoline. The preparation method includes the following synthesis steps: in the presence of an oxidant, adding a catalyst and an auxiliary agent, and adding nitrobenzene and ethanol to conduct a one-step reaction to obtain a 2-methylquinoline target product. The catalyst includes a metal catalyst, and the auxiliary agent includes an auxiliary agent I and an auxiliary agent II, the metal catalyst is a palladium metal catalyst, the auxiliary agent I is a silvercontaining compound, and the auxiliary agent II is an acidic compound. According to the method, the nitrobenzene and the ethanol are used as raw materials, and the 2-methylquinoline can be prepared through the one-step reaction. The preparation method is simple, convenient and easy to implement. The preparation process does not generate new three wastes, is environmentally friendly, and provides a green and environmentfriendly synthesis method to adapt to the development of the times.



21: 2021/08986. 22: 2021-11-12. 43: 2022-01-19 51: A23L

71: Xiamen Sci-plus Biotech. Co., Ltd. 72: LIU, Wenmei, ZOU, Zehua, DENG, Honghui, YU, Chengzhuang, YU, Jinming 54: METHOD FOR DEODORIZING AND ENHANCING FLAVOR OF MEAT AND MEAT PRODUCTS BY USING LACTOBACILLUS FERMENTATION BROTH 00: -

The present disclosure discloses a method for deodorizing and enhancing flavor of meat and meat products. The method comprises the following steps: slicing meat or meat products: slicing meat products, wherein the slice thickness is controlled to be 0.3-1 mm; rolling and kneading: adding lactobacillus fermentation broth; and performing manual or machine rolling and kneading under the environment of vacuum of 0.07 MPA and the temperature being 4 degrees centigrade or below for 15-20 minutes; a preparation method of the lactobacillus fermentation broth comprises the following steps of performing high-temperature sterilization on an expansion culture medium, then cooling to 30-40 degrees centigrade, performing inoculation with lactobacillus plantarum HM6068, fermenting, inactivating at 95 degrees centigrade for 30 min, loading in a tank, and filling so as to obtain the lactobacillus fermentation broth, wherein the expansion culture medium contains white granulated sugar, a yeast extract, a soybean extract, magnesium sulfate and purified water.

- 21: 2021/08989. 22: 2021-11-12. 43: 2022-01-19
- 51: C07C; C09K; G01N
- 71: Dezhou University

72: CHEN, Yuting, WANG, Guangyin, FAN, Jinyong, ZHAO, Hongrui, HU, Kaili, DONG, Yaru 33: CN 31: 202110406915.2 32: 2021-04-15 54: MOLECULAR SENSOR WITH FLUORESCENCE DETECTION SIGNAL OF "OFF-ON-OFF" TO ACIDIC ENVIRONMENT AND APPLICATION THEREOF 00: -

The present disclosure relates to the technical field of organic compound properties, and discloses a triphenylamine-fluorene molecular sensor. The triphenylamine-fluorene molecular sensor is prepared in one stage by polymerization reaction of 2, 7 diaminofluorene with p-

diphenylaminobenzaldehyde. The molecular sensor contains both diphenyl and imine proton interaction sites, exhibiting sensitive "off on off" dual fluorescence detection signals to an acidic environment, with high sensitivity and good selectivity, and has significant application values. Its preparation method has the advantages of high yield, simple preparation process and easy implementation, which is suitable for industrial

promotion, and creates favorable conditions for the popularization and application of the triphenylaminefluorene molecular sensor.



#### 21: 2021/08990. 22: 2021-11-12. 43: 2022-01-19 51: G01M

71: China Special Equipment Inspection and Research Institute, Dalian University of Technology 72: YANG, Zhirong, ZHANG, Dayong, SUN, Liang, WANG, Guojun, YU, Zhemin, YUE, Qianjin, SHOU, Binan

#### 54: SPHERICAL STORAGE TANK MODEL FOR ANTI-SEISMIC DESIGN EXPERIMENT 00: -

A spherical storage tank model for an anti-seismic design experiment is related, which belongs to the field of petrochemical engineering. The spherical storage tank model is a model experimental device for analyzing responses of a spherical storage tank under the earthquake load influence. The spherical storage tank model including a spherical housing and a support structure thereof is installed on a vibration table. Sensors are installed in the spherical housing and at a bottom of the support structure. Each support column of the support structure is formed by connecting an upper support column with a lower support column in a detachable manner. The spherical housing is made of transparent organic glass, and the support structure is made of steel. Pull rods are installed among the support columns, and a tension-compression sensor is arranged in a middle of the pull rod.



# 21: 2021/08993. 22: 2021-11-12. 43: 2022-01-19 51: E02D

71: SHANDONG UNIVERSITY

72: LI, Lianxiang, HAN, Zhixiao, HOU, Yingxue, LI, Shengqun, CHEN, Jiacai, LI, Xiudong, GUO, Longde, ZHAO, Shilei

## 33: CN 31: 202110285327.8 32: 2021-03-17 54: METHOD FOR CLASSIFICATION DESIGN OF SOIL-ROCK FOUNDATION PIT SUPPORT BASED ON DEPTH AND BURIED DEPTH OF MODERATELY WEATHERED ROCK 00: -

The present invention discloses a method for classification design of soil-rock foundation pit support based on depth and buried depth of moderately weathered rock, which comprises the following steps: classifying the soil-rock dualelement stratum foundation pit based on the relationship between the depth of the foundation pit and the buried depth of the moderately weathered rock; according to the corresponding classification types, obtaining the failure form of foundation pit through finite element model analysis, and determining the corresponding foundation pit support scheme. The method classifies the foundation pit types, and gives the foundation pit support scheme for the corresponding foundation pit types, of which the design is reasonable.



#### 21: 2021/08994. 22: 2021-11-12. 43: 2022-01-19

# 51: E21D

71: SHANDONG UNIVERSITY 72: LI, Lianxiang, HOU, Yingxue, PAN, Yupo, LI, Shengqun, HAN, Zhixiao, ZHAO, Shilei, GUO, Longde, SU, Baiji 54: PERMANENT SUPPORT STRUCTURE COMBINING ANTLEL OATING ANCHOR BOD AN

#### COMBINING ANTI FLOATING ANCHOR ROD AND UNDERGROUND HORIZONTAL STRUCTURE AND CONSTRUCTION METHOD THEREOF 00: -

The present invention discloses a permanent support structure combining an anti floating anchor rod with an underground horizontal structure and a construction method thereof, of which the technical solution is: including a basement exterior wall and a horizontal floor slab, also including an anti floating anchor rod; the outer side of the horizontal floor slab is provided with an extended support, which is connected between the anti floating anchor rod and the horizontal floor to construct a permanent support structure; wherein, a plurality of longitudinal stressbearing reinforcement are arranged inside the anti floating anchor rod. The present invention solves the current situation of waste of support structure and large earth pressure borne by the basement exterior wall in the existing foundation pit project, and makes the foundation pit support structure play the role of retaining soil and water, and permanently bear the earth pressure of soil outside the pit.



21: 2021/09013. 22: 2021-11-12. 43: 2022-01-19 51: H01G; B82Y

71: QILU UNIVERSITY OF TECHNOLOGY 72: CHEN, Jiachuan, LI, Fengfeng, JIA, Qianqian, YANG, Guihua, ZHANG, Zhili, JI, Xingxiang 33: CN 31: 202010191293.1 32: 2020-03-18 54: LIGNIN-BASED FLEXIBLE FIBROUS ELECTRODE, PREPARATION METHOD THEREFOR AND APPLICATION THEREOF 00: -

Disclosed are a lignin-based flexible fibrous electrode and a preparation method and application thereof, and the preparation method comprises the following steps: uniformly dispersing alkali lignin, graphene oxide and a reducing agent in a solvent to form a mixed dispersion; subjecting the mixed dispersion to a low-temperature hydrothermal reaction to prepare a lignin-based flexible fibrous electrode, the temperature of the hydrothermal reaction is 60-80°C. The use of green, cheap, and renewable lignin as raw materials to prepare flexible electrodes can effectively replace expensive electrode materials such as metal oxides and conductive polymers, and is of great significance to the development of low-cost, renewable new flexible electrodes.



- 21: 2021/09027. 22: 2021-11-15. 43: 2022-01-19 51: E21D
- 71: Northwest University

72: Jiading Wang, Yuanjun Xu, Dengfei Zhang, Tianfeng Gu, Qi Gu

# 54: A RAPID PERCEPTION AND PROTECTION METHOD FOR BLOCK FALLING AND SAND SLIDING IN EXCAVATION OF SANDY LOESS TUNNEL

00: -

The invention discloses a rapid perception and protection method for block falling and sand sliding in excavation of sandy loess tunnel, which involves the field of tunnel support technology. It can solve the problem of sand-slide at the top of sandy-loess tunnel excavation. This method includes : repair the excavated tunnel top contour to make the contour smooth ; draw white lines or hanging lines on the concrete sprayed surface at the top of the tunnel according to the width of biaxial tensile plastic geogrid; according to the white line or hanging line drawn, lay the biaxial tensile plastic geogrid, and fix

the biaxial tensile plastic geogrid on the top of the tunnel quickly through multiple fixed nails by using nail gun; spray quick-setting concrete with a wet sprayer quickly; maintain the rapid solidification concrete layer. The invention effectively solves the problem that the falling block and sliding sand of loess layer at tunnel top caused by traditional direct shotcreting. The invention has simple construction technology, small engineering quantity, and effectively shortens the engineering period, which can save 20 % -30 % of the engineering cost and is easy to construct and popularize.



21: 2021/09028. 22: 2021-11-15. 43: 2022-01-19 51: G06F

71: Linyi University, Shandong University of Science and Technology

72: Zhang Guibin, Zhang Qi, Shao Jianli, Zhang Wenquan, Wang Zaiyong, Wang Hailong 54: A DIVISION METHOD OF ENGINEERING GEOLOGICAL GENERALIZED MODEL FOR MINING NEAR LOOSE LAYER 00: -

The invention provides a division method of engineering geological generalization model for mining near loose layer, including the following steps: analysis of geological and hydrogeological conditions, analysis of engineering conditions (artificial mining conditions), screening and detailed analysis of main control influencing factors and their key conditions, determination of main control influencing factors, screening and quantitative analysis of key conditions of main control influencing factors, generalization of modeling elements of actual geological and engineering conditions, and establishment of engineering geological generalization model for mining near loose layer; the engineering geological generalization model of nearloose stratum mining is based on the actual

conditions of near-loose stratum mining. On the basis of analyzing the natural geological conditions and artificial mining conditions including rock and soil structure, hydrogeological structure, in-situ stress and adverse geological structure, the key factors affecting the deformation or failure of rock and soil in near-loose stratum mining engineering are extracted and generalized reasonably, so as to obtain a simplified diagram that can characterize the interaction between engineering and geological key conditions.



#### 21: 2021/09029. 22: 2021-11-15. 43: 2022-01-19 51: C07B

#### 51: C07B

71: Qingdao University of Science and Technology 72: Zhang Yuanyuan, Pan Yu, Wan Congcong, Qin Fucheng, Jiang Zhuying, Liang Shaoxin, Wang Fanye

#### 54: METHOD FOR PREPARATION OF METHYL BROMOPHENYLPROPIONATE BY ASYMMETRIC REDUCTION CATALYZED BY SACCHAROMYCES CEREVISIAE 00: -

(-)-(2S,3S)-3-(4-bromophenyl)-3-hydroxy-2methylpropionic acid methyl ester is prepared by asymmetric reduction reaction catalyzed by Saccharomyces cerevisiae. The product is obtained by adding phosphate buffer to the reaction tank and adding ramie gauze to control the substrate and product concentration to significantly reduce inhibition. The product yield and the enantiomeric excess rate is high by using yeast cells as catalyst for biological asymmetric reduction reaction. 21: 2021/09030. 22: 2021-11-15. 43: 2022-01-19 51: C21C; C22B

71: Northeastern University

72: XUE, Xiangxin, TENG, Aijun, CHEN, Donghui, ZHANG, Xuefei, GAO, Minglei, CHENG, Gongjin, LIU, Jianxing

#### 54: MANGANESE-VANADIUM SLAG AND METHOD FOR PRODUCING MANGANESE-VANADIUM SLAG IN CONVERTER 00: -

The present disclosure relates to a manganesevanadium slag and a method for producing manganese-vanadium slag in a converter and belongs to the technical field of vanadium metallurgy. The method for producing manganesevanadium slag in a converter includes placing vanadium-containing molten iron into a converter for smelting; during the smelting, introducing oxygen into a top of the converter for blowing for 1-30 minutes; adding manganese-rich ore for continuous blowing for 1-15 minutes, to obtain the manganesevanadium slag and semi-steel. The new manganese-vanadium slag rich in manganese and vanadium can be prepared by using the method, and the manganese-rich ore is added in the preparation process to replace a coolant and some oxidants in the converter, such that a vanadium oxidation rate is increased, a carbon oxidation rate is reduced, and the iron content of the vanadium slag is reduced.

21: 2021/09032. 22: 2021-11-15. 43: 2022-01-19 51: G02B 71: Linyi University 72: NING, Xuefeng 54: PHOTONIC CRYSTAL FIBER 00: -

The present invention relates to a photonic crystal fiber. The fiber includes a core, a clad, and a coating from inside to outside. A cross section of the fiber is circular; the core, the clad, and the coating are concentric; the clad includes a plurality of layers of clad rings disposed from inside to outside; the clad ring of the inner layer includes a plurality of elliptical air holes and two semi-elliptical air holes symmetric about the geometric center of the core; the long axis of the elliptical air hole is perpendicular to the long axis of the semi-elliptical air hole; the residual clad rings are uniformly provided with a plurality of circular air holes with same sizes; the residual clad rings do not include the clad ring of the inner layer; and the diameter of the clad is greater than or equal to 250 microns.



21: 2021/09033. 22: 2021-11-15. 43: 2022-01-19 51: A01D

71: Qingdao University of Technology

72: Zhang Jianjun, Xu Huiqun, Li Yang, Che Qinglun, Zhang Zhongyu, Guo Feng 54: VIBRATING MULTIFUNCTIONAL LAYERED PICKING INTEGRATED MACHINE FOR WINTER JUJUBES 00: -

The invention discloses a vibrating multifunctional layered picking integrated machine for winter jujubes, which solves the problems in the prior art that manual picking is time-consuming and laborconsuming, and automatic picking equipment cannot meet the requirements. It can reduce the surface damage rate of winter jujubes, can automatically screen collected winter jujubes and grade them according to different diameters, and ensure the high efficiency of picking, collecting and grading. According to the technical scheme, the integrated machine comprises a preset picking manipulator, an umbrella surface collecting device and a rejection detecting device, wherein the preset picking manipulator drives winter jujube branches to vibrate at high frequency. The umbrella surface collecting device comprises two "7"-shaped rods arranged opposite to each other and a plurality of auxiliary rods. Sector parts are arranged between adjacent rods. The two "7"-shaped rods rotate reversely through a multistage sprocket mechanism connected with the auxiliary rods, so that a conical umbrella surface is formed between the sector parts. The
reject detection device screens high-quality winter jujubes and bad jujubes. High-quality winter jujubes enter a threaded roller for grading treatment. Bad jujubes are rejected by the built-in stepping impeller in the reject detection device.



21: 2021/09034. 22: 2021-11-15. 43: 2022-01-19 51: D21F

71: Guangning Zhengda Special Paper Co., Ltd. 72: Fudian Dong, Yeqing Dong, Shangren Fang 54: SMALL PAPER MACHINE

#### 00: -

A small paper machine includes a forming part (10) and a drying part (20). The forming part (10) comprises a net cage (12) and a spray pipe (14). The net cage is provided with a containing groove, and the side wall (121) of the containing groove is provided with a slurry inlet (122). The spray pipe is arranged at the top of the net cage and is provided with a flocculant injection port (142) so as to inject the flocculant into the containing groove. The drying part can be arranged on one side of the forming part, and comprises a drying cylinder (22), a drying cylinder cover (24), a heating device (26) and an oil roller (28). The drying cylinder is rotatably arranged, and the rotating path of the drying cylinder is provided with a paper loading side and a paper receiving side. And the drying cylinder cover is arranged on the drying cylinder. The heating device is arranged in the drying cylinder cover and can heat the paper loading side of the drying cylinder. The oil roller can contact the drying cylinder between the paper receiving side and the paper loading side. The small paper machine can improve the paper making quality and reduce the material waste so as to

improve the paper making effect of the whole small paper machine.



21: 2021/09035. 22: 2021-11-15. 43: 2022-01-19 51: D21F

71: Guangning Zhengda Special Paper Co., Ltd.

72: Fudian Dong, Fu Dong, Yeqing Dong, Shangren Fang

## 54: PAPER MAKING MACHINE 00: -

The invention relates to the field of paper making equipment and discloses a paper making machine. The machine comprises a forming part, the forming part comprises a net box in which an accommodating groove is formed, and a spray device is arranged on any side wall of the net box; the spray device includes an extension part and a plurality of fan-shaped spray heads arranged on the extension part; one side of the net box is provided with a net cage, and the extension prat of the spray device is located above a side of the net cage. The fan-shaped spray heads are arranged above the side of the net cage, a paper on the net cage is sprayed, excess slurry is cleaned with water, the fanshaped spray heads spray water into a fan shape, which can spray in the largest range, the size of the net cage is adjusted, the inside and outside of the spray device can be adjusted, and the machine is convenient and flexible to use.



21: 2021/09036. 22: 2021-11-15. 43: 2022-01-19 51: D21F

## 71: Fu Dona

#### 72: Fu Dong

#### 54: WARM AREA RAINSTORM IDENTIFICATION AND CLASSIFICATION METHOD AND SYSTEM 00: -

The invention relates to the field of weather, in particular to a warm area rainstorm identification and classification method and system, and the method comprises the steps: obtaining weather grid point data of a set time period in a preset geographic range; judging and identifying the rainstorm of the warm area through a preset identification model; and classifying the rainstorm of the warm are aaccording to the weather circulation background. According to the invention, the rainstorm of the warm area is identified and classified according to the weather background when the rainstorm of the warm area occurs, which is beneficial to discussion of the overall distribution characteristics and climate characteristics of the rainstorm of the warm area. In addition, the weather condition or model when the rainstorm of the warm area occurs is mastered, and the rainstorm of the warm area when the same or similar circulation background occurs next time is relatively well predicted, so that the prediction accuracy of the rainstorm of the warm area can be improved; not only be a large number of resources saved, but also convenience and quickness are achieved.



#### 21: 2021/09037. 22: 2021-11-15. 43: 2022-01-19 51: H04Q

71: Qingdao University of Science and Technology 72: Lingwei Xu, Zhihe Gao, Zhe Chen, Yanyan Duan, Xinpeng Zhou

## 54: AN OUTAGE PROBABILITY PERFORMANCE PREDICTION METHOD FOR MOBILE COMMUNICATION SYSTEM

#### 00: -

The invention discloses a method for predicting the outage probability performance of the mobile communication system. Based on the multiple-input multiple-output and hybrid decode-amplify-forward cooperative communication technologies, it establishes a mobile cooperative communication system model and selects the best mobile relay node. When the signal-to-noise ratio of the link from the mobile source to the best mobile relay node is greater than the signal-to-noise ratio threshold, the mobile source signal is forwarded to the mobile destination by decoding. Otherwise, the mobile source signal is amplified and forwarded to the mobile destination. Then two transmitting antenna selection schemes are proposed, and the closed expressions for the outage probability are derived respectively. Neural networks are used to intelligently predict the outage probability performance of the mobile cooperative communication system. Compared with the existing methods such as extreme learning machine, locally weighted linear regression, support vector machine, generalized regression neural network and radial basis function neural network, better outage probability performance prediction results are obtained.



21: 2021/09038. 22: 2021-11-15. 43: 2022-01-19 51: C09K

- 71: Shandong North Zite Special Oil Co., Ltd.
- 72: Fuliang Li, Naitang Yang

## 54: METHOD FOR ORGANIC HEAT CARRIER SYNTHETISED BY HIGH TEMPERATURE RESISTANCE

00: -

The invention relates to the technical field of organic heat carrier production, in particular to a novel longservice-life energy-saving environment-friendly hightemperature synthetic organic heat carrier. A method comprises the following steps: 1 preparing raw material; 2, heating and feeding; 3, stirring and mixing; 4, performing pulse blending; and 5, discharging a finished product. The beneficial effects are that according to the invention, imported raw materials are replaced by an isopropyl biphenyl mixture; the product has the advantages of no color, no odor, no corrosion to equipment, low kinematic viscosity, high flow rate, good pumpability, high thermal efficiency, single component, high purity, low vapor pressure, narrow distillation range, good hightemperature thermal stability and good lowtemperature flowability, can replace hydrogenated terphenyl and dibenzyl toluene, and has wide market prospects, thereby greatly reduces the production cost. The organic heat carrier completely meets the operation requirement of a low-pressure liquid phase, has a good cleaning function of preventing solid coke scale, is particularly suitable for being

used for a long time at the high temperature of 350 DEG C, is long in-service life, and has the excellent performances of being renewable, energy-saving, safe, environment-friendly and high in cost performance.



- 21: 2021/09039. 22: 2021-11-15. 43: 2022-01-19
- 51: G01J; H04B
- 71: Tsinghua University

72: Ye Zhangdong, Long Guilu, Zhu Kuntuo, Pan Dong

## 54: METHOD AND DEVICE FOR GENERATING NUMERICAL VALUE OF CRITICAL PHOTON DETECTOR OPERATOR

The embodiment of the invention provides a method and a device for generating numerical values of critical photon detector operators. The method comprises the following steps: determining the required photon number subspace according to the type of quantum communication protocol and the type of quantum communication receiving device; modeling and simplifying the Fock state space operator of the detection device of the desired photon number subspace based on the equidistant isomorphism method, and generating the numerical form of the Fock state space operator. According to

the embodiment of the invention, different parameters are input for different device types, and the numerical form of the spatial operator of the detection device is automatically output, so that the processing speed of the high-dimensional photon number spatial operator is extremely fast, and the problem that the analytic form of the spatial operator of the detection device is complex in high dimensions is solved.



21: 2021/09040. 22: 2021-11-15. 43: 2022-01-19 51: E21D

71: Fuzhou University

72: HUANG, Mingqing, LIU, Qingling, SHEN, Wenbo, LIU, Sunqi, DING, Xingzhi, WENG, Yajie 33: CN 31: 202110126497.1 32: 2021-01-29 54: ANCHOR ROD AND METHOD FOR SUPPORTING FRACTURE ZONE 00: -

The present disclosure provides an anchor rod and method for supporting a fracture zone. The anchor rod includes a rod body, where a sealing plug is inserted into a rear side of the rod body, the rod body is of a hollow structure, the rod body is provided along an axial surface with a tube seam that is as long as the rod body and formed axially, and a circular hole is formed on a surface of the rod body. As the rod body uses a micro-expansive selfcompacting concrete-filled steel tube structure, the rod body of the anchor rod forms a circumferential constraint to the concrete, and the rod body and the concrete material are jointly stressed, the present disclosure significantly improves the mechanical property of the anchor rod support structure.



21: 2021/09041. 22: 2021-11-15. 43: 2022-01-19 51: C09K; G01N; B82Y 71: Linyi University 72: LU, Hongzhi, XU, Shoufang 54: METHOD FOR PREPARING FLUORESCENT POLYMER FOR SIMULTANEOUSLY DETECTING TRIVALENT CHROMIUM IONS AND HEXAVALENT CHROMIUM IONS 00: -

The present disclosure discloses a method for preparing a fluorescent polymer for simultaneously detecting trivalent chromium ions and hexavalent chromium ions, comprising the following steps: (1) Preparing blue carbon dots and red carbon dots, the excitation spectrum of the blue carbon dots is completely overlapped with the absorption spectrum of the hexavalent chromium ions, and the blue carbon dots are guenched by the hexavalent chromium ions through an inner filtration effect; and the excitation wavelength of the red carbon dots is about 570 nm, the emission wavelength is about 600 nm, and the red carbon dots can be guenched by the trivalent chromium ions based on electron transfer; (2) Coating the blue carbon dots with silicon spheres; (3) Coating the surface of the silicon spheres coating the blue carbon dots with a fluorescent imprinting layer of the trivalent chromium ions.



21: 2021/09061. 22: 2021-11-15. 43: 2022-01-19 51: A61B

#### 71: NANTONG UNIVERSITY

72: FANG, Xiaoxia, PENG, Yuping, YANG, Bin, QIU, Yihua, LU, Jianhua

#### 54: HAND-OPERATED DEVIATION-FREE CORRECTOR FOR STEREOTAXIC INSTRUMENT 00: -

A hand-operated deviation-free corrector for a stereotaxic instrument. Side plates (5) are fixedly installed at two ends of a base (16) of the corrector, lug rod insertion holes (4) are provided in the upper portions of the side plates (5), a manual transverse lead screw mechanism (8) fixedly installed on the base (16) is arranged between the side plates (5) at the two ends, a lead screw nut (7) of the manual transverse lead screw mechanism (8) is fixedly connected to a transverse moving sliding block (6), a manual longitudinal lead screw mechanism (15) is arranged on the transverse moving sliding block (6), and the manual transverse lead screw mechanism (8) is provided with a handle (20); a lead screw nut (10) of the manual longitudinal lead screw mechanism (15) is fixedly connected to a longitudinal moving sliding block (9), and the manual longitudinal lead screw mechanism (15) is provided with a handle (19); and a three-dimensional spatial positioning column (2) is fixedly installed on the longitudinal moving sliding block (9), a threedimensional spatial positioning tip (1) is arranged at the top end of the three-dimensional spatial positioning column (2), a rotatable three-dimensional spatial positioning column sleeve (18) is sleeved on the three-dimensional spatial positioning column (2), a height scale (17) is arranged at the top end of the three-dimensional spatial positioning column sleeve (18), and a toothed plate contact member (3) which is connected to a stereotaxic instrument is arranged

at the outer side end of the base (16). The corrector manually controls the movement of the transverse moving sliding block (6) and the longitudinal moving sliding block (9) and is quite easily used.



21: 2021/09079. 22: 2021-11-15. 43: 2022-01-31 51: C07C; C07D; C07J; A61P 71: NINGXIA UNIVERSITY 72: WEI, MENGXUE 33: CN 31: 202011530930X 32: 2020-12-22 33: CN 31: 2021109238424 32: 2021-08-12 54: B-KETOSULFOXIDE DERIVATIVE FOR CARBOXYLIC ACID DRUGS AS WELL AS PREPARATION METHOD AND APPLICATION THEREOF

#### 00: -

The present invention provides a ß-ketosulfoxide derivative for carboxylic acid drugs as well as a preparation method and application thereof, and belongs to the technical field of organic synthesis. The ß-ketosulfoxide derivative for carboxylic acid drugs is prepared from an acyl chloride derivative for carboxylic acid drugs as a raw material in the coexistence of CaC2 and TEA (triethylamine). On the one hand, the yield of the prepared ß-ketosulfoxide derivative is as high as 49%-64%; and the preparation method is green and environmentfriendly, mild in reaction process and simple to operate. On the other hand, the prepared ßketosulfoxide derivative, as a drug for treating respective indications, reduces irritation to the intestines and the stomach after entering the human body, and has the advantages of high activity, low toxicity and high added value.



21: 2021/09081. 22: 2021-11-15. 43: 2022-01-31 51: G01B; G05B

71: ANHUI UNIVERSITY OF SCIENCE AND TECHNOLOGY

72: ZHANG, Shuangshuang, LIU, Yueqi, YANG, Hongtao, HE, Jian, ZHANG, Yilong 54: EXPERIMENTAL APPARATUS FOR MEASURING AND SEPARATING ROTATION ERRORS OF PRECISION SPINDLE

00: -Disclosed is

Disclosed is an experimental apparatus for measuring and separating rotation errors of a precision spindle. A measured spindle is installed on a rotary index plate which is installed on a base, and driven by a motor to rotate; a central hole runs through a bearing table which is sleeved on the spindle and the index plate through the central hole, and there are gaps between the central hole and the spindle and the index plate respectively; a plurality of testing mechanisms are connected to the table and distributed circumferentially around the spindle. The present invention discloses the experimental apparatus for measuring and separating the rotation errors of the precision spindle, which is suitable for various measurement and separation methods without adjustment, thereby facilitating the comparison of data obtained by various measurement and separation methods; the accuracy of experimental results can be improved, also, the experimental efficiency is high.



21: 2021/09086. 22: 2021-11-16. 43: 2022-01-20 51: B01J; C01B

71: Qingdao University of Science and Technology 72: LI, Zhenjiang, WANG, Xuehua, WANG, Xianghu, MENG, Alan, YANG, Hui

#### 33: CN 31: 202110498482.8 32: 2021-05-08 54: MOSE2/DEFECT-RICH ZNIN2S4/CDSE DUAL Z-SCHEME PHOTOCATALYST FOR PHOTOCATALYTIC WATER SPLITTING TO HYDROGEN 00: -

The present disclosure discloses a MoSe2/defectrich ZnIn2S4/CdSe dual Z-scheme photocatalyst with efficient photocatalytic water splitting to hydrogen performance, and belongs to the technical field of photocatalysis. In the present disclosure, the MoSe2/defect-rich ZnIn2S4/CdSe dual Z-scheme photocatalyst with flower-like microsphere structure is prepared by one-step hydrothermal method using the prepared ZnIn2S4, Na2MoO4·2H2O, Cd(CH3COO)2.2H2O and Se powder as raw materials and hydrazine hydrate as the reducing agent. Nanosheet-shaped MoSe2 and granular CdSe are bonded on the surface of defect-rich ZnIn2S4 through Mo-S bond and Cd-S bond, respectively, thus a close heterointerface is formed between the defect-rich ZnIn2S4 and MoSe2, as well as defect-rich ZnIn2S4 and CdSe, which further contributed to a strong built-in electric field.

21: 2021/09087. 22: 2021-11-16. 43: 2022-01-20 51: G06K 71: Guizhou Institute Of Pratacultural 72: Zhang Wen, Wang Zhiwei, Song Xuelian, Yi Shuhua, Chen Jianjun, Ruan Xirui, Qin Yu, Yue

## Guangyang 54: EXTRACTION METHOD OF CHARACTERISTIC POINTS FOR GROUND OBJECT OF AERIAL PHOTOGRAPHS BASED ON UNMANNED AERIAL VEHICLE REMOTE SENSING TECHNIQUE

00: -

This invention provides extraction method of characteristic points for ground object of aerial photographs based on unmanned aerial vehicle remote sensing technique, which comprises steps as follows: obtaining aerial photos, extracting the central latitude and longitude information of aerial photographs, matching aerial photographs to latitude and longitude information positions, according to the central latitude and longitude information, satellite image information and base map information of aerial photographs, taking the aerial photos after geographical correction as reference, identifying the types of ground objects on the satellite image map. The characteristic points of ground objects are extracted from the aerial photos after ground object type recognition. The method can complete the characteristic point extraction process of ground features more quickly, and further provide an effective method for saving manpower, material resources and financial resources for future largescale unmanned aerial vehicle remote sensing technique.

21: 2021/09088. 22: 2021-11-16. 43: 2022-01-20 51: B25J

71: Xinjiang Sanli Intelligent Technology Co., Ltd.72: LI, Linqing

## 54: METHOD AND DEVICE FOR PLANNING MOTION TRAJECTORY OF ROBOT

00: -

The present disclosure relates to a device and a method for planning a motion trajectory of a robot. The device includes a three-dimensional space locator, a tool model and a master computer, wherein the tool model is an actuator model of a robot to be operated, and the tool model is connected to the three-dimensional space locator; and a motion trajectory of the tool model is acquired by moving the three-dimensional space locator, and the motion trajectory of the tool model is a motion trajectory of the robot to be operated. The present disclosure improves the speed of planning the motion trajectory of the robot, and thus improves the operation and utilization efficiency of the robot.



21: 2021/09089. 22: 2021-11-16. 43: 2022-01-20 51: G01J 71: NORTH CHINA ELECTRIC POWER UNIVERSITY (BAODING) 72: ZHOU, Yuhao, FAN, Xiaozhou 33: CN 31: 202111150826.2 32: 2021-09-29 54: AN INFRARED IMAGER AND A SIGNAL CORRECTION METHOD THEREOF 00: -

The present disclosure discloses an infrared imager, which includes an infrared radiation collection module for collecting an infrared radiation electromagnetic wave; an imaging module for generating an image from the collected infrared radiation electromagnetic wave; a correction module for correcting the infrared imager according to the image generated by the imaging module. The present disclosure can improve the shortcomings of the prior art, effectively simplify an infrared image correction process, and improve the image processing speed.



21: 2021/09090. 22: 2021-11-16. 43: 2022-01-20 51: A01G

71: Guizhou Horticultural Institute (Guizhou Horticultural Engineering Technology Research Center)

72: WANG, Aihua

# 54: MARKING METHOD FOR STOLON TIP OF STRAWBERRY

00: -

The present disclosure relates to a marking method for stolon tip of strawberry, belonging to the technical field of plant stolon tip marking. The marking method for stolon tip of strawberry provided by the present disclosure comprises the following steps: 1) Record the content of the mark on the front and back of the label; 2) Use a waterproof transparent material to coat the label to obtain a waterproof label; 3) Use the waterproof label of step 2) wraps the tip of the stolon; 4) Fix the waterproof label wrapped on the tip of the stolon. The marking method provided by the present disclosure has simple and easy operation process, good fixing effect, the label is not affected by temperature and humidity, and does not damage plant tissues.

21: 2021/09091. 22: 2021-11-16. 43: 2022-01-20 51: G06F; H04L; G06N

71: Zhongyuan University of Technology

72: YANG, Yaoke, GAO, Yanxia, XIA, Minjie, XU, Fei, LI, Feng

#### 54: INTRUSION DETECTION METHOD FOR NETWORK INFORMATION SECURITY 00: -

The present invention relates to the field of network security supervision, and in particular, to an intrusion detection method for network information security, including the following steps: S1, collecting a mouse motion trajectory, a mouse wheel motion trajectory, and a control command for left and right keys, and also collecting a control command for shortcut key entering; S2, recognizing a mouse control command by recognizing the mouse motion trajectory, the mouse wheel motion trajectory, and the control command for left and right keys; S3, recognizing and intercepting an abnormal behaviour based on a comparison of the mouse control command and the control command for shortcut keys with a computer operation script; S4, recognizing an abnormal traffic based on a preset abnormal traffic monitoring model; and S5, evaluating computer network security based on a recognition result of the abnormal behaviour and/or a recognition result of the abnormal traffic.



#### 21: 2021/09092. 22: 2021-11-16. 43: 2022-01-20 51: A61K

71: Heilongjiang University of Chinese Medicine 72: Ma Yanchun, Fu Qiang, Liu Huiyun, Feng Tiantian, Pu Guangyuan, Fan Chuchen, Duan Ying, Hu Jianhui, Wu Wenxuan

#### 54: ORAL CHINESE MEDICINAL COMPOSITION FOR TREATING PSORIASIS 00: -

The present invention discloses an internal Chinese medicine composition for the treatment of psoriasis, consisting of: Fructus Arctii, Goosegrass Herb, dodartia, Patience Dock Root, Cornu Bubali, Spina Gleditsiae, black-striped snake, Squama Manis, wild chrysanthemum, Rhizoma Smilacis Glabrae, vinegar-soaked Rhizoma Sparganii, salt Rhizoma Alismatis, Semen Plantaginis, fried Fructus Setariae Germinatus. The invention "Wu niu ci she pill" is a powerful and targeted medicine, which overcomes the shortcomings of similar drugs used to treat psoriasis. The pill has rapid healing effect and no recurrence. Psoriasis is caused by a deficiency of blood in the body and blood heat, resulting in dryness and a loss of nourishment in the skin. The

combination of the above herbs works to clear heat and cool the blood, invigorate the blood, detoxify the blood, remove dampness, relieve itching, clear the blood and detoxify the body, and regulate the immune system.

21: 2021/09093. 22: 2021-11-16. 43: 2022-01-20 51: G06F; G06K

71: Shandong Provincial NO 4 Institute Of

Geological and Mineral Survey, Qingdao Agricultural University

72: Yin Jianguo, Guo Zhiqian, Yi Weihong, Zhang Xiaoguang, Song Xiangyun, Liu Xinwei, Cui Dejie, Shao Yirui

#### 54: REMOTE SENSING CLASSIFICATION AND IDENTIFICATION METHOD, DEVICE, EQUIPMENT AND STORAGE MEDIUM FOR SOIL GROUPS 00: -

The invention applies to the field of computer technology and provides a remote sensing classification and recognition method, device, equipment and storage medium for soil groups. The method comprises the following steps: Obtaining remote sensing images of the soil to be recognized; Extraction of remote sensing image texture features in the preset scale; Fusion of texture feature and remote sensing image to generate remote sensing classification image fused with texture feature; The remote sensing classification image is processed to determine the classification and recognition results of the soil to be identified. The invention provides a remote sensing classification and recognition method for soil group. By extracting the texture features that can be used to describe the spatial and geometric information of the soil in the remote sensing image, and fusing with the remote sensing image, the rich spatial and geometric information contained in the texture feature is used to assist the classification and recognition. The problem of insufficient spectral information in the classification and recognition of the existing technology is overcome, and the classification accuracy is improved, so as to ensure the remote sensing classification and recognition effect of the soil group.



#### 21: 2021/09094. 22: 2021-11-16. 43: 2022-01-20 51: A61K

71: LONGHUA Hospital Shanghai University of Traditional Chinese Medicine

72: Chen Lei, Zhou Zhiheng, Cao Hongwen, Feng Yigeng, Gao Renjie, Wang Dan, Xu Min, Bai Huiming, Wu Xiaotong, Li Haibin, Zhao Wenyang, Song Zixi

## 54: CHINESE MEDICINAL COMPOSITION FOR TREATING CHRONIC NONBACTERIAL PROSTATITIS

00: -

The invention discloses a traditional Chinese medicine composition for treating chronic nonbacterial prostatitis, which belongs to the technical field of medicine. The traditional Chinese medicine composition comprises the following raw materials in parts by weight: 15-30 parts of Sargentodoxa cuneata, 15-30 parts of Herba pyrolae, 12-30 parts of Hedyotis diffusa, 3-12 parts of Cortex phellodendri, 6-12 parts of Flos carthami, 9-15 parts of Radix angelicae sinensis, 12-30 parts of Achyranthes bidentata, 15-30 parts of Epimedium brevicornu and 9-15 parts of Radix dipsaci. The traditional Chinese medicine components of the invention are scientific and reasonable in compatibility, mutually support each other, have the efficacies of promoting diuresis and relieving pain, resisting bacteria and diminishing inflammation, clearing away heat and toxic materials, are effectively used for treating chronic non-bacterial

prostatitis, have good curative effect, are safe to use, have no toxic or side effects, are innovative medicines for treating chronic non-bacterial prostatitis, and have practical clinical significance and popularization value.

21: 2021/09095. 22: 2021-11-16. 43: 2022-01-20 51: C04B; C08F

71: Institute of Applied Chemistry, Jiangxi Academy of Sciences

72: YOU, Shengyong, LI, Ling, ZOU, Jiyong, DONG, Xiaona, XU, Changjiang, ZHAO, Chaowei, FANG, Jie

#### 54: PREPARATION AND APPLICATION OF COPOLYMER MODIFIED WATERPROOF AGENT 00: -

The present disclosure discloses a method for preparing a copolymer modified waterproof agent. According to the method, styrene and vinyl acetate are taken as raw materials, the vinyl alcohol-styrene sulfonate copolymer is prepared by polymerization, benzene ring sulfonation, and ester group hydrolysis, and is mixed with a defoaming agent, a redispersible latex powder and a water reducing agent to obtain a cement-based permeable crystalline waterproof agent containing vinyl alcoholstyrene sulfonate copolymer. Meanwhile, the effect of the waterproof agent on the performance of a mortar and a concrete is investigated, and results show that all performance indexes of the waterproof agent meet experimental methods and technical requirements specified in the national standard GB 18445-2012 Cementitious capillary crystalline waterproofing materials. The present disclosure is suitable for building waterproof materials.

21: 2021/09096. 22: 2021-11-16. 43: 2022-01-20 51: G01N

71: Hangzhou Lohand Biological Technology CO., Ltd.

72: Wu Dan, Cheng Huan, Shen Jian, Bao Weifang 54: PORTABLE DIGITAL REFRACTOMETER 00: -

The invention discloses a portable digital

refractometer, which comprises a shell and a circuit board, wherein the circuit board is installed in the shell, and a microcontroller and a display module are installed on the circuit board; the optical path sensing system comprises a bracket, wherein the bracket is fixedly connected to one end of the housing far away from the circuit board; the bracket is fixedly connected with an inverted trapezoidal prism; the housing is provided with a measuring groove; the inverted trapezoidal prism is correspondingly arranged with the measuring groove; the two sides of the inverted trapezoidal prism are provided with image photoelectric sensors and illuminators; and the image photoelectric sensors and illuminators are fixedly connected to the bracket; the image photoelectric sensor is in communication connection with the microcontroller; the pow supply is installed at that bottom of the house, and both the circuit board and the lighting part are electrically connected with the power supply; the light shielding plate is rotatably connected to the outside of the shell, and the light shielding plate is correspondingly arranged with the measuring groove.



21: 2021/09097. 22: 2021-11-16. 43: 2022-01-21 51: C08B

71: Neimenggu Fufeng Biotechnologies Co., Ltd. 72: FU, Guanghao, XU, Shujiang, LIU, Lu, WANG, Kun, GAO, Lei, LIANG, Xiaojuan, XU, Na 54: METHOD FOR INCREASING YIELD OF CORN STARCH

#### 00: -

The present disclosure belongs to the field of biotechnology and discloses a method for increasing the yield of corn starch, including the following steps: soaking corn grains with an acid solution, treating with assistant ultrasonic waves and microwaves, performing enzymolysis, and finally implementing a starch processing procedure. The present disclosure can effectively improve the corn soaking efficiency, shorten the soaking time, reduce industrial energy consumption; moreover, a safe soaking agent is used, no sulfurous acid is used in the soaking process, no SO2 pollution is caused, and meanwhile, the yield of the corn starch is increased. 21: 2021/09098. 22: 2021-11-16. 43: 2022-01-20 51: B03B

71: Shandong University of Science & Technology
72: Cui Guangwen, Liu Huijie
54: EFFICIENT COAL SLURRY DEEP
SEPARATION PROCESS

00: -

The invention discloses coal slurry deep separation process. This process is suitable for slime water separation process, and the slime water is separated again by a triple cone cyclone to produce clean coal and slime, which solves the phenomenon of clean coal loss in slime water and improves the recovery rate of clean coal, thus improving the economic benefits of coal preparation plants.

21: 2021/09099. 22: 2021-11-16. 43: 2022-01-20 51: B61C; B61D

71: Anhui Wanhang Rail Traffic Equipment Co., Ltd 72: HUANG, Quangui

## 54: HYBRID LOCOMOTIVE

00: -

The present disclosure relates to the field of power locomotives, in particular to a hybrid power locomotive, including a locomotive body and a cab. One side of the cab is provided with an entrance, a first groove is formed in the outer end of the locomotive body, cavities are symmetrically formed in the side of the locomotive body located at the first groove, a first rotating shaft is rotatably connected to the inner wall of the first groove, a rotating plate sleeves and is fixed to the outer wall of the first rotating shaft, worm wheels sleeve and are fixed to the outer wall of the first rotating shaft, the bottom ends of the two worm wheels are both engaged with worms that are in a horizontal direction, and the ends of the two worms away from the worm wheels are both connected to motors.



21: 2021/09101. 22: 2021-11-16. 43: 2022-01-20 51: H01L

71: SHANXI DATONG UNIVERSITY, JINNENG HOLDING GROUP DADOUGOU COAL INDUSTRY CO., LTD.

72: JIANG, Xiaoyun, CHEN, Yang, YANG, Chunhua, LIU, Hongmei, WANG, Yongwei, SUN, Fa, XU, Li 54: QUANTUM DOT INFRARED DETECTOR WITH HIGH ABSORPTIVITY 00: -

The invention provides a quantum dot infrared detector with high absorptivity. The detector includes a metal reflective layer having a first barrier layer thereon, one or more quantum dot composite layers laminated together are disposed on the first barrier layer, the quantum dot composite layers include a quantum dot layer below and a second barrier layer above, and a metal grating layer is disposed on the second barrier layer. According to the quantum dot infrared detector provided in the invention, properties such as absorptivity and guantum efficiency of the quantum dot detector are improved by incorporating a unique metal grating structure and utilizing the properties of beyond the diffraction limit and local field enhancement of surface plasmons, so that the quantum dot infrared detector can achieve stable detection efficiency and accuracy, has a great application value in actual environment, and is suitable for the field of photoelectric semiconductor detectors.



# 21: 2021/09102. 22: 2021-11-16. 43: 2022-01-20 51: C02F

71: Nanjing Institute of Environmental Sciences, Ministry of Ecology and Environment

72: LIU, Dong, YANG, Yue, XU, Mengjia, SUN, Jie, ZHANG, Wenhui

## 54: TREATMENT PROCESS OF SURFACE FLOW-VERTICAL SUBSURFACE FLOW CONSTRUCTED WETLANDS

00: -

The present disclosure provides a treatment process of surface flow-vertical subsurface flow constructed wetlands, and belongs to the technical field of environmental protection. The construction of the constructed wetlands includes the following steps:1) selecting seedlings of constructed wetland plant species, cultivating the seedlings first in water and then in NO3-/NH4+ nutrient solutions at different concentrations, and selecting plants that prefer NH4+ and plants that prefer NO3-; 2) growing the plants that prefer NH4+ selected in step 1) in the surface flow constructed wetland, and growing the plants that prefer NO3- in the vertical subsurface flow constructed wetland; and 3) connecting the surface flow constructed wetland and the vertical subsurface flow constructed wetland constructed in step 2) in series, with the surface flow constructed wetland being located at a water inlet end of the system and the vertical subsurface flow constructed wetland at a water outlet end of the system.

21: 2021/09103. 22: 2021-11-16. 43: 2022-01-20 51: E21C

71: China Coal Technology and Engineering Group Chongqing Research Institute Co., Ltd.

72: LI, Siqian, REN, Qihan, CAO, Jianjun, LIU, Jun, LI, Shengzhou, LIU, Huaifu, YUAN, Benqing, XU, Zunyu, NIU, Xingang, LI, Chengcheng, LU, Zhanjin, CHEN, Guohong, XU, Junjian, WANG, Zhonghua, HU, Jie

#### 54: ROCK BURST PREVENTION AND CONTROL METHOD OF BROKEN BOTTOM COAL DRILLING COMBINED WITH BLASTING PRESSURE RELIEF 00: -

The present disclosure discloses a rock burst prevention and control method of broken bottom coal drilling combined with blasting pressure relief. includes the following steps: a, determining a prevention and control area requiring rock burst prevention and control; and b, drilling a pressure relief drill hole group in the prevention and control area to release elastic energy accumulated in a roadway bottom coal; wherein the pressure relief hole group includes multiple side holes and multiple bottom holes; the multiple side holes are uniformly distributed on the two sides of the roadway along the longitudinal direction, and the side holes are drilled in a manner inclined laterally outward towards the roadway; and the multiple bottom holes are distributed on a floor of the roadway in a rectangular array.



# 21: 2021/09104. 22: 2021-11-16. 43: 2022-01-20 51: E04B

71: Shandong University, China Railway Development Investment Co., Ltd, China Railway First Bureau Group Fifth Engineering Co., Ltd, Qingdao Metro Line 6 Co., Ltd

72: Liu Quanwei, Zhao Jizeng, Xiao Yongqiang, Huang Cheng, Chen Jiacai, Zong Chao, Jiang Jinyan, Wang Qitao, Jiang Xiaoming, Wang Peijun, Zhu Hao, Liu Xinyu, Xia Chengxin

#### 54: THIN-WALLED STEEL PIPE HOLLOW-RIBBED CONCRETE COMPOSITE SLAB, FLOOR SLAB, BUILDING AND MANUFACTURING METHOD THEREOF 00: -

The invention relates to a thin-walled steel pipe hollow-ribbed concrete composite slab, floor slab, building and manufacturing method thereof, belonging to the technical field of building engineering. The concrete composite slab mainly

includes a concrete slab, in which longitudinal and transverse reinforcing bars are arranged, and the extension direction of the longitudinal reinforcing bars is the same as the length direction of the concrete bottom plate; the transverse reinforcing steel bar is fixedly connected with the thin-wall steel pipe; the top of the thin-walled steel pipe protrudes from the concrete bottom plate; and the axis of the thin-walled steel pipe is parallel to the straight line with the same length direction of the concrete bottom plate. The concrete laminated plate provided by the invention has the advantages of convenient processing and low cost, can not only generate hollows at the neutral axis position of the plate, but also realize the effect that thin-walled steel pipe ribs can effectively bear the load in the construction stage and the later use stage.



21: 2021/09105. 22: 2021-11-16. 43: 2022-01-20 51: B21D

71: Shandong University, China Railway

Development Investment Co., Ltd., China Railway First Bureau Group Fifth Engineering Co., Ltd., Qingdao Metro Line 6 Co., Ltd.

72: Liu Quanwei, Zhao Jizeng, Xiao Yongqiang, Huang Cheng, Chen Jiacai, Zong Chao, Jiang Jinyan, Wang Qitao, Jiang Xiaoming, Wang Peijun, Gu Hangping, Wang Qishuai

## 54: SLIDING TRI-PETAL SLEEVE FOR CONNECTING STEEL BARS

The invention discloses a sliding three-petal sleeve for connecting steel bars, which comprises a sliding sleeve and an inner sleeve. The sliding sleeve is sleeved on the outer ring of the inner sleeve and can slide axially along the inner sleeve; the inner sleeve comprises a hollow cylinder section and a tri-petal cylinder section which are integrally formed, wherein that tri-petal cylinder wall of the tri-petal cylinder section can expand at a certain angle, the hollow cylinder section is provided with an internal threads matched with a first steel bar, and the tri-petal cylinder section is internally provide with a dentate protrusion matched with a second steel bar. The use method is as follows: firstly, the whole sleeve is connected with the first steel bar through threads, then the second steel bar is inserted into the tri-petal cylinder, and finally, the sliding sleeve is slid to the tri-petal cylinder section so as to clamp the tri-petal cylinder tightly, so that the dentate protrusions inside the cylinder are tightly engaged with the steel bar ribs, and the quick butt joint can be completed.



## 21: 2021/09106. 22: 2021-11-16. 43: 2022-01-20 51: E04B

71: Shandong University, China Railway Development Investment Co., Ltd, China Railway First Bureau Group Fifth Engineering Co., Ltd, Qingdao Metro Line 6 Co., Ltd

72: Liu Quanwei, Zhao Jizeng, Xiao Yongqiang, Huang Cheng, Chen Jiacai, Zong Chao, Jiang Jinyan, Wang Qitao, Jiang Xiaoming, Liu Mei, Gu Hangping, Liu Xinyu

#### 54: SPLICING NODE OF PRECAST CONCRETE SHEAR WALL AND CONSTRUCTION METHOD 00: -

The invention discloses a splicing node of a precast concrete shear wall and a construction method. The splicing node of the precast concrete shear wall is formed by extruding and connecting the ribbed steel sleeve at the end. It not only has the advantage of convenient connection of steel structure, but also the overall performance advantage of concrete structure, so that steel structure and concrete structure work together, complementing the

advantages and disadvantages. It not only solves the problem that the construction quality of the precast concrete shear wall connected with the reinforced sleeve grouting is not easy to guarantee, but also solves the problem of hidden dangers in construction safety. In addition, the connection method is simple to operate, fast in construction, saves construction time, and has good economic benefits.



21: 2021/09110. 22: 2021-11-16. 43: 2022-01-31 51: H01F

71: ANHUI UNIVERSITY OF SCIENCE AND TECHNOLOGY

#### 72: MEI LI, ZHE LIANG 54: METHOD FOR IDENTIFYING PARTIAL DISCHARGE PATTERN OF TRANSFORMER BASED ON DISCHARGE FINGERPRINT DATABASE

#### 00: -

The present invention discloses a method for identifying a partial discharge pattern of a transformer based on a discharge fingerprint database. The method includes a process of extracting characteristics of ultrahigh-frequency partial discharge signals, establishing a fingerprint database and judging a discharge type, and specifically includes: firstly, building a typical partial discharge model, collecting ultrahigh-frequency signals of the discharge, and carrying out frequency mixing and reduction processing; extracting 10 statistical operators (fingerprints) by utilizing three types of spectrograms including a two-dimensional spectrogram, a three-dimensional spectrogram and an ellipse spectrogram to form the fingerprint database; and finally, comparing the fingerprint database with calculated fingerprint information of a fault signal through a hybrid neural network algorithm, so that the partial discharge type of the transformer can be identified.



- 21: 2021/09111. 22: 2021-11-16. 43: 2022-01-25
- 51: C07C; C12P

71: Qingdao University of Science and Technology 72: Fangkun ZHANG, Kang DU, Baoming SHAN, Qilei XU

#### 54: A METHOD OF PREPARATION FOR A L-GLUTAMIC ACID SEED CRYSTAL 00: -

A method of preparation for a L-Glutamic acid seed crystal is disclosed in the invention, which belongs to the technical field of preparation of high-purity seed crystal in the process of industrial crystallization, the preparation method comprises the following steps: dissolve the LGlutamic acid crystal in the solvent to obtain the L-Glutamic acid solution (the concentration of the L-Glutamic acid solution is 40 50g / L), take the L-Glutamic acid solution as the raw material, reduce the temperature to room temperature under the stirring state (the appropriate

stirring speed is that the solution does not precipitate), precipitate the crystal, and rapidly separate the solution from solid to liquid after the solution changes from transparent to milky liquid and the crystallization is completed, the separated solid is washed and dried, then a L-Glutamic acid seed crystal is obtained. The a L-Glutamic acid prepared by the invention has stable crystal form, uniform seed crystal, high quality and purity of seed crystal, and the purity of the crystal form is as high as 100%.



21: 2021/09112. 22: 2021-11-16. 43: 2022-01-20 51: G05D

71: Qingdao University of Science and Technology 72: Fangkun ZHANG, Baoming SHAN, Qilei XU, Zhaoyou ZHU, Yinglong WANG

## 54: A PRECISION TEMPERATURE CONTROL DEVICE AND METHOD SUITABLE FOR FRIEDEL CRAFTS REACTION IN IBUPROFEN PRODUCTION

00: -

A precision temperature control device and method suitable for Friedel-Crafts reaction in Ibuprofen production is disclosed in the invention, the device comprises a tubular reaction heat exchanger and a temperature control system; the tubular reaction heat exchanger is successively provided with several stages of reaction heat exchangers from the first end to the second end; water inlet and outlet are installed for each stage of heat exchanger; the temperature control system includes cascade temperature control system and process simulation prediction control module; the cascade temperature control system includes temperature control loop and chilled liquid flow control loop; the temperature control loop is the main loop, and the chilled liquid flow control loop is the secondary loop; the process simulation prediction control module is used to simulate the reaction process and generate compensation signals, the invention can effectively solve the problems of side reaction increase and reactor blockage caused by large reaction temperature fluctuation, which increases the selectivity of the target product from about 83% to more than 95%, avoids shutdown for cleaning of the equipment for many times, and improve the production efficiency and stability.



# 21: 2021/09113. 22: 2021-11-16. 43: 2022-01-20 51: C30B

71: Qingdao University of Science and Technology
72: Fangkun ZHANG, Baoming SHAN, Qilei XU,
Yinglong WANG, Zhaoyou ZHU
54: A PRECISION TEMPERATURE CONTROL
DEVICE AND METHOD SUITABLE FOR FRIEDEL

## CRAFTS REACTION IN IBUPROFEN PRODUCTION

00: -

The present invention discloses a multi-gradient continuous crystallization method applicable for the reactive crystallization process, which relates to the field of continuation and control of the industrial crystallization process. The present invention realized the classification of oil precipitation stage and crystallization process, and thus, it can effectively control the whole process of crystallization, and realize the hierarchical control of nucleation and crystal growth, and further improve the product quality, the purity and the uniformity. Furthermore, the present invention realized the coordinated regulation of pH value and temperature, so that it can control the product quality precisely, and obtain products with different size distributions, and thus, the size classification can be accomplished. In addition, the present invention

allows to add acid at intermediate stage via the mixer, and can improve the miscibility of solution, as well as reduce the sedimentation of crystals in the crystallizer by discharging fragment of crystalline at each stage, and control the temperature hierarchically, and thus, the heating, dissolution and cleaning of the crystallizer can be accomplished.



21: 2021/09114. 22: 2021-11-15. 43: 2022-01-20 51: C12G; C12N; C12R

71: QILU UNIVERSITY OF TECHNOLOGY 72: HE, Xi, HAN, Ning, LIU, Peng, ZHAO, Xinjie 33: CN 31: 201911173242.X 32: 2019-11-26 54: CONSTRUCTION METHOD AND APPLICATION OF ENGINEERING STRAIN OF OENOCOCCUS OENI 00: -

The present disclosure relates to a construction method and an application of an engineering strain of Oenococcus oeni. The construction method includes the following steps: (1) preparing a lipase gene lipase; (2) preparing a homologous arm gene carrying a lipase gene; (3) preparing a plasmid pMG36e-lipase; (4) preparing a nisl fragment; (5) preparing a linear fragment without an erythromycin sequence; (6) preparing an expression vector pMG36n-lipase; and (7) transferring the expression vector pMG36n-lipase into Oenococcus oeni competent cells to prepare the engineering strain of Oenococcus oeni. The engineering strain of Oenococcus oeni capable of degrading esters of the present disclosure can be applied to wine-making, avoiding adverse effects of excessive esters on the flavor and aroma of wine in the wine-making process to reduce the preservation time of wine, and shortening a production cycle to achieve the same flavor of wine.

21: 2021/09118. 22: 2021-11-16. 43: 2022-01-20 51: C08J; C08L 71: NANTONG UNIVERSITY 72: MIAO, Jianwen, LI, Minmin, SONG, Guohua, LIU, Huan 33: CN 31: 202010738548.1 32: 2020-07-27

#### 54: PREPARATION METHOD FOR FLUORESCENT AND TRANSPARENT COMPOSITE MATERIAL 00: -

A preparation method for a fluorescent and transparent composite material, comprising: (1) selecting a crab shell or crab shell piece having a complete form, washing, and saving in deionized water for later use; (2) sequentially using a lowconcentration acid solution, a low-concentration alkaline solution, and an ethanol solution to immerse the complete crab shell or crab shell piece until completely removing calcium carbonate, proteins, lipids, and a pigment matrix, and saving the treated crab shell or crab shell piece in anhydrous ethanol for later use; (3) uniformly dispersing a fluorescent material in a polymer monomer by means of thermomechanical stirring, and then performing polymerization to obtain a polymer; and (4) taking out the treated crab shell or crab shell piece, immersing in the polymer obtained at step (3), performing vacuum pumping in a vacuum drying box and keeping pressure for 15 minutes, repeating three times, taking out the crab shell or crab shell piece and wrapping same with a tin foil, and performing isothermal curing. The prepared fluorescent and transparent composite material not only is high in light transmittance, but also has a complete crab shell form; and the addition of fluorescent powder makes a transparent crab shell present different colors under the irradiation of light and has little influence on the light transmittance.



21: 2021/09132. 22: 2021-11-16. 43: 2022-01-20 51: E01C

71: QINGDAO UNIVERSITY OF TECHNOLOGY, QINGDAO DONGHUIQUAN TECHNOLOGY CO. LTD

72: WANG, Jungang, WANG, Lu, CHEN, Miaomiao, JIANG, Hui, LI, Chong, LIU, Naiyou, NIAN, Dawu, CHEN, Feida, LI, Yifan, XU, Renyu, ZHANG, Xuefeng, WANG, Chaoyang, YAO, Xin 33: CN 31: 202010154637.1 32: 2020-03-08

#### 54: ROAD NETWORK BALANCED DRAINAGE METHOD AIMED AT REDUCING URBAN WATERLOGGING

#### 00: -

The present invention relates to a road network balanced drainage method aimed at reducing urban waterlogging. According to the drainage demand, the existing intersection elevation is changed or the intersection elevation that meets the drainage requirement is designed and implemented in new construction so that the intersection drainage (water flowing out of the intersection) is distributed according to the desired proportion; the water flowing to the water accumulation position (the waterlogging point) is transferred to reduce the waterlogging degree. Through the analysis of the depth of water accumulation in the whole road network, the method of water flow distribution at the intersection is used to make the precipitation flow evenly distributed in the whole road network. The present invention can be used for solving serious water accumulation of a certain road section and can also be used for the balanced drainage of the whole road network.



21: 2021/09138. 22: 2021-11-17. 43: 2022-01-20 51: G06Q

71: GuangXi Beitou Transportation Maintenance Technology Group Co.,Ltd., Chengdu Yanghua Yuandong New Materials Science and Technology Co., Ltd.

72: Luo Junhui, Wu Chunwei, Jiang Yajun, Zhou Xiang, Li Yangyi, Huang Haifeng, Liao Laixing, Chang Zhenchao, Mo Peng, Xiao Huarong, Mi Decai, Wang Shihai, Hao Tianzhi, Wu Yuhang, Chen Yuanpeng

## 54: SAFE MAINTENANCE METHOD OF HIGHWAY TUNNEL STRUCTURE

00: -

The invention discloses a safe maintenance method for highway tunnel structures, which comprises the following steps: step 1, building a numerical model of disease characteristics of civil engineering structures of highway tunnels and monitoring and evaluating; step 2, judging and sorting tunnels according to disease characteristic data; step 3, formulating and distributing maintenance measures in time; step 4, detecting, accepting and uploading data after maintenance; step 5, intensive continuous monitoring; and step 6, early warning and comprehensive training of maintenance personnel. The finite element analysis software is used to monitor the highway tunnel by establishing a numerical model, so as to effectively improve the safety guarantee level of highway tunnel operation and improve the operation and maintenance ability of tunnels with different geological conditions. At the same time, the maintenance method of the invention trains the measures implementers for different geological conditions, effectively improves the practical level and professional degree of the maintenance implementers, and greatly improves the maintenance speed and quality.



21: 2021/09140. 22: 2021-11-17. 43: 2022-01-20 51: E21B

71: Shandong University of Technology
72: Chu Fujiao, Wang Jie, Li Haizhou, Yu Hui,
Zhang Xiaojun
54: SPIRAL ANNULAR SHAPED CHARG

## E CUTTING LINER

00: -

The invention discloses a spiral annular shaped charge cutting liner, which relates to the technical field of blasting devices and comprises a liner, wherein the liner has a spiral thin-wall structure, and both sides of the liner are bent in the same direction to form a groove with a parabolic cross section. The spiral annular shaped charge cutting liner of the invention has a simple structure. It is convenient to operate in field use, easy to manufacture, and of low material cost, low manufacturing cost, high flexibility and strong adaptability in field construction. Therefore, using this kind of liner can help reduce the working intensity of workers. In addition, the shaped charge blasting at the bottom of the hole can effectively solve the problems such as high toe rock rate of open bench blasting and uneven working face after blasting, which ensures the engineering quality of blasting, avoids the difficulties of later construction caused by improper blasting design, and has wide practicability.



21: 2021/09141. 22: 2021-11-17. 43: 2022-02-03 51: A01D

71: Xuzhou Institute of Technology

72: Tan Xuehong

#### 54: ROAD VEGETATION GREENING WEEDING SANITATION DEVICE AND WORKING METHOD THEREOF 00: -

The invention discloses a road vegetation greening weeding sanitation device and a working method thereof, which consists of a vehicle body bracket, a moving tire, a side auxiliary row brush, a rotating tooth plate, a handle, a connecting rod, a weed storage box and a weeding device. The front and rear sides of the car body bracket are respectively provided with moving tires, which are divided into big tires and small tires; The side sub-row brush is located on the front surface of the vehicle body bracket, and the bottom surface of the side sub-row brush is flush with the ground plane; The rotating toothed disc is located between the moving tire and the vehicle body bracket, and the two groups of rotating toothed discs are in transmission connection through a chain; The push handle is located on the upper surface of the vehicle body bracket; The weed

storage box is located in the cavity inside the vehicle body bracket; The weeding device is located in front of the weed storage box, and the weeding device is fixedly connected with the vehicle body bracket through screws. The device for greening, weeding and sanitation of highway vegetation has novel and reasonable structure, convenient and quick operation and high weeding efficiency, and is suitable for different types of highway vegetation.



21: 2021/09142. 22: 2021-11-17. 43: 2022-01-20 51: A61H

71: Shandong University of Technology

72: Ge Wenqing, Zhao Yanjun, Sun Binbin, Tan Cao, Bi Wenlong, Wei Xiao

#### 54: LOWER LIMB EXOSKELETON DEVICE FOR MULTI-POSITION REHABILITATION TRAINING 00: -

The invention discloses a lower limb exoskeleton device for multi-position rehabilitation training, which consists of three parts: a standing bed part, a lower limb exoskeleton part and a lower limb exoskeleton lifting adjusting part; the standing bed part includes a underframe, a bed body, a mattress, a bed body supporting plate, an electric push rod, self-locking universal wheels, a rotating shaft, a rhombic bearing seat, a motor fixing bracket and a vertical optical axis bracket; the lower limb exoskeleton part includes two left and right symmetrical lower limbs, and each lower limb includes a hip joint structure, a knee joint structure and an ankle joint structure; the left and right lower limbs are respectively connected with the lower limb exoskeleton lifting adjusting part through sliders. The device realizes the 0-90 degrees rotation of the bed body, the lifting of the lower limb exoskeleton and the adjustment of crotch distance, and meets the training needs of patients in different postures such as lying flat, reclining and standing.



21: 2021/09143. 22: 2021-11-17. 43: 2022-01-20 51: C05F

71: Qingdao Agricultural University, Shandong Chunyi Agricultural Technology Development Co., Ltd, Jining Yanzhou agricultural and rural Bureau
72: Liu Yiguo, Liu Xingwei, Zhang Yumei, Zhang Yan, Shi Changhai, Wan Xuejie

## 54: A STRESS-RESISTANT ORGANIC SOIL AMENDMENT WITH BIOSTIMULATION AND ITS PREPARATION METHOD

00: -

The invention belongs to the technical field of soil improvement, and particularly relates to a stressresistant organic soil amendment with biostimulation, which is prepared from 10-60 parts of calcium silicate powder, 30-50 parts of biomass fertilizer, 10-20 parts of humic acid, 15-25 parts of chitosan, 10-20 parts of bentonite, 5-10 parts of alginic acid solution, 6-16 parts of amino acid solution, 6-11 parts of animal viscera fermentation broth, 4-6 parts of water-preserving agent, 0.2-0.7 part of magnesium sulphate, 0.02-0.06 part of microbial community and 0.3-0.7 part of brassinolide. The invention also relates to a preparation method of the aforementioned stress-resistant organic soil amendment, which is obtained by high-tower granulation after mixing raw materials together. The soil amendment provided by the invention contains a large amount of active and effective silicon nutrition, which combines with various marine biological source growth promoting factors such as alginic acid to nourish the root system, promote the root system growth, improve the root system activity, and enhance the stress resistance of crops such as drought resistance, pest and disease resistance, continuous cropping resistance and the like.

21: 2021/09144. 22: 2021-11-17. 43: 2022-01-20 51: C12Q

71: Linyi University

72: Liu Yunguo, Liu Lingxiao, Gong Min, Sui Zhihai, Lin Xiangna, Wu Huanyu, Liu Zhen, Qi Chengtian 54: RAPID DETECTION METHOD OF WEISSELLA VIRIDESCENS BASED ON DROPLET DIGITAL PCR

00: -

This invention discloses rapid detection method of Weissella viridescens based on droplet digital PCR, firstly, the genomic DNA of the enrichment solution of the sample to be tested is extracted and diluted for later use, then, specific primers and probes were designed by using the conserved DNA sequence of Weissella viridescens genome. Then, using the primer and probe, the genomic DNA of the enrichment solution of the sample to be tested is amplified and detected by droplet digital PCR. After PCR amplification, each droplet is detected one by one by droplet analyzer, and the droplet with fluorescence signal is interpreted as 1, while the droplet without fluorescence signal is interpreted as 0. Finally, according to Poisson distribution principle and the proportion of positive droplets, the concentration or copy number of the target molecule to be detected is calculated. The microdroplet digital PCR can directly obtain the number of DNA molecules, and can be used for absolute quantification of Weissella viridescens in samples. The method has the advantages of high sensitivity,

accurate quantification, wide linear range of detection, good specificity and moderate cost.

21: 2021/09145. 22: 2021-11-17. 43: 2022-01-20 51: A01C

71: Qingdao Agricultural University, Shandong Chunyi Agricultural Technology Development Co., Ltd, Rizhao Agricultural Technical Service Center 72: Shi Changhai, Liu Yiguo, Liu Xingwei, Wang Heng, Shi Junhui, Lin Zhidong, Che Lin, An Peng, Wang Kehui, Wu Di

#### 54: PLANTING METHOD TO INCREASE WHEAT YIELD ON DRY LAND 00: -

A planting method for increasing the yield of dryland wheat belongs to the field of planting technology of dryland food crops. The planting method of the present invention is as follows: deep plowing is used to deepen the plowing layer to increase rainfall accumulation, combined with deep plowing, all the applied fertilizers are applied as base fertilizer deep into the soil, after soil preparation, no ridges are allowed, and equal-row flat sowing is achieved. The method of the invention is suitable for Shandong province and Huanghuaihai winter wheat dry farming areas, can fully tap the yield increasing potential of dryland wheat, improve the utilization efficiency of fertilizer and water, reduce costs, increase land output, save agricultural water, increase dryland wheat yield, and produce good economic, social and ecological benefits. Field retests by experts showed that the average yield per mu of ten acres of highyield research fields reached 703.5 kg, setting a new record for the average yield per mu of dryland wheat in China.

33: CN 31: 2021112672724 32: 2021-10-29 54: MULTI-FUNCTIONAL SPIRAL PUSHING TYPE SUPPLEMENTARY FEEDING MACHINE FOR DAIRY COWS

00: -

The invention relates to a multi-functional spiral pushing type supplementary feeding machine for dairy cows, which comprises a walking device, and a

<sup>21: 2021/09146. 22: 2021-11-17. 43: 2022-01-20</sup> 

<sup>51:</sup> A01K

<sup>71:</sup> Shandong Agricultural University

<sup>72:</sup> Tian Fuyang, Yuan Xin, Lin Xueyan, Wang Zhonghua, Yu Zhenwei, Song Zhanhua, Yan Yinfa, Yan Zhengui

pushing device, a forage throwing device and a concentrated feed supplementing device which are installed on the walking device, wherein the pushing device is located at a front end of the walking device, a pushing direction of the pushing device faces a feeding side, and a discharge outlet of the forage throwing device is located in front of a discharge outlet of the concentrated feed supplementing device. The machine is simple and practical in structure and convenient to manufacture, and the distribution of feed and forage on the ground may be detected and identified by a depth camera and fed back to a control system, so that the forage throwing device and the concentrated feed supplementing device may intelligently supplement feed in time to meet the real-time nutritional needs of dairy cows; and a pushing screw is used to realize feed pushing, so that the pushing efficiency is greatly improved compared with the traditional manual pushing method, the problems of too many leftovers, feed loss, high labor consumption and high workload caused by manual pushing may be effectively reduced, labor cost is greatly reduced, manpower and material resources are saved, and the income of pastures is increased.



21: 2021/09147. 22: 2021-11-17. 43: 2022-01-20 51: A01C

71: QingDao Agricultural University, Shandong Agriculture Technology Popularizing Center, Agricultural and Rural Bureau of Zhucheng 72: Liu Yiguo, Liu Hongjun, Han Wei, Yan Weiting, Che Lin, Lin Zhidong

## 54: WIDE RIDGE AND FURROW SOWING CULTIVATION TECHNOLOGY OF WHEAT IN SALINE-ALKALI LAND

#### 00: -

The invention discloses a wide ridge and furrow sowing cultivation technology of wheat in salinealkali land. The technology comprises the following steps. S1. Soil preparation before sowing: after the previous crop is harvested, the land is rotary plowed by a rotary tiller. Therefore the plough layer is uniformly crushed without large clods and the land is flat. S2. Irrigating: checking the soil moisture, and irrigating the land to keep the water layer at 0.5-1 cm. S3. Ridging: ridging the land by using a ridgingsowing machine or manually. The ridge width is required to be 30-50 cm, the ridge height is required to be 10-30 cm, and the furrow width formed after ridging is 15-25 cm. S4. Sowing: sowing in ridges while ridging, planting wheat on both sides of a furrow to form two rows of wheat. The planting mode can be manual planting or mechanical planting. S5. Management: after the wheat survives, applying 9-13 kg of urea per mu as seedling fertilizer, 4-9 kg of urea per mu at jointing stage and 3.5 kg of urea per mu at jointing stage of wheat. The invention improves the utilization efficiency of saline-alkali land, increases the grain yield, obtains higher economic benefits, and has good application prospects.

21: 2021/09148. 22: 2021-11-17. 43: 2022-01-20 51: A01C; G01N

71: Qingdao Agricultural University, Qingdao Agricultural Technology Extension Center, Shandong Chunyi Agricultural Technology Development Co., Ltd

72: Liu Yiguo, Yan Weiting, Lin Zhidong, Che Lin, Liu Xingwei, Li Songjian, Jiang Wen

### 54: ON-LINE DETECTION SYSTEM FOR INTEGRATION OF WATER AND FERTILIZER 00: -

An on-line detection system for integration of water and fertilizer is used to detect trace elements in the soil, so as to determine the amount of water and fertilizer needed by crops. The on-line detection system for integration of water and fertilizer comprises the following components: water and fertilizer main pipeline, water and fertilizer branch pipelines, first determining pipeline, second determining pipeline, third determining pipeline,

recovering pipelines, recovering tank, PLC controller, pipeline switch and soil analyzer; wherein the water and fertilizer main pipeline is connected with a plurality of water and fertilizer branch pipelines; the recovering pipelines correspond to each crop unit one by one and recover the remaining water and fertilizer absorbed by each crop unit; the first determining pipeline obtains water and fertilizer from the water and fertilizer main pipeline and transports it to the control room; the second determining pipeline obtains water and fertilizer from the water and fertilizer branch pipelines and transports it to the control room; the third determining pipeline obtains water and fertilizer from the recovering pipelines and transports it to the control room; the recycling pipeline is connected with the recycling tank; the soil analyzer is in one-to-one correspondence with the crop unit as well as is connected with the PLC controller by signal; and the PLC controller is connected with the pipeline switch arranged on the water and fertilizer branch pipelines by signal. Therefore, the invention can detect water and fertilizer in the online.



- 21: 2021/09149. 22: 2021-11-17. 43: 2022-01-20 51: B01D; B09B
- 71: Xuzhou University of Technology
- 72: Tan Xuehong

#### 54: WASTE TREATMENT DEVICE USED IN PLANT PLANTING PROCESS 00: -

The invention discloses a waste treatment device used in that plant plan process, which comprises:

the plant crushing device is used for crushing plant wastes and carrying out preliminary dry-wet separation on the crushed plant wastes; the plant extrusion device is used for extruding and dehydrating the plant wastes after preliminary drywet separation; the waste gas treatment device is used for purifying the waste gas generated by the extrusion water post-treatment system. The waste treatment device used in the plant planting process provided by the invention has high degree of automation, stable and reliable operation and convenient later maintenance; the device has high treatment efficiency, reduces the labor intensity, and at the same time, centrally purifies and filters the waste gas generated in the sewage treatment process, thus avoiding air pollution.



#### 21: 2021/09150. 22: 2021-11-17. 43: 2022-01-20 51: G01M

- 71: Shanghai Ocean University
- 72: Chu Wenhua, Yuan Qing, Yin Chunqing

#### 54: CONNECTING DEVICE FOR HYDRODYNAMIC MODEL EXPERIMENTS OF V-SHAPED OTTER BOARD

### 00: -

The invention discloses a connecting device for Vshaped otter board hydrodynamic model experiment, which comprises a V-shaped otter board model, Lshaped fixing splints, and a cylindrical connector and

a connecting rod, wherein the L-shaped fixing splints comprise a vertical fold surface and a horizontal folding surface which are perpendicular to each other. The invention has the effects of improving the connection stability between the model and the sixcomponent dynamometer in the model experiment, and enabling the attitude of the V-shaped otter board model to be accurately adjusted.



21: 2021/09151, 22: 2021-11-17, 43: 2022-01-20 51: G01N

71: Biology Institute of Shandong Academy of Sciences

72: LI, Qiushun, YANG, Yan, CAI, Lei, MA, Yaohong, MENG, Qingjun, YANG, Junhui, LIU, Qing'ai

#### 54: METHOD FOR DETECTING OTA BY POLYMETHACRYLIC ACID LPFG 00: -

The present disclosure discloses a method for detecting OTA by polymethylacrylic acid LPFG, which comprises the following steps: continuously and controllably growing a polymethylacrylic acid film on the surface of LPFG in real time by controlling the concentration, reaction time and reaction temperature of a reaction reagent, so that the sensitivity of LPFG to the refractive index within the range of 1.333-1.4 reaches the optimal state. The OTA monoclonal antibody is further modified on the surface of the polymethacrylic acid film, the OTA detection selectivity of the LPFG is improved according to the specific reaction of the OTA monoclonal antibody and OTA, and the OTA content is judged according to the change of a resonance spectrum, so that the high-sensitivity and highselectivity detection of OTA is realized. Fluorescence labeling is not needed, the detection steps are simplified, the detection cost is saved, the detection time is shortened.

#### 21: 2021/09152. 22: 2021-11-17. 43: 2022-01-20 51: A01K

71: Shanghai Ocean University

72: LI, Jiayao, LI, Jinghao, CHENG, Yongxu 54: METHOD FOR FARMING PROCAMBARUS CLARKII BY BIOFLOC TECHNOLOGY (BFT) 00: -

The present disclosure provides a method for farming Procambarus clarkii using biofloc technology (BFT), including step 1 of establishing a biofloc farming system and step 2 of conducting daily farming management. In the farming method, a feeding efficiency of the Procambarus clarkii is improved and sheltered places are provided to reduce mutual damages of the Procambarus clarkii using fake aquatic plants as biofloc attachment; and a farming density is decreased to reduce a concentration of total suspended particulates according to living habits of the Procambarus clarkii. The farming method can maintain a desirable water quality, reduce a feed coefficient, enhance a digestive enzyme activity and an antioxidant level of farmed aquatic animals, thereby increasing a yield and a survival rate, saving labor costs, improving a unit labor efficiency and greatly reducing farming costs.



21: 2021/09153, 22: 2021-11-17, 43: 2022-01-20 51: C12Q; G06K 71: Capital Medical University

72: Guo Xiuhua, Pan Huiying, Wu Zhiyuan, Zhang Haiping, Feng Wei, Zhang Jie, Tao Lixin, Wang Xiaonan, Liu Xiangtong

54: BIOMARKERS RELATED TO THE OCCURRENCE AND DEVELOPMENT OF ESOPHAGEAL CANCER

## 00: -

Disclosed in the present disclosure is a kind of biomarkers related to the occurrence and development of esophageal cancer based on data of tumour risk factors of populations in high-risk areas and epidemiological investigation, which therefore overcomes the defects of low sensitivity and specificity of existing esophageal cancer tumour markers and provides biomarkers capable of rapidly, simply and accurately diagnosing esophageal cancer in addition to large-scale popularization. In this study, a case-control study is designed to collect questionnaire information on demographics, dietary behavior and disease history as well as blood samples from the study subjects. Based on the glycosomics analysis technique, the relative contents of IgG N-glycans are measured using ultrahigh pressure liquid chromatography, and 24 direct glycan peaks (GP1-GP24) and 54 glycosyl-derived variables (IGP24-IGP77) are obtained. After false discovery rate (FDR) correction, the Kruskal-Wallis H test is used to evaluate the relative contents of IgG N-glycans among the three groups. Ordinal Logistic regression model are used to explore the IgG Nglycan biomarkers associated with precancerous esophageal lesions and early stage cancer and to search for potential biomarkers of the disease after adjusting the effects of age, gender, Body Mass Index, hypertension, smoking, alcohol consumption, income, marital status, education background and dietary habits. The classification results are evaluated by the Receiver Operating Characteristic curve (ROC curve) and the robustness of the diagnostic capability of the screened biomarkers is evaluated by using the Bootstrap method.



- 21: 2021/09154. 22: 2021-11-17. 43: 2022-01-20
- 51: G06K; G06Q
- 71: Southwest Petroleum University

#### 72: Pang Xiyue, Chen Bo, Lin Chunhua 54: METHOD TO QUANTIFY THE RELIABILITY OF HUMAN FACTORS BASED ON FRACTURING OPERATION SHIFT 00: -

The invention discloses a method to quantify the reliability of human factors based on fracturing operation shift, which includes: establishing a cognitive behavior model for fracturing operation shift through investigation and analysis of fracturing site, and describing the cognitive behavior process of fracturing operation shift from the perspective of psychology and behavior. According to the cognitive behavior model and the characteristics of fracturing operation situation environment, combined with expert interviews, the common performance condition (CPC) suitable for evaluating fracturing operation is established, and the evaluation indexes of various factors are determined. Secondly, combining cognitive reliability and error analysis methods CREAM and fuzzy mathematics, the evaluation index description level membership function and shift control mode membership function are constructed. By combining the order relation method G1 and entropy weight method, the subjective and objective combination weights of

various evaluation indexes are given, and the membership degree of fracturing operation shift control mode is fuzzy calculated. Finally, the human factors of fracturing operation are fuzzified by gravity method.



21: 2021/09155. 22: 2021-11-17. 43: 2022-01-20 51: B22F

71: North China University of Technology 72: Liu Kun, Zhang Pengjie, Zhang Yikun, Feng Yunli, Wang Shuhuan

#### 33: CN 31: 202111085055.3 32: 2021-09-16 54: HIGH-PERFORMANCE SMFE12-BASED PERMANENT MAGNET POWDER AND PREPARATION METHOD THEREOF 00: -

The invention discloses a high-performance SmFe12-based permanent magnet powder and a preparation method thereof, belonging to the technical field of rare earth permanent magnet preparation. The composition of the highperformance SmFe12-based permanent magnetic powder is (Sm, Zrx)(Fe0.8Co0.2)11-yCuyTi, wherein x is 0.2-0.3 and y is 0.4-0.5. The method Comprises the following steps: adding Zr, Co, Cu and Ti into SmFe12 alloy, performing alloying treatment to obtain (Sm, Zrx)(Fe0.8Co0.2)11-yCuyTi alloy with uniform composition and organization, and then performing high-pressure atomization treatment to obtain the high-performance SmFe12-based permanent magnet powder. The SmFe12-based permanent magnet powder prepared by the invention has appropriate grain size and

microstructure, which is conducive to the improvement of the final magnetic properties of the formed block.



#### 21: 2021/09156. 22: 2021-11-17. 43: 2022-01-20 51: G01C

71: Linyi University

72: YANG, Liu, LIANG, Ruquan, YANG, Yueting, ZHANG, Dengbo, SONG, Yuanmei, SHI, Jianhui, ZHANG, Danhui, ZHANG, Junlan, TONG, Yishi 54: INTELLIGENT INSPECTION VEHICLE FOR HIGH-SPEED TRACK 00: -

## The present invention discloses an intelligent inspection vehicle for a high-speed track, including a vehicle body, a bogie, a battery module, and at least two drive units including a drive motor fixedly arranged on the bogie and a wheel set arranged on the bogie. The drive motor can drive the wheel set to rotate and is electrically connected to the battery module; at least two air springs are fixedly arranged above the bogie; a bottom end of the vehicle body is fixedly connected with top ends of the air springs; front and rear ends of the vehicle body are provided with laser radars and illuminating lamps; the vehicle body is further provided with a central processor, a high-speed solid-state memory, a GPS gyro locator, and a wireless data transmitter; and a bottom end of the bogie is fixedly provided with a high-speed camera and a vibration sensor.



#### 21: 2021/09157. 22: 2021-11-17. 43: 2022-01-20 51: A61B; A61N

71: Jiangsu Cancer Hospital

72: Wu Jing, He Xia, Wu Jianfeng, Liu Yatian, Jiang Xuesong, Xie Peng, Zhu Huanfeng 54: RADIOTHERAPY POSITIONING DEVICE FOR TUMOR

00: -

The invention discloses a radiotherapy positioning device for tumor, which comprises a base and a radiation head, a radiotherapy table is arranged above the base, and one side of the radiotherapy table is provided with an assembly support frame; a sliding lifting mechanism is installed on one side of the assembly support frame close to the radiotherapy table, a positioning protection box is installed on one side of the sliding lifting mechanism away from the assembly support frame, and a radiation head is arranged directly above the positioning protection box, and the radiation head is slidably connected with the assembly support frame. According to the radiotherapy positioning device for tumor, the positioning protection box is additionally arranged on the radiotherapy table, and the height and front and back positions of the positioning protection box can be adjusted through the sliding lifting mechanism, so that a doctor can position the position that a patient needs to be irradiated in advance through the positioning component on the positioning protection box, and then only the radiation head needs to enter the positioning cylinder, so that it is unnecessary to carry out position correction for many times for positioning, and the complicated steps in positioning are reduced and the radiotherapy efficiency is improved.



#### 21: 2021/09158. 22: 2021-11-17. 43: 2022-01-20 51: A61K; A61P

71: LINYI UNIVERSITY

72: LI, Qiong, WANG, Yilin, XIONG, Xuefan, DU, Hairong, ZHANG, Shusheng

33: CN 31: 202011300962.0 32: 2020-11-19 54: CORE SHELL STRUCTURE-BASED NANOPARTICLES FOR TARGETED DRUG-DELIVERY AND PREPARATION METHOD THEREOF

#### 00: -

The present disclosure relates to the technical field of nano-biomedicine, and provides a core shell structure-based nanoparticles for targeted drugdelivery and a preparation method thereof. The core shell structure-based nanoparticles for targeted drug-delivery includes a drug- delivery core and a drug-delivery shell coated on a surface of the drugdelivery core; where the drug-delivery core includes a luminous drug-delivery core, a cell penetrating peptide modified on a surface of the luminous drugdelivery core and a gene drug adsorbed on a surface of the cell penetrating peptide; and the drugdelivery shell includes a calcium phosphate layer, a chemotherapeutic drug doped in the calcium phosphate layer and a nucleic acid aptamer modified on a surface of the calcium phosphate layer. The core shell structure-based nanoparticles for targeted drug-delivery can target tumor tissues, effectively

improve enrichment and retention of nano-drugs in the tumor tissues.



21: 2021/09159. 22: 2021-11-17. 43: 2022-01-20 51: C12N

71: ZhengZhou University, Sichuan Liangshan Tobacco Company

72: Li, Hongli, Chen, Yulan, Luo, Lin, Ling, Aifen, Zhang, Susu, Xie, Shiqi, Li, Zhongkui, Wang, Yong, Wang, Yan

33: CN 31: 202011378315.1 32: 2020-12-01 54: SOIL CONDITIONING BACTERIAL AGENT AND COMBINATION THEREOF WITH LIME NITROGEN

00: -

The invention provides a soil-improvement bacteria agent, including Aspergillus niger, Bacillus subtilis, Bacillus licheniformis and Streptomyces microflavus. The aforementioned bacteria are stored separately in the agent or mixed with two or more of them. The invention also relates to combination thereof with lime nitrogen. Through repeated selection, the bacteria agent was obtained that can synergize with lime nitrogen. Through combined use thereof, it not only improves the structure of soil bacteria flora and the economic indicators of crops, but also significantly improves the control effect of black shank disease, nematode disease, bacterial wilt, etc.

21: 2021/09160. 22: 2021-11-17. 43: 2022-01-20 51: H02J 71: JIN, Hulin 72: JIN, Hulin 54: WIRELESS CHARGING SYSTEM USING BEAMFORMING ANTENNAS 00: - The present invention discloses a wireless charging system using Beamforming antennas, including: a wireless power distributor, configured to transmit wireless power to a plurality of Beamforming antennas sequentially; a wireless power supply controller, configured to obtain a state of charge from a terminal device for the distribution of wireless charging power, to distribute wireless power to a specific Beamforming antenna; and a charging information receiver, configured to obtain the state of charge from the charged terminal device (150, 151, 152). The wireless charging terminal device sends charging information to the charging information receiver after receiving the wireless charging power and confirming the state of charge; and the corresponding Beamforming antenna accurately determines the terminal device in its area, thereby improving the wireless power efficiency of the wireless charging system.



21: 2021/09161. 22: 2021-11-17. 43: 2022-01-20

51: G06F

71: South China University of Technology

72: MA, Niujing, FANG, Mingshan, PIAO, Long, ZHANG, Xingzhi, GAO, Xing

54: CALCULATION METHOD FOR ORTHOTROPIC STEEL BRIDGE DECK 00: -

The present invention provides a calculation method for an orthotropic steel bridge deck. A parent plate with an equivalent cross section is uniformly compressed, and a longitudinal rib is uniformly tensioned. On that basis, stiffness equations of the orthotropic steel bridge deck are created according to the energy theory, and MATLAB software can be used to conveniently calculate a stiffness matrix of the structure.



21: 2021/09162. 22: 2021-11-17. 43: 2022-01-20 51: E21C

71: China University of Mining and Technology, Xinjiang Coalfield Fire-Extinguishing Engineering Bureau

72: SHAO, Zhenlu, ZHOU, Tao, ZHANG, Guofu, WEI, Jun, DENG, Rong, CAO, Fei, ZHONG, Xiaoxing, SUN, Huahai, TANG, Xiaofei, QING, Shangkun, ZHANG, Yong, HU, Zhimin, BAO, Xingdong, XU, Yan

#### 54: MULTILAYER THERMAL INSULATING LOADING DEVICE FOR HIGH-TEMPERATURE BLASTING BOREHOLE OF OPEN-PIT MINE 00: -

The present invention relates to a multilayer thermal insulating loading device for a high-temperature blasting borehole of an open-pit mine, including a peripheral thermal insulating layer and an inner loading bag, both being open hollow cylindrical cavity structures. The inner loading bag is arranged in the peripheral thermal insulating layer with a peripheral annular cavity formed therebetween to inject liquid. Both the peripheral thermal insulating layer and the inner loading bag are arranged in an underground borehole during use. High-reliability and low-thermal-conductivity materials are used to form a double-layer space: an outer layer is injected with water to insulate heat while an inner layer is loaded with an ordinary ammonium nitrate explosive. As such, an internal explosive loading space is effectively separated from an external hightemperature environment to rapidly create a borehole temperature environment meeting a loading blasting requirement and simultaneously create a process condition for convenient and safe loading.



21: 2021/09163. 22: 2021-11-17. 43: 2022-01-20 51: A23K

71: Shanghai Ocean University

72: LI, Songlin, DING, Guitao, CHEN, Naisong 54: PREPARATION METHOD OF ENZYME-HYDROLYZED SOYBEAN MEAL AND ITS APPLICATION IN FEED FOR MICROPTERUS SALMOIDES

00: -

The present disclosure provides a preparation method of enzymatically hydrolyzed soybean meal and its application in Micropterus salmoides feed; adding enzyme hydrolyzed soybean meal to Micropterus salmoides feed can significantly improve the growth performance, feed utilization rate and improve intestinal health of the Micropterus salmoides.



### 21: 2021/09168. 22: 2021-11-17. 43: 2022-02-03 51: C30B

71: Qingdao University of Science and Technology 72: Fangkun ZHANG, Baoming SHAN, Bing WU, YINGLONG WANG, ZHAOYOU ZHU

#### 54: SEED CRYSTAL PREPARATION METHOD APPLIED TO CRYSTALLIZATION PROCESS 00: -

The invention relates to a seed crystal preparation method applied to a crystallization process, and in particular to a method for preparing a seed crystal by multiple processes in combination. The method consists of recrystallization, solid-liquid separation, drying, grinding, screening, washing and the like. According to the method disclosed by the invention, the high-quality seed crystals can be obtained by the combined processes such as recrystallization, solidliquid separation and the like under the condition that the raw crystal does not meet the purity and the crystal form, fine grains in the ground and screened seed crystals are removed by a washing method, the particle size distribution of the seed crystals is narrowed, the quality of the seed crystals is improved, and finally the high-quality dry seed crystals are obtained by filtering and drying. The method disclosed by the invention is a systematic and complete seed crystal preparation method, the fine grains in the seed crystals can be removed, the

seed crystals with narrow particle size distribution is obtained, the impurity content in the seed crystals can be reduced, the purity and quality of the seed crystals are improved, the quality of a crystal product is improved, and downstream process treatment difficulty is reduced.



21: 2021/09170. 22: 2021-11-17. 43: 2022-01-20 51: A23L

71: INSTITUTE FOR APPLICATION OF ATOMIC ENERGY, SHANDONG ACADEMY OF AGRICULTURAL SCIENCES (SHAN DONG RADIATION CENTER, INSTITUTE OF AGRO-FOOD SCIENCES AND TECHNOLOGY, SAAS) 72: GUO, Xu, SUN, Jinyue, LIU, Chao, SHAN, Chenggang, WANG, Xianchang, WANG, Qing, WANG, Xinkun, CHEN, Yingying 33: CN 31: 202110024458.0 32: 2021-01-08 54: AMERICAN GINSENG COMPOUND BEVERAGE AND PRAPARATION METHOD THEREOF

#### 00: -

Disclosed are an American ginseng compound beverage and a preparation method thereof belonging to the field of American ginseng beverage preparation. The American ginseng compound beverage includes the following main components: water, concentrated American ginseng juice, fructo oligosaccharide, grapefruit juice, erythritol, isomaltulose, instant cordyceps militaris powder, rose, chamomile, chitin, and red dates, and the components are in the following proportions by weight: water: 68 to 78%; concentrated American ginseng juice: 5 to 10%; fructo oligosaccharide: 4 to 7%; grapefruit juice: 2 to 5%; erythritol: 2 to 5%; isomaltulose: 0.8 to 2%; instant cordyceps militaris powder: 0.5 to 1%; rose: 1 to 3%; chamomile: 0.8 to

1.2%; chitin: 0.8 to 1.2%; and red dates: 0.1 to 0.3%. The present disclosure can effectively allay user's tiredness caused by work and life stresses, promote sleep, enhance user's sleep quality, and meanwhile, promote skin rejuvenation, and prevent emaciation with sallow complexion due to stresses.

21: 2021/09171. 22: 2021-11-17. 43: 2022-01-20 51: G06T

71: ZHENGZHOU UNIVERSITY OF LIGHT INDUSTRY 72: ZHOU, Fuli, HE, Yandong, MA, Panpan, CHENG, Shuang 54: FUZZY TOPSIS APPROACH BASED ON

# IMPROVED EUCLIDEAN DISTANCES

The present invention discloses a fuzzy TOPSIS approach based on improved Euclidean distances, characterized by including the following steps: step 1, calculating index weights under fuzzy conditions based on a subjective and objective weight method EW-AHP; and step 2, fuzzy TOPSIS evaluation ordering based on customer preferences. The present invention not only considers subjective and objective weights of experts under fuzzy conditions, but also improves the Euclidean distance function in the traditional TOPSIS method based on customer preference information, constructs weight index functions, calculates weight index Euclidean distances, and orders evaluation objects, thereby improving the evaluation accuracy and robustness of the TOPSIS evaluation method under fuzzy conditions.



21: 2021/09191. 22: 2021-11-17. 43: 2022-02-03 51: B29C

71: JIANGSU YUNXIN ELECTRICAL CO., LTD 72: JIANG, Wenjun, JIANG, Jiayun, CHEN, Chao, GAO, Weikai

33: CN 31: 201910463797.1 32: 2019-05-30 33: CN 31: 201920803061.X 32: 2019-05-30 33: CN 31: 201910465048.2 32: 2019-05-30 54: COMPOSITE MATERIAL PRODUCTION LINE AND PRODUCTION METHOD BASED ON VERTICAL GRAVITY TENSIONING METHOD 00: -

Provided are a composite material production line and a production method based on a vertical gravity tension method, the production method involving: firstly, sequentially arranging all apparatuses of the composite material production line vertically from top to bottom according to a production sequence, and setting a coaxial processing channel at the center of each processing area; then pulling a raw material tensioned with prestress using a traction device, such that the raw material passes through each processing apparatus along the processing channel sequentially in the vertical direction, so as to obtain a finished fiber-reinforced composite material (FRP) profile. According to the invention, the problems of insufficient resin immersion and interlayer bubbles are thoroughly solved by means of the production line design of a vertical structure, the complete curing of the fiber-reinforced composite material is ensured, and the pipe quality is improved. The profile produced therefrom has a wide range of applications, and can be used for various profiles in power systems and petrochemical engineering, and also in a 5G pole-tower. Since inorganic material is used therein, the 5G pole-tower has excellent lightning protection and anti-interference performance and an anti-corrosion protection lasting for 50 years; and same is two-thirds the cost of an ordinary iron tower and only one-sixth the weight of the iron tower.



#### 21: 2021/09213. 22: 2021-11-18. 43: 2022-02-09 51: A01K

71: Qingdao Agricultural University 72: WANG, Feng, LIU, Bo, ZHENG, Bo 54: METHOD FOR CROSSBREEDING PELTEOBAGRUS FULVIDRACO AND PELTEOBAGRUS VACHELLI 00: -

The present disclosure discloses a method for crossbreeding pelteobagrus fulvidraco and pelteobagrus vachelli, comprising the following steps: temporarily breeding and domesticating wild or commercially available pelteobagrus fulvidraco and pelteobagrus vachelli to meet the parent fish standard; after performing artificial spawning induction and artificial insemination, evenly attaching the fertilized eggs to an incubation mesh, and performing incubation in a 'honeycomb' type incubation pool through micro-flowing water, to obtain crossbred fish species. By means of the method, pelteobagrus fulvidraco and pelteobagrus vachelli artificial crossbred seedlings that have high growth speed, high stress resistance and good meat quality can be obtained, which has great significance in meeting living needs of people and increasing new freshwater aquaculture varieties.

21: 2021/09223. 22: 2021-11-18. 43: 2022-02-09 51: A61K 71: FENG, Xuewen 72: FENG, Xuewen 54: CHINESE MEDICINE COMPOSITION FOR TREATING HEART DISEASE AND

## PREPARATION METHOD THEREOF 00: -

The invention discloses a Chinese medicine composition for treating heart disease and a preparation method thereof. The Chinese medicine composition of the invention has good therapeutic effect, high utilization rate of effective ingredients, good synergy between various raw materials, safety, no toxic side effects, high cure rate, and can significantly improve heart function. The freezing wall-breaking pulverization method adopted in the invention can not only effectively retain the active ingredients of the original medicine and make it fully utilized, but also can save the dosage of Chinese medicinal materials and reduce the cost.

# 21: 2021/09224. 22: 2021-11-18. 43: 2022-02-09 51: C12N; C12Q

71: Jilin Academy of Agricultural Sciences 72: WANG, Chunxin, ZHANG, Mingxin, ZHAO, Yunhui, YUAN, Zhiyu, WANG, Song, XIAO, Cheng, ZHAO, Zhuo, XU, Jing, WU, Yujin, CHENG, Yiyao, CHEN, Geng, WU, Cuiling

#### 54: LNCRNA SFR1 AND ITS APPLICATION, PRODUCTS AND METHODS FOR REGULATING FOLLICULAR DEVELOPMENT 00: -

The invention provides a IncRNA SFR1 and its application and products and methods for regulating follicular development, which relates to the field of biotechnology. The present invention provides a new long non-coding RNA SFR1, which is related to the apoptosis of granulosa cells and can also play a corresponding regulatory role in follicular development related pathways, genes and hormones by regulating the expression of IncRNA SFR1. Therefore, the application of IncRNA SFR1 and corresponding products provided by the invention can effectively regulate follicular development in vivo and in vitro, providing a strong guarantee for the development of follicles and the study of physiological and biochemical functions. In addition, through the regulation of IncRNA SFR1 on follicular development, the excellent characteristics

of mammalian germplasm resources, especially sheep, can be maintained while improving population fertility, so as to improve the economic benefits of breeding.



21: 2021/09225. 22: 2021-11-18. 43: 2022-02-09 51: G01N

71: China Institute of Water Resources and Hydropower Research

72: ZHAO, Weiquan, ZHANG, Jinjie, ZHOU, Jianhua, LI, Na, LU, Wei, WAN, Xiaohong, WANG, Lijuan, REN, Zengzeng

## 54: DEVICE AND METHOD FOR MEASURING AND CONTROLLING DIFFUSION RANGE OF CEMENT-BASED GROUT IN OVERBURDEN GROUTING

00: -

The present disclosure discloses a device and method for measuring and controlling the diffusion range of cement-based grout in overburden grouting, and relates to the technical field of grouting engineering. The device includes multiple sets of pH electrodes arranged in corresponding monitoring holes respectively and used for obtaining pH values at multiple coordinate positions in each monitoring hole in real time: a pH data collection instrument connected with the multiple sets of pH electrodes and used for collecting pH values sent by each pH electrode in real time; and a slurry diffusion data management system connected with the pH data collection instrument and used for processing the pH values sent by the pH data collection instrument in real time, determining a slurry diffusion position and drawing a profile diagram of cement-based grout diffusion range at any moment according to the slurry diffusion position.



21: 2021/09232. 22: 2021-11-18. 43: 2022-02-09 51: A23L

71: Ocean University of China

72: ZHAO, Yuanhui, XU, Xinxing, LIU, Kang, GAO, Ruichang, ZENG, Mingyong, HUANG, Pan, LIU, Weijia, FU, Jingtong

## 54: METHOD FOR PREPARING STURGEON HEAD SEASONING

00: -

The present disclosure discloses a method for preparing a sturgeon head seasoning, comprising the steps of: (1) preparing sturgeon head pulp; (2) carrying out enzymolysis on the sturgeon head pulp: taking the sturgeon head pulp prepared by the step (1), adding papain and stirring to conduct primary enzymolysis reaction; and then adding flavourzyme and conducting secondary enzymolysis reaction;(3) carrying out enzyme deactivation: after the enzymolysis is finished, carrying out the enzyme deactivation and filtering an enzymolysis product to obtain sturgeon head pulp filtrate; (4) conducting Maillard reaction: conducting Maillard reaction on the sturgeon head pulp filtrate prepared by the step (3); (5) carrying out emulsification treatment: sufficiently emulsifying a product of the Maillard reaction in the step (4); (6) sterilizing and packaging, to obtain a sturgeon head seasoning finished product.

71: SHANDONG ETON NEW MATERIAL CO., LTD 72: TENG, Kun, LI, Changyin, LI, Qinghua, LIU, Tao, TENG, Bo, ZHANG, Yan

33: CN 31: 201910465188.X 32: 2019-05-30 54: METHOD FOR PREPARING HYDROXYETHYL CELLULOSE 00: -

The present invention discloses a method for preparing hydroxyethyl cellulose. The method for preparing the hydroxyethyl cellulose includes a

<sup>21: 2021/09246. 22: 2021-11-18. 43: 2022-02-09</sup> 51: C08B

process of preparing the hydroxyethyl cellulose from a cellulose raw material through procedures of alkalization, etherification, pH adjustment, removal of salt by washing and solid-liquid separation, wherein the method further includes a step of adding a precipitant before the removal of salt by washing, and/or a step of adding a crosslinker after the pH adjustment and before the removal of salt by washing. The method for preparing the hydroxyethyl cellulose inhibits and/or delays dissolution of hydroxyethyl cellulose in water and achieves removal of salt by water washing, thereby ensuring the quality of a product. Compared with the traditional production process, the method provided by the present invention has the advantages that a washing liquid does not use an organic solvent and a washing solvent recovery process is omitted, thereby significantly reducing production costs as well as reducing safety hazards and occupational health risks caused by the use of the organic solvent. Furthermore, the washing efficiency is high, and the objective of washing can be achieved by only once washing, thereby saving the washing time and improving the production efficiency.

21: 2021/09272. 22: 2021-11-19. 43: 2022-01-31 51: A61K

71: Maternal and Child Health Care Hospital of Shandong Province, Shandong University
72: ZHANG, Lin, DUAN, Shuyin, WANG, Lifeng, FANG, Lei, PENG, Yanjie, LI, Baifeng, MA, Lan, HAN, Zhengpu, TIAN, Jiaqi, YIN, Haoyu
33: CN 31: 202111182317.8 32: 2021-10-11
54: MACROPHAGE PYROPTOSIS MODEL, CONSTRUCTION METHOD AND APPLICATION THEREOF

00: -

The present invention provides a construction method of macrophage pyroptosis model, comprising: pretreating macrophages at log phase in a DMEM culturing medium with high glucose, wherein lipopolysaccharide (LPS) is added in the DMEM culturing medium with high glucose; and adding nano-SiO2 powder or micro-SiO2 powder into the DMEM culturing medium with high glucose after pretreatment, culturing for an appropriate period of time, and obtaining the macrophage pyroptosis model. The method provided in the present invention can induce macrophage pyroptosis in 10 hours, the sequence of adding LPS first and then the SiO2 powder is in line with features of inducing and activation stages of pyroptosis, in combination with use of LPS and SiO2 powder of different grain sizes real conditions of pyroptosis in vocational exposure situations are to the greatest extent recovered, by building a macrophage pyroptosis model in vitro mechanisms of all kinds of lung diseases induced by dust can be known, which is of significant value in analyzing occurrence and initiation of pulmonary silicosis and lung cancers



21: 2021/09273. 22: 2021-11-19. 43: 2022-02-09 51: A23L

71: Liaoning Institute of Pomology 72: HAO, Yi, JIANG, Yongfeng, XING, Yingli, LI, Jiangkuo, LU, Yuzhuo, ZHAO, Haijuan, RONG, Chuansheng

#### 54: METHOD FOR MANUFACTURING HIGH-EFFICIENCY PLUM PRESERVATIVE 00: -

The present disclosure relates to a fruit preservative, and specifically relates to a method for manufacturing a plum preservative. At present, two methods for preservation of plums include placing preservatives in fruit packaging boxes or bags and using low-temperature refrigeration. The existing preservatives contain toxic ingredients, and the shelf life and quality of fruits are also affected by refrigeration. The present disclosure includes a ratio of raw materials and a manufacturing process of the preservative. The raw materials including potassium permanganate, calcium hydroxide, ferrous sulfate, calcium oxide, sodium hypochlorite, anhydrous calcium chloride, zinc oxide, ascorbic acid, sodium polyacrylate and the like are mixed at a ratio, pulverized, uniformly stirred and then sieved with zeolite as a carrier. Then, a small amount of water is added to prepare granules.

21: 2021/09275. 22: 2021-11-19. 43: 2022-02-08

51: A01C; A01G

71: Liaoning Institute of Pomology

72: WANG, Xingdong, LIU, Cheng, WEI, Xin, YANG, Yuchun, WANG, Sheng, SUN, Bin, WANG, Hongguang, LIU, Youchun, ZHANG, Duo, LIU, Xiuli, YANG, Yanmin, LIU, Shuang **54: GREENHOUSE BLUEBERRY POSTHARVEST** 

#### 54: GREENHOUSE BLUEBERRY POSTHARVES PRUNING METHOD

00: -

The present disclosure provides a greenhouse blueberry postharvest pruning method. According to the method, a high-yield tree shape suitable for blueberry production is established, the technical standard of the tree shape is quantified, and meanwhile, the industrial yield standard that the culture and yield per mu of postharvest pruned fruitbearing base branches is not lower than 1 ton of fruits is quantified. According to the method, the optimal branch remaining amount is determined by determining the technical standards of fruit-bearing base branch selection, quantity and thickness and the quantity and yield of formed fruit-bearing branches, meanwhile, the postharvest pruning operation technical standard and process are established with reference to the 'branch shaving' pruning operation technical standard of fruit-bearing base branch culture, to make the standardization of the operation, and industrial pruning modeling production to become possible.

21: 2021/09276. 22: 2021-11-19. 43: 2022-02-08 51: A23L

71: Liaoning Institute of Pomology 72: HAO, Yi, XU, Ling, CAI, Feng, LU, Yuzhuo, LI, Jiangkuo, JIANG, Yongfeng, AI, Jiayin

#### 54: METHOD FOR MANUFACTURING HIGH-EFFICIENCY SWEET CHERRY PRESERVATIVE 00: -

The present disclosure relates to a fruit preservative, and specifically relates to a method for manufacturing a sweet cherry preservative. At present, two methods for preservation of sweet cherries include placing preservatives in fruit packaging boxes or bags and using low-temperature refrigeration. The existing preservatives contain toxic ingredients, and the shelf life and quality of fruits are also affected by refrigeration. The present disclosure includes weight percentages of raw materials and a manufacturing process of the preservative. The raw materials including ferrous chloride, ferrous sulfate, sodium carbonate, sodium bicarbonate, potassium permanganate, sodium hypochlorite, zinc oxide and the like are mixed at a ratio, pulverized, uniformly stirred and then sieved with zeolite as a carrier. Then, a small amount of water is added to prepare granules.

21: 2021/09280. 22: 2021-11-19. 43: 2022-02-09 51: E04B

71: Beijing University of Technology

72: HE, Haoxiang, SUN, Haoding, CHEN, Yifei, CHENG, Shitao

#### 54: SQUARE-BUCKET TUNED LIQUID DAMPER CAPABLE OF SEMI-ACTIVELY REGULATING AND CONTROLLING DAMPING PERFORMANCE 00: -

The invention discloses a square-bucket tuned liquid damper capable of semi-actively regulating and controlling damping performance, comprising a square-bucket water tank, a pluggable clapboard, an initial double-layer clapboard, a clapboard fixing device, a floating plate, a floating plate fixing device and a clapboard semi-actively controlling device. The shape of a rectangular water tank of a traditional tuned liquid damper (TLD) is changed into a squarebucket water tank, a clapboard capable of changing a size of a hole is added into the water tank, a damping ratio of a TLD system is improved, a liquid energy dissipation is increased, meanwhile, the clapboard is made to move in front, back, left and right directions through semi-active control, and a tuning frequency of the TLD is consistent with an external interference frequency in a frequency band range of a controlled vibration mode.



21: 2021/09281. 22: 2021-11-19. 43: 2022-02-09 51: E04B; E04H 71: Beijing University of Technology 72: CHENG, Shitao, HE, Haoxiang, CHEN, Yifei, LAN, Bingji 54: SELF-RESETTING WALL WITH TUNING-SWING-FRICTION COMPOSITE STAGED ENERGY DISSIPATION FUNCTION 00: -

The present invention discloses a self-resetting wall with a tuning-swing-friction composite staged energy dissipation function, which is composed of a prefabricated wall, steel strands, long and short metal rubber pads, air springs, a sliding hinge support, and arc-shaped friction energy dissipation devices. Bottom of the prefabricated wall is hinged by the sliding hinge support and lateral stiffness is provided by the air springs. Swing frequency of the prefabricated wall is controlled near the frequency of main structure by adjusting the lateral stiffness provided by the air springs, to exert energy dissipation and seismic reduction effects. Under a small seismic effect, a tuned mass damper constituted by the prefabricated wall can swing for energy dissipation and seismic reduction. Under a large seismic effect, while the prefabricated wall swings to dissipate energy, friction plates in the arcshaped friction energy dissipation devices contact to exert energy dissipation and seismic reduction effects.



21: 2021/09282. 22: 2021-11-19. 43: 2022-02-09 51: E04B; E04H

71: Beijing University of Technology

72: HE, Haoxiang, CHENG, Shitao, ZHENG, Jiacheng, LIAO, Lican

## 54: COLD-FORMED THIN-WALLED STEEL PLATE WALL SYSTEM WITH BUILT-IN FRICTION AND NEGATIVE RIGIDITY COMPOSITE DAMPING DEVICE

00: -

The invention discloses a cold-formed thin-walled steel plate wall system with a built-in friction and negative rigidity composite vibration damping device, which consists of a metal support square rod, a hinge support, a friction plate, a groove-shaped metal plate, bolts, a metal box, a universal hinge, an inclined rod, a metal spring, a high-strength metal plate, a tension spring set, a metal sleeve, edge column columns, stand columns, a guide rail beam, a steel belt horizontal tension bar, screws and a wall panel. A cold-formed thin-walled steel plate wall system with a built-in friction and negative rigidity composite damping device normally has the same effect as a common cold-formed thin-walled steel plate wall; under the action of earthquake or wind load, energy dissipation and vibration reduction are firstly carried out through relative sliding of a friction plate in an internal friction device.



21: 2021/09284. 22: 2021-11-19. 43: 2022-02-09 51: E04B; E04H

71: Beijing University of Technology

72: WU, Shan, HE, Haoxiang, ZHOU, Yujing, ZHENG, Jiacheng

## 54: COMBINED BUCKLING RESTRAINED BRACE WITH MULTI-YIELD STAGES AND MULTI-WAVE CORE UNITS

00: -

The present invention discloses a combined buckling restrained brace with multi-yield stages and multiwave core units, and belongs to the fields of new building structure technology and structural earthquake resistance and damping. The structural system comprises a straight plate core unit, smallwave corrugated plate core units, large-wave corrugated plate core units, stiffening ribs, a limit clamp, a cross-shaped steel pipe, cement emulsified asphalt mortar, square end plates, hinged joints, node plates, anchor plates and the like. The brace

core unit comprises one straight plate core unit, two small-wave corrugated plate core units and two large-wave corrugated plate core units. The crossshaped steel pipe serves as a restriction unit, and cement emulsified asphalt mortar is filled between the restriction unit and the core units. The brace is connected with the node plates on the main body structure through hinged joints.



21: 2021/09289. 22: 2021-11-19. 43: 2022-02-09 51: B27J; B27M; B29C; B32B 71: Hunan Jiale Bamboo and Wood Co., Ltd. 72: Yongjun Li, Guande Li 54: A PROCESSING SYSTEM FOR BAMBOO PRODUCTS 00: -

The invention discloses a processing system for bamboo products, comprising a workbench, a drying mechanism, a plug pulling mechanism and a guiding member, and the drying mechanism comprises a driving motor and a gearbox, the free end of a rotating shaft extending from the gearbox is provided with a central fixed shaft, and a circumferential array of the central fixed shaft is provided with a rectangular fan blade box, the driving motor drives the central fixed shaft to rotate around the shaft. The invention uses the motor of the drying mechanism to drive the rotation of the central fixed shaft, which can drive the fan blade box to rotate around the shaft, further realizing the drying of a bamboo board placed in the fan blade box, and after completing the drying, a fixed plug of the fan blade box can be pulled out by a electric push rod of the plug pulling mechanism, the even drying of the bamboo board is realized with the rotation of the fan blade box, and under the action of gravity, by the cooperation of the guiding member, the bamboo board slides from the fan blade box onto the workbench surface, greatly reducing manual operation.



21: 2021/09326. 22: 2021-11-19. 43: 2022-01-31 51: A01C; A01G 71: HANGZHOU DECHEN FORESTRY TECHNOLOGY SERVICE CO., LTD., EAST CHINA INVESTIGATION, PLANNING AND DESIGN INSTITUTE OF STATE FORESTRY AND GRASSLAND ADMINISTRATION 72: CHEN, JIANYI, WU, ZEQIANG, ZHENG, YUNFENG, WANG, JINGCAI, XU, PENG 54: HIGH-EFFICIENCY AND ENERGY-SAVING FORESTRY SEEDLING CULTIVATION DEVICE AND CULTIVATION METHOD THEREOF 00: -

Disclosed is a forestry seedling cultivation device and method. The device comprises a positioning disc with positioning plates rotatably arranged at the outer end of its top and a base; a cultivation frame with positioning grooves formed in the bottom of the two sides of the inner wall is fixedly arranged at the top end of each positioning plate; a positioning piece is articulated at the middle position of the inner wall of each of the positioning grooves; a positioning rod with spring arranged at one end of the outer wall is fixed at each of the two ends on one side of each of the two positioning pieces; a limiting groove is formed the two ends at the bottom of each cultivation frame; and the other ends of the outer walls of the four first positioning rods are connected with one end of each limiting grooves.


21: 2021/09327. 22: 2021-11-19. 43: 2022-01-27 51: A01H; C12N 71: HUNAN HORTICULTURAL RESEARCH

INSTITUTE 72: LIU, JUAN, ZHOU, CHANGFU, GONG, BIYA, LI,

XIANXIN, YANG, SHUIZHI, WU, CHANGCHUN 54: METHOD FOR INDUCING FLOWER BUDS OF FEMALE TREES OF MYRICARUBRA(LOUR.)SIEB.ETZUCC. TO BE DIFFERENTIATED INTO MALE FLOWERS 00: -

The present invention discloses a method for inducing flower buds of female trees of Myricarubra(Lour.)Sieb.etZucc. to be differentiated into male flowers. The method comprises: applying a plant growth inhibitor to a part of branches in a differentiation phase of the flower buds of the female trees of Myricarubra(Lour.)Sieb.etZucc. and inducing the flower buds of Myricarubra(Lour.)Sieb.etZucc. to be differentiated into male inflorescences. The plant growth inhibitor comprises one or more of MET (multi-effect triazole), uniconazole, prohexadione calcium and triiodobenzoic acid. The method disclosed by the present invention is simple, convenient, guick and effective; and paternal pollens with a clear source and definite characters can be provided for hybridization of Myricarubra (Lour.)Sieb.etZucc., so as to ensure smooth implementation of crossbreeding of Myricarubra(Lour.)Sieb.etZucc. and provide a foundation for cultivating more diversified Myricarubra(Lour.)Sieb.etZucc. varieties.



21: 2021/09330. 22: 2021-11-22. 43: 2022-01-21 51: G06K; G06Q

71: Shanghai Ocean University

72: Zhou FANG, Nan LI, Chao WANG, Bohao ZHANG, Jun YU, Guangmingmei YANG
33: CN 31: 202011630217.2 32: 2020-12-31
54: METHOD FOR IDENTIFYING POPULATIONS AND SPECIES OF CEPHALOPODS
00: -

The present disclosure discloses a method for identifying populations and species of cephalopods, which comprises the following steps: (1) firstly, obtaining samples of hard tissues (such as horny jaws) of cephalopods; (2) extracting main appearance characteristics of the hard tissues by utilizing landmark points; (3) calculating average morphology and centroid size with software; (4) performing dimensionality reduction on the obtained data for principal component analysis to obtain the first N groups of principal components accounting for more than 80%; and (5) taking the selected first N groups of principal components as explanatory variables for discriminant analysis. Compared with traditional methods, the method not only can simulate the morphology of hard tissues to make differences intuitively visible, but also can effectively

improve the discrimination accuracy of species or populations, and can also be applied to individual difference analysis to provide reference for fish stock assessment and habitat assessment in different periods.



21: 2021/09331. 22: 2021-11-22. 43: 2022-01-21 51: A01C; C05G

71: Enshi Tujia and Miao Autonomous Prefecture Forestry Academy

72: DUN, Chunyao, WU, Daikun, LI, Shuanglong, ZENG, Yong, CHEN, Beibei, LI, Chunlin, XIANG, Wei, ZHANG, Chuan, WAN, Songsheng **54: EM TREE NUTRIENT SOLUTION** 00: -

The present disclosure relates to an EM tree nutrient solution, comprising the following steps: the nutrient solution comprises a nutrient package A and a nutrient package B, 1 part of nutrient package A and 0.1 part of nutrient package B are dissolved in 1,000 parts of pure water and are stirred and uniformly dissolved to obtain the nutrient solution, the nutrient solution is filled into a drip irrigation nutrient bag, and the drip irrigation nutrient bag is hung on a transplanted tree for drip irrigation, or the nutrient solution is directly irrigated to roots. The present disclosure solves the deficiency of existing tree nutrient solution and provides an EM tree nutrient solution formula.

21: 2021/09332. 22: 2021-11-22. 43: 2022-01-21 51: A61K; A61P

71: GANSU INSTITUTE OF ANIMAL SCIENCES 72: CHANG, Liang, MENG, Qi, GAO, Wucheng, LI, Yuanxin, ZHANG, Haiming

#### 54: COMPOUND CHINESE HERBAL MEDICINE FOR CHICKEN RESPIRATORY DISEASES AND PREPARATION METHOD THEREOF 00: -

The present disclosure discloses a compound Chinese herbal medicine for chicken respiratory diseases, comprising the following raw materials in parts by weight: 12-18 parts of Scutellaria baicalensis, 10-15 parts of radix rehmanniae, 15-20 parts of honeysuckle, 12-18 parts of radix stemonae, 8-12 parts of astragalus, 4-8 parts of forsythia, 8-12 parts of epimedium, 8-12 parts of radix bupleuri, 6-11 parts of licorice, 3-6 parts of radix isatidis, 10-15 parts of sorbitol and 5-10 parts of vitamin B2; a preparation method, comprising the steps of: (1) Weighing the raw materials; (2) Mixing and stirring radix scutellariae, radix rehmanniae, honeysuckle flower, stemona, radix astragali, fructus forsythiae, epimedium, radix bupleuri, licorice root and isatis root, pulverizing, screening, and drying at low temperature; (3) Adding water, decocting, filtering, and merging the filtrates; (4) Carrying out vacuum concentration; (5) Adding sorbitol and vitamin B2, and uniformly stirring.

# 21: 2021/09333. 22: 2021-11-22. 43: 2022-01-21

51: A01G

71: Guangxi Institute of Botany, Chinese Academy of Sciences, China

72: Tang Jianmin, Zou Rong, Gu Rui, Wei Xiao, Lv Shihong, Chai Shengfeng, Qin Huizhen 54: METHOD FOR PROMOTING RAPID GERMINATION AND SEEDLING FORMATION OF ARTOCARPUS STYRACIFOLIUS PIERRE SEEDS

00: -

The invention discloses a method for promoting rapid germination and seedling formation of Artocarpus styracifolius Pierre seeds, which comprises the following steps: S1, preparing seeds; S2, preparing a culture medium; S3, container seeding; S4, incubator setting; S5, the first seedling transplantinging; S6: the second seedling transplanting. The invention has the advantages that the single factor method is adopted to find out the most suitable conditions for germination, then these conditions are fused, and the effects of temperature, light, culture medium, medium water content and sowing depth on the germination Artocarpus styracifolius Pierre seeds are comprehensively discussed, so that an optimal factor combination step for the germination Artocarpus styracifolius Pierre seeds is found. This method can greatly improve the germination rate Artocarpus styracifolius Pierre seeds and rapidly raise seedlings. Meanwhile, during the process of raising seedling, this method can significantly reduce the workload of cultivation and monitoring and reduce the seedling raising cost, and has the advantages of convenience, less pollution and low cost.

21: 2021/09334. 22: 2021-11-22. 43: 2022-01-21 51: G06K

71: Henan University

72: TIAN, Haifeng, QIN, Yaochen, SHEN, Wei,
ZHOU, Boyan, WANG, Yongjiu
33: CN 31: 202010995102.7 32: 2020-09-21
54: CLOUD PLATFORM-BASED GARLIC CROP
RECOGNITION METHOD BY COUPLLING ACTIVE
AND PASSIVE REMOTE SENSING IMAGES
00: -

The present invention provides a cloud platformbased garlic crop recognition method by coupling active and passive remote sensing images. The method includes the following steps: firstly, obtaining an optical satellite remote sensing image based on phenological characteristics of garlic, and constructing a decision tree model for optical image recognition of the garlic by combining geographic coordinate information of the garlic, so as to obtain an optical distribution diagram of the garlic; secondly, obtaining radar image characteristics of the garlic and winter wheat based on a synthetic aperture radar satellite, and constructing a decision tree model for radar image recognition of the garlic by combining the geographic coordinate information of the garlic, so as to obtain a radar distribution diagram of the garlic; and finally, coupling the optical distribution diagram of the garlic with the radar distribution diagram of the garlic, i.e., selecting an intersection of the two distribution diagrams to complete remote sensing recognition drawing of the garlic. According to the method, the advantages of the optical satellite image and a synthetic aperture radar image are comprehensively utilized, the technical problem that the garlic and the winter wheat are difficult to distinguish is solved, and accurate and automatic remote sensing-based recognition of garlic distribution in a geographic space on a large-area scale based on a cloud platform is realized.



#### 21: 2021/09335. 22: 2021-11-22. 43: 2022-01-21 51: C12Q; G01N

71: Institute of Forestry, Chinese Academy of Forestry Sciences, Hebei Agricultural University 72: Zhang Junpei, Wang Hongxia, Zhao Shugang, An Xiuhong, Tian Yi, Ma Qingguo, Zhang Zhihua 54: METHOD FOR IDENTIFYING WALNUT VARIETIES BY SSR TECHNOLOGY 00: -

The invention relates to the technical field of plant varieties, in particular to a method for identifying walnut varieties by SSR technology, which comprises the following steps: S1, designing specific primers according to target gene sequences; S2, performing PCR amplification on DNA of different walnut varieties by using the primers prepared in S1; S3, detecting PCR amplification products by nondenatured polyacrylamide gel electrophoresis; S4, dyeing by silver nitrate dyeing method; S5, according to relative position of amplification products on electrophoresis gel, recording "A" with bands and "B" with no bands at the same migration position; S6, respectively performing PCR amplification on the DNA of walnut varieties to be detected by using the primers prepared in S1; S7, coding according to the primer sequence, comparing the obtained codes with the characteristic codes of other walnut varieties, and determining the walnut varieties to be tested. The method can quickly complete walnut variety identification, and has the

advantages of high efficiency, accuracy, low cost, simple operation and the like.

21: 2021/09337. 22: 2021-11-22. 43: 2022-01-21 51: C12N

71: Industrial Crops Research Institute, Hubei
Academy of Agricultural Sciences, Hubei Zhaozhi
Modern Agricultural Technology Co., Ltd
72: Wang Fei, Yao Minghua, Li Ning, Yin Yanxu,
Gao Shenghua, Xiao Mingzhao

#### 54: A METHOD FOR MICRO-EXTRACTION OF DNA FROM SINGLE PEPPER SEED 00: -

The invention discloses a method for microextracting DNA of a single pepper seed, which comprises the following steps: A, cleaning and soaking a pepper seed; B, grinding with liquid nitrogen; C, adding DNA extraction buffer solution and mixing evenly; D, Water bath at 65 degree Celsius for 10min; E, adding NaAc, mixing in ice bath, and centrifuging at 13000r/min. Collect supernatant, add isopropanol, mix well, and centrifuge at 13000r/min. Discard the supernatant, let stand and dry, and add 75 percent ethanol to clean and dry. Add double distilled water and NaAc, mix well, add absolute ethyl alcohol, and freeze deeply at -70 degree Celsius for 1h. Centrifuge at 1000 r/min, discard the supernatant, and wash and dry with 75 percent ethanol. Dissolve nucleic acid in sterile double distilled water and store it at -20 degree Celsius. The purity and concentration of the seed DNA obtained by the method of the invention can meet the requirements of PCR amplification on template DNA, has low cost and high speed, and is a resource-saving and environment-friendly efficient extraction method.

21: 2021/09338. 22: 2021-11-22. 43: 2022-01-21 51: B09C

71: Qinghai Geological and Mineral Testing Center (Qinghai Province Eco-environmental Geology Inspection and Testing Center)

72: XIONG, Xin, ZHAO, Yuqing, SUN, Xiaohua, YING, Yongpeng, CHEN, Xiuna, LIU, Dao, DU, Zuopeng

54: METHOD FOR REMEDYING SOIL IN MINING AREA

00: -

The present disclosure discloses a method for remedying soil in a mining area, which specifically comprises the following steps: digging and loosening polluted soil in the mining area by using digging equipment, and directly performing primary filtration, adding a soil disinfectant into the polluted soil, stirring the soil and the soil disinfectant, performing secondary filtration on the soil in the stirring process, then spreading straw organic fertilizer and plant ash on the surface of the polluted soil per mu, mixing 5 kg of remedying agent with 100 times the mass of water, spraying the mixture to the surface of the soil, and deeply ploughing the soil; applying a soil remedying agent to the surface of the soil; planting plants with heavy metal enriching capacity in the soil.

#### 21: 2021/09339. 22: 2021-11-22. 43: 2022-01-21 51: C02F

71: Qinghai Geological and Mineral Testing Center (Qinghai Province Eco-environmental Geology Inspection and Testing Center)
72: ZHAO, Yuqing, XIONG, Xin, YING, Yongpeng,

SUN, Xiaohua, CHEN, Xiuna, LIU, Dao, WEI, Zhenhong

# 54: COMPREHENSIVE TREATMENT METHOD FOR NON-FERROUS METAL MINE WASTEWATER

00: -

The present disclosure discloses a comprehensive treatment method for non-ferrous metal mine wastewater, comprising the following steps: filtering debris and silt after wastewater is collected; enabling the wastewater to sequentially pass through a multimedium filter and a precision filter to produce colorless and transparent wastewater; adjusting the pH value of the filtered wastewater to 3-6; adding hydrogen peroxide, a Fe2+ reagent and a catalyst into the adjusted wastewater under the conditions of stirring and ultraviolet lamp irradiation, carrying out an ultraviolet-Fenton oxidation reaction; after adjusting the pH value, sequentially adding a polyaluminum chloride solution and a macromolecular anionic polyacrylamide solution for coagulating sedimentation, and stopping stirring and standing after the coagulating sedimentation; enabling a supernatant obtained after the sedimentation to enter a biological activated carbon treatment system; pumping water produced through the biological activated carbon treatment into an ion

membrane reverse osmosis machine, and entering a refined water tank.

21: 2021/09340. 22: 2021-11-22. 43: 2022-01-21 51: A61D

71: Army Medical University

72: ZENG, Yi, ZHOU, Ziyuan, JIN, Huidong, GUO, Chengwei, CHEN, Weiyan, CUI, Ke 54: TRACHEAL INSTILLATION DEVICE FOR EXPERIMENTAL ANIMAL 00<sup>-</sup> -

A tracheal instillation device for an experimental animal is provided, all operations can be completed by only one person, and the operation is simpler and high in success rate.



21: 2021/09341. 22: 2021-11-22. 43: 2022-01-21 51: F28D

71: Qingdao University of Science and Technology 72: Jia Wenguang, Liu Bingcheng, Wang Chuanwei, Yan Jinglu

# 54: AIR PLATE TYPE TOTAL HEAT RECOVERY HEAT EXCHANGER WITH ROTATING FILTER DEVICE

00: -

The invention belongs to the field of air heat exchangers, and relates to an air plate type total heat recovery heat exchanger with a rotary filter device, which is composed of a rotary wheel filter device part and an air plate type total heat recovery heat exchanger part. The core of the air plate type total heat recovery heat exchanger is formed by stacking a pair of plates made of porous oblique corrugated metal material through the restraint of a toothed bar. Because of its structural characteristics, the plate heat exchanger can realize heat transfer and moisture transfer between fresh air and exhaust air in the fresh air system, thus realizing total heat exchange. Its heat exchange efficiency is higher than that of the existing air heat recovery plate heat exchanger, reducing the energy consumption of heating and air conditioning refrigeration, and saving the operating cost of equipment. The rotary filter device uses fiber filter material for air filtration, which can efficiently capture soot, dust and ultrafine particles, and at the same time realize automatic cleaning and recycling of filter material, thus achieving higher filtration efficiency.

## 21: 2021/09342. 22: 2021-11-22. 43: 2022-01-21 51: B22C

71: Beijing Wenshui Jiangyuan Coating Technology Co., Ltd.

72: TENG, Junwei, QIN, Dandan

54: LOST FOAM STAINLESS STEEL COATING SPECIAL FOR LOST FOAM CASTING PROCESS AND MANUFACTURING METHOD THEREOF 00: -

The present disclosure relates to a lost foam stainless steel coating special for a lost foam casting process. The coating includes 90% of a chrome ore, 4% of attapulgite, 1% of a polyvinyl alcohol (PVA) rubber powder, 2% of an environmentally friendly binder, 1% of a talc powder, 1% of kyanite and 1% of a raw high aluminum powder. The PVA rubber powder has excellent toughness, smoothness, wearing resistance and adhesiveness to fibers. A sizing effect is great, a slurry is not easily rotted and deteriorated, and viscosity is not changed after the PVA rubber powder is heated for a long time. Therefore, a sizing rate is stably controlled. The adhesiveness, flexural strength, water resistance, plasticity, wearing resistance and workability of mortar are improved, and the coating has higher flexibility in the flexible anti-cracking mortar.



21: 2021/09343. 22: 2021-11-22. 43: 2022-01-21 51: C05G

71: Inner Mongolia Agricultural University 72: Guo Yuefeng, Qi Wei, Sun Shixian, Shao Yufang, Guo Zhenning, Wang Haoyue, Bu Fanjing, Qi Huijuan, Teng Juntao, Zhang Penghao, Zhang Jiufei

# 54: BIOLOGICAL IMPROVER FOR DESERTIFICATION SOIL AND PREPARATION METHOD THEREOF

00: -

The invention discloses a biological improver for desertification soil and a preparation method thereof, belonging to the technical field of soil improvement. The biological improver for desertified soil of the invention comprises raw materials: green manure compound, compound bacteria, zeolite, fly ash, calcium humate, potassium polyacrylate and traditional Chinese medicine composition. The preparation method of the biological improver for desertified soil of the present invention comprises the following steps: adding compound bacteria to the green manure compound for fermentation treatment to obtain fermentation products, adding pulverized zeolite, fly ash, calcium humate and potassium polyacrylate, uniformly mixing, and finally adding Chinese medicinal composition and stirring to obtain the biological improver for desertified soil. The application of the soil conditioner of the present invention to desertified soil can improve soil fertility,

adjust soil pH value, inhibit soil-borne diseases, and keep water and fertilizer, and it has a good regulating effect on desertified soil.

21: 2021/09344. 22: 2021-11-22. 43: 2022-01-21 51: G01R

71: Guangdong guiyue Energy Technology Co.Ltd 72: JOHN YUPENG GUI, KANG, Jianqiang, Lillian Li Wang, GUI, Chengjie

#### 54: METHOD FOR DIAGNOSING STATE OF HEALTH OF BATTERY 00: -

The present invention provides a method of diagnosing a state of health of a battery, characterized by comprising the following steps: establishing a database of battery capacity standard parameters for new batteries: respectively acquiring a mean value and standard deviation of a relaxation time and a recovery voltage difference of N new batteries; acquiring the battery capacity parameter of the battery to be measured: acquiring a relaxation time and a recovery voltage difference of the battery to be measured, and judging whether the acquired relaxation time and recovery voltage difference of the battery to be measured are valid parameters according to the mean value and standard deviation of the relaxation time and recovery voltage difference of the new battery; acquiring the battery capacity of the sample to be measured, and determining the battery capacity by the aging voltage difference of the battery to be measured.



#### 21: 2021/09345. 22: 2021-11-22. 43: 2022-01-21 51: A01G; A01H

71: Jiangsu Xuhuai Xuzhou Institute of Agricultural Sciences (Jiangsu Xuzhou Sweet Potato Research Center)

72: SUN, Houjun, ZHANG, Chengling, XIE, Yiping, YANG, Dongjing, MA, Jukui, TANG, Wei, CHEN, Jingwei, GAO, Fangyuan

# 54: METHOD FOR TRANSPLANTING SWEET POTATO TISSUE-CULTURED SEEDLING WITH A HIGH SURVIVAL RATE

00: -

The present disclosure provides a method for transplanting a sweet potato tissue-cultured seedling with a high survival rate, and belongs to the field of crop cultivation, including the following steps: 1) preparation of a soil matrix; 2) hardening-off; 3) plantlet washing; 4) transplantation; and 5) conservation. The method for transplanting a sweet potato tissue-cultured seedling provided by the present disclosure is scientific, effective, easy to operate, and high in the survival rate of tissuecultured seedlings. Rooting and strong seedlings are promoted by progressive hardening-off, transplantation with soil matrix, prevention of damping-off and rot with agents, and pouring roots with polypeptidase. This method increases the transplanting survival rate of sweet potato tissuecultured seedlings, overcomes a disadvantage of dead sweet potato seedlings due to dry rot, damping-off, and rot during common transplantation, and reduces the loss of tissue-cultured seedlings due to death in transplantation.

21: 2021/09346. 22: 2021-11-22. 43: 2022-01-21 51: B01D

71: Heilongjiang Bayi Agricultural University 72: Li Liangyu, Han Shuchen, Luo Cheng, Jiang Caixia, Tang Huacheng, Cao Longkui

#### 54: SIMULATED MOVING BED CHROMATOGRAPHY (SMB) PURIFICATION METHOD FOR PURIFYING CICHORIUM INTYBUS L. BALSAM

00: -

A method for purifying Cichorium intybus L. balsam by simulated moving bed chromatography (SMB) takes Cichorium intybus L. as raw material, integrates ultrasonic extraction, simulated moving bed chromatography (SMB) and other technologies to extract and purify Cichorium intybus L. balsam at 25degree celsius and macroporous adsorption resin as chromatographic stationary phase, and the obtained balsam has high purity and high yield. The entire process has low operating costs, reduced production energy consumption, and a high degree of automation; it can realize continuous industrial production and improve production efficiency.

21: 2021/09347. 22: 2021-11-22. 43: 2022-01-21 51: A61K; C12N; C12R; A61P 71: QINGDAO AGRICULTURAL UNIVERSITY 72: ZHAO, Yongda, GUO, Lili 54: TRIPLE VACCINE FOR SALMONELLA, RIEMERELLAANATIPESTIFER AND ESCHERICHIA COLI 00: -

The present disclosure belongs to the technical field of veterinary biological products and particularly relates to a triple vaccine for salmonella, riemerella anatipestifer and escherichia coli.

71: INSTITUTE OF NATURAL RESOURCES AND ECOLOGY, HEILONGJIANG ACADEMY OF SCIENCES

72: WAN, Jifeng, NI, Hongwei, HAN, Dayong, HAN, Hui, ZHU, Daoguang, YANG, Fan, HUANG, Qingyang, QU, Yanting, ZHONG, Haixiu, LUO, Chunyu, QU, Yi, WU, Yining 33: CN 31: 202111254866.1 32: 2021-10-27

54: METHOD FOR ECOLOGICAL RESTORATION OF WETLAND VEGETATION BASED ON WATER ACTIVATION OF SOIL SEED BANK 00: -

Disclosed is a method for ecological restoration of wetland vegetation based on water activation of a soil seed bank, a method for ecological restoration of wetland vegetation, and in particular to a method for ecological restoration of wetland vegetation in a freshwater sediment of Northern rivers. The purpose is to solve the problems of serious man-made interference and slow speed of vegetation restoration in the existing wetland vegetation restoration methods. Method: I, selection of an experimental subject; II, determination on characteristics of a seed bank in a restoration region: 1, taking samples in late April each year; 2, sampling; 3, sample treatment; 4, plant species survey, and recording plant species and density within each sample piece; III, performing dripping irrigation according to the plant types in the soil seed bank for 2 times specifically, and controlling the surface water level and soil water content in a degraded wetland region.

<sup>21: 2021/09348. 22: 2021-11-22. 43: 2022-01-21</sup> 51: A01B

#### 21: 2021/09349. 22: 2021-11-22. 43: 2022-01-21 51: A01M

71: SHANDONG INSTITUTE OF POMOLOGY 72: LI, Guixiang, ZHANG, Anning, LI, Miao, GAO, Xiaolan, GONG, Qingtao

#### 54: MULTIFUNCTIONAL SPRAYING DEVICE FOR PEACH ORCHARDS 00: -

The present utility model provides a multifunctional spraying device for peach orchards; the multifunctional spraying device includes a water collection tank, a booster pump and spraving units; each spraying unit includes a pipeline support system and atomizing nozzles; each pipeline support system includes a main pipeline and two branch pipelines communicating with the main pipeline; the branch pipelines are provided with vertically arranged first conveying pipelines communicating with the branch pipelines; the first conveying pipelines are provided with horizontally arranged second conveying pipelines communicating with the first conveying pipelines; third annular conveying pipelines communicating with the second conveying pipelines are arrange under the second conveying pipelines, and atomizing nozzles are arranged on the third conveying pipelines; and valves A are arranged on the branch pipelines.



21: 2021/09350. 22: 2021-11-22. 43: 2022-01-21 51: A23K

71: CROP RESEARCH INSTITUTE, SHANDONG ACADEMY OF AGRICULTURAL SCIENCES 72: GUO, Yuqiu, CHEN, Lirong, WANG, Xingya, LIU, Kaichang, GONG, Kuijie

# 54: WHOLE MAIZE FLOUR AND PREPARATION METHOD THEREOF

00: -

The present invention discloses whole maize flour and a preparation method thereof. The method includes the steps: soaking and sterilizing maize kernels are cleaning the same, performing germination cultivation under low temperature, low humidity and no light conditions after the maize kernels are soaked to absorb water, adjusting the moisture content after coarse flour is prepared, performing a gentle extrusion treatment, and performing fine grinding to obtain whole maize flour. The present invention combines restricted germination with gentle extrusion, and in the obtained whole maize flour, the content of the first limiting amino acid, that is, lysine, is increased from 21.33mg/g to 29.85mg/g protein, the content of soluble dietary fibers/total dietary fibers is increased from 15.11% to 50.88%, the fat content is reduced from 3.62% to 1.83%, and the nutritional and health values are significantly improved.



21: 2021/09356. 22: 2021-11-22. 43: 2021-12-08 51: B65D

71: SACMI COOPERATIVA MECCANICI IMOLA SOCIETÀ COOPERATIVA

72: FALZONI, ALESSANDRO, BASSI, VITTORIO 33: IT 31: 102020000003781 32: 2020-02-24 54: CAP FOR CLOSING A CONTAINER AND ITS METHOD FOR MAKING THE CAP 00: -

A cap for a container is provided and a related method for making the cap. The cap comprises a side wall extending about an axis and a transversal wall arranged at an end of the side wall, a separation line being provided on the side wall for defining: a retaining ring, which is intended to remain anchored to a neck of the container and is configured to

internally engage with an enlargement of the neck; and a closure element which can removably engage the neck, so as to open or close the container. The separation line extends about the axis and is circumferentially interrupted so as to leave a joining portion, between the retaining ring and the closure element, which extends circumferentially for a respective angle, the cap further having an incision line which extends transversally to the axis between the separation line and a free edge of the retaining ring, so that two connecting bands are defined between the separation line and the incision line, the two connecting bands joining the retaining ring to the joining portion. The connecting bands are deformable and the joining portion is externally provided with a projection which projects from the joining portion and is positioned between a separation plane in which the separation line lies and the incision line so that, when the closure element is in the open position and the connecting bands keep the closure element connected to the retaining ring, an edge of the joining portion which, in the closed position, faces the retaining ring, is facing, in the open position, towards a rim of the neck and the projection is resting on the neck in said open position.



21: 2021/09375. 22: 2021-11-22. 43: 2022-01-21 51: A01G; E04B

71: QINGDAO AGRICULTURAL UNIVERSITY 72: LI, Qingqing

33: CN 31: 202010275472.3 32: 2020-04-09 54: ENERGY-STORAGE WALL AND SOLAR GREENHOUSE

#### 00: -

An energy-storage wall (10). The energy-storage wall (10) comprises a wall body (1), a heatabsorbing pipe layer (2), a heat-storage pipe layer (3), a first connecting pipe (4) and a second connecting pipe (5); the heat-absorbing pipe layer (2) is laid on the wall body (1), the heat-storage pipe layer (3) is laid inside the wall body (1), the upper end of the heat-absorbing pipe layer (2) is connected to the heat-storage pipe layer (3), the lower end of the heat-absorbing pipe layer (2) is connected to the heat storage pipe layer (3), and the fluid heattransfer medium can circularly flow in the heattransfer pipeline. The wall can effectively transfer heat emitted by the sun to the interior of the wall body and store the heat by the wall body, thereby effectively improving the heat storage amount of the wall body. Also included is a solar greenhouse.



21: 2021/09390. 22: 2021-11-23. 43: 2022-01-21 51: A01G; A01N; C05G; A01P

71: Zhejiang Institute of Landscape Plants and Flowers, Hangzhou Landscaping Incorporated, Taizhou Forestry Technology Extension Station 72: SHI, Xiaohua, FAN, Jing, ZHU, Kaiyuan, ZHANG, Junlin, MA, Guangying, MAO, Lihui, QIU, Zhimin

#### 54: METHOD FOR REGULATING FLOWERING PERIOD OF HELLEBORUS HYBRIDUS IN THE SOUTH OF THE YANGTZE RIVER REGION 00: -

The present disclosure discloses a method for regulating and controlling the flowering period of Helleborus hybridus in the south of the Yangtze River.

21: 2021/09391. 22: 2021-11-23. 43: 2022-01-21 51: E02D; E21D

71: China University of Mining and Technology

- 72: MENG, Qingbin, WANG, Qi, ZHOU, Yuejin,
- WANG, Gang, LIU, Jiangfeng, CHEN, Yanlong, LI,

Weiteng, WANG, Hongtao, LU, Yinlong, WU, Jiangyu

# 54: LONG AND SHORT ANCHOR CABLE COORDINATED ENERGY-ABSORBING AND YIELDING DEVICE AND CONSTRUCTION METHOD

00: -

The present invention provides a long and short anchor cable coordinated energy-absorbing and yielding device and a construction method, wherein the long anchor cable is made from a mixed yielding material and a plastic porous partition plate having the dual characteristics of energy-absorbing and vielding deformation, and can absorb the deformation energy released when the surrounding rock of a roadway is deformed and damaged or an impact ground pressure occurs and produce yielding; the front end of the short anchor cable adopts a sliding hollow anchor head and a movable locking device to achieve anchoring and yielding, and the rear end adopts a quantitative yielding end anchoring device composed of an end anchoring device, a spring pressing head and a multi-stage yielding spring to achieve multi-stage yielding and coordinated deformation with the long anchor cable. assembly; one end of the water supply pipeline is connected to a reservoir, and the other end of the water supply pipeline is connected to a water pump; one end of the steel pipe upright is connected to a water pump, and the other end of the steel pipe upright is provided with a multi-layer steel pipe transverse column assembly at intervals; the steel pipe upright is movably connected to the steel pipe transverse column assembly through a movable component; the steel pipe transverse column assembly comprises a plurality of steel pipe transverse columns; a plurality of rain sprinklers are arranged on the steel pipe transverse column; a fan is also arranged on the steel pipe upright, and the air outlet of the fan is opposite to the rain sprinkler. The utility model is simple in structure and easy to operate, which not only reduces the experiment cost, increases the application range of the experiment, but also makes the rainfall experiment simpler, and makes use of the movable components and fans to finely simulate the rain intensity and the direction of raindrops, thus improving the fitting effect to the actual rainfall process.



21: 2021/09392. 22: 2021-11-23. 43: 2022-01-21 51: G01N; G05B

71: Hebei University of Engineering, Water Resources Office of Handan, Handan Meteorological

Service Center 72: LIAN, Qiuyan, LIU, Hongliang, WANG, Hongfeng, HE, Lixin, WANG, Ying, FENG, Junling, GAO, Haoyue, BI, Hongkai, LUAN, Qinghua 54: AN ARTIFICIAL RAINFALL SIMULATION DEVICE

00: -

The utility model relates to an artificial rainfall simulation device , which comprises a water reservoir, a water pipe, a water pump, a steel pipe upright, a fan, a movable component, a rain sprinkler and a multi-layer steel pipe transverse column 21: 2021/09393. 22: 2021-11-23. 43: 2022-01-21 51: B22F

71: Shanghai Maritime University

72: Bangping Gu, Junshuo Wang, Weichen Shi, Dejian Sun, Wei Wang, Li Zhao, Zhensheng Yang, Guangnian Xiao, Yang Shen, Zhipeng Huo 33: CN 31: 202111281825.1 32: 2021-11-08 54: ELECTRIC CURRENT PULSE STRESS RELIEF CLAMPING DEVICE 00: -

The present invention discloses an electric current pulse stress relief clamping device, comprising four support mechanisms, a guide mechanism, two wire fixing mechanisms and a working platform; a moving

support plate in the support mechanism is connected with an insulating protection support plate via clearance fit, a T-type positioning block in the guide mechanism is connected with a transverse guide fixing frame via clearance fit, the transverse guide fixing frame is connected with the working platform via threaded connection, a semi-circle arc lower clamp ring in the wire fixing mechanism is connected with a longitudinal fixing frame in the guide mechanism via threaded connection, the wire fixing mechanism is connected with a wire via hold hoop connection, the moving support plate in the support mechanism is connected with the guide mechanism via threaded connection. The invention has the advantage of improving the safety of the electric current pulse stress relief.



21: 2021/09394. 22: 2021-11-23. 43: 2022-01-21 51: G01N 71: HEFEI INSTITUTES OF PHYSICAL SCIENCE, CHINESE ACADEMY OF SCIENCES 72: WANG, Zhenzhu, TAO, Zongming, LIU, Dong, WANG, Yingjian, MA, Xiaomin 54: DETECTION DEVICE FOR HEIGHT DISTRIBUTION OF PM2.5 MASS CONCENTRATION AND DETECTION METHOD THEREOF

00: -

The invention discloses a detection device for the height distribution of PM2.5 mass concentration and a detection method thereof. The detection device comprises a PM2.5 detector (2) and a CCD side-scattering laser radar (1) which are electrically connected to a data processor (3) respectively through a serial interface or a parallel interface. The detection device and the detection method thereof can be used in the research of pollutant diffusion law, environmental assessment, forecasting and governance and other fields.



21: 2021/09395. 22: 2021-11-23. 43: 2022-01-21 51: H04L; G06Q

71: Qingdao University of Science and Technology 72: HU, Qiang, HUANG, Wen, TIAN, Yuqing 54: CLOUD SERVICE COMPOSITION METHOD AND PLATFORM ORIENTED TO MOLD MAKING 00: -

The present invention belongs to the mold making technical field, and provides a cloud service composition method and platform oriented to mold making. The method comprises obtaining a service request; searching a service process model library, when there is at least one service process matching the service request, setting the matching service process to be a target service process; otherwise decomposing the service request semantically into a plurality of service points, recombining the corresponding services, and obtaining the service process matching the service request, conducting a feasibility examination, in case the examination is passed, setting the service process that have passed the examination as the target service process; in case the examination is failed, generating the target service process by preacquired service resource information and the service request; rectifying a process pattern of the target service process and associating with specifications and parameters. The cloud service composition method and platform oriented to mold making according to the present invention can combine flexibly and efficiently different mold services, improve synergic abilities of mold companies and satisfy diversified service needs.



21: 2021/09396. 22: 2021-11-23. 43: 2022-01-21 51: B09C

71: Yanbian University

#### 72: LI, Guangchun, YAN, Han 54: METHOD FOR REMEDIATION OF POLYCYCLIC AROMATIC HYDROCARBONS-CONTAMINATED SOIL

#### 00: -

The present disclosure provides a method for remediation of a polycyclic aromatic hydrocarbonscontaminated soil. The present disclosure utilizes a polycyclic aromatic hydrocarbons-degrading bacterial strain for biodegradation of a soil slurry based on bioactive water, which is beneficial to improve the efficiency of bioremediation.



21: 2021/09397. 22: 2021-11-23. 43: 2022-01-21 51: C12Q

71: Shandong Agricultural University

72: Li Xianyao, Hu Geng, Dong Yaning, Liu Liying, Fan Xinzhong, Tang Hui

#### 33: CN 31: 2021101666221 32: 2021-02-04 54: MOLECULAR MARKER AND METHOD FOR DETECTING SALMONELLA ENTERITIDIS INFECTION IN CHICKENS AND APPLICATION OF MOLECULAR MARKER

#### 00: -

The invention discloses a molecular marker and a method for detecting Salmonella enteritidis infection in chickens and application of the molecular marker. The molecular marker is isomir-1, an isomer of ggamiR-146b-5p in chicken cecum tissues, which has a nucleotide sequence as shown in SEQ ID NO.1. DNA reverse transcribed from total RNA of the chicken cecum tissue is taken as template for PCR amplification; and after correction by internal control, chickens are determined as Salmonella enteritidispositive chickens when the expression level of isomir-1 in chickens to be detected is more than twice as high as that in Salmonella enteritidisnegative chickens. The method provided by the invention determines whether the chickens are infected with Salmonella enteritidis by detecting the expression level of isomir-1 of gga-miR-146b-5p in the chicken cecum tissues, and is a novel molecular marker method.



21: 2021/09398. 22: 2021-11-23. 43: 2022-01-21 51: B21C; C21D; C22C

71: Tianjin University of Technology and Education 72: GUO, Dong, LIN, Maomao, DENG, Xiaohu, LI, Min, QU, Zhoude

# 54: HIGH-STRENGTH CREEP-RESISTANT HEAT-RESISTANT STEEL

00: -

The present disclosure discloses a high-strength creep-resistant heat-resistant steel. The heat-resistant steel can generate an Al2O3 and Cr2O3 composite oxidation film on the surface, which greatly improves the high-temperature oxidation performance of the heat-resistant steel and increases the creep resistance of the heat-resistant steel.

- 21: 2021/09399. 22: 2021-11-23. 43: 2022-01-21
- 51: G05B
- 71: Beijing Institute of Technology
- 72: ZHAO, Liangyu, SHI, Zhongjiao

54: MODEL REFERENCE ADAPTIVE AIRCRAFT ROBUST CONTROL METHOD

### 00: -

The present invention discloses an aircraft robust model reference adaptive control method and system based on a linear matrix inequality. The method includes first establishing an aircraft dynamics model and selecting a reference model; then setting a state feedback controller, an adaptive controller, and a robust controller based on a linear matrix inequality according to the above dynamics model and reference model, to obtain a linear state feedback control law, an adaptive control law, and a robust correction term; and introducing the controllers into the aircraft dynamics model to obtain a robust model reference adaptive controller based on a linear matrix inequality, through which an aircraft is controlled.



21: 2021/09400. 22: 2021-11-23. 43: 2022-01-21 51: B28B; E04B

71: North China University of Science and Technology

72: YANG, Zhinian, MAO, Zhen, ZHOU, Yunlong 33: CN 31: 202111025898.4 32: 2021-09-02 54: BUILDING FIREPROOF THERMAL INSULATION MATERIAL PRODUCING AND PROCESSING DEVICE

00: -

The present disclosure relates to a building fireproof thermal insulation material producing and processing device, the building fireproof thermal insulation material producing and processing device comprises four supporting plates, a stirring structure and a mixing structure, the tops of the four supporting plates are fixedly connected with a same processing box, a rotating hole is formed in the top of the processing box, a thick shaft is rotatably installed in the rotating hole, a thick hole is formed in the top end of the thick shaft, a thin shaft is in contact with the interior of the thick hole, a sleeve disc is fixedly connected to the top of the outer side of the thin shaft, a protective cover is fixedly connected to the top of the processing box, and the stirring structure is matched with the mixing structure for use.



21: 2021/09401. 22: 2021-11-23. 43: 2022-01-21 51: G09B

71: North China University of Science and Technology

72: JIA, Mutian, WANG, Kaibo, GAO, Lin, JIANG, Nan, YANG, Zhinian, ZHOU, Yunlong
33: CN 31: 202111149368.0 32: 2021-09-29
54: MULTIFUNCTIONAL WORKBENCH FOR CIVIL ENGINEERING PRACTICE TEACHING 00: -

A multifunctional workbench for civil engineering practice teaching, which comprises two supporting legs, an adjusting structure, a lighting structure and a heat dissipation and dust removal structure, wherein one side of the two supporting legs close to each other is fixedly connected with the same lower box, the top of the lower box is fixedly connected with an upper box, the top of the upper box is provided with a sliding hole in which a panel is slidably mounted, four mounting grooves are provided in the front side of the panel, a display screen is fixedly connected in the mounting grooves, a guide plate is fixedly connected to the bottom of the panel, a driven hole is provided at the bottom of the upper box, a driven shaft is rotatably mounted in the driven hole, and an external thread is provided on the outer side of the driven shaft.



21: 2021/09402. 22: 2021-11-23. 43: 2022-01-21 51: E04B

71: North China University of Science and Technology

72: DONG, Haosong, YANG, Zhinian, ZHOU, Yunlong, CHEN, Kaijiang

#### 33: CN 31: 202111078600.6 32: 2021-09-15 54: FIREPROOF BOARD LAMINATING DEVICE FOR BUILDING WALLS 00: -

The present disclosure belongs to the field of fireproof board processing, particularly relates to a fireproof board laminating device for building walls, the fireproof board laminating device for building walls comprises an under frame, a glue spraying structure, a stirring structure and limiting structures, a transverse frame is fixedly connected to the top of the under frame, four supporting frames are fixedly connected to the top of the transverse frame, a same top frame is fixedly connected to the tops of the four supporting frames, a hydraulic cylinder is fixedly connected to the top of the top frame, a push plate is connected to the hydraulic cylinder, two branched plates are fixedly connected to the bottom of the push plate, a same rectangular plate is fixedly connected to the bottoms of the two branched plates, and a glue box is fixedly connected to the bottom of the transverse frame.



21: 2021/09403. 22: 2021-11-23. 43: 2022-01-21 51: G09B

71: North China University of Science and Technology

72: WANG, Kaibo, JIA, Mutian, MENG, Lingyi, JIANG, Nan, ZHOU, Yunlong, YANG, Zhinian 33: CN 31: 202111149354.9 32: 2021-09-29 54: SIMULATION EXPERIMENT DEVICE FOR WATER SUPPLY AND DRAINAGE TEACHING 00: -

The present disclosure discloses a simulation experiment device for water supply and drainage teaching, which has a reasonable design and the effect of saving water resources and is convenient to control a teaching display platform for horizontal rotation adjustment, so as to facilitate students to observe and study from multiple angles. When not in use, it is convenient to store the teaching display platform in a storage cabinet, thus effectively protecting the teaching display platform.



21: 2021/09405. 22: 2021-11-23. 43: 2022-01-21 51: G09B

71: North China University of Science and Technology

72: BO, Haimei, CHENG, Guang, ZHANG, Jingxi, ZHAO, Jihua, LI, Jianmin

# 33: CN 31: 202110972101.5 32: 2021-08-24 54: TRAINING SYSTEM FOR CARDIOPULMONARY-CEREBRAL RESUSCITATION BASED ON VIRTUAL SIMULATION

00: -

The present disclosure belongs to the training field of cardiopulmonary-cerebral resuscitation, and in particular to a training system for cardiopulmonarycerebral resuscitation based on virtual simulation; in order to solve the problems in present training systems that the heat radiation is poor, the service life is reduced, the control plate cannot be well protected when not used and it is inconvenient to perform regular maintenance of the interior, the present disclosure provides a following scheme, which includes a casing body, a protection structure, a heat radiation structure and a limit structure, wherein a bottom inner wall of the casing body is in contact with a controller, four inner walls of the casing body are in contact with one same cover plate, one side of the casing body is fixedly connected to a control plate and a camera, one side of the casing body is fixedly connected to a motor.



21: 2021/09406. 22: 2021-11-23. 43: 2022-01-21 51: G06T

71: Changchun University of Science and Technology, Changchun University of Science and Technology Chongqing Research Institute 72: CHEN, Zhanfang, ZHANG, Yingchao, JIANG, Xiaoming

#### 54: ENHANCEMENT METHOD AND SYSTEM FOR LOW ILLUMINATION IMAGE 00: -

The present disclosure discloses an enhancement method for low illumination images, which relates to the technical field of image enhancement, including: obtaining a low illumination image; inputting the low illumination image into a visual attention network for brightness information extraction processing, and generating a channel attention image; wherein the visual attention network has a built-in visual attention mechanism, and the channel attention image includes a high-brightness area and a low-brightness area; inputting the channel attention image into a noise reduction network for noise reduction processing, and generating a denoise image; inputting the low illumination image, the channel attention image and the denoise image into an enhancement network to generate an enhancement image; wherein a loss function of the enhancement network includes a brightness loss sub-function, a structural loss sub-function, a perceptual loss subfunction, and a regional loss sub-function.



#### 21: 2021/09407. 22: 2021-11-23. 43: 2022-01-21 51: H04L; H04N

71: Changchun University of Science and Technology, Changchun University of Science and Technology Chongqing Research Institute 72: CHEN, Zhanfang, YANG, Ya, JIANG, Xiaoming 54: FUSION ENCRYPTION METHOD BASED ON MULTI CHAOTIC SYSTEM 00: -

The present disclosure relates to a fusion encryption method based on multiple chaotic system, and on the basis of PWLCM, Kent and a one-dimensional Logistic mapping chaotic system, a shuffling algorithm, bit scrambling and a dynamic DNA coding method are fused, and different chaotic sequences are generated by the chaotic system; and then binary pixel values are cleaned by using a shuffling algorithm, bit-level scrambling is carried out through an index matrix, and diffusion operation is carried out by dynamic DNA coding.



### 21: 2021/09408. 22: 2021-11-23. 43: 2022-01-21 51: C08F; C10L

71: Qingdao University of Science and Technology 72: WANG, Fei, HE, Yan, LIU, Li, CHEN, Chen 54: GAS HYDRATE NANO-PROMOTER AND PREPARATION METHOD THEREOF 00: -

The present disclosure discloses a gas hydrate nano-promoter. The gas hydrate nano-promoter uses a polymer nanosphere as a carrier, and hydrophilic active groups are coated on a surface of the polymer nanosphere via a covalent bond. The polymer nanosphere is an enoic acid esters monomer-styrene polymer, and the hydrophilic active groups are -SO3- and -COO-. The present disclosure also provides a preparation method of the gas hydrate nano-promoter. The present disclosure

prepares a novel nano-promoter with the polymer nanosphere as the carrier and the hydrophilic active groups immobilizing on the surface of the polymer nanosphere via the covalent bond and the soap-free seeded emulsion polymerization. Moreover, the present disclosure realizes the rapid formation of the gas hydrate with high density by regulating the types and compounding relationships of the active groups on the surface of the polymer nanosphere.

#### 21: 2021/09409. 22: 2021-11-23. 43: 2022-01-21 51: B01J; C10L

71: Qingdao University of Science and Technology 72: WANG, Fei, ZHANG, Guodong, CHAO, Kun, CHEN, Chen

### 54: STRANDING CAGE TYPE NATURAL GAS HYDRATE CONTINUOUS REACTION APPARATUS

#### 00: -

The invention relates to the technical field of natural gas hydrate production devices, and particularly to a stranding cage type natural gas hydrate continuous reaction apparatus. A main structure comprises a stranding cage reactor, a collection unit, an ultrasonic dispersion unit, a control and monitoring unit, a power unit, a gas supply unit, a liquid supply unit, and a high-low temperature thermostat. By stirring of a stranding cage rod in the stranding cage reactor and by the ultrasonic dispersion unit, efficient and rapid continuous reaction of natural gas hydrate is achieved, separation and compaction of the natural gas hydrate are achieved by means of through holes in stranding cage blades and reduced screw pitch design of the stranding cage blades, collection of the natural gas hydrate is achieved by the collection unit, and continuous reaction of the natural gas hydrate can be further accelerated by adding kinetic and thermodynamic accelerators.



#### 21: 2021/09410. 22: 2021-11-23. 43: 2022-01-21 51: C08F; H01F

71: Qingdao University of Science and Technology 72: WANG, Fei, SUN, Mengting, ZHANG, Guodong, CHEN, Chen

#### 54: SPHERICAL NANO-MAGNETON WITH STABLE SOLUTION DISPERSIBILITY AND PREPARATION METHOD THEREOF 00: -

The present disclosure belongs to the technical field of magnetic stirring and relates to a spherical nanomagneton with stable solution dispersibility and a preparation method thereof, which aims to realize magnetic stirring under micro-nano scale and within a confined microspace, wherein the spherical nanomagneton are magnetic Fe3O4 nanoparticles generated on the surface of water-soluble polymeric nanosphere carriers through electrostatic adsorption-in-situ reduction. The preparation process of the spherical nano-magneton comprises totally two steps of preparing an aqueous solution of polymeric nanospheres and preparing the nanomagneton. By means of electrostatic adsorption-insitu reduction growth, Fe3O4 nanoparticles are immobilized on the surface of water-soluble polymeric nanospheres that can be dispersed stably in water, so that the prepared nano-magneton has stable dispersibility in water. Moreover, by controlling the size and distribution density of Fe3O4 nanoparticles on the surface of water-soluble polymeric nanospheres, the magnetic property of the nano-magneton can be controlled controllably.



- 21: 2021/09411. 22: 2021-11-23. 43: 2022-01-21 51: G01N
- 71: Jilin University

72: WANG, Qiliang, LI, Hongdong, GAO, Nan, MA, Zicheng, LIU, Junsong, CHENG, Shaoheng, LI, Liu'an

#### 54: PREPARATION METHOD OF COMPOSITE STRUCTURAL SENSOR USED FOR DETECTING CLENBUTEROL HYDROCHLORIDE 00: -

A preparation method of a composite structural sensor used for detecting clenbuterol hydrochloride of the present invention belongs to the technical field of electrochemical sensors. A nano gold film is deposited on a boron-doped diamond film, and hightemperature treatment is performed by water vapor, thus forming a gold nanoparticle and nano-porous boron-doped diamond composite structural sensor. In the present invention, the formation of the nanoporous boron-doped diamond and the reasonable design of the composite structure of gold nanoparticles can be used for testing the clenbuterol hydrochloride. Furthermore, the novel composite structural sensor used for detecting the clenbuterol hydrochloride has high sensitivity; the sensor is convenient to prepare and low in cost, has high stability and repetitiveness, and has high interference resistance.



21: 2021/09412. 22: 2021-11-23. 43: 2022-01-21

#### 51: C30B

71: Jilin University, Shenzhen Research Institute of Jilin University

72: WANG, Qiliang, ZOU, Guangtian, LI, Hongdong, LV, Xianyi, LI, Liuan, LI, Genzhuang

33: CN 31: 202111195819.4 32: 2021-10-14 54: METHOD FOR IMPROVING QUALITY OF SPLICING SEAM OF DIAMOND MONOCRYSTAL GROWN BY SPLICING METHOD 00: -

A method for improving the quality of a splicing seam of a diamond monocrystal grown by a splicing method of the present invention falls within the technical field of diamond monocrystal growth. The method comprises: taking a diamond monocrystal as a seed, and splicing two or more seeds together to obtain a diamond monocrystal substrate; uniformly producing a plurality of defects at a splicing seam by a laser cutting machine before the growth; growing a diamond monocrystal in an MPCVD device, wherein, the diamond became turret-shaped at the artificial defects due to secondary nucleation, diamond polycrystalline particles are grown at the top, and diamond monocrystal steps are grown at the surrounding; and polishing the diamond polycrystalline at the top of the turret and continuing growing to obtain a complete diamond monocrystal epitaxial layer.



21: 2021/09413. 22: 2021-11-23. 43: 2022-01-21 51: C30B

71: Jilin University, Shenzhen Research Institute of Jilin University

72: ZOU, Guangtian, LI, Genzhuang, LV, Xianyi, WANG, Qiliang, LI, Liuan, XIE, Wenliang, LIN, Wang, DONG, Chengwei 33: CN 31: 202111195697.9 32: 2021-10-14 54: METHOD FOR SPLICING GROWTH OF LARGE-SIZE MONOCRYSTAL DIAMOND 00: -

A method for splicing growth of a large-size monocrystal diamond of the present invention comprises: firstly, selecting a piece of (100)-oriented monocrystal diamond as a substrate template, and growing an epitaxial layer of the monocrystal diamond on the surface of the substrate template; cutting and stripping, and repeating this operation to obtain multiple high-quality monocrystal diamond epitaxial wafers with strictly consistent crystal orientation; grinding, polishing and cleaning, and placing into a CVD apparatus for growing for 1-4 h, so as to observe the growth direction of a step flow on the surface of the sample; and arranging the epitaxial wafers in a parallel manner along the growth direction of a step flow as a spliced substrate, growing an epitaxial layer of the monocrystal diamond on the surface of the spliced substrate, and cutting and stripping to obtain the large-size and high-quality monocrystal diamond.



21: 2021/09416. 22: 2021-11-23. 43: 2022-01-21 51: B29C

71: QINGDAO AGRICULTURAL UNIVERSITY 72: ZHU, Yinglian, XU, Zhiqiang 54: PREPARATION METHOD AND APPLICATION OF THE NOVEL NISIN COMPOSITE

NANOPARTICLES

00: -

Disclosed herein is a novel preparation of nisin composite nanoparticles, preparation method and application, which belong to the field of food anticorrosion technology. The nisin composite nanoparticles of the invention have nisin as the core, and the outer layer is encapsulated with a shell, wherein the shell components are chitosan and sodium tripolyphosphate. The synthesized nisin composite nanoparticles had a broad-spectrum of antimicrobial activities, and has high inhibition effect against both gram-positive and gram-negative bacteria. Therefore, nisin composite nanoparticles could be used in food preservation and anticorrosion, and has considerable economic value.



21: 2021/09417. 22: 2021-11-23. 43: 2022-01-21 51: B24B

71: QINGDAO UNIVERSITY OF TECHNOLOGY, HANERGY (QINGDAO) LUBRICATION TECHNOLOGY CO., LTD. 72: GAO, Teng, LI, Changhe, ZHOU, Zongming 54: NANOFLUID MINIMUM QUANTITY LUBRICATION EXPERIMENTAL SYSTEM AND METHOD FOR ULTRASONIC VIBRATION ASSISTED GRINDING

00: -

The invention discloses a nanofluid minimum quantity lubrication experimental system and method for ultrasonic vibration assisted grinding, which comprises a magnetic worktable, a workpiece fixture, a dynamometer and an ultrasonic vibration device; The ultrasonic vibration device comprises a tangential ultrasonic vibration device, an axial ultrasonic vibration device, a vibrating base and a radial piezoelectric ceramic sheet fixed on the vibrating base; The tangential ultrasonic vibration device and the axial ultrasonic vibration device are respectively fixed on the vibrating base; At the same time, it is respectively fixed on the magnetic workbench through the support, the dynamometer is fixed on the vibrating base, and the workpiece fixture is fixed on the dynamometer; The invention has the advantages that the on-line detection of grinding force and grinding temperature is realized at the same time, which not only saves time, but also avoids the machining error caused by multiple assembly.



21: 2021/09443. 22: 2021-11-23. 43: 2022-01-21 51: A47B

71: Ludong University

72: Hongwei GAO, Yingni SUN

33: CN 31: 202010744365.0 (CN111887585A) 32: 2020-07-29

#### 54: ASSISTIVE HANDWRITING DEVICE FOR PATIENTS HAVING PARKINSON'S DISEASE 00: -

An embodiment of the present disclosure provides an assistive handwriting device for patients having Parkinson's disease. It includes a bottom plate, a support plate and a writing board. A fixing frame is mounted on the bottom plate. Threaded rods are mounted at a left end and a right end of the fixing frame. A first gear is mounted outside a bottom end of the threaded rod. A second gear is mounted at a side of the first gear. A rotating motor is mounted on a middle portion of an upper end of the fixing frame. A third gear is mounted on a front end of a rotating shaft of the rotating motor. A fixing cylinder is mounted outside an upper end of the threaded rod. A connecting block and a rotating frame are mounted on the top of the fixing cylinder. The support plate and the writing board are mounted on the top of the rotating frame. A limit frame is mounted at a front end of the support plate. A cylinder is mounted at bottom of a front face of the limit frame. A telescopic motor is mounted inside a bottom end of the cylinder. A pillar is mounted on the top of the telescopic motor. A connecting plate is mounted on the pillar. An auxiliary plate is mounted on the connecting plate. A fixing plate is mounted on the auxiliary plate. The device of the present disclosure has a reasonable structure which is convenient for the patients having Parkinson's disease to adjust height and angle of the device,

improving the writing effect and writing efficiency of the patients having Parkinson's disease.



21: 2021/09450. 22: 2021-11-24. 43: 2022-01-21 51: G03F

71: QINGDAO UNIVERSITY OF TECHNOLOGY, HANERGY (QINGDAO) LUBRICATION TECHNOLOGY CO., LTD. 72: LI, Wenyi, ZHANG, Yanbin, LI, Changhe, ZHOU,

#### Zongming 54: STAMPING MOULD AND SYSTEM FOR CARBON FIBER COMPOSITE DOUBLE HOLE CONNECTOR 00: -

The invention discloses a stamping molding mold and system for carbon fiber composite double-hole connector, which solves the problem of large tool wear in the prior art and has the beneficial effect of facilitating stamping processing, reducing deformation and reducing burr. The scheme is as follows: the upper die comprises an upper die seat, which is detachable and connected with the press; The punch fixing plate is arranged on the lower surface of the upper die seat and is provided with a plurality of through holes; At least one row of punching punch for punching parts internal holes, punching punch under the surface with two punching convex, punching punch through the punch fixed plate through the hole and set, and the same row of blanking punch is wavy; it of the punch for blanking the contour of the parts, the punch is arranged through the hole of the plate.



21: 2021/09451. 22: 2021-11-24. 43: 2022-01-21 51: A23N

71: QINGDAO UNIVERSITY OF TECHNOLOGY, INNER MONGOLIA UNIVERSITY FOR NATIONALITIES

72: WANG, Xiaoming, LI, Changhe, LIU, Mingzheng, ZHAO, Huayang

### 54: INDENT SELF-POSITIONING LONG-DIAMETER STRIKING TYPE SHELL BREAKING AND WHOLE KERNEL TAKING EQUIPMENT AND METHOD FOR HIGH-EXPOSED-KERNEL WALNUTS

00: -

The invention provides a self-positioning longdiameter beating type high-luen walnut shellbreaking and whole-kernel equipment and method. The equipment includes a feeding positioning device, which is used to discharge walnuts in a longdiameter posture. The chain plate feeding device is used to fix the discharged long-diameter posture walnut through the socket and send the walnut to the primary shell breaking device. A shell-breaking device, which is used to imitate the shell-breaking action by artificially knocking the shell. The secondary shell breaking device includes a spiral slideway, and the spiral slideway is rotatable. In this way, the walnuts processed by the primary shell breaking device roll down along the spiral slide under the action of gravity, so as to realize the secondary shell breaking of the walnuts. The shell and kernel separation device uses the pneumatic power generated by the pressure difference to separate the shell and kernel.



21: 2021/09452. 22: 2021-11-24. 43: 2022-01-21 51: A23N

71: QINGDAO UNIVERSITY OF TECHNOLOGY, INNER MONGOLIA UNIVERSITY FOR NATIONALITIES

72: WANG, Leyi, LI, Changhe, ZHAO, Huayang, LIU, Mingzheng

# 54: FRUIT VIBRATION GRADING EQUIPMENT

The invention provides a fruit vibration grading equipment, which solves the problem of the inability to accurately classify and stuck the fruit, realizes the size grading of spherical or ellipsoidal fruit through a multi-stage series-connected adjustable vibrating screen. At the same time, an anti-stuck mechanism is designed to ensure that the equipment has a wide range of adaptation and improve the working stability of the equipment. The technical scheme is as follows: including a vibration base, on which the multi-layer vibrating screen is fixedly arranged, the screen holes size of each vibrating screen is different, and the screen holes of the multi-layer vibrating screen is sequentially reduced from top to bottom; the vibration base is fixedly connected with a vibrating motor, and the vibrating motor is installed at an oblique set angle to make the multi-layer vibrating screen vibrate obliquely.



21: 2021/09453. 22: 2021-11-24. 43: 2022-01-21 51: A23N

71: QINGDAO UNIVERSITY OF TECHNOLOGY, XINJIANG JIANG NING LIGHT INDUSTRIAL MACHINERY ENGINEERING TECHNOLOGY CO., LTD.

72: XU, Wenhao, LI, Changhe, LIU, Mingzheng, CHE, Ji

54: TILTING TYPE LIFTING AND STIR-FRYING WALNUT KERNELS TO REMOVE RED SKIN DEVICE BASED ON ELECTROMAGNETIC HEATING

The invention discloses a tilting type lifting and stirfrying walnut kernels to remove red skin device based on electromagnetic heating, which comprises: a roller, a roller drive device and a roller fixing support; the roller is fixed on a roller fixing bracket, and the roller driving device is connected to the roller to drive the roller to rotate in either a positive or negative direction; the inner wall of the roller is provided with a feeder plate, and the inner part of the roller is provided with a support shaft, in which a baffle plate is arranged at a position corresponding to the lifter plate; the solenoid coils are wound around the roller. The invention has the advantages of uniform heating, good heat insulation effect, high automation degree and high peeling efficiency, as well as the function of stirring the raising stock.



21: 2021/09454. 22: 2021-11-24. 43: 2022-01-21 51: A23N

71: QINGDAO UNIVERSITY OF TECHNOLOGY, XINJIANG JIANG NING LIGHT INDUSTRIAL MACHINERY ENGINEERING TECHNOLOGY CO., LTD.

72: ZHANG, Xiaotian, LI, Changhe, LIU, Mingzheng, CHE, Ji

# 54: A WALNUT EXTRUSION CRACK SYSTEM AND METHOD BASED ON ACCURATE SELF-POSITIONING

00: -

The invention provides a walnut extrusion crack system and method based on accurate selfpositioning. The system comprises a driving mechanism, a transmission mechanism and an extrusion mechanism. The driving mechanism generates a driving force and drives the transmission mechanism to move back and forth. The extrusion mechanism comprises a blanking block and an extrusion block arranged opposite to each other. There is a gap between the blanking block and the extrusion block, and the gap gradually decreases to locate the falling walnut. The conveying mechanism pushes the blanking block and the extrusion block to change the gap between the extrusion block and the blanking block, so as to squeeze the walnut falling between the extrusion block and the blanking block and produce cracks.



21: 2021/09455. 22: 2021-11-24. 43: 2022-01-21 51: A23N

71: QINGDAO UNIVERSITY OF TECHNOLOGY, XINJIANG JIANG NING LIGHT INDUSTRIAL MACHINERY ENGINEERING TECHNOLOGY CO., LTD.

72: LI, Kang, LI, Changhe, CHE, Ji, LIU, Mingzheng 54: A SQUEEZING AND SHEARING TYPE WALNUT SHELL BREAKING DEVICE AND METHOD

00: -

The invention discloses a squeezing and shearing type walnut shell breaking device and method, which solves the problem that the walnut shell lacks protection of the nucleus and the existing shell breaking device cannot be applied to walnuts of different sizes. The force is applied by the squeeze roller, and the shearing effect is generated by the friction force, the shell breaking efficiency is high, the whole kernel rate is high, and the nucleus damage is small. The technical scheme is: including a conveying part and a squeezing part, and the conveying part conveys the walnuts to the squeezing part; the squeezing part includes a squeezing roller, the lower side of the squeezing roller is matched with a rotatable shell-breaking baffle, and the two have a set gap; one end of the shell-breaking baffle is fixed to the frame through a rotating shaft.



21: 2021/09456. 22: 2021-11-24. 43: 2022-01-21 51: A23N

71: QINGDAO UNIVERSITY OF TECHNOLOGY, INNER MONGOLIA UNIVERSITY FOR NATIONALITIES

72: LIU, Mingzheng, LI, Changhe, ZHAO, Huayang 54: INTEGRATED DEVICE, SYSTEM AND METHOD INTEGRATING MATERIAL SHELL REMOVING AND FRICTION TYPE CLEANING 00: -

The disclosure provides an integrated device, system and method for spiral peeling and friction cleaning, including a feeding system, a tapered spiral laminated blade peeling system, a grinding disc grinding system and a discharging system. The feeding system uniformly transports the materials to the tapered spiral laminated blade de peeling system. The peeling system of the tapered spiral laminated blade comprises a tapered funnel and a tapered spiral laminated blade arranged therein. The spacing between the tapered funnel and the tapered spiral laminated blade gradually decreases from top to bottom. The grinding disc grinding and washing system rubs the peeled walnut material. The discharge system separates and outputs the processed materials.



21: 2021/09459. 22: 2021-11-24. 43: 2022-01-21 51: F16D; F16H 71: Qingdao University of Science and Technology 72: YANG, Fuqin, JIANG, Jingwei, SI, Mingqing, YU, Jianping

# 54: BALL-TYPE TRIPOD UNIVERSAL COUPLING 00: -

The present invention discloses a ball-type tripod universal coupling, comprising: an input shaft, a slider assembly, a tripod assembly, and an output shaft assembly; one end of the input shaft is provided with a key way, and the other end is provided with three groups of slider slots spaced at intervals of 120°; three slider assemblies are provided and mounted in the three groups of slider slots, respectively, and are connected to the tripod assembly; and the tripod assembly is connected to the output shaft assembly via a rectangular spline. The ball-type tripod universal coupling provided by the present invention has excellent lubrication, low wear, low energy loss, large load capacity, large shaft angle, reliable operation, long service life, good damping performance, low production cost, convenient processing and installation, and can be adapted to complex transmission scenarios.



21: 2021/09460. 22: 2021-11-24. 43: 2022-01-21 51: A01B

71: Baicheng Normal University

72: Li Wenwen, Wang Gang, Chu Guangli, Cong Jianmin, Yang Haotian, Gu Lijun, Wang Haiyang, Liu Yang, Ning Guangxu, Li Yue

54: CUTTING ROBOT BASED ON WEED IDENTIFICATION AND OPERATING SYSTEM THEREOF

# 00: -

The invention discloses a cutting robot based on weed identification, wherein that top of the frame is fixedly connected with a control cabinet; a controller is embedded in one end of the control cabinet, fixed

seats are symmetrically installed at the bottom end of the frame, and an adjusting rod is rotatably installed between the two fixed seats, and guide grooves are arranged at the positions at the bottom end of the frame corresponding to both sides of the adjusting rod. The mechanism is scientific and reasonable in structure, safe and convenient to use, and the position of the moving wheel can be adjusted according to the position of the plant in the ridge through the symmetrically adjusted moving mechanism, so that the plant can be prevented from being crushed when the frame is moved by the moving wheel, and the stability of the frame can be prevented from being influenced by the asymmetry of the moving wheel after the position of the moving wheel is adjusted; through the set adjusting and cutting mechanism, the position of the cutting knife can be adjusted according to the lateral position and height position of the weed grass roots, so that the accuracy of grass roots cutting is improved, and the situation that other plants are mistakenly cut when weeds are cut is reduced.

21: 2021/09461. 22: 2021-11-24. 43: 2022-01-21 51: C02F

71: Yangjiang Polytechnic

72: Si Yuanyuan, Lu Wangti, Tang Haiyao, Chen Xinghan, Wang Lijiao, Li Yanping 54: INTEGRATED BIOLOGICAL DENITRIFICATION DEVICE AND APPLICATION METHOD THEREOF 00: -

The invention discloses an integrated biological denitrification device and an application method. The device sequentially comprises an autotrophic sedimentation tank, an aerobic nitrification tank and an anaerobic denitrification tank from inside to outside. Agitators are arranged in the anaerobic denitrification tank and the autotrophic sedimentation tank; the bottom of the aerobic nitrification tank is provided with an aeration component, and the aerobic nitrification tank is provided with a nitrification box; the bottom of the autotrophic sedimentation tank is provided with a groove, and the bottom of the groove is connected with a return pipe which is provided with two outlets, and one outlet of the return pipe is communicated with the aerobic nitrification tank and provided with a second water pump. According to the invention, nitration and denitrification reactions are completed in the same denitrification device, and the nitration and denitrification reactions are alternately carried out, so that the nitrates generated by nitration can be removed in time to generate nitrogen to achieve the purpose of denitrification, and at the same time, the purpose of simultaneous nitration and denitrification can be achieved by controlling the concentration of dissolved oxygen in the system; according to the invention, nitration and denitrification reactions are completed in the same denitrification device, and the nitration and denitrification reactions are alternately carried out, so that the nitrates generated by nitration can be removed in time to generate nitrogen; thus achieving the purpose of denitrification, and at the same time, the purpose of simultaneous nitration and denitrification can be achieved by controlling the concentration of dissolved oxygen in the system. Accordingly, greatly improve the nitrogen removal efficiency of sewage, and ensure that the total nitrogen content in the discharged water body meets the discharge standard.



- 21: 2021/09462. 22: 2021-11-24. 43: 2022-01-21 51: C08J; C08K; C08L; C09C
- 71: Jiangsu Vocational Institute of Architectural Technology
- 72: WANG, Junqiang, HUANG, Yong, DU, Bin

# 54: RECYCLED SELF-FILLER MATERIAL AND PREPARATION METHOD THEREOF 00: -

The present disclosure discloses a recycled self-filler material and a preparation method thereof. The recycled self-filler material includes, in parts by mass, 560-870 parts of a recycled pellet mixture, 105-180 parts of an admixture, 2.1-10.6 parts of a curing activator and 180-230 parts of water. Waste muck obtained after excavation of an underground pipe groove or a hidden cavity is fully used in the present disclosure, and by improving the workability and backfilling performance of a filling material, uniform and compact filling of the prepared filling material around the underground pipe groove can be achieved due to gravity and cohesiveness, so that backfilling of the underground pipe groove is facilitated.

21: 2021/09463. 22: 2021-11-24. 43: 2022-01-21 51: G01J

71: Qingdao Agricultural University

72: Zhao Haiyan, Zhu Pengfei, Yang Qingli, Pang Bin

# 54: METHOD FOR IDENTIFYING THE GEOGRAPHICAL ORIGIN OF PEANUT OIL BY THE RAMAN SPECTRAL FINGERPRINTING TECHNIQUE

00: -

The invention disclosed a method for identifying the geographical origin of peanut oil by the Raman spectral fingerprinting technique, belonging to the technical field of food origin traceability. The identification method included Raman spectra collection, spectral preprocessing, establishing a discrimination model, and determining the origin of the sample to be tested. The origin identification model of peanut oil established by the invention was less affected by variety and could quickly and accurately identify peanut oils from different regions. Furthermore, this method did not need sample pretreatment, had no loss to samples, and had short exposure time. Thus, it was suitable for rapid detection of large quantities of samples.



- 21: 2021/09464. 22: 2021-11-24. 43: 2022-01-24 51: G06Q
- 71: Qingdao Agricultural University
- 72: GUŎ, Qi

# 54: EMPLOYMENT-MANAGING SYSTEM 00: -

The present invention relates to an employmentmanaging system comprising a job-hunting information acquisition module, a recruitment information acquisition module, a screening module, a job hunter selection module, a resume generation module and a resume optimized module; relevant recruitment information is obtained according to the job-hunting information by acquiring a job hunter's job-hunting information and ability and collecting the recruitment information of the recruiter; then, the job hunter selects satisfactory recruitment information, and creates a resume for the job hunter according to the job hunter's selection and all relevant recruitment information; finally, the excellent part of the basic resume is marked as the highlight of the resume according to the recruitment information.



21: 2021/09465. 22: 2021-11-24. 43: 2022-01-24 51: G05B

- 71: Qingdao Agricultural University
- 72: GUO, Qi

# 54: INTERNET OF THINGS-BASED INTELLIGENT AGRICULTURAL SYSTEM

00: -

The present invention relates to an Internet of things-based intelligent agricultural system. Through the present invention, a manager may monitor a growth environment of agricultural crops in real time, and meanwhile, the control unit group may timely meet growth requirements of the agricultural crops to keep the agricultural crops in a good growth state for long, so the yield and quality of the agricultural crops are greatly improved.



#### 21: 2021/09467. 22: 2021-11-24. 43: 2022-01-24

#### 51: C09K

71: Shandong Academy of Agricultural Sciences 72: MA, Zheng, SHEN, Yuwen, YANG, Zhengtao, ZHENG, Fuli, DONG, Xiaoxia 54: ACID SOIL CONDITIONER AND

## PREPARATION METHOD AND APPLICATION THEREOF 00: -

The present disclosure provides an acid soil conditioner and a preparation method and application thereof, belonging to the technical field of soil conditioners. The acid soil conditioner provided in the present disclosure comprises the following raw materials in parts by weight: 2-10 parts of quicklime, 9-25 parts of biochar, 0.5-1 part of compound microbial agent, 20-40 parts of humic acid, 8-40 parts of animal waste and 10-30 parts of straws, wherein the total number of effective viable bacteria in the compound microbial agent is not less than 10 million/g. The acid soil conditioner provided can comprehensively improve the acid soil, increase the content of organic matter in the acid soil, and promote the increase in crop yield. It can also solve the problem of resource utilization of waste in aquaculture and agriculture; in addition, the raw materials are easily available, the preparation process is simple, so it facilitates promotion.

21: 2021/09468. 22: 2021-11-24. 43: 2022-01-24 51: G01B; G01M; G06K 71: SHANDONG UNIVERSITY OF SCIENCE AND TECHNOLOGY 72: WANG, Fengde, LIU, Qi, LIU, Bing, YAO, Yan'an

33: CN 31: 202011349488.0 32: 2020-11-26 54: METHOD FOR IDENTIFYING IMPACT DAMAGE REGION APPLICABLE TO CANTILEVER BEAM AND DEVICE THEREOF 00: -

The present invention discloses a method for identifying an impact damage region applicable to a cantilever beam and device thereof, the method includes processing k time-domain strain response signals corresponding to each impact damage experiment in each region by Hilbert-Huang transform, and the k marginal spectra corresponding to each impact damage experiment in each region are obtained; determining 1 characteristic marginal spectrum corresponding to each impact damage experiment in each region according to the k marginal spectra corresponding to each impact

damage experiment in each region; constructing a sample database according to 1 characteristic marginal spectrum corresponding to each impact damage experiment in each region; training a support vector machine using the sample database; identifying the damage region of cantilever beam by trained support vector machine. The present invention improves the accuracy of the damage region identification of the cantilever beam.



21: 2021/09469. 22: 2021-11-24. 43: 2022-01-24 51: C05F

# 71: SHANDONG UNIVERSITY OF SCIENCE AND TECHNOLOGY

72: ZHANG, Lin, QIN, Zhen

#### 33: CN 31: 202110498502.1 32: 2021-05-08 54: SEALED PLANT FERMENTED INDIGO VAT 00: -

The present invention discloses a sealed plant fermented indigo vat, which includes a vat module, a sampling module arranged inside the vat module, a stirring module connected with the sampling module, and a test dyeing module connected with the vat module; the vat has two layers, wherein the upper layer is fixedly provided with a sampling module that can absorb the dye in the vat and send the dye to the dye vat to complete the dye sampling work; the bottom layer is equipped with a stirring module that can fully stir the dye and clean the vat; the test dyeing module is provided with an intermittent motion module, so that the dye absorbed by the dyeing plate is printed on a surface to complete the test dyeing. According to the present invention, the problem that with the existing dyeing devices it is not possible to conduct dyeing test and test the color of dyed cloth is effectively solved, and waste caused by insufficient coloring effects of the dye and incapability of use is avoided.



#### 21: 2021/09470. 22: 2021-11-24. 43: 2022-01-24 51: B01J; C06B

71: Nanjing University of Science and Technology, Hubei Institute of Aerospace Chemical Technology 72: Liu Jie, Wu Shixi, He Narenchaogetu, Sun Sensen, Wang Deqi, Bei Yiying, Chen Ling, Li Fengsheng

# 54: PREPARATION METHOD OF SPHERICAL AMMONIUM PERCHLORATE AND COMPOSITE PARTICLES THEREOF

00: -

The present invention provides a method for preparing spherical ammonium perchlorate (AP) and composite particles thereof. The method utilizes a solvent-non-solvent recrystallization technology, using NMP as a solvent and dichloromethane as a non-solvent. The preparation process of a spherical AP particle roughly includes: first prepare a saturated solution of AP, and then drop the saturated solution of AP into a non-solvent, after AP crystals are separated out, filtered with suction, washed, and dried, AP particles with high sphericity are obtained. The preparation method is simple and safe, has low cost, and can realize large-scale production. A preparation method of spherical nano CuO-AP core-shell structure composite particles includes: firstly weighing nano CuO and AP with a mass ratio of 2:98, prepare a saturated solution of AP and a dichloromethane suspension of nano CuO, and then add the saturated solution of AP dropwise

to the dichloromethane suspension, after the composite particles are crystallized out, filtered by suction, washed, and dried, spherical nano-CuO-AP core-shell structure composite particles are obtained, it takes nano CuO as the core, AP as the shell, and AP forms a complete coating layer, and the coating effect is good.

21: 2021/09471. 22: 2021-11-24. 43: 2022-01-24 51: D21B: D21F: D21H

71: Guangning Zhengda Special Paper Co., Ltd. 72: DONG, Fudian, DONG, Fu, DONG, Yeqing, FANG. Shangren

# 54: METHOD FOR MAKING HIGH-STRENGTH ADHESIVE TAPE PAPER AND APPLICATION THEREOF

00: -

The present disclosure provides a method for making high-strength and high-air-permeability twosided offset paper. The method comprises the processes of pulping, defibering, papermaking, drying, gumming, etc. According to the method, needle-leaved wood and broad-leaved wood are adopted as raw materials, and low-basis-weight, high-strength and high-air-permeability two-sided offset paper is prepared through twice gumming. Guar gum molecules similar to cellulose in structure are selected for the first time of gumming, and the strength and evenness of a substrate are improved through the high affinity to cellulose. A mixed solution used for the second time of gumming is prepared through mixing two kinds of gum, and the strength and softness of the paper are further effectively improved. The two-sided offset paper has good strength and air permeability, and thus can be applied to electronic devices.

21: 2021/09472. 22: 2021-11-24. 43: 2022-01-24 51: A01G

72: Yang Xiong, Liu Houcheng

#### 54: METHOD FOR SUPPLEMENTING LIGHT WITH RED LIGHT TO PROMOTE TOMATO FRUIT DEVELOPMENT AND LYCOPENE ACCUMULATION

00: -

The invention discloses a method for supplementing light with red light to promote tomato fruit development and lycopene accumulation, and belongs to the technical field of plant production. The present invention supplements light for 6 hours per day during the process of growing tomatoes in the plastic greenhouse substrate, the wavelength is 660±10nm, the light intensity is 100±5 micromole·m·m-2·s-1 red light, it accelerates the ripening speed of tomato fruits, and the ripening time is three days earlier, which significantly increases the content of phytoene in tomato fruits.



#### 21: 2021/09473. 22: 2021-11-24. 43: 2022-01-24 51: H04W

71: Institute of Geological Natural Disaster
Prevention, Gansu Academy of Sciences
72: LIU Xiaohua, LIU Hanze
54: AN INTEGRATED POSITIONING SYSTEM
AND METHOD FOR PEOPLE IN DISASTERPRONE AREAS
00: -

The invention discloses an integrated positioning system and method for people in disaster-prone areas, combining the outdoor space positioning technology, the indoor space positioning technology, the digital fence technology and the image video recognition technology, through the individuals' dynamic position state information sent by a wireless positioning terminal, to effectively monitor individuals' position state information of the areas; the wireless positioning terminal carried by individuals activates a specific signal when disasters occur, and rescuers can find people in distress more quickly by the position state information and the specific signal, thereby enabling trapped people to

<sup>71:</sup> Shenzhen Hortiright CO., LTD.

be rescued in time; the problem of disaster-prone areas can be effectively solved, and when disasters occur, trapped people can be rescued in time by known individuals' position state information and the specific signal sent by the wireless positioning terminal, reducing the number of disaster-affected victims and achieving a positive significance for disaster prevention and reduction.



21: 2021/09474. 22: 2021-11-24. 43: 2022-01-24 51: D21H

71: Guangning Zhengda Special Paper Co., Ltd. 72: DONG, Fudian, DONG, Fu, DONG, Yeqing, FANG, Shangren

# 54: METHOD FOR PREPARING HIGH-AIR-PERMEABILITY MOISTURE-PROOF GUMMED PAPER AND APPLICATION THEREOF

The present disclosure provides a method for preparing high-air-permeability moisture-proof gummed paper. The method comprises the processes of pulping, defibering, papermaking, gumming, etc. According to the method, the characteristics of multiple pores and high strength of polynosic are utilized, the polynosic and needleleaved wood fibers are mixed for papermaking to prepare a gummed paper substrate with high strength and high air permeability is prepared. The two sides of the substrate are coated with moistureproof materials, so that the gummed paper has a waterproof effect, and some precision electronic devices are not affected by a moisture environment due to fixed protection of the gummed paper in the transportation and use processes.

21: 2021/09475. 22: 2021-11-24. 43: 2022-01-24
51: A01N; C07K; C12N; A01P
71: Shandong Agricultural University
72: LIU, Huixiang, WANG, Haiming, YU, Chengming, WANG, Yongli, CHEN, Rong, ZHANG, Zhen, XIONG, Xiong, DIAO, Yufei, JIN, Jiyang, REN, Yuchen
54: HARPINF PROTEIN AND USE THEREOF IN

# INDUCTION OF RESISTANCE OF POPULUS × CANADENSIS MOENCH POPLAR TO BACTERIAL CANKER 00: -

The present disclosure provides a harpinF protein and use thereof in induction of resistance of Populus x canadensis Moench poplar (Populus x canadensis Moench.) to bacterial canker. The present disclosure provides an hrpF gene sequence of a pathogen of the bacterial canker of Populus x canadensis Moench poplar, Lonsdalea guercina subsp. populi strain, and a protein encoded thereby; His is used for fusion expression of harpin protein by a gene engineering method, and the expression thereof in Escherichia coli is significantly upregulated. A target protein is purified by a Ni column, and the pure protein concentration is about 1 mg/mL. To spray the harpinF obtained by the present disclosure to branches of the Populus x canadensis Moench poplar can significantly improve resistance of the Populus × canadensis Moench poplar to bacterial canker. The above conclusion proves that the harpinF has application value in developing biogenic pesticides.



- 21: 2021/09476. 22: 2021-11-24. 43: 2022-01-24
- 51: C04B
- 71: Northeastern University

72: GU, Xiaowei, ZHANG, Weifeng, WANG, Hao, LI, Xiaohui

#### 54: CEMENT-BASED COMPOSITE MATERIAL USING IRON TAILINGS AND PREPARATION METHOD THEREOF 00: -

The present disclosure discloses a cement-based composite material using iron tailings, comprising a gelling material, aggregate, a water reducing agent and water, wherein the gelling material comprises cement and silica fume, and the mass fraction of the cement in the gelling material is 75-80%; the aggregate comprises iron tailings and machine-made quartz sand, and the mass fraction of the iron tailings in the aggregate is less than or equal to 70%; the cement-based composite material has a water-to-gel ratio of 0.16 to 0.2; and the water reducing agent accounts for 2.0 to 2.4% of the mass of the gelling material.

21: 2021/09477. 22: 2021-11-24. 43: 2022-01-24 51: C04B

71: Northeastern University

72: GU, Xiaowei, LI, Xiaohui, GAO, Yuxin, WANG, Hao, LIU, Jianping, LIU, Peng 54: LARGE-DOPING-AMOUNT SOLID WASTE-BASED ALKALI-ACTIVATED FOAMED CONCRETE AND PREPARATION METHOD THEREOF

00: -

The present disclosure belongs to the field of lightweight prefabricated components prepared from fabricated building materials, and particularly relates to a preparation method of a large-doping-amount solid waste-based alkali-activated foamed concrete prefabricated component. The large-doping-amount solid waste-based alkali-activated foamed concrete prefabricated component includes 80-240 parts of a solid waste-based aggregate, 60-80 parts of a solid waste-based micropowder, 5-30 parts of a mineral admixture, 15-30 parts of an alkaline activator, 5-15 parts of water, 2-8 parts of a composite foaming agent, 1-8 parts of an additive and 0.5-3 parts of a fiber; and the composite foaming agent includes 4-7 parts of a foaming agent, 2-4 parts of a water repellent and 0.03-0.06 part of a foam stabilizing component.

21: 2021/09478. 22: 2021-11-24. 43: 2022-01-21 51: G01N 71: North China University of Science and Technology

72: LI, Xin, LIU, Xiaojie, LI, Jianpeng, LI, Hongwei, LI, Hongyang, ZHANG, Zhifeng, LV, Qing 54: DETECTION DEVICE FOR REACTION OF H2O, CO2 AND COKE 00: -

The present invention discloses a test device for quantitatively detecting a solvent loss reaction of water vapor and carbon dioxide on coke, which comprises: a water vaporization device, a water flow regulator and a water storage tank. The water vaporization device mainly includes a coke reaction tube, a connector and a micro tube. A top of a Ushaped gas channel of the reaction tube is connected to a microtube with a connector and a 5 mm plastic hose between the microtube and the water flow regulator. The other end of the water flow regulator is connected to the water storage tank.



21: 2021/09479. 22: 2021-11-24. 43: 2022-01-21 51: G06F; G06Q

- 71: Northeastern University
- 72: GU, Xiaowei, KONG, Wenyuan, WANG, Qing,

XU, Xiaochuan, WANG, Hao

# 54: METHOD FOR OPEN-PIT COAL MINING PLAN OPTIMIZATION BASED ON ENDOGENOUS VARIABLES OF CAPITAL CONSTRUCTION INVESTMENT

00: -

The present disclosure relates to the field of open-pit coal mining, and in particular to a method for openpit coal mining plan optimization based on endogenous variables of the capital construction investment, comprising: (1) acquiring a capital construction investment function of a coal cleaning

plant, other capital construction investment functions excluding the coal cleaning plant and stripping equipment, and a total capital construction investment function summing up the two functions; (2) obtaining quantities of raw coal mining, stripped waste rock and stripped Quaternary strata of a certain planned path in a certain year; (3) obtaining a relational model of the cost of a certain planned path in a certain year; (4) obtaining a relational model of the profit of a certain planned path in a certain year; (5) obtaining a profit relational model of a certain feasible planning path in all years.



21: 2021/09480. 22: 2021-11-24. 43: 2022-01-21 51: G06F; G06Q

71: China Institute of Water Resources and Hydropower Research, China Three Gorges Corporation

72: GONG, Jiaguo, LIU, Zhiwu, WANG, Ying, WANG, Hao, WANG, Menghan, YE, Yuntao 54: NOVEL URBAN WETLAND PLANNING AND DESIGN METHOD

#### 00: -

The present invention discloses a novel urban wetland planning and design method.



# 21: 2021/09481. 22: 2021-11-24. 43: 2021-12-08 51: C10L

71: QINGDAO YONGQUANHUA ENERGY TECHNOLOGY CO. LTD 72: HAN, JIANPENG, HAN, KAI 54: ENVIRONMENTAL PROTECTION AND ENERGY SAVING AND SUPER GASOLINE FORMULATION FOR TREATING SMOG, AND PRODUCTION METHOD THEREOF 00: -

A super gasoline formulation is provided. The super gasoline formulation includes components of alkylated gasoline, straight-run gasoline, carbon olefins, metal deactivator, and octane number accelerator, and base on total weight of the gasoline, the gasoline comprising of approximately 30-40% of alkylated gasoline, approximately 15-20% of the straight-run gasoline, approximately 20-25% of the carbon olefins, approximately 20-25% of the metal deactivator, approximately 0.03% of the octane number accelerator.

21: 2021/09482. 22: 2021-11-24. 43: 2021-12-08 51: C10L

71: QINGDAO YONGQUANHUA ENERGY TECHNOLOGY CO. LTD 72: HAN, JIANPENG, HAN, KAI 54: ENVIRONMENTAL PROTECTION AND ENERGY SAVING SUPER DIESEL OIL FORMULATION FOR TREATING SMOG, AND PRODUCTION METHOD THEREOF 00: -

A super diesel oil formulation is provided. Base on total weight of super diesel oil, the super diesel oil formulation is comprised of approximately 50-60% of the straight chain alkanes, approximately 10-20% of the organic solvent, approximately 15-20% of the cycloalkane, approximately 8-10% of the alkylbenzene, approximately 5-10% of the kerosene, approximately 0.8% of the anti-smog environmental

protection diesel combustion accelerator. Furthermore, a method for producing the super diesel oil formulation is also provided.

21: 2021/09484. 22: 2021-11-24. 43: 2022-01-24 51: A23N

71: QINGDAO UNIVERSITY OF TECHNOLOGY, INNER MONGOLIA UNIVERSITY FOR NATIONALITIES 72: JIANG, Zhiyong, LI, Changhe, LIU, Mingzheng,

ZHAO, Huayang

# 54: WALNUT SHELL BREAKING DEVICE, WALNUT WHOLE KERNEL DEVICE AND METHOD

00: -

The invention provides a walnut shell breaking device, a walnut whole kernel device and a method. The walnut shell breaking device comprises a feeding system, which comprises a conveying chain row, which is provided with a plurality of socket holes, and each socket hole is used to fix the walnut with long-diameter attitude; A primary shell breaking system and a secondary shell breaking system are successively arranged along the forward direction of the conveyor chain row; The primary shell breaking system is used to apply a vertical downward impact force to the walnut in the socket to realize primary shell breaking; The secondary shell breaking system includes a spiral slide and a driving mechanism. The driving mechanism is used to drive the spiral slide to rotate, so that the walnut after the first shell breaking can roll down along the spiral slide under the action of gravity.



21: 2021/09485. 22: 2021-11-24. 43: 2022-01-24 51: G05B 71: QINGDAO UNIVERSITY OF TECHNOLOGY,

NINGBO SANHAN ALLOY MATERIAL CO., LTD.

72: WU, Xifeng, LI, Changhe, HONG, Huaping, LI, Runze

#### 54: A MACHINE TOOL WITH CUTTING TOOL AS MAIN MOVEMENT AND WORKING METHOD 00: -

The invention relates to a machine tool with a tool for main movement and a working method, including a bed. The bed is equipped with the first three-axis linkage mechanism. The first three-axis linkage mechanism is connected to the power system, and the power system is connected to the tool. The bed is also provided with a fixed workpiece bearing platform. A second three-axis linkage mechanism is provided on one side of the cutting tool, and the second three-axis linkage mechanism is connected with the nozzle angle adjustment mechanism. The nozzle angle adjustment mechanism is connected with the nozzle to adjust the spray angle of the nozzle. The nozzle is connected with the liquid supply mechanism, and the nozzle angle adjustment mechanism is also provided with a camera mechanism. The machine tool adopting the invention has high cutting fluid utilization rate and good lubrication and cooling effect.



21: 2021/09486. 22: 2021-11-24. 43: 2022-01-24 51: B23Q

71: QINGDAO UNIVERSITY OF TECHNOLOGY, NINGBO SANHAN ALLOY MATERIAL CO., LTD. 72: SUN, Jingang, LI, Changhe, HONG, Huaping 54: MICRO LUBRICATION MULTI DEGREE OF FREEDOM INTELLIGENT NOZZLE SYSTEM BASED ON CNC MILLING MACHINE 00: -

The invention discloses the micro lubrication multi degree of freedom intelligent nozzle system based on CNC milling machine, comprising: a CNC milling machine system, which is connected to the nozzle multi-directional motion system and the nozzle angle automatic adjustment system, respectively; said the

nozzle multi-directional motion system includes an XZ-plane rotation mechanism, a Y-directional movement mechanism and an X-directional movement mechanism, and the nozzle is mounted on the X-directional movement mechanism, and said nozzle is also connected to the nozzle angle automatic adjustment system said X-directional moving mechanism is used to drive the nozzle in the X-direction; said nozzle angle automatic adjustment system is used to automatically adjust the nozzle angle; under the drive of said Y-directional moving mechanism, said X-directional moving mechanism can carry out Y-directional movement along the Ydirectional moving mechanism, so as to realize the X-directional movement of the nozzle.



21: 2021/09487. 22: 2021-11-24. 43: 2022-01-24 51: B23Q

71: QINGDAO UNIVERSITY OF TECHNOLOGY, HANERGY (QINGDAO) LUBRICATION TECHNOLOGY CO., LTD. 72: KONG, Ming, YANG, Min, LI, Changhe, LI,

Runze, ZHOU, Zongming

#### 54: MIMIMUM QUANTITY LUBRICATION INTELLIGENT SPRAYER-HEAD SYSTEM OF CNC HORIZONTAL LATHE BASED ON THREE-AXIS PARALLEL PLATFORM

00: -

The invention discloses a minimum quantity lubrication intelligent spray-head system for a numerical control horizontal lathe based on a threeaxis linkage platform. The horizontal moving part is connected with the longitudinal telescopic part to provide the power required for the lateral movement of the longitudinal telescopic part, so that the longitudinal telescopic part can move horizontally; A rotating part is provided in the longitudinal telescopic part to allow the rotating part to move longitudinally; the rotating part is connected to a three-axis linkage platform, and the rotating part drives the three-axis linkage platform to rotate, and the three-axis linkage platform is provided with a spray head.



#### 21: 2021/09488. 22: 2021-11-24. 43: 2022-01-21 51: B24B

71: QINGDAO UNIVERSITY OF TECHNOLOGY, HANERGY (QINGDAO) LUBRICATION TECHNOLOGY CO., LTD. 72: CUI, Xin, LI, Changhe, LI, Runze, ZHOU, Zongming

# 54: EXPERIMENTAL SYSTEM AND METHOD OF SPEED AND SIZE EFFECT IN SINGLE ABRASIVE GRINDING UNDER DOFFERENT LUBRICATION CONDITIONS

00: -

The invention discloses an experimental system and method of speed and size effect in single abrasive grinding under different lubrication conditions. It solves the problem of not being able to do experimental research on single abrasive in the existing technology. It has a beneficial effect on the experiments of single abrasive under different lubricating conditions. The solution is as follows. The test system includes a rotating wheel which is equipped with at least a pair of abrasive. The workbench is arranged at the bottom of wheel to facilitate grinding of the workpiece by the wheel. The grinding dynamometer is arranged at the bottom of workbench, and is connected to the control mechanism. The three-dimensional moving mechanism supports the grinding dynamometer to drive the workpiece to move in X, Y and Z directions.



21: 2021/09489. 22: 2021-11-24. 43: 2022-02-03 51: C07F

71: GUSAIN, Siddharth, SHALINI, Shruti, VARMA, Diksha Awadhesh, TIWARI, Manisha, MISHRA, Chandrabhushan, KUMARI, Shikha

72: TIWARI, Manisha, MISHRA, Chandrabhushan, KUMARI, Shikha

# 54: A METHOD FOR DESINGING AND SYNTHESIZING CARBAZOLE BASED NOVEL MULTIFUNCTIONAL AGENTS AS POTENTIAL ANTI-ALZHEIMER AGENTS

#### 00: -

The present disclosure relates to a method for designing and synthesizing carbazole based novel multifunctional agents as potential Anti-Alzheimer agents. The method comprises: reacting carbazole with phenylchloroformate for obtaining a phenyl ester derivative; refluxing the derivative with hydrazine hydrate for achieving acid hydrazide; and coupling acid hydrazide with substituted benzoyl chloride for providing the multifunctional agents. The synthesized agents are assessed for their multifunctional activities using various in vitro, in silico and in vivo studies which reveal them as potent multifunctional agents for treating AD. The synthesized compounds are AChE inhibitors, Aß aggregation inhibitors, anti-oxidant, and neuroprotective agents. The compound MT-1 and MT-6 are found to be most potent multifunctional agents which are effective AChE inhibition, Aß disaggregation, anti-oxidant and shown metal chelation action. The evaluation of compound MT-6 against scopolamine induced dementia mode of mice significantly improved the memory deficit and cognition impairment.



#### 21: 2021/09491. 22: 2021-11-24. 43: 2022-01-21 51: A01K

71: BOSE, Rajesh, ROY, Sandip, GHOSH, Malay, MONDAL, Haraprasad, DEY, Raktim Kumar, BHATTACHARJEE, Pratik, BISWAS, Suparna, CHATTOPADHYAY, Samiran, CHOWDHURY, Chandreyee

72: BOSE, Rajesh, ROY, Sandip, GHOSH, Malay, MONDAL, Haraprasad, DEY, Raktim Kumar, BHATTACHARJEE, Pratik, BISWAS, Suparna, CHATTOPADHYAY, Samiran, CHOWDHURY, Chandreyee

### 54: A SYSTEM FOR A COMPUTERIZED POULTRY CONFIGURATION FRAMEWORK FOR THE REGULATION OF REAL-TIME SMART POULTRY

#### 00: -

The present disclosure relates to a system for a computerized poultry configuration framework for the regulation of real-time smart poultry The present disclosure proposes a smart poultry farm which regulates environmental specifications such as humidity, temperature, ammonia gas, lighting, and many more for better production of chickens. The proposed system comprises various sensors which gather the information about the atmosphere such as temperature and humidity and send that information to the microcontroller which then compared the input which the threshold value and then takes decision. In this disclosure an algorithm has been proposed for controlling the entire system in three different modes. The proposed system makes less power consumption and saves money as well and also it reduces the use of man power making it more effective. The proposed system can be operated by the application of the smart phones which helps the owner to monitor real time environmental parameters.

$\overline{}$	
	weather control unit 102
	water control unit 104
	gas identification and controlling unit 106
	automatic light switching unit 106
Г	smart video monitoring unit 106

21: 2021/09492. 22: 2021-11-24. 43: 2022-01-21 51: B66C

71: SHANDONG JIANZHU UNIVERSITY

72: WANG, Shengchun, Ll, Wenhao, AN, Hong 54: HIGH-STABILITY DOUBLE-HOOK CRANE 00: -

A high-stability double-hook crane is disclosed, wherein a first movable pulley and a second movable pulley are rotatably arranged in parallel on a hook bracket, the first movable pulley is wound with a first steel wire rope, the second movable pulley is wound with a second steel wire rope, and the first and the second hook bodies are both rotatably connected to the hook bracket via a pin shaft; a hoisting point adjustment assembly is provided between the first and the second hook bodies; the first and the second steel wire ropes form four parallel steel wire ropes, so the lifting of the hook assembly below is more stable; an adjusting lever is provided between the first and the second hook bodies, and an adjustable included angle is arranged between the first and the second hook bodies.



21: 2021/09493. 22: 2021-11-24. 43: 2022-01-21 51: A61K; A61P

71: QINGDAO BOLIN BIOLOGICAL TECHNOLOGY CO., LTD., QINGDAO CENTER FOR ANIMAL DISEASE CONTROL AND PREVENTION 72: ZHAO, Yongda, LI, Yan, GUO, Lili

#### 54: VETERINARY BROMHEXINE HYDROCHLORIDE SOLUBLE POWDER AND PREPARATION METHOD AND USE THEREOF 00: -

The present disclosure belongs to the technical field of veterinary drugs, and particularly relates to a veterinary bromhexine hydrochloride soluble powder and a preparation method and use thereof.



#### 21: 2021/09507. 22: 2021-11-24. 43: 2022-01-27 51: H01L

- 71: ZHEJIANG UNIVERSITY
- 72: WU, Haotian, WANG, Xiaosong

33: CN 31: 202111217080.2 32: 2021-10-19 54: DISPLAY DEVICE FOR MULTI-ANGLE VIEWING OF INDUSTRIAL DESIGN PRODUCT 00: -

Disclosed is a display device for multi-angle viewing of an industrial design product comprising a base, a motor arranged in the base, a tray arranged at an output shaft of the motor and a cover plate arranged on the upper surface of the tray, a fixing component which is arranged in the tray. The fixing component comprises first cylinders, clamping plates, connecting plates, second cylinders and blocking plates; a groove is formed in the upper surface of the tray; and the first cylinders are arranged in the groove. Through arrangement of the fixing component, with cooperation of the clamping plates and the connecting plates, multiple or irregular products are conveniently clamped. The second cylinders are capable of facilitating the connecting plates to cling to the products, the firmness of clamping of the products and the fixing scope is enhanced.



21: 2021/09524. 22: 2021-11-25. 43: 2022-01-25 51: B24B; B24D

71: ANHUI HECHEN NEW MATERIAL CO., LTD. 72: LI, Jiahai, TAN, Hong

54: WAXLESS PAD FOR SEMICONDUCTOR POLISHING AND PRODUCTION METHOD 00: -

The present disclosure discloses a waxless pad for semiconductor polishing and a production method. The waxless pad prepared by the method has better elasticity and frosting degree, and is convenient for sanding and polishing of semiconductor products.



The present disclosure discloses an adsorption pad for fine polishing of an electronic display screen.

21: 2021/09527. 22: 2021-11-25. 43: 2022-02-09 51: B24B; B32B

71: ANHUI HECHEN NEW MATERIAL CO., LTD. 72: LI, Jiahai, TAN, Hong

54: ADSORPTION PAD FOR DOUBLE-SIDED POLISHING OF THIN WAFER AND PRODUCTION METHOD 00: -

The present disclosure discloses an adsorption pad for double-sided polishing of a thin wafer and a production method, which can effectively protect a rubber airbag and effectively avoid broken wafer edges of the wafer.




21: 2021/09528. 22: 2021-11-25. 43: 2022-01-25 51: G01P

## 71: SHANDONG UNIVERSITY OF SCIENCE AND TECHNOLOGY

72: LIU, Qi, LIU, Xianglin, DA, Yuxin, CHEN, Shaojie, LI, Qinghai, GUO, Weiyao, WANG, Shuai, ZHAO, Yongqiang, WANG, Fengnian, ZHU, Lei, HUANG, Haipeng, HAO, Lei, WANG, Zhengshuai, QIAN, Yunyun, FAN, Guotao, YANG, Yuyu 54: TAPERED FIBER ACCELERATION SENSOR SYSTEM

00: -

The present invention provides a tapered fiber acceleration sensor system, comprising: a protecting shell, an elastic base layer, a light source, a circulator, a coupler, a fiber phase modulator/demodulator, an isolator and a

photodetector. The elastic base layer is arranged in the protecting shell to divide a cavity in the protecting shell into an upper sub-cavity and a lower sub-cavity; an upper surface and a lower surface of the elastic base layer are respectively provided with sensing fiber assemblies for detecting deformation; the sensing fiber assemblies are respectively connected with the fiber phase

modulator/demodulator; the light source is coupled with the circulator; the circulator is respectively coupled with the coupler and the photodetector; the coupler is respectively connected with the isolator and the fiber phase modulator/demodulator; and the isolator is coupled with the photodetector.



21: 2021/09530. 22: 2021-11-25. 43: 2022-01-25 51: B32B; G02F

71: ANHUI HECHEN NEW MATERIAL CO., LTD. 72: LI, Jiahai, TAN, Hong, LIANG, Zebing 54: METHOD FOR PREPARING DAMPING CLOTH FOR POLISHING FOR THE PRODUCTION OF LCDS 00: - The present disclosure discloses a method for preparing a damping cloth for polishing for the production of LCDs. The damping cloth obtained by using the technical solutions disclosed by the present disclosure has good polishing effect, does not damage the display screen; furthermore, the damping cloth has a long service life due to its good physical and chemical properties.



21: 2021/09531. 22: 2021-11-25. 43: 2022-01-24 51: C01F

71: Tianjin University of Science and Technology 72: WANG, Xiaocong, JIAO, Tianyi, HUI, Zhenping, YANG, Xiyue, ZHANG, Xiaoqi, SHI, Yuhan, ZHANG, Yanjuan

#### 54: METHOD FOR PREPARING BARIUM SULFATE CRYSTAL WITH CONTROLLABLE MORPHOLOGY 00: -

The present disclosure relates to the technical field of preparation of barium sulfate crystals, and provides a method for preparing a barium sulfate crystal with controllable morphology. According to the preparation method, barium chloride, sodium sulfate and sodium chloride solutions are mixed with carbon quantum dots, and the morphology of the barium sulfate crystal is regulated and controlled by regulating the amount of the carbon quantum dots. Experimental results show that the morphology of the barium sulfate crystal obtained by the preparation method changes along with the change of the concentration of the carbon quantum dots, and the morphology of the barium sulfate crystal shows the change from a rectangular sheet shape to a shuttle-like shape, a flower-like shape, a dense flower-like shape and irregular particles without fixed shapes in sequence, so that the control of the morphology of the barium sulfate crystal is realized.



21: 2021/09532. 22: 2021-11-25. 43: 2022-01-24 51: A61L; C08L

71: Liaoning Zhongxuan Biotechnology Co., Ltd.

72: Caikun TANG, Kun QI, Yuncheng GUAN, Dan

#### LI, Baoquan WANG, Yuan YUAN

## 54: METHOD FOR PREPARING CHITOSAN COLLAGEN GEL

00: -

A method for preparing a chitosan collagen gel is disclosed herein. The chitosan collagen gel of the present disclosure is applied to hemostasis of acute and chronic wounds, absorption of seepage, autolytic debridement, protection of exposed nerve endings, relief of pain, maintenance of a moist environment of the wounds, acceleration of wound healing and inhibition of scar generation.

21: 2021/09533. 22: 2021-11-25. 43: 2022-01-24 51: A61B

71: BEIJING ZHENHEALTH TECHNOLOGY CO., LTD.

72: ZHANG, Dongdong, WANG, Xiantao, DING, Hongchang, WANG, Bin, WANG, Yong, LIU, Peng 54: FUNDUS CAMERA

00: -

The present disclosure relates to a fundus camera, including an imaging optical path, an illumination unit and an imaging unit; wherein an optical axis of the imaging optical path is coaxial with an optical axis of the imaging unit; the illumination unit deviates away from the optical axis of the imaging optical path, and is configured to provide an illumination light beam to a target fundus when collecting an image of the target fundus; the imaging optical path is configured to converge a reflected light beam from the target fundus and project a concentrated reflected light beam to the imaging unit; the imaging unit receives the reflected light beam to form an image of the target fundus; wherein the imaging optical path includes a relay lens group; and the relay lens group includes a first adjustable lens.



21: 2021/09534. 22: 2021-11-25. 43: 2022-01-24 51: H01M

71: Qingdao University of Science and Technology 72: LIU, Haichao, WANG, Chuansheng, GUO, Lei, CHEN, Hongbo, HAN, Wenwen, LV, Dejun, REN, Donghui

#### 54: HYDROPHOBIC GUIDE PLATE OF FUEL CELL 00<sup>-</sup> -

A hydrophobic flow guide plate of fuel cell is provided. The hydrophobic guide plate is constructed in a fuel cell, and the hydrophobic guide plate includes at least one air inlet, at least one air outlet, and at least one guide gas channel. Two ends of the guide gas channel are communicated with the air inlet and the air outlet respectively. The guide gas channel includes at least one straight guide channel, and may also include at least one guide semi-curved channel or at least one guide fully-curved channel at the same time. There are fin-shaped grooves on the side wall of the straight guide channel, and there is a semi-curved guide angle at the semi-curved guide channel, and there is a fully-curved guide angle at the fully-curved guide channel.

21: 2021/09535. 22: 2021-11-25. 43: 2022-01-24 51: A61K

71: Qingdao Agricultural University

72: Liu Fuxiao, Lin Jiahui, Shan Hu

54: RECOMBINANT CANINE DISTEMPER VIRUS THAT EXPRESSES THE VP2 OF CANINE PARVOVIRUS TYPE 2A 00: -

The objective of the present invention is to provide a recombinant canine distemper virus (CDV) that expresses the VP2 of canine parvovirus type 2a (CPV-2a), wherein the structure of the recombinant CDV nucleic acid fragment used to rescue and express VP2 is 5'-N-P-VP2-M-F-H-L-3'; among them, N, P, M, F, H and L are the structural genes of CDV; VP2 is the open reading frame (ORF) of CPV-2a VP2, which contains M gene initiation sequence upstream and P gene termination sequence downstream. The recombinant CDV rescued by reversed genetic technology can effectively express VP2 in cells. The recombinant CDV is continuously passaged in cells for 30 generations, and RT-PCR analysis shows that VP2 gene is not deleted during virus passaging.

21: 2021/09536. 22: 2021-11-25. 43: 2022-01-24 51: A01G

71: Jiangxi Agricultural University 72: Li Bo, Gou Yuting, Xiang Dongying, Min Daozhang, Zheng Chen

#### 54: LARGE-SCALE FIELD PLANTING METHOD OF FICUS TIKOUA BUREAU IN AUTUMN 00: -

The invention discloses a large-scale field planting method for Ficus tikoua Bureau in autumn, which comprises the following steps of: collecting cuttings, treating with rooting and disinfection mixture, cutting and covering with mulching film; firstly, collecting cuttings in autumn, treating the cuttings by the rooting and disinfection mixture, and then cutting, and covering with mulching film. The method has the advantages that the cuttings of old branches of Ficus tikoua Bureau in autumn only requires one growing season in the spring of the next year without an additional culture medium, a nursery and a sunshade, and seedling hardening and transplantation, the direct large-scale planting can greatly save the cost in the early stage and shorten the comprehensive development and utilization time of Ficus tikoua Bureau, and the mature fruits can be harvested by field seedlings in summer next year; the large-scale field planting of Ficus tikoua Bureau by utilizing the film mulching technology can effectively prevent the death of the cutting seedlings caused by drought and freezing damage; the root disinfectant mixture can ensure the rooting survival rate of the cuttings seedlings; and the survival rate of cuttings reaches more than 95%, and the preservation rate reaches 100%.

21: 2021/09537. 22: 2021-11-25. 43: 2022-01-24 51: C04B

71: Beibu Gulf University

72: Zheng Xiumei, Yang Haiwei, Ning Zuojun, Jiang Qiongming, Sun Yanzeng, Huang Huansheng, Ling Bin, Zou Ye

#### 54: ECOLOGICAL CONCRETE BASED ON MARINE SOLID WASTE AND PREPARATION METHOD THEREOF 00: -

The invention discloses an ecological concrete based on marine solid waste and a preparation method thereof, and belongs to the technical field of agriculture. The ecological concrete based on marine solid waste includes the following raw materials by weight: 100-200 parts of recycled plastics, 200-300 parts of cement, 800-900 parts of recycled aggregates, 400-500 parts of sand, 100-300 parts of fly ash, 10-30 parts of copper tailings, 2-3 parts of water reducing agent, 1-2 parts of silane coupling agent, 3-5 parts of defoaming agent, 3-6 parts of anti-aging agent, 1-2 parts of thickener, 2-3 parts of warm wheel rubber and 60-120 parts of water. The present invention combines marine solid waste with cement, recycled aggregate, sand, fly ash, copper tailings, water reducing agent, silane coupling agent, defoamer, anti-aging agent, thickener, warm wheel rubber, etc. The mixed preparation obtains ecological coagulation, which not only effectively utilizes marine solid waste, but also improves the performance of concrete.

#### 54: APPLIANCE STORAGE STRUCTURE FOR MAINTAINING MUFFLE ROLLER TYPE MESH BELT QUENCHING FURNACE 00: -

The invention discloses an appliance storage structure for maintaining a muffle roller type mesh belt quenching furnace, which comprises an upper storage module and a lower storage module; the upper storage module comprises a pulling cover and a maintenance appliance placing box, and the

<sup>21: 2021/09538. 22: 2021-11-25. 43: 2022-01-24</sup> 51: B25H

<sup>71:</sup> Anhui Science and Technology University 72: Guo Chun, Hu Ruizhang, Kang Taiyu, Chen Feng

pulling cover comprises a cover body, braces, guide rods and a sealing plate; the maintenance appliance placing box comprises a first box body, slideways, a first partition and buckles. The lower storage module comprises a sealed box and a detachable appliance storage box, and the sealed box comprises a second box body, guiding grooves, a second partition and clamping strips; and the detachable appliance storage box comprises a third box body, a clamping plate, a third partition and fetching blocks. The invention can store various maintenance appliances in a unified way, and is provided with storage spaces for various appliances, thus realizing classified storage of different appliances, and facilitating maintenance personnel to find the corresponding maintenance appliances at the first time in actual maintenance. The invention solves the problems that maintenance appliances in the prior art cannot be stored uniformly, and the corresponding maintenance appliances cannot be found at the first time in the actual maintenance process.



21: 2021/09540. 22: 2021-11-25. 43: 2022-01-24 51: C08G; C09D

71: Tianjin University of Science and Technology 72: WANG, Xiaocong, HUI, Zhenping, JIAO, Tianyi, YANG, Xiyue, ZHANG, Hongfeng, ZHANG, Xiaoqi **54: WASTE EXPANDED** 

POLYSTYRENE/POLYANILINE COMPOSITE ANTICORROSIVE COATING AND PREPARATION METHOD THEREOF 00: -

The present disclosure discloses a waste expanded polystyrene/polyaniline composite anticorrosive coating and a preparation method thereof, namely, seeded polymerization method. The seeded polymerization method for preparing the anticorrosive coating comprises the following steps: 1) cleaning waste expanded polystyrene; 2) adding the expanded polystyrene into a mixed solution of aniline and acetone, and stirring to sufficiently dissolve the expanded polystyrene; 3) adding seeds (polyaniline nanoparticles) into the mixed system in the step 2); wherein the seeds are polyaniline nanoparticles; 4) adding doping acid into the mixed system in the step 3), and adjusting the pH value to 1-3; 5) adding an initiator into the mixed system in the step 4) to initiate polymerization.



21: 2021/09541. 22: 2021-11-25. 43: 2022-01-24 51: C02F

71: Shandong Jianzhu University

72: YANG, Luopeng, ZHANG, Linhua, QU, Yunxia, JIANG, Ren, CHEN, Xianbing

## 54: BRACKISH WATER DESALINATION SYSTEM SUITABLE FOR GREENHOUSE IN SUMMER 00: -

A brackish water desalination system suitable for a greenhouse in summer belongs to the technical field of brackish water desalination and agricultural greenhouses. The system includes a water curtain humidification subsystem, a condenser dehumidification subsystem, and a ventilation and cooling subsystem. Water curtain humidifiers are made of inexpensive honeycomb porous cardboards. Ventilation cooling and fresh water self-sufficiency for greenhouse in summer planting in the

Yellow River basin are realized by solar energy without external electricity and fuel; and brackish water desalination for greenhouses meets the fresh water demand for irrigation in the Yellow River basin, and cool dry air after dehumidification effectively reduces the temperature for planting crops in the greenhouse in summer. The secondary water curtain humidifier equipped with rollers can be freely moved in the greenhouse, which can reduce the temperature of flowing air in the greenhouse and increase the output of brackish water desalination.

21: 2021/09542. 22: 2021-11-25. 43: 2022-01-24 51: C12P

71: QINGDAO UNIVERSITY OF TECHNOLOGY 72: ZHAO, Jianwei, QIN, Chengzhi, ZHANG, Qi, ZHANG, Hongying, ZHANG, Dalei, SUN, Yingjie 54: SHORT-CHAIN VOLATILE FATTY ACID AND PREPARATION METHOD THEREOF 00: -

The present disclosure discloses short-chain volatile fatty acid and a preparation method thereof. The method for preparing the short-chain volatile fatty acid comprises the following steps: utilizing sludge as a fermentation substrate; and adding sodium nitrite into the fermentation substrate, pretreating in an acid environment, and then carrying out anaerobic fermentation under an alkaline condition to obtain the short-chain volatile fatty acid.

21: 2021/09543. 22: 2021-11-25. 43: 2022-01-24 51: A01G

71: Sichuan Agriculture University, Institute of Urban Agriculture, Chinese Academy of Agricultural Sciences

72: LU, Wei, ZHENG, Yangxia, YANG, Qichang, DUAN, Famin, BIAN, Zhonghua, LI, Zonggeng 54: HEATING SYSTEM FOR SOLAR GREENHOUSE

00: -

The present invention relates to the technical field of temperature control equipment for a greenhouse, and more particularly, to a heating system for a solar greenhouse, comprising a solar-energy heat collection device, a heat storage device, a water supply pipeline and a heat dissipation device, wherein the solar-energy heat collection device is located outside a ceiling of the greenhouse and is arranged to match a shape of a ceiling framework, the solar-energy heat collection device is connected to the heat storage device, the heat dissipation device is arranged in the greenhouse, and the heat storage device and the heat dissipation device are connected via the water supply pipeline.



### 21: 2021/09544. 22: 2021-11-25. 43: 2022-01-24 51: C05G

71: Zhejiang University of Science and Technology 72: ZHANG, Changai, JIN, Pengjie, CAO, Lidong, ZHANG, Huanjie, ZHANG, Chenyang, SHAN, Shengdao

## 54: STABLE-STATE ORGANIC-INORGANIC RICE SPECIAL FERTILIZER PREPARED FROM BIOGAS RESIDUES AND PREPARATION METHOD THEREOF

00: -

The present disclosure provides a stable-state organic-inorganic rice special fertilizer prepared from biogas residues. The stable-state organic-inorganic rice special fertilizer is prepared from the following raw materials in percentage by mass: 48 to 61% of biogas residues, 30 to 40% of inorganic fertilizer, 3 to 4% of gypsum powder, 2 to 3% of a carbon-based material and 4 to 6% of a high-stability adhesive. The present disclosure further provides a preparation method of the stable-state organicinorganic rice special fertilizer. The obtained stablestate organic-inorganic rice special fertilizer has high stability under the soaking condition, is scientific in proportion, meets the nutrient requirements of rice, and has the remarkable effects of being environmentally friendly and improving the soil quality. The preparation method of the stable-state organic-inorganic rice special fertilizer does not need a fermentation and decomposition step, and is simple in preparation process and relatively low in production cost.



21: 2021/09545. 22: 2021-11-25. 43: 2022-01-24 51: G01B

71: QINGDAO UNIVERSITY OF TECHNOLOGY 72: ZHANG, Yamei, YAN, Nan, BAI, Xiaoyu, SANG, Songkui, ZHANG, Qijun, ZHANG, Mingyi, ZHANG, Changtai, YAN, Jun, WANG, Zhongsheng, FANG, Xiang, LI, Cuicui

#### 54: DEVICE AND METHOD FOR TESTING COMPRESSION AMOUNT OF PILE BODY OF ROCK-SOCKETED CAST-IN-PLACE PILE 00: -

The disclosure belongs to the technical field of pile foundation testing, and provides a device and method for testing compression amount of a pile body of a rock-socketed cast-in-place pile, which may accurately measure the compression amount of the pile body of the rock-socketed cast-in-place pile on the premise of not damaging the rock-socketed cast-in-place pile.



21: 2021/09546. 22: 2021-11-25. 43: 2022-01-24 51: F28B 71: Shandong Jianzhu University 72: YANG, Luopeng, ZHANG, Linhua, QU, Yunxia, CUI, Ping, KONG, Lingjian 54: MULTI-PROCESS EVAPORATIVE CONDENSER

00: -

A multi-process evaporative condenser belongs to the technical field of condensing equipment. Humid air outlets are added for increased air humidity, so that rising nearly-saturated humid air in a housing is directly sucked away by a fan, the upward flow resistance of the humid air and the pumping power of the fan can be reduced compared with original continuous rise of humid air to sweep heat exchange tube bundles, and more dry air can enter the housing to improve the heat/mass transfer efficiency between air and cooling water; the condenser uses horizontal tube bundles instead of the traditional coil to arrange the tube spacing according to the optimal thickness principle of a liquid film outside the tube, which ensures the formation of a thin and uniform liquid film, and can increase the evaporation heat transfer rate, avoid fouling, and improve the compactness of heat exchangers.

#### 21: 2021/09547. 22: 2021-11-25. 43: 2022-01-24 51: A23B

71: Southwest Minzu University, Chengdu Aoke New Technology Co., Ltd.

72: HAO, Gang, ZHANG, Zhuo 54: NOVEL COMPOUND PRESERVATIVE FORMULA BASED ON ETHYL LAUROYL ARGININE AND APPLICATION MODE SUITABLE FOR PRESERVATION OF CHILLED MEAT SAUSAGES 00: -

The present disclosure discloses a compound preservative formula based on ethyl lauroyl arginate (LAE) as the main preservation component. The compound preservative formula and the application mode of the present disclosure can significantly inhibit the growth of microorganisms, significantly delay the time to the maximum growth speed of bacteria, improve the preservation capacity and prolong the shelf life during the preservation of chilled meat sausages.

21: 2021/09548. 22: 2021-11-25. 43: 2022-01-24

51: G06Q

71: Shandong Jiaotong University

72: WU, Yuanyuan

54: EDUCATIONAL INFORMATION MANAGEMENT SYSTEM AND METHOD 00: -

The present invention provides an educational information management system and method. The

system includes a control module and a plurality of educational terminals connected with the control module and used to acquire educational information and send the educational information to the control module; the educational information is text data of a teaching activity; a review model is stored in the control module; the control module is used to input the educational information into the review model and send, according to a review result, gualified educational information to the plurality of educational terminal; and the review model is obtained by training a long short term memory network by using marked historical educational information. By means of setting the control module storing the review model, the present invention can automatically review whether the educational information is qualified, thus improving the automation level of educational information management.



21: 2021/09549. 22: 2021-11-25. 43: 2022-01-24 51: C04B

71: Beijing Wenshui Jiangyuan Coating Technology Co., Ltd

72: TENG, Junwei, QIN, Dandan

## 54: LOST FOAM COATING AND USE THEREOF 00: -

The present disclosure provides a lost foam coating. The lost foam coating includes the following components in parts by weight: 100 parts of a refractory material, 1-5 parts of a suspending agent, 2-5 parts of a binder, 1-3 parts of a suspension stabilizer, 0.2-0.5 part of a defoaming agent, 0.5-5 parts of foam micro-beads and 50-100 parts of water. By using the refractory material, the present disclosure guarantees refractoriness, chemical stability and thermal insulation performance of the coating. By adding the suspending agent and the suspension stabilizer, suspension stability and dispersion of the coating are improved. By adding the binder, a strength of the coating is enhanced. By adding the defoaming agent, the coating is prevented from being foamed in a stirring process, and air bubbles existing in a system are eliminated. By adding the foam micro-leads, air permeability of the coating is improved.

21: 2021/09550. 22: 2021-11-25. 43: 2022-01-24 51: H01H

71: Chengdu University of Technology 72: XU, Huikai, CHEN, Tianxiang, YANG, Bowen, ZHAO, Shenyuan, REN, Xinyue, LIU, Lei 54: SHAPE MEMORY ALLOY-BASED MULTI-TEMPERATURE-STEP CONTROL DEVICE AND CONTROL METHOD 00: -

The present invention discloses a Shape Memory Alloy (SMA)-based multi-temperature-step control device and a control method, and provides an SMAbased automatic temperature control device, which may improve the reliability and universality of a temperature control system and freely set the temperature and is simple is mechanism, convenient to mount and in no need of a control power supply. The device of the present invention is provided with a memory alloy spring, a transmission mechanism, a switching mechanism, and an insulating shell. The memory alloy spring drives the transmission mechanism with the change of a temperature to further control the switching mechanism to control a circuit to be opened and closed. The temperature control device of the present invention is applicable to various working environments and long in service life, and may be concatenated to set multiple temperature limits to control the opening and closing of multiple groups of contacts.



21: 2021/09551. 22: 2021-11-25. 43: 2022-01-24

## 51: G06K

#### 71: Jiangsu Police Institute 72: Gong Pengfei, Chang Zhenghui 54: VEHICLE VERIFICATION SYSTEM AND VERIFICATION METHOD 00: -

The invention discloses a vehicle verification system and a verification method. The vehicle verification system comprises a VIN code recognition module and a VIN code verification module; the VIN code recognition module takes a picture of the VIN code in front of the vehicle, processes the picture and recognizes the VIN code of the vehicle; and the VIN code verification module verifies the validity of the recognized VIN code. The vehicle verification method according to the invention comprises the following steps: (1) starting from the first digit, multiplying the numerical value corresponding to the VIN code character of the digit with the weighted value of the digit, and then summing the multiplication results and making the remainder by 11; (2) comparing the remainder obtained in step (1) with the ninth digit character of VIN code, if equal, the VIN code is the correct VIN code, otherwise, the VIN code is wrong. The invention verifies the VIN code through the image recognition and verification system, and improves the verification efficiency.



21: 2021/09552. 22: 2021-11-25. 43: 2022-01-24 51: C02F

71: Zhengzhou University of Aeronautics

72: Jia Xiaofeng, Su Hongtao, Sun Yu, Tao He, Wang Zehua, Liu Lei, Chen Xiaoyu, Lin Maowei, Xu Yifeng

54: COMBINED TREATMENT METHOD FOR HIGH STANDARD DISCHARGE OF PAPERMAKING WASTEWATER 00: - The invention provides a combined treatment method for high-standard discharge of papermaking wastewater, belonging to the technical field of wastewater treatment, which is specifically implemented according to the following steps: the pH of effluent from papermaking wastewater is adjusted to 6.5-9, which is injected into inclined plate sedimentation tank for coagulation and sedimentation, and the effluent is filtered and then cooled to below 30 degree Celsius by secondary cooling. Then, the effluent is sequentially injected into an efficient anaerobic acidification tank for anaerobic microbial degradation, and then contacted with an oxidation tank for aerobic microbial degradation; after secondary coagulation, the effluent is injected into the secondary sedimentation tank for settling separation, and then enters the middle tank and the biological aerated filter in turn to further degrade and filter the residual microorganisms in the water, and the effluent from the biological aerated filter reaches the discharge standard of papermaking wastewater. The method has the advantages of simple steps, convenient operation, short treatment period, low cost and remarkable treatment effect, and various emission indexes are significantly lower than national standards.



21: 2021/09553. 22: 2021-11-25. 43: 2022-01-24 51: G08G; G06Q

71: East China Normal University

72: Chen Yixiang, Liu Pengchen, Li Kaixuan

54: DYNAMIC PATH PLANNING ALGORITHM BASED ON TRAFFIC TIME AND VEHICLE SPEED PREDICTION AND SYSTEM THEREOF 00: -

The application discloses a dynamic path planning algorithm and system based on traffic time and vehicle speed prediction. The algorithm includes a lower-level algorithm OptSub and an upper-level algorithm DyPath. According to the traffic time data predicted by the future path in the process of automobile driving, the vehicle driving path is dynamically planned in real time, so that the traffic time of vehicles in complex paths is the shortest, thus realizing intelligent transportation. In the driving process, the invention combines the real-time average vehicle speed of each road section with the predicted future average vehicle speed, calculates the real-time traffic duration of the road section, predicts the traffic duration in the future period, and dynamically adjusts the path. The existing traditional prediction algorithm based on the real-time road conditions is used to optimize the route selection, but it can't cope with the changes of road traffic conditions in the future. The method is correct, effective and applicable, improves the road traffic capacity of vehicles and brings convenience to urban traffic under the environment of frequent road state changes.



21: 2021/09554. 22: 2021-11-25. 43: 2022-01-24 51: G06F

71: Foshan University, Hunan University of Science and Technology

72: GUO, Shuaiping, ZHANG, Shuo, XIAO, Dongming, LI, Hongguang, BIN, Guangfu, YANG, Dalian

## 54: SIMULATION METHOD FOR FIXED-POINT RUB-IMPACT BETWEEN MULTIPLE BLADES OF ROTOR AND CASING CONSIDERING CASING DEFORMATION

## 00: -

The present invention discloses a simulation method for fixed-point rub-impact between multiple blades of rotor and casing considering casing deformation, comprising the steps of: S1, establishing dynamic finite element model of rotor and casing system; S2, obtaining clearance function between blade and casing considering casing deformation; S3,

considering rotor rotation and displacement between blade and casing after the casing deformation, and obtaining modified clearance function between blade and casing; and S4, setting time advance logic and time step change of rub-impact between multiple blades of rotor and casing based on the modified clearance function between blade and casing, and calculating rub-impact force between blade and casing, rub-impact friction force and response of rotor casing system at each moment.



21: 2021/09555. 22: 2021-11-25. 43: 2022-02-01 51: G01C

71: Zhengzhou University of Aeronautics

72: Xiaomeng Fan, Lijuan Zhu, Meng Luo, Zhenxing Tang, Shuaibin Liu

33: CN 31: 202110247854.X 32: 2021-03-06 54: TOPOGRAPHIC SURVEYING AND MAPPING DEVICE FOR URBAN AND RURAL PLANNING 00: -

The disclosure relates to the field of urban and rural planning, in particular to a topographic surveying and mapping device for urban and rural planning, which includes support legs, a leveling ball, a horizontal ball, telescopic rods, a supporting structure and a vibrating structure. The leveling ball is spherically hinged on a support plate on the support legs, the horizontal ball is spherically hinged on a lower end of the leveling ball, and a lower end of the horizontal ball is provided with a horizontal platform. The horizontal platform is universally connected with the support legs through telescopic rods. The leveling ball is inserted with a locking shaft. The lower end of the locking shaft is spherically hinged with a sliding shaft rotatably provided with an elastic sheet, and the end of the elastic sheet is supported on the supporting

structure. The vibration structure is arranged on the upper end of the locking shaft. When in use, the surveying and mapping platform on the leveling ball is shaken, the vibration structure makes the elastic sheet rotate downward under the guidance of the support structure, and the locking shaft moves down into the horizontal ball to lock the leveling ball, and the surveying and mapping platform is pulled to be in a horizontal state; and the elastic sheet tighten the universal assembly to lock the support legs so as to fix the device, so that the device is automatically leveled by its own structure, has a simple operation is and is convenient to use.



21: 2021/09556. 22: 2021-11-25. 43: 2022-01-24 51: G06F

71: Hunan University of Science and Technology 72: YANG, Dalian, ZOU, Junjun, ZHANG, Wenbin, GUO, Shuaiping, LI, Hongguang, WAN, Zhenhua 54: QUANTITATIVE IDENTIFICATION METHOD FOR BIROTOR MISALIGNMENT 00: -

The present invention discloses a quantitative identification method for birotor misalignment, which includes the following steps: carrying out VMD (Variational Mode Decomposition) on collected acceleration vibration signals to obtain mode components and further processing the mode components to obtain a data sample; inputting training group data into a DBN (Deep Belief Network) and carrying out greedy layer-wise training

from a lower layer to a higher layer; carrying out step-by-step reverse fine tuning on parameters from a highest layer to a lowest layer according to labels and classification rules of a Soft-max classifier, so as to complete training of a DBN model; and calculating the correct identification rate of misalignment quantitative identification. The present invention greatly simplifies the fault identification process, and has high identification accuracy.

21: 2021/09557. 22: 2021-11-25. 43: 2022-01-24 51: G01N

71: Shandong University

72: Liu Shiliang, Zhang Wenhui, Li Weiguo 54: METHOD FOR PREDICTING DEVELOPMENT HEIGHT OF WATER-CONDUCTING FRACTURE ZONE CONSIDERING SOIL LAYER EFFECT IN SHALLOW BURIED COAL SEAM 00: -

The invention provides a method for predicting the development height of a water-conducting fracture zone considering the soil layer effect in a shallow buried coal seam mining areas, which comprises the following steps: dividing basic units of the mining area, and extracting the coal seam thickness, bedrock thickness, soil layer thickness and coal seam buried depth of each basic unit; dividing the area with both soil and bedrock and the area with only bedrock in the mining area stratum; the development height of water-conducting fracture zone is predicted in bedrock area only, and the first prediction result is obtained. In the area with both soil and bedrock layers, judge the stratum where the top interface of the development height of the waterconducting fractured zone is located; when the height of the water-conducting fractured zone penetrates the bedrock and enters the soil layer, the data of the height of the water-conducting fractured zone is counted, and the relationship between the inhibition/promotion coefficient of the development height of the water-conducting fractured zone and the soil-bedrock ratio is fitted to determine the thickness of the water-conducting fractured zone penetrating the bedrock and entering the soil layer, and then the development height of the waterconducting fractured zone is calculated to obtain the second predicted result. Based on the first and second prediction results, the development height of

water-conducting fracture zone in shallow buried coal seam mining area is determined.

21: 2021/09558. 22: 2021-11-25. 43: 2022-01-24 51: C21B

71: Qingdao Special Steel Co., Ltd., Qingdao Technological University

72: Wang Hai Bo, Yang Ling Zhi, Luan Guo Wen, Wang Dong, Zhou Yang Min, Yi Chui Jie 54: NEW TECHNOLOGY AND WORKING METHOD FOR RECOVERING WASTE HEAT OF SLAG FLUSHING WATER OF BLAST FURNACE 00: -

This invention provides new technology and working method for recovering waste heat of slag flushing water of blast furnace which comprises both smooth circulation system of slag-water mixture and flash heat exchange system of slag-water mixture, in which, the smooth circulation system of slag-water mixture mainly uses gravity to pass through the grille, plunger valve, overflow pipe, unpowered mechanical atomizing device, pushing pump and other key equipment, the plunger valve can automatically adjust the opening according to the data of the liquid level meter, and is used for maintaining the water level of the pool secondary flash heat exchange system, the overflow pipe can not only ensure the liquid level stability of the secondary flash system, but also play a good sealing role, this invention saves the project investment and energy consumption cost of traditional slurry pump pumping water to heat exchange station.

21: 2021/09559. 22: 2021-11-25. 43: 2022-01-24 51: A61B; G06T

71: BEIJING ZHENHEALTH TECHNOLOGY CO., LTD.

72: YANG, Kang, JIANG, Hongyang, ZHANG, Dongdong, DAI, Liming

## 54: DIABETIC RETINOPATHY DETECTION SYSTEM, METHOD, DEVICE AND TRAINING SYSTEM

00: -A diabetic retinopathy detection system, which includes a quality control module and a diabetic retinopathy determining module, the quality control module is configured for obtaining a fundus image currently collected by an image collecting device, determining quality of the fundus image; the quality control module is further configured for inputting the fundus image to the diabetic retinopathy determining module when determining the quality of the fundus image is qualified; the diabetic retinopathy determining module is configured for receiving the fundus image, detecting the fundus image to obtain a corresponding detection result, performing category division for the detection result. Through adding the quality control module before the diabetic retinopathy determining module, the fundus image currently to be tested is firstly performed quality judgment by the quality control module, and then input to the diabetic retinopathy determining module for detection when the quality of the fundus image is determined to be qualified.



## 21: 2021/09560. 22: 2021-11-25. 43: 2022-01-24 51: C08G; C08K; C08L

71: ANHUI HECHEN NEW MATERIAL CO., LTD 72: LI, Jiahai, HUANG, Guoping, YANG, Huiming 54: POLYETHER POLYURETHANE MATERIAL AND PREPARATION METHOD THEREOF 00: -

The present disclosure discloses a polyether polyurethane material and a preparation method thereof. The preparation method of the present disclosure is simple and convenient, and the materials are easily available.

21: 2021/09561. 22: 2021-11-25. 43: 2022-01-24 51: C09G; C09K

71: ANHUI HECHEN NEW MATERIAL CO., LTD. 72: LI, Jiahai, TAN, Hong, YU, Hualin 54: POLISHING POWDER FOR FINE POLISHING OF ELECTRONIC DISPLAY SCREEN AND PRODUCTION METHOD THEREOF

00: -

The present disclosure discloses a polishing powder for fine polishing of an electronic display screen, to enhance the polishing precision.

21: 2021/09562. 22: 2021-11-25. 43: 2022-01-24 51: G06Q

71: Linyi University, Jinzhongzheng Project Management Co., Ltd.

72: Song Xiaoyuan, Yuan Zhongxiang, Ji Chaowen, Wang Jingbo, Wu Jinyi

#### 54: AN APPLICATION BASED ON IMPROVED MUTATION PROGRESSION METHOD IN THE EVALUATION OF SOIL RESTORATION IN RECLAIMED AREA 00: -

The invention provides an application based on improved mutation progression method in the evaluation of soil restoration in reclaimed area, including the following steps: mutation model is established; derive normalized formula; evaluation of mutation progression method in the restoration of reclaimed area; evaluation indicator system is established; membership function is used to normalize control variable; recursive operation is carried out by using normalized formula; mutation progression method was used to evaluate the transformation of indicator value. The invention establishes a corresponding relationship between membership value of the underlying indicator and its mutation evaluation value, transforms the mutation evaluation value, the method does not need to determine the weight of evaluation indicator, reduces the subjective problems caused by man, has a small amount of calculation and is convenient for application.



21: 2021/09569. 22: 2021-11-25. 43: 2022-01-31 51: A01K

71: BOSE, Rajesh, ROY, Sandip, GHOSH, Malay, MONDAL, Haraprasad, DEY, Raktim Kumar, BHATTACHARJEE, Pratik, BISWAS, Suparna,

## CHATTOPADHYAY, Samiran, CHOWDHURY, Chandreyee

72: BOSE, Rajesh, ROY, Sandip, GHOSH, Malay, MONDAL, Haraprasad, DEY, Raktim Kumar, BHATTACHARJEE, Pratik, BISWAS, Suparna, CHATTOPADHYAY, Samiran, CHOWDHURY, Chandreyee

## 54: A SYSTEM FOR A COMPUTERIZED POULTRY CONFIGURATION FRAMEWORK FOR THE REGULATION OF REAL-TIME SMART POULTRY

00: -

The present disclosure relates to a system for a computerized poultry configuration framework for the regulation of real-time smart poultry. The present disclosure proposes a smart poultry farm which regulates environmental specifications such as humidity, temperature, ammonia gas, lighting, and many more for better production of chickens. The proposed system comprises various sensors which gather the information about the atmosphere such as temperature and humidity and send that information to the microcontroller which then compared the input which the threshold value and then takes decision. In this disclosure an algorithm has been proposed for controlling the entire system in three different modes. The proposed system makes less power consumption and saves money as well and also it reduces the use of man power making it more effective. The proposed system can be operated by the application of the smart phones which helps the owner to monitor real time environmental parameters.



21: 2021/09571. 22: 2021-11-25. 43: 2022-01-31 51: C12G; C12H 71: TAISHAN UNIVERSITY 72: QIN, Weishuai, ZHANG, Na, LIN, Ke, WU, Qiang, ZHANG, Yuexun, WANG, Jiawei 54: CHERRY JUICE WINE AND PREPARATION METHOD THEREOF 00: -

The present disclosure provides cherry juice wine and a preparation method thereof. 21: 2021/09572. 22: 2021-11-25. 43: 2022-01-31 51: A63B

71: SHANDONG NORMAL UNIVERSITY 72: WANG, Sen

#### 33: CN 31: 202111144658.6 32: 2021-09-28 54: DEVICE AND METHOD FOR SANDA SIDE-KICK TECHNIQUE TRAINING 00: -

The invention relates to a device and method for Sanda side-kick technique training, belonging to the field of sports equipment, the device comprising: a rotating frame being arranged in the frame, a first end of the rotating frame being hinged on a top of the frame, a second end opposite to the first end being connected with the frame through a telescopic part; an inclination angle of the rotating frame being controlled through the telescopic movement of a telescopic part; the first end of the rotating frame being provided with a first pulley, the second end of the rotating frame being provided with a second pulley; a mobile vehicle being arranged on the rotating frame, and the mobile vehicle being able to move on the rotating frame; the mobile vehicle being connected with a foot target.



21: 2021/09617. 22: 2021-11-26. 43: 2022-02-09 51: C12N

71: Ludong University

72: WANG, Xiaotong, WEI, Lei, WANG, Xiaona, JIANG, Qiuyun, HUANG, Baoyu, LIU, Yaqiong, ZHANG, Meiwei, HAN, Yijing 54: METHOD FOR HARMLESS AND EFFICIENT EXTRACTION OF DNA FROM OYSTERS 00: -

The present invention discloses an oyster shell DNA extraction method, identification primers and kits thereof. According to the extraction method of the present invention, a small amount of shells about 100 mg from the ventral margin portions of oyster shells are selected as extraction samples, after

crushing the shell samples, EDTA solution is added to decalcify the shell powder, then, protein digestion is performed to release DNAs, and then impurities such as proteins, polysaccharides and lipids are separated from the DNAs by adding extraction solution, such that DNA samples can be obtained for molecular biology experiments and genetic and breeding testing. The whole process is simple and fast, and the extracted DNA is of good quality and can be preserved for a long time. The samples are taken at the ventral margin portions of the shells where the DNA content is high. Therefore, the method of the present invention will not harm the breeding brook stock individuals, and the extraction amount is high, which lays a foundation for the molecular breeding of mollusks, especially large mollusks.



21: 2021/09619. 22: 2021-11-26. 43: 2022-02-09 51: A01B

71: Shandong Agricultural University

72: Tian Fuyang, Zheng Wende, Song Zhanhua, Yu Zhenwei, Yan Yinfa, Li Fade, Lin Xueyan, Chu Chunyang

33: CN 31: 2021113250999 32: 2021-11-10 54: MULTI-FUNCITONAL AGRICULTURAL ROBOT

00: -

The present invention relates to a multi-functional agricultural robot, including a rack fitted with a traveling device, as well as a spraying device and a liquid farm-chemical tank, wherein a bottom surface of the rack is detachably and fixedly connected with a connecting device, which is connected to a sowing device or a fertilizing device via bolts; and the traveling device includes two back wheels and two front wheels, the two back wheels are mounted on a back cross beam that is rotationally connected to the rack via a horizontal pin shaft, and the two back wheels and the two front wheels are each connected to a traveling servo motor. The present invention has a modular design, and connects sowing, fertilizing, weeding and other different working modules to the rack of the robot by using the connecting device to integrate sowing, fertilizing, weeding and farmchemical applying functions, thereby achieving the effect of one robot serving several purposes; by using a radar depth camera for automatic recognition, the robot automatically changes an operating mode based on the actual condition, which increases the level of automation and intelligence; and by using ROS robot simulation software for path planning, the full-automatic operating mode of the robot is realized.



21: 2021/09622. 22: 2021-11-26. 43: 2022-02-07 51: C12Q

71: Liaoning Institute of Pomology

72: LIU, Youchun, YUAN, Xingfu, LIU, Cheng, WANG, Sheng, ZHANG, Duo, WEI, Xin, LIU, Xiuli, SUN, Bin, WANG, Hongguang, YANG, Yuchun, GAO, Shuqing, LI, Jiaqi

54: NON-HYBRID OFFSPRING IDENTIFICATION METHOD BASED ON SIMPLIFIED GENOME SEQUENCING AND SINGLE-NUCLEOTIDE POLYMORPHISM (SNP) MINOR ALLELE FREQUENCY (MAF)

00: -

The present disclosure provides a non-hybrid offspring identification method based on simplified genome sequencing and single-nucleotide polymorphism (SNP) minor allele frequency (MAF), and relates to the technical field of hybrid offspring identification. Based on a reference genome and SNP MAF data sets, the identification method uses genetic relationship analysis and individual-specific rare allelic variant analysis to reflect a genetic

relationship among offspring of a population from different perspectives and further visually reflect outlier individuals through a box plot, which are determined as non-hybrid offspring. The non-hybrid offspring identified by this method are consistent with verification results based on homozygous dominant SNP loci of parents. Therefore, the identification method of the present disclosure can simply and effectively screen out non-hybrid offspring in a hybrid population, which is of great significance for research on selective breeding and genetic analysis of new plant varieties, map construction, trait mapping, and the like.



21: 2021/09665. 22: 2021-11-26. 43: 2022-01-31 51: A23K

71: COASTAL AGRICULTURAL RESEARCH INSTITUTE, HEBEI ACADEMY OF AGRICULTURAL AND FORESTRY SCIENCES 72: LI, Zhaojia, MENG, Ran, FENG, Wei, WU, Zhe, LU, Xuelin, WANG, Xiuping

## 54: LIVESTOCK AND POULTRY FEED ADDITIVE BASED ON POLYPHENOL SALT-TOLERANT MEDICINAL AND EDIBLE PLANTS

00: -

Disclosed is a livestock and poultry feed additive which includes the following components in parts by weight: 50-100 parts of compound polyphenol salttolerant medicinal and edible plants, 3-6 parts of compound vitamins, 3-6 parts of compound amino acid salts, 3-6 parts of compound trace elements and 5-10 parts of Saccharomyces cerevisiae cell walls. The additive includes polyphenol salt-tolerant medicinal and edible plants which are developed and utilized, thereby increasing a plant utilization ratio and increasing economic capacity of salinealkali soil. When the additive is added into livestock feed, multiple abilities of laying hens and dairy cattle may be improved. Various components of the additive are green and antibiotic-free. The additive has no drug residue, no drug resistance and zero toxic or side effect when used for a long time, provides a new way for development of antibiotic reduction and substitution in the livestock and poultry industry.



### 21: 2021/09673. 22: 2021-11-29. 43: 2022-02-09 51: A61B

71: GRAPHIC ERA (DEEMED TO BE UNIVERSITY) 72: Dr. Mohammad Wazid, Dr. D. P. Singh, Dr. Bhahskar Pant

33: IN 31: 202011053677 32: 2020-12-10 54: SMART HEALTH MONITORING SYSTEM 00: -

The invention discloses a smart health monitoring system 100 comprising: a plurality of sensors 201, a biometric unit 203, an alerting unit 204, a sensitization unit 205, a printing unit 206, a communication module 202, a processor 207, a biometry-based health monitoring device 200, and a memory 208. The method of providing a biometrybased health monitoring comprises storing a plurality of biometric data of each person; identifying a person standing on said biometry-based health monitoring device; monitoring a plurality of health parameters of each person; alert using said alerting unit 204 when at least one of said plurality of health parameters is above a predefined value, wherein said predefined value for each of said plurality of health parameters is pre-stored; and send said plurality of health parameters to an authorize system when at least one of said plurality of health parameters is above a predefined values.



21: 2021/09681. 22: 2021-11-29. 43: 2022-02-09 51: B01D; C08L; G01N; H01B; H01M 71: GRAPHIC ERA (DEEMED TO BE) UNIVERSITY, GRAPHIC ERA HILL UNIVERSITY, DEHRADUN CAMPUS

72: Dr. Varij Panwar, Sumeshwar Singh, Shiv Ashish Dhondiyal

#### 33: IN 31: 202111031529 32: 2021-07-14 54: AN ELECTRONIC-IONIC POLYMER SENSOR FOR VOLTAGE GENERATION 00: -

The present invention relates to an electronic-ionic polymer sensor for voltage generation comprising a polymer blend membrane, wherein said polymer blend membrane comprises a TER polymer. apolyvinylpyrrolydine (PVP), and a polymer mixture of two ionomers; and an ionic liquid. The TER polymer is a polymeric mixture of Vinylidene fluoride, Trifluoroethylene, and Chlorotrifluoroethylene. The polymer mixture is PEDOT:PSS and wherein said ionomers are poly(3,4-ethylenedioxythiophene) and polystyrene sulfonate.Further, various experiments performed taking different ratios of the TER polymer, the polyvinylpyrrolydine (PVP), and said polymer mixture used for preparing the polymer blend membranes.A method of fabrication of electronicionic polymer blend sensor is also disclosed. The electronic-ionic polymer sensor having sensing voltage up to 27 V is disclosed.

21: 2021/09688. 22: 2021-11-29. 43: 2022-02-09 51: A61B 71: Puyang Anyang Regional Hospital 72: LI, Yanli, LIU, Yanyan, LI, Ke 33: CN 31: 2021113063600 32: 2021-11-05 54: CONVENIENT-TO-ADJUST EXAMINATION TABLE FOR OPHTHALMOLOGY 00: - The invention relates to the technical field of ophthalmology examination equipment, in particular to a convenient-to-adjust examination table for ophthalmology, comprising a base, a U-shaped seat, and a visual function tester body, wherein a mounting seat is fixedly installed on the right side of the upper surface of the base; a patient seat is fixedly installed at the end of the mounting seat; a sliding groove is provided on the left side of the mounting seat on the upper surface of the base; a sliding column is limitedly and slidably installed in the sliding groove. Based on the above structure, with the cooperation of the buffer assembly and the sliding column, the doctor pushes the U-shaped seat by holding the handle to realize the stable movement of the visual function tester body; at the same time, the lifting assembly can realize the stable lifting of the visual function tester body, thereby satisfying patients of different body types for eye examination, which replace the traditional examination table wherein only the patient seat can be adjusted. The doctor can directly adjust the visual function tester body, thereby reducing unnecessary troubles for patients with eye diseases and greatly facilitating the eye examination of the patients.



21: 2021/09697. 22: 2021-11-29. 43: 2022-02-09
51: G06F; G08B; G08C
71: CENTRAL CHINA NORMAL UNIVERSITY
72: Wu Yanwen, Ge Di, Liu Sannyuya, Ma Yanmei, Cao Shuangshuang, Deng Yunze
33: CN 31: 2021113175042 32: 2021-11-09
54: ENVIRONMENT-AWARE NETWORK
OPTIMIZATION METHOD AND SYSTEM
00: Disclosed are an environment-aware network
optimization method and system, belonging to a

digital twin technology in the technical field of Internet of Things. The environment-aware network optimization method comprises: performing data collection on each sensor category in each node at each collection moment, and calculating the data at each collection moment to obtain a reference value, wherein the reference values at all the collection moments constitutes positive sample set; calculating the node contribution of each node, and reserving nodes whose node contributions are greater than or equal to a node contribution threshold; calculating the average weight of each sensor category in each optimized node, and reserving sensor categories in each node whose average weights are greater than or equal to a sensor weight threshold; and screening the collected data according to the optimized nodes and sensor categories to obtain a characterization vector at each collection moment, and fitting the characterization vectors with the reference values in the positive sample set, wherein it is indicated that the optimization results reach expectations if the fitting similarity is greater than or equal to the similarity threshold. The present invention lowers the hardware cost of the environment-aware network and improves the instant responsiveness.



21: 2021/09699. 22: 2021-11-29. 43: 2022-01-27 51: B01J 71: ANHUI UNIVERSITY OF SCIENCE AND

TECHNOLOGY 72: XINHUA HUANG, ZHIROU WANG, DONGYIN QIN, MEIYUE JIN

#### 54: PREPARATION PROCESS OF POROUS CARBON NANOSPHERES 00: -

The present invention discloses a preparation process of porous carbon nanospheres, which comprises the following steps: S1, preparing ZnCl2 solution; S2, adding 2, 6-diaminopyridine into the ZnCl2 solution and stirring the solution until 2, 6diaminopyridine is completely dissolved; S3, adding formaldehyde into the solution prepared in S2 until the reaction is complete, to obtain solution A; S4, carrying out centrifugal treatment on the solution A and drying centrifugation sediments to obtain polytriazine; S5, calcining poly-triazine to obtain carbonization products B; and S6, drying the carbonization products B after being washed, to obtain the porous carbon nanospheres, wherein the concentration of the ZnCl2 solution is more than 0.5 mg/mL and less than 4 mg/mL.



21: 2021/09700. 22: 2021-11-29. 43: 2022-01-27 51: B01J

71: ANHUI UNIVERSITY OF SCIENCE AND TECHNOLOGY

72: ZHANG, LEI, NIE, ZHICHENG, LI, ZIYAO, HONG, JIE, LI, LUHAN, YE, YING 54: MIXED METAL PHOSPHIDE-BASED HOLLOW NANO-BOX AS WELL AS PREPARATION METHOD AND APPLICATION THEREOF 00: -

The present invention relates to the technical field of metal phosphide-based hollow nano-boxes, and particularly relates to a mixed metal phosphidebased hollow nano-box as well as a preparation method and application thereof. The present invention discloses a preparation method of a mixed metal phosphide-based hollow nano-box, which comprises the following steps: synthesizing Ni3[Fe(CN)6]2•H2O nano-cubes; synthesizing Ni3[Co(CN)6]2•12H2O coated Ni3[Fe(CN)6]2•H2O core-shell structures; synthesizing Ni3[Co(CN)6]2•12H2O coated Ni3[Fe(CN)6]2•H2O hollow core-shell structures; and synthesizing mixed metal phosphide-based hollow nano-box

electrocatalysts. In the present invention, the preparation technique is simple and convenient for operation; and in addition, compared with a nonhollow nano-structure, an obtained product shows excellent electrocatalytic activity for water oxidation, which is closely related to a unique hollow structure, a favorable mass and load transfer channel and abundant active sites of the obtained product.



21: 2021/09757. 22: 2021-11-30. 43: 2022-01-25 51: A01C; C05F; C05G

71: Shandong Institute of Sericulture, Ludong University, Qingdao Agricultural University 72: Ll, Meng, GUO, Xiaohong, Ll, Junlin, SONG, Ningning, GU, Yinyu, CHEN, Chuanjie, ZHANG, Haiyang, LIANG, Xiaoyan, YI, Kuihua 54: METHOD FOR PREDICTING TOXICITY OF PRASEODYMIUM TO WHEAT ROOT ELONGATION

00: -

The present disclosure provides a method for predicting toxicity of praseodymium to wheat root elongation, and belongs to the technical field of toxicity assessment of ecological pollutants. The present disclosure estimates complexation equilibrium constants of Pr3+, PrOH2+, PrCl2+, H+, Mg2+, and Ca2+ with a wheat root ligand based on a biotic ligand model (BLM), and establishes a BLM for predicting toxicity of praseodymium to wheat; measured concentrations of Pr3+, PrOH2+, PrCl2+, H+, Mg2+, and Ca2+ in soil are substituted into the BLM to predict the toxicity of praseodymium to wheat root elongation.



21: 2021/09758. 22: 2021-11-30. 43: 2022-01-25

## 51: C12Q

71: Tropical Crops Genetic Resources Institute, Chinese Academy of Tropical Agricultural Sciences 72: Liu Ziji, Cao Zhenmu, Qin Yuling, Liu Weixia 54: EST-SSR MOLECULAR MARKER FOR PURITY DETECTION OF PEPPER HYBRIDS AND ITS APPLICATION 00: -

The invention relates to the field of molecular marker, in particular to EST-SSR molecular marker for purity detection of pepper hybrids and its application. The invention develops EST-SSR molecular marker HE4 for purity detection of pepper hybrids, which is applied to the purity detection of the 'Hot Pepper No.1' hybrid.

21: 2021/09759. 22: 2021-11-30. 43: 2022-01-25 51: G06F

71: Guangdong Dongguan Quality Supervision Testing Center

72: WU, Zhenghuan, SUN, Kangbin, QIU, Huaxing, HUANG, Lifeng, LI, Xiaohui, FAN, Qixiang 54: METHOD FOR OBTAINING PREDICTIVE MODEL OF DIMENSION CHANGE TREND OF S136 SERIES STEEL BASED ON RETAINED AUSTENITE CONTENT 00: -

The present disclosure provides a method for obtaining predictive model of dimension change trend of S136 series steel based on retained austenite content. The present disclosure uses a Xray diffraction method to detect the retained austenite of S136 series steel sample blocks after heat treatment, and tests the length direction dimensions of the second test block under different placement days, and then based on principle of mass conservation, the concept of average density is introduced to find the mathematical change law between a martensite volume stabilization rate, a volume transformation rate of retained austenite and length dimension, and obtain a relationship between a martensite volume stabilization rate and a change in length direction dimension and a relationship between a volume transformation rate of retained austenite and the change in length direction dimension of the S316 series steel.



21: 2021/09760. 22: 2021-11-30. 43: 2022-01-25 51: A01G

71: SHANDONG UNIVERSITY OF TRADITIONAL CHINESE MEDICINE

72: GAO, Demin, GENG, Yannan, JIANG, Xiumei, SUN, Yan, DU, Kan

#### 54: METHOD FOR PLANTING ROSES ON BARREN HILLSIDE SANDY SOIL 00: -

The present disclosure discloses a method for planting roses on barren hillside sandy soil. By means of the planting method, the yield and quality of the roses can be remarkably increased. By means of the method combining vegetative propagation, deep burying and close planting, the yield per mu of the roses is increased and the quality of the roses is improved, the economic benefits of rose planters are increased, and therefore the technical problems that the yield of roses planted on barren hillside sandy soil is low, and the quality of the roses is poor are solved.

21: 2021/09761. 22: 2021-11-30. 43: 2022-01-25 51: C12N

71: Qingdao Agricultural University

72: Li Jingtao, Wang Chenyang, Li Yue, Zheng Yaning, Liang Wenxing, Wang Guangyuan, Li Mingchen

#### 54: RAPID IDENTIFICATION METHOD OF TOMATO FUSARIUM WILT BASED ON PCR 00: -

The invention discloses a rapid identification method of tomato fusarium wilt based on PCR, which belongs to the field of molecular biology. The method comprises the following steps: taking a plant material to be tested, freezing the plant material in liquid nitrogen together with a grinding material, and then fully grinding to obtain a plant powder to be tested; adding NaOH solution into the plant powder to be tested, centrifuging immediately after mixing, taking supernatant, neutralizing with TE buffer, and extracting to obtain the DNA of the plant to be tested; PCR detection of the DNA of the plant to be detected, detection of pathogenic molecules and disease diagnosis according to gel electrophoresis results. It is a safe, cheap, simple, rapid and efficient method for molecular detection of diseases by extracting DNA from plants with NaOH and Tris, which is of great significance for disease prediction and prevention, and has a wide application prospect and value in actual production.



21: 2021/09762. 22: 2021-11-30. 43: 2022-01-25 51: A23K; A23L

71: Inner Mongolia Academy of Agricultural and Animal Husbandry Sciences

72: ZHANG, Fujin, ZHANG, Xinxin, YIN, Guomei, XUE, Yanlin, LIU, Guanghua, SUN, Lin, ZHANG, Yao, LI, Yanfang, LIAN, Haifei, GUO, Zhigang, ZHANG, Lihua

#### 54: USE OF LITSEA CUBEBA EXTRACT AS ANTI-MOULD ADDITIVE OF SILAGE MAIZE 00: -

The present invention disclose use of Litsea cubeba extract as anti-mould additive of silage maize, said Litsea cubeba extract is an extract obtained from Litsea cubeba fruit by using Soxhlet extraction method, said Litsea Cubeba extract is directly mixed with the silage maize. The present invention can effectively inhibit four types of mould namely Fusarium, Aspergillus flavus, Penicillium, Rhizopus by adding the Litsea Cubeba extract into the silage

maize, thereby effectively controlling occurrence of mould in the silage maize; the Litsea Cubeba extract can also significantly increase total amount of amino acid and total amount of fatty acid in the silage maize, and improve nutritional quality of the silage maize, having a good application prospect.



21: 2021/09763. 22: 2021-11-30. 43: 2022-01-25 51: G01N

71: Tianjin Research Institute for Water Transport Engineering, Ministry of Transport

72: Zhang Chunyi, Jing Liang, Xue Yonghua, Zhang Binbin, Li Jinzhao, Chen Yaohongling, Wang Qingbiao, Liu Xiaomeng, Bai Lu, Wang Yishen 54: DATA MONITORING SYSTEM AND METHOD OF AIR PARTICULATE MATTER BASED ON BP NEURAL NETWORK

00: -

The invention discloses an data monitoring system of air particulate matter based on BP neural network, which comprises: an arrangement module, which is used for modeling an area to be measured according to historical pollution data, and arranging a collection module for the area to be measured in a grid division mode; the acquisition module is used for acquiring the air particulate data of the area to be measured; the evaluation module is used for evaluating the area to be measured through BP neural network and collected air particulate data; and the communication module is used for data transmission between the acquisition module and the evaluation module. According to the invention, by building a model according to database module, different grids are divided for different grades of areas, so that the sensitivity and timeliness of air particulate matter data are improved, and the cost is reduced; and mobile monitoring devices are arranged in heavily polluted areas, so as to fill the gaps of indoor air particulate matter data and improve the accuracy of real-time monitoring; and by adopting the BP neural network, the automation and accuracy of calculation are improved.



## 21: 2021/09764. 22: 2021-11-30. 43: 2022-01-25 51: F28D

71: Qingdao University of Science and Technology 72: Li Qiang, Liu Bingcheng, Wang Shaoyi, Zhang Mengmeng

## 54: EXPERIMENTAL VISUALIZATION PLATE HEAT EXCHANGER

The invention relates to an experimental visualization plate heat exchanger, which comprises a heat exchange core and a shell; the heat exchange core is arranged in the rectangular blind plate and the upper and lower pressing plates, and is formed by stacking heat exchange sheets; heat exchange channels, a cold fluid inlet and a cold fluid outlet are arranged between the heat exchange plates; a hot fluid inlet and a hot fluid outlet are arranged between adjacent heat exchange plates; the two sides of the heat exchange plates are respectively provided with protrusions and grooves; the shell is made of plexiglass, which can visually see the flow condition of fluid of the inlets and outlets in cold side and hot side and the fluid around the heat exchange core.



21: 2021/09765. 22: 2021-11-30. 43: 2022-01-25 51: G01R; G06F

71: Tianjin University

72: LIU, Yong, WANG, Hao, WANG, Zhihui, LI, Qiran, HUANG, Xingwang, ZONG, Hongbao, DONG, Xuejia, FANG, Jing, WEI, Zhanpeng

## 54: MULTI-SCALE FEATURE EXTRACTION TECHNOLOGY BASED ON ORIGINAL TIME DOMAIN WAVEFORM OF PARTIAL DISCHARGE 00: -

The present invention provides a multi-scale feature extraction technology based on an original time domain waveform of partial discharge. The original time domain waveform of partial discharge contains abundant feature information. Harmonic wavelet transform is performed on the original time domain waveform of partial discharge to obtain sub-bands with different frequencies; and multi-scale feature quantities, including a multi-scale energy parameter and a multi-scale sample entropy parameter, on different sub-bands are extracted as feature quantities to represent an original partial discharge signal. The parameters reflect the original features of a partial discharge signal from different perspectives, and different types of partial discharge can be distinguished accordingly.

21: 2021/09766. 22: 2021-11-30. 43: 2022-01-25 51: A01M

71: Shandong Agricultural University

72: LIU, Shuangxi, WANG, Jinxing, MA, Bo, WANG, Zhen, ZHANG, Zhenghui, MU, Junlin, HU, Xianliang, LIU, Yi

33: CN 31: 202110981079.0 32: 2021-08-25 54: APPLE ORCHARD PEST TRAPPING AND RECOGNITION DEVICE AND METHOD 00: - The present application discloses an apple orchard pest trapping and recognition device and method. The device includes: a pest trapping device and a pest collection device which are respectively arranged at a top and a bottom of a device shell and are correspondingly disposed at the top and bottom. A pest collection surface facing the pest collection device is provided with image acquisition equipment electrically connected with a controller that is electrically connected with a remote server. Pests trapped by the pest trapping device enter the pest collection device; the image acquisition equipment acquires images of the pests and sends the images to the controller; and the controller sends the received pest images to the remote server. An apple orchard pest recognition device is arranged in the remote server, so that the pests in the images can be quickly recognized.



21: 2021/09773. 22: 2021-11-30. 43: 2021-12-08 51: G02F

71: CHINA RAILWAY FIRST GROUP CO., LTD, CHINA RAILWAY FIRST GROUP TIANJIN CONSTRUCTION CO., LTD 72: ZHANG, YU, SUN, JIANSHENG, ZHOU, LINA, LI, ZEJUN, DONG, CHAO, WANG, JIANQING, XIAO, YUNPENG, YANG, WEI 54: RADIATION-PROOF WALL STRUCTURE FOR CT ROOM OF HOSPITAL 00: -

The present application relates to a radiation-proof wall structure used in a hospital CT room, which includes a first protective layer, a second protective layer and a third protective layer. The first protective layer is stuck at a side of the second protective

layer, and convex portions arranged at equal distance are provided at a side of the first protective layer away from the second protective layer; the second protective layer is made of a lead plate; and the third protective layer is stuck at the side of the second protective layer away from the first protective layer, and a mounting layer is provided at the the side of the third protective layer away from the second protective layer. The present application has effects of improving efficiency of eliminating X-rays and reducing harm to the environment outside the CT room.



21: 2021/09775. 22: 2021-11-30. 43: 2022-01-25 51: C12N

71: Guangxi Medical University

72: Wen Sha, He Min, Yang Lichao, Li Hui, Chen Qiuli, Huang Xuejing

#### 54: EXPRESSION AND PURIFICATION METHOD OF RECOMBINANT SEX HORMONE-BINDING GLOBULIN N-TERMINAL 51-218AA 00: -

This invention relates to technical field of gene cloning expression, in particular relates to expression and purification method of recombinant sex hormone-binding globulin N-terminal 51-218aa. The invention uses Escherichia coli to express and purify and express recombinant Sex hormonebinding globulin, providing the construction method of expression vector of recombinant human SHBG protein N-terminal 51-218aa, and purify the induced and expressed recombinant human SHBG protein N-terminal 51-218aa with two steps of Ni agarose gel chromatography column and gel cutting recovery. The recombinant human SHBG protein Nterminal 51-218aa prepared by the method of the invention has the characteristics of high yield, high purity and low cost, which is conducive to further independent research and development of the protein detection kit.

## 21: 2021/09776. 22: 2021-11-30. 43: 2022-01-26 51: C12M

71: GuangXi Normal University for nationalities 72: YANG Xiu-zeng, XIAO Li-ling

#### 54: FERMENTATION TANK OF EDIBLE FUNGUS LIQUID STRAIN WITH HIGH YIELD 00: -

The invention relates to the technical field of edible fungi culture, which discloses fermentation tank of edible fungus liquid strain with high yield, which comprises a fermentation tank, wherein the outer side of the fermentation tank is fixedly provided with three fixed arm, the bottom of the fixed arm is fixedly provided with roller, and the bottom of the fermentation tank is communicated with discharge pipe. According to this invention, the stirring blade and the water spray plate arranged can make the stirring blade stir the liquid strain evenly in the fermentation process, so that the fermentation is more complete, thus improving the yield. When cleaning is needed, the valve on the water inlet pipe is opened and the water inlet pipe is externally connected with water source, the water is channeled to the water spray plate through the corrugated hose, the nozzle on the water spray plate sprays water to wash the inner wall of the fermentation tank, and the screw can move the water spray plate up and down, so that the inner wall of the fermentation tank can be completely cleaned.After cleaning, open the valve outside the discharge pipe to discharge the sewage, which is simple and quick, and achieves the effect of convenient cleaning.

21: 2021/09778. 22: 2021-11-30. 43: 2022-01-26 51: A61K; C12N; A61P 71: YANTAI YUHUANGDING HOSPITAL, JINING MEDICAL UNIVERSITY 72: WANG, Qiuling, XUE, Qingjie, YU, Meimei, CUI, Yanshuo, MI, Tian 54: NUCLEOTIDE SEQUENCE AND USE THEREOF

## 00: -

The present disclosure relates to a nucleotide sequence and use thereof, in particular to a nucleotide sequence obtained after fusion and optimization of a cDNA sequence of interleukin-2 (IL-2) and a cDNA sequence of latent membrane protein 2A (LMP2A). In the present disclosure, an obtained live vaccine takes viral genes and gene products as targets, to selectively kill tumor cells using differences between Epstein-Barr virus (EBV)positive tumor cells and normal cells, thereby providing a new method and experimental basis for specific treatment of virus-related tumors.

21: 2021/09779. 22: 2021-11-30. 43: 2022-01-26 51: H04L

71: QINGDAO UNIVERSITY OF TECHNOLOGY 72: YU, Chunyu, LEI, Peng

#### 54: SIX-DIMENSIONAL FRACTIONAL ORDER HYPERCHAOTIC SYSTEM AND CHAOTIC SIGNAL GENERATOR 00: -

A six dimensional fractional order hyperchaotic system and a chaotic signal generator. The six dimensional fractional order hypersystem is used to output six chaotic signals. The FPGA in the chaotic signal generator is used to generate a sixdimensional hyperchaotic system circuit. The six chaotic signal output ends of the FPGA are respectively connected to digital signal input ends of the first, second, third, fourth, fifth and sixth digital to analog converters; One end of a dial switch is connected to a power supply, and the other end of the dial switch is respectively connected to the power supply end of the six channel digital to analog converter. The signals output by the six channel digital to analog converter are voltage signals. The chaotic signal generator can provide a sixdimensional chaotic signal source with various variable combinations, which is used for information encryption and has good chaotic characteristics.



21: 2021/09805. 22: 2021-12-01. 43: 2022-01-25 51: G01J

71: Shandong Hi-Speed Construction Management Group CO. LTD., Shandong University 72: Zhang Qingtao, Wu Jianqing, Xu Qingchao, Li Zhouyuan, Song Jiakang, Yang Ziliang, Liu Hong 54: DEVICE AND METHOD FOR TESTING WORKING PERFORMANCE OF LASER RADAR IN BAD WEATHER

00: -

The invention discloses a device and method for testing the working performance of laser radar in bad weather, which comprises a model box, a target detection system, a rainfall system, a snowfall system, a fog making system and a haze making system; the model box is a box structure, which provides working space for the target detection system, the rainfall and snowfall system and the fog and haze making system: the target detection system is placed on the side plate of the model box, which is used to simulate the target detection process of laser radar in bad weather and selfpollution conditions, so as to test the working performance of laser radar in many environmental conditions; the rainfall system is located at the top of the model box, providing a rainy environment for the working space in the box; snowfall system provides a snowing environment for the workspace; fog making system simulates foggy weather; the haze making system is placed on the side plate of the model box to simulate the haze weather.



21: 2021/09806. 22: 2021-12-01. 43: 2022-01-25 51: H04W

71: China University of mining and Technology, Jiangsu Future Networks Innovation Institute
72: Wang Bowen, Sun Yanjing, Xu Zimeng, Li Song, Yun Xiao, Chen Ruirui, Xu Yonggang
54: UNMANNED AERIAL VEHICLE RELAY
SELECTION METHOD FOR POST-DISASTER
EMERGENCY SCENARIOS IN UNDERGROUND
SPACE

00: -

The invention discloses an unmanned aerial vehicle relay selection method for post-disaster emergency scenario in underground space, which comprises the following steps: based on the predicted range of D2D users for unmanned aerial vehicles, collecting the maximum rate, minimum rate and average rate of data transmitted by D2D users through unmanned aerial vehicles, and obtaining the first uncertain preference order of D2D users for unmanned aerial vehicles and the second uncertain preference order of unmanned aerial vehicles for D2D users; based on the first uncertain preference order and the second uncertain preference order, the preference strategy of D2D users for unmanned aerial vehicles is obtained, and after matching according to the many-to-one bilateral matching algorithm, any two matched unmanned aerial vehicles of D2D users are exchanged and matched, so as to obtain the matching result with stable bilateral exchange; the algorithm of the invention has low computational complexity, allows the same relay unmanned aerial vehicle to cooperate with multiple pairs of D2D users to communicate in the same time slot, and the matching result is stable, which can ensure timely

and effective communication of as many rescuers as possible.



#### 21: 2021/09807. 22: 2021-12-01. 43: 2022-01-25 51: H01L

71: Zhengzhou University of Aeronautics

72: Wang Haili, Wang Xianli, Xu Kun, Wang Yanyan, Yang Peng, Yu Zhanjun, Duan Xiangyang, Fu Linjie, Yang Mengjie, Ma Xiaolong

#### 54: OXIDATION DEVICE AND OXIDATION EQUIPMENT FOR MANUFACTURING SEMICONDUCTOR COMPONENTS 00: -

The application discloses an oxidation device and an oxidation equipment for manufacturing semiconductor components. The invention heats in a radiation mode, so that the heat can flow in a balanced way, unlike the heaters arranged in the prior art areas, the heat is not balanced; The set drive system can drive the oxidation furnace body to rotate at an adjustable speed, so that the internal heat energy of the oxidation furnace body is more uniform, the built-in wafer to be oxidized is heated more fully, and the oxide film grows well.



21: 2021/09808. 22: 2021-12-01. 43: 2022-01-25 51: A01B; B01J

71: Northwest A&F University

72: CHEN, Chun, WEI, Gehong, HU, Yingwei, LIU,

Shuang, WANG, Hanyu, LI Tao, ZHANG, Xike, HUA, Junwen

54: A HUMIC ACID EMBEDDED BIOCHAR-NANO HYDROXYAPATITE COMPOSITE MATERIAL AND

# A PREPARATION METHOD AND APPLICATION THEREOF

#### 00: -

The invention belongs to the technical field of functional soil improvement, in particular to a humic acid embedded biochar-nano hydroxyapatite composite material and a preparation method and application thereof; the invention takes the rice straw biochar as the core material, increases the input of available phosphorus through the modification of nano hydroxyapatite, and improves the adsorption capacity of biochar to sodium humate at the same time, and solves the problem of low efficiency of available phosphorus caused by the application of biochar alone in the aeolian soil with low organic matter content.



21: 2021/09809. 22: 2021-12-01. 43: 2022-01-25 51: G01N

71: Anqing Normal University

72: SUN, Chunyan, BAI, Jin, WANG, Guishi, ZHOU, Lichuan, GAO, Xiaoming, HE, Xinyu, LIANG, Chen

## 54: ALL-FIBER FREQUENCY DIVISION MULTIPLEXING WAVELENGTH MODULATION LASER HETERODYNE DETECTION SYSTEM 00: -

The present invention discloses an all-fiber frequency division multiplexing wavelength modulation laser heterodyne detection system, comprising an optical lens, an optical splitter, a detector, a laser group, an acquisition card, a signal processing component, a lock-in amplifier group, and a laser controller group, wherein there are both provided with a plurality of the optical splitters and detectors; the optical lens is connected to a first optical splitter which is connected to a second optical splitter, and the first optical splitter and the second optical splitter are respectively connected to a first detector and a second detector; the second optical splitter is provided with a third optical splitter which is provided with a laser group, and the laser group is provided with a laser controller group; there are both provided with a plurality of the laser groups and laser controller groups corresponding to one another.



- 21: 2021/09810. 22: 2021-12-01. 43: 2022-01-25 51: G01D: G01N
- 71: Central South University

72: HUANG, Linqi, CHEN, Jiangzhan, LI, Xibing, ZHOU, Shitong

54: LOADING CONTROL AND DATA SYNCHRONIZATION MONITORING DEVICE FOR TRUE TRIAXIAL MULTI-FIELD COUPLING AND DYNAMIC DISTURBANCE PLATFORM 00: -

The present disclosure discloses a loading control and data synchronization monitoring device for a

true triaxial multi-field coupling and dynamic disturbance platform, which realizes the time synchronization of data acquisition by triggering a monitoring data acquisition mechanism through a synchronization trigger. Each mechanism in the loading control system also transmits the acquired data to the monitoring data acquisition mechanism. The loading control system and the monitoring sensors realize the data synchronous coupling matching between the loading control system and the data synchronization monitoring device in a manner of synchronous acquisition in parallel, and realize the synchronous and accurate data verification in a manner of double-channel repeated acquisition.



### 21: 2021/09811. 22: 2021-12-01. 43: 2022-01-25 51: B01D

71: China University of Petroleum (East China) 72: LIU, Chunhua, CHEN, Ji, HAO, Zhongxian, LIU, Xinfu, LIU, Feng, SHI, Yongjun, SHA, Wenhao, CHENG, Hui, TAO, Junling

## 54: SEPARATION DEVICE WITH TWO-STAGE GAS-LIQUID MIXTURE AND CONICAL SPIRAL FIELDS

00: -

A separation device with two-stage gas-liquid mixture and conical spiral fields is provided. A firststage uniform mixer performs first-stage gas-liquid crushing and uniform mixing process by an outer micropore ceramic pipe, a middle micropore ceramic pipe and an inner micropore ceramic pipe and crushes large bubbles in the gas-liquid two-phase flow into small bubbles. A second-stage uniform mixer performs second-stage gas-liquid crushing and uniform mixing process. A whirlpool-making gas collector adjusts the gas-liquid uniform mixing flow obtained after two-stage gas-liquid uniform mixing into hollow-core type high-speed two-phase spiral flow. A conical degasser performs gas-liquid efficient separation operation in a high-speed conical spiral field. A two-stage uniform mixing control system and a gas-liquid separation control system automatically regulate and control the flow and the flow pressure of the gas-liquid two-phase flow, the gas-liquid uniform mixing flow and degassed gas flow and degassed liquid flow.



## 21: 2021/09812. 22: 2021-12-01. 43: 2022-01-25 51: C08G

71: Qingdao University of Science and Technology 72: Jiao Chuanmei, Dong Huixin, Chen Xilei, Li Shaoxiang

## 54: CARBON NITRIDE-POLYANILINE NANOCOMPOSITE AND ITS PREPARATION METHOD AS WELL AS CARBON NITRIDE-POLYANILINE INTUMESCENT FLAME RETARDANT COATING AND ITS PREPARATION METHOD

00: -

The present invention provides a carbon nitridepolyaniline nanocomposite and its preparation method as well as carbon nitride-polyaniline intumescent flame retardant coating and its preparation method, and relates to the flame retardant coating field. This invention aims to solve the problem of easy modification of epoxy resin and to form the epoxy resin and other materials' compounds whose performance may be superior to that of each other. However, there is mutual effect of very strong VDW force between layers of carbon nitride, which makes it very likely to cake and very hard to disperse in epoxy resin. The present invention applies cheap raw materials, and the process is easy to control. Carbon nitride-polyaniline intumescent flame retardant coating prepared with carbon nitride-polyaniline nano materials is of

extraordinary fire retardance performance and environment-friendly.



21: 2021/09813. 22: 2021-12-01. 43: 2022-01-25 51: C12Q; C12R

71: LINYI UNIVERSITY

72: Liu, Yunguo, Lei, Zhiwen, Zhang, Jie, Hu, Xiaojie, Wang, Fangfang, Peng, Shanli, Kang, Dacheng

#### 54: DROPLET DIGITAL POLYMERASE CHAIN REACTION (DDPCR)-BASED RAPID DETECTION METHOD FOR ESCHERICHIA HERMANNII 00: -

The present disclosure provides a droplet digital polymerase chain reaction (ddPCR)-based rapid detection method for Escherichia hermannii, including the following steps: extracting a genomic DNA of an enrichment broth of a sample to be tested and diluting for later use; designing specific primers and a probe using conservative DNA sequences of a Escherichia hermannii genome; and conducting ddPCR amplification and detection on the genomic DNA of the enrichment broth of the sample to be tested using the specific primers and the probe. After the PCR amplification, each droplet is detected separately using a droplet analyzer, a droplet with a fluorescence signal is interpreted as 1, and a droplet without the fluorescence signal is interpreted as 0, and a concentration or a copy number of target molecules to be detected is calculated according to the Poisson distribution and a proportion of positive droplets.

21: 2021/09814. 22: 2021-12-01. 43: 2022-01-25 51: G01N; G09B 71: North China University of Technology 72: FENG, Shaojie, HU, Hang, SUN, Shiguo, SONG, Zhifei, JIN, Songli, LIU, Leipeng, FU, Ge, GAO, Chen

#### 33: CN 31: 202110193740.1 32: 2021-02-20 54: TEST DEVICE FOR SIMULATING HEAVY RAIN INDUCED MUCK LANDSLIDE 00: -

The present invention discloses a test device for simulating a heavy rain induced muck landslide. The device includes a test chamber arranged above the test chamber, a rainfall device arranged above the test chamber, a monitoring system, a control console, and a water tank; a muck side slope model is arranged inside the test chamber; the monitoring system is arranged inside the muck side slope model; the rainfall device communicates with the water tank: and the rainfall device and the monitoring system are both electrically connected with the control console which is used to control the rainfall device to simulate different rainfall types and acquire internal parameters of soil sent by the monitoring system. The present invention can simulate a real process of the heavy rain induced muck landslide and can monitor the internal parameters of the soil in real time.



21: 2021/09815. 22: 2021-12-01. 43: 2022-01-25
51: C07D; C09K; G01N
71: Dezhou University
72: KONG, Chunyan, WANG, Fang, WANG, Dunqing, WANG, Aili, CHEN, Yuting, LI, Wenbo, ZHAI, Xinyu
33: CN 31: 202111104153.7 32: 2021-09-22
54: FLUORESCENT MOLECULAR PROBE

## CAPABLE OF DETECTING BA2+ IN WATER AND APPLICATION THEREOF

00: -

The present disclosure provides a fluorescent molecular probe capable of detecting Ba2+ in water and an application thereof, which pertains to the technical field of organic compound detection performance. The malenitrile Schiff base fluorescent molecular probe of the present disclosure is prepared by one-step polymerization with pcyanobenzaldehyde and diaminomaleonitrile as starting materials. Since the maleonitrile Schiff base fluorescent molecular probe simultaneously contains metal ion action sites such as amino, imine and cyano, with a sensitive "off-on" fluorescence detection response to Ba2+, it has significant application value. The preparation method has the advantages of high yield, simple preparation process and easy implementation. It is suitable for industrial promotion, which creates favorable conditions for the popularization and application of malenitrile Schiff base fluorescent molecular probe.



21: 2021/09816. 22: 2021-12-01. 43: 2022-01-25 51: G06Q

71: Aba Teachers University

72: Huang Chengbing, Li Juan

#### 54: INTERNET-BASED INNOVATION AND ENTREPRENEURSHIP PLATFORM SYSTEM 00: -

The invention discloses an innovation and entrepreneurship platform system based on the Internet, which comprises an innovation and entrepreneurship platform website, a homepage development, an activity center section, an enterprise library section, a scientific research institution section, a service institution section, an expert tutor library, a policy information section, an instrument sharing section, an investment attraction section, a talent demand promotion section, a demand registration section and achievement library, wherein the homepage development, activity center section, enterprise library section, scientific research institution section, service institution section, expert tutor library, policy information section, instrument sharing section, investment attraction section, talent demand promotion section, demand registration section and achievement library are respectively connected with the website of innovation and entrepreneurship platform. The invention belongs to the technical field of the Internet, in particular to an innovation and entrepreneurship platform system based on the Internet, which realizes the technical effects of platform multidirectional and high efficiency by combining various sections, provides a good platform for innovation and entrepreneurship, reduces the startup cost and stimulates innovation vitality.

21: 2021/09817. 22: 2021-12-01. 43: 2022-01-25 51: C08G

71: Qingdao University of Science and Technology 72: Chen Xilei, Dong Huixin, Jiao Chuanmei, Li Shaoxiang

54: PHYTIC ACID DOPED CARBON NITRIDE-POLYANILINE NANOCOMPOSITE AND ITS PREPARATION METHOD AS WELL AS PHYTIC ACID DOPED CARBON NITRIDE-POLYANILINE INTUMESCENT FLAME RETARDANT COATING AND ITS PREPARATION METHOD 00: -

The present invention provides a type of phytic acid doped carbon nitride-polyaniline nanocomposite and its preparation method and carbon nitride-polyaniline intumescent flame retardant coating and its preparation method, relates to the flame retardant coating field, aims to solve the problem that twodimensional sheet materials that are used to enhance the flame retardant performance of epoxy resin are easy to cake and are hard to be dispersed in epoxy resin. The phytic acid in the present invention is a biologic material that is a green and sustainable resource, conforms to the green chemical concept, and can be produced with a synthetic material whose process flow is easy to control. Carbon nitride-polyaniline intumescent flame retardant coating prepared with phytic acid doped

carbon nitride-polyaniline nanomaterials is of extraordinary flame retardant performance and environment-friendly.



21: 2021/09818. 22: 2021-12-01. 43: 2022-01-25 51: C12N; C12P; C12R

71: Qingdao University of Science and Technology, Qingdao Agricultural University

72: ZHAO, Hongwei, LI, Jingyuan 54: GENETICALLY ENGINEERED STRAIN FOR EFFICIENTLY SYNTHESIZING MELATONIN AND CONSTRUCTION METHOD AND USE THEREOF 00: -

The present disclosure provides a genetically engineered strain for efficiently synthesizing melatonin and a construction method and use of the genetically engineered strain. The genetically engineered has significantly improved efficiency for synthesizing melatonin with the maximum yield reaching 25.7 mg/L, which is increased by 12 times or more compared with that of an original strain



21: 2021/09819. 22: 2021-12-01. 43: 2022-01-25 51: A01K 71: Zhejiang Grain Science Research Institute Co., Ltd

#### 72: Jiang Qiushui, Shen Hua, Sun Yiwen 54: APPLICATION OF FOOD ADDITIVES (HIGHER FATTY ALCOHOLS AND DERIVATIVES) 00: -

Disclosed are an aquatic animal feed additive and its application. The aquatic animal feed additive of the invention comprises fatty alcohol phosphate potassium. The aquatic animal feed additive of the invention can be applied to feed. The invention has the advantages of simple formula, effectively reducing the asphyxiation point of aquatic animals, enhancing the stress tolerance of aquatic animals, and improving the survival rate and feed utilization rate, etc.

21: 2021/09861. 22: 2021-12-02. 43: 2022-01-31 51: C12N; C12Q 71: GANSU INSTITUTE OF ANIMAL AND VETERINARY SCIENCE 72: YANG, JunXiang, WANG, YanYan, CHENG, WeiWei, XU, JianFeng, LI, YuanXin, HE, MaoChang, SHI, FuYue, LUO, Yan 54: METHOD FOR COMPARATIVE TRANSCRIPTOME ANALYSIS OF DIFFERENTIALLY EXPRESSED GENES 00: -

Disclosed is a method for comparative transcriptome analysis of differentially expressed genes comprising: S1: variety selection, selecting 10month-old Suffolk and Hu sheep crossbred F1 generation lambs (SH) and Hu sheep purebred lambs (HH), controlling the number of each variety to be the same, performing slaughtering, collecting longissimus dorsi muscle tissues after slaughtering, removing anadesma, put same into an enzyme-free cryopreservation tube and placing same into liquid nitrogen immediately, storing same in a refrigerator. The transcriptome of muscle of the F1 generation and Hu sheep is compared and analyzed, and the differentially expressed genes of muscle of the Suffolk and Hu sheep F1 generation and Hu sheep are compared and analyzed by using the RNA-seq technology; The relative expression levels of four candidate differentially expressed genes are detected by qRT-PCR for verification, which indicates the result of gRT-PCR detection is consistent with the fold change in the transcriptome sequencing analysis.



21: 2021/09862. 22: 2021-12-02. 43: 2022-02-02 51: G01N

71: North China University of Science and Technology

72: JIA, Mutian, WANG, Kaibo, ZHOU, Yunlong, CHEN, Kaijiang, YANG, Zhinian

#### 54: DEVICE FOR TESTING SHEAR STRENGTH OF CIVIL ENGINEERING MATERIAL 00: -

The present disclosure discloses a device for testing shear strength of a civil engineering material, including a platform. A chute is formed in the top of the platform, a saddle is slidably installed in the chute, the top of the saddle extends out of the chute, a groove is formed in the top of the saddle, and a rotating motor is fixedly installed in the groove. The present disclosure is reasonable in design, high in practicability and convenient to operate, and improves the accuracy of detection results.



21: 2021/09863. 22: 2021-12-02. 43: 2022-02-02 51: E03E

71: North China University of Science and Technology

72: WANG, Kaibo, JIA, Mutian, JIANG, Nan, YANG, Zhinian, ZHOU, Yunlong

#### 54: CAMPUS SPONGE ECOLOGICAL RAINWATER RECYCLING EQUIPMENT 00: -

The present disclosure discloses to campus sponge ecological rainwater recycling equipment, which comprises a lower box body, a stirring structure, an adding structure and a filtering structure. Aiming at the defects that rainwater is filtered through a filter screen, the filtering effect is poor, and fine impurities in the rainwater cannot be filtered in the prior art, the campus sponge ecological rainwater recycling equipment provided in the present disclosure can filter fine impurities in rainwater, has a good filtering effect, and can effectively prevent the filtering plate from clogging.



21: 2021/09864. 22: 2021-12-02. 43: 2022-02-02 51: A61K

71: Changshu Institute of Technology

72: Peng Yingyun, Cui Zhumei, Yang Qi, Wang Liuyi 54: COMPOUND PLANT POLYSACCHARIDE CONCENTRATE AND APPLICATION THEREOF IN HEALTH CARE PRODUCTS 00: -

The invention discloses a compound plant polysaccharide concentrated solution and application thereof in health care products, belonging to the technical field of health care products. Comprise that following component in parts by mass: 6-8 parts of tea polysaccharide, 3-5 part of pumpkin polysaccharide, 1-3 parts of Angelica sinensis polysaccharide and 1-2 parts of asparagus polysaccharide. According to the invention, tea polysaccharide, pumpkin polysaccharide, Angelica sinensis polysaccharide and asparagus polysaccharide are compounded, and through synergistic effect, the compound plant polysaccharide concentrated solution can effectively reduce blood fat, blood sugar and blood pressure. 21: 2021/09865. 22: 2021-12-02. 43: 2022-02-02 51: C01G

71: Zhengzhou University of Aeronautics 72: Wang Xianli, Wang Haili, Yu Zhanjun, Fu Linjie, Chen Dongxia, Xu Kun, Duan Xiangyang, Yang Peng, Li Mingyu

## 54: NEGATIVE EXPANSION MATERIAL, PREPARATION METHOD AND APPLICATION THEREOF

## 00: -

The invention discloses a negative expansion material, a preparation method and application thereof, and belongs to the technical field of negative expansion materials. Comprises the following steps: mixing raw materials HfO2, WO3 and MoO3, uniformly grinding, heating at 1,000-1,200 degree Celsius for 6-8 h, cooling, sintering, taking out and quenching in ice water to obtain negative expansion material. The molecular formula is HfW2.5Mo0.5O11. The negative expansion material has a thermal expansion coefficient of --10.17\*10-6 K-1 to -11.14\*10-6 K-1. The method is simple, short in period and pollution-free, so it is suitable for industrial production.

21: 2021/09866. 22: 2021-12-02. 43: 2022-02-02 51: C22C

71: Qingdao University of Technology

72: ZHANG, Shuling, CUI, Ning, GUÓ, Dong, GAN, Zhiying, HUANG, Tenglong, WU, Shuaizheng, ZHANG, Ruifeng, WU, Surui 54: METHOD FOR OPTIMIZING MICROSTRUCTURE AND PROPERTY OF SECONDARY ALUMINUM

00: -

Disclosed is a method for optimizing a microstructure and property of secondary aluminum, belonging to the field of metals.



21: 2021/09867. 22: 2021-12-02. 43: 2022-02-02 51: F24F

71: Qingdao Agricultural University

#### 72: LIANG, Zede

## 54: SOLUTION DEHUMIDIFICATION AIR-CONDITIONING SYSTEM BASED ON NATURAL COLD SOURCE DRIVE AND SOLAR ENERGY REGENERATION

00: -

A solution dehumidification air-conditioning system based on natural cold source drive and solar energy regeneration. Liquid from a natural high-temperature cold source passes through a cold water pump and is then divided into two paths, one flows into the inlet of a sensible heat removal dry indoor terminal device, and then flows back to the natural hightemperature cold source, and the other flows into a solution-type fresh air unit, then flows out of the solution-type fresh air unit and then flows back to the natural high-temperature cold source; a return pipeline of the solution-type fresh air unit is divided into two paths, one flows back into the natural hightemperature cold source, and the other flows into the inlet of the sensible heat removal dry indoor terminal device, and then flows back to the natural hightemperature cold source from the outlet of the sensible heat removal dry indoor terminal device.



#### 21: 2021/09869. 22: 2021-12-02. 43: 2022-02-02 51: E21B

71: Chongqing University of Science and Technology

72: Xu Jianian, Liu Hongli, Chen Peiliang, Wu Xiaoyong, Chen Bo, Wang Zhengku, Li Fengxia 33: CN 31: 202111304456.3 32: 2021-11-05 54: EXTERNAL MEASURING NIPPLE FOR LOST CIRCULATION LEAKAGE FLOW WHILE DRILLING

#### 00: -

The invention disclose an external measuring nipple for lost circulation leakage flow while drilling, which comprises a short drill collar, wherein the upper end of the inner side of the short drill collar is provided with a data transmission component, the lower end of the data transmission component is provided with a hydraulic power assembly, the lower end of the hydraulic power assembly is communicated with one end of a three-way oil circuit, and the other two ends of the three-way oil circuit are respectively communicated with an energy storage component and a probe driving component; the device can effectively solve the problem that the lost flow of drilling fluid can not be accurately measured after lost circulation occurs in the drilling operation process, which leads to the inability to effectively stop leakage. Moreover, the use of the device can effectively reduce the non-drilling drilling cycle such as dealing with lost circulation and complicated situations induced by lost circulation, reduce the cost of oil and gas well-building operation, and improve the profit of oil and gas well-building operation, and it is an oil and gas measurement tool while drilling with high economic value and popularization value.



21: 2021/09870. 22: 2021-12-02. 43: 2022-02-02 51: G06T

- 71: Southwest University
- 72: Dong Tao, Ji Jingmin

#### 54: A NEURAL BASED UNMANNED AERIAL VEHICLE (UAV) TRACKING SYSTEM 00: -

The invention relates to a neural-based unmanned aerial vehicle tracking system, including an image acquisition module, a neural network processing module and a control module. The invention will gradually correct the rotation angle, flight height and flight speed of the UAV in the process of traveling by adjusting the rotational speed difference of each spiral wing and the overall rotational speed value during the key operation of the UAV according to the previous flight data. While ensuring that the UAV will not be damaged, the flight time of the UAV is gradually shortened, so as to effectively improve the flight efficiency of the UAV tracking system based on the neural network.

21: 2021/09871. 22: 2021-12-02. 43: 2022-02-02 51: A01C

71: Qingdao Agricultural University

72: PAN, Zhiguo, YANG, Ranbing, ZHANG, Huan, ZHANG, Jian

#### 54: CHINESE YAM SEEDER 00: -

The present disclosure provides a Chinese yam seeder, including a furrow opener, a seed discharging device, a pesticide spraying device, a ridging device, and a compacting device that are integrated. The seed discharging device includes a seed slot mechanism, which includes a seed slot inner shell, and a seed slot outer shell. The seed slot inner shell is mounted in the seed slot outer shell in a pushing-pulling manner. According to the seed slot mechanism, the seed discharging device, and the seeder of the present disclosure, the Chinese yam seeder can adapt to Chinese yam seeds with various lengths first by mounting the seed slot inner shell in the seed slot outer shell in the pushingpulling manner, which solves the inconvenience brought by replacing the seed slot mechanism to adapt to the Chinese yam seeds with different lengths.



21: 2021/09872. 22: 2021-12-02. 43: 2022-02-01 51: C12G

71: Qingdao Agricultural University, Qingdao
University of Science and Technology
72: LI, Jingyuan, ZHENG, Zhuoqi, ZHAO, Hongwei
54: METHOD FOR REDUCING ORGANIC ACIDS
IN BLUEBERRY WINE
00: -

The present disclosure provide a method for reducing organic acids in a blueberry wine. The method includes the following steps: rinsing an ion exchange resin with hot water at 40 degrees Celsius until foams disappear, soaking with a 5% hydrochloric acid solution for 4 h, rinsing the resin with distilled water until the resin is neutral, soaking with a 5% sodium hydroxide solution for 4 h, and rinsing with distilled water to a pH value of about 8.0; mixing the resin and a blueberry wine to be processed evenly in a ratio of 1:40, checking a pH value of the blueberry wine every one hour, and filtering when the pH value no longer changes; and adding a filtered blueberry wine to a lactic acid bacteria activation solution for fermentation at 20 degrees Celsius, after malic acid disappears, terminating the fermentation to complete organic acids reduction. .



21: 2021/09873. 22: 2021-12-02. 43: 2022-02-02 51: A61K

71: Luoyang Orthpedic-Traumatological Hospital of Henan Province (Henan Provincial Orthopedic Hospital)

72: Ma Kun, Zhang Chuan, Wang Dandan, Shen Sheng

## 54: APPLICATION OF PECTOLINARIN IN PREPARATION OF ANTI-OSTEOSARCOMA DRUGS

#### 00: -

The invention discloses the application of pectolinarin in the preparation of anti-osteosarcoma drugs, belonging to the technical field of medicine. The pectolinarin of the invention can inhibit the growth and proliferation of various osteosarcoma cells, promote the apoptosis of osteosarcoma cells, interfere with the cell cycle, block the cells in G1 phase, reduce the number of cells in G2 phase, and inhibit the cell division ability; And can inhibit the invasion and migration of HOS and 143B osteosarcoma cells; The animal experiment proved that the pectolinarin can obviously inhibit the volume of subcutaneous 143B cell tumor in nude mice, and can well inhibit the growth of osteosarcoma. Therefore, the pectolinarin is expected to become a drug for treating osteosarcoma, and has a broad prospect in the development of drugs for treating osteosarcoma.

21: 2021/09874. 22: 2021-12-02. 43: 2022-02-02 51: G05B 71: Linyi University 72: ZHANG, Xin 54: GRADUAL STOP CONTROL METHOD AND SYSTEM FOR MECHANICAL DEVICE, AND EQUIPMENT 00: - A gradual stop control method and system for a mechanical device, and equipment. The system includes a power output control unit and an execution unit. The power output control module receives a remote instruction and a local instruction; the remote instruction includes restriction power and a time interval; when the restriction power is equal to the maximum power of the execution unit, the local instruction controls the real-time output power of the execution unit; and when the restriction power is less than the maximum power of the execution unit, the maximum output power of the execution unit is reduced to the restriction power within a set time interval. By means of controlling the power/dynamic power output of running equipment, the power output of the running equipment linearly changes, which provides an intuitive power change feeling for operating personnel and provides much time for completing safe stop of the equipment.



21: 2021/09875. 22: 2021-12-02. 43: 2022-02-02 51: C01G: B82Y

71: Henan Chemical Industry Research Institute Co., Ltd., Henan Academy of Sciences

72: YANG, Shucheng, CHENG, Lanxing, ZHAO, Zengbing, ZHAO, Yili, CHENG, Xinhe, DING, Weigong, ZHANG, Bibo, HUANG, Jingluo, GUO, Ge, LI, Yanan, MENG, Bingnan, ZHAO, Tengfei **54: PREPARATION METHOD OF NANOMETER MOLYBDENUM DISULFIDE** 00: -

A preparation method of nanometer molybdenum disulfide comprises the following steps: a. preparing an intercalator solution by a mass ratio of intercalator and deionized water of 1:0.8-10; b. putting molybdenum disulfide in a three-port closed

container and vacuumizing to a vacuum degree of 1.3-60 Kpa; sucking the prepared intercalator solution into the closed container through a port thereof, appropriately for completely submerging the molybdenum disulfide solid, opening a vent port to remove vacuum and restore ordinary pressure, controlling the temperature at 20-80 degrees Celsius and soaking for 10-24 h; c. filtering the soaking seriflux, washing the obtained solid molybdenum disulfide by deionized water and drying at 40-60 degrees Celsius in a vacuum for 2-12 h; d. putting the dried molybdenum disulfide containing the intercalator in a microwave oven with a power of 100-180 KW, keeping for 5-60 min and subsequently obtaining nanometer molybdenum disulfide powder by a wet classification technique.

21: 2021/09876. 22: 2021-12-02. 43: 2022-02-02 51: G06F; G06Q

71: Linyi University

72: GUO, Feng, SHEN, Tingda, ZHANG, Han, GUO, Jijin, LIU, Guoshuai, LIU, Xinyu 54: MECHANICAL EQUIPMENT POWER CONTROL METHOD AND SYSTEM, MEDIUM, AND ELECTRONIC DEVICE

00: -

The present disclosure discloses a charge control system and method. The system includes a charge control device configured in a charge device used for acquiring one or more of current user information, current charged equipment information, and a requested charge mode after charged equipment is connected to the charge device, generating a charge request instruction, sending the same to a management cloud platform, receiving a charge instruction sent by the management cloud platform, and controlling the charge equipment to execute charging; the management cloud platform used for determining a suitable charge mode according to one or more of the current user information, the current charged equipment information, and the requested charge mode, generating a charge control instruction, and sending the same to the charge control device.



#### 21: 2021/09877. 22: 2021-12-02. 43: 2022-02-02 51: G07F; H02J 71: Linyi University

72: ZHANG, Xin, DU, Cuiyun, LIU, Guoshuai, WANG, Lei, CHAO, Xibin, DING, Lijiao 54: CHARGE CONTROL SYSTEM AND METHOD 00: -

The present disclosure discloses a charge control system and method. The system includes a charge control device configured in a charge device used for acquiring one or more of current user information, current charged equipment information, and a requested charge mode after charged equipment is connected to the charge device, generating a charge request command, sending the same to a management cloud platform, receiving a charge command sent by the management cloud platform, and controlling the charge equipment to execute charging; the management cloud platform used for determining a suitable charge mode according to one or more of the current user information, the current charged equipment information, and the requested charge mode, generating a charge control command, and sending the same to the charge control device.



21: 2021/09878. 22: 2021-12-02. 43: 2022-01-31

## 51: C07C; C07D; C07K

71: TOBACCO RESEARCH INSTITUTE OF CHINESE ACADEMY OF AGRICULTURAL SCIENCES

72: FANG, Song, NING, Yang, LIU, Xue, SUN, Peng, SONG, Dean, GUO, Yongfeng, QIU, Jun, KONG, Fanyu

## 33: CN 31: 202110435924.4 32: 2021-04-22 54: A KIND OF ABIENOL-BASED HAPTEN, ARTIFICIAL ANTIGEN AND ANTIBODY AS WELL AS THE PREPARATION METHODS AND APPLICATIONS THEREOF

00: -

The invention applies to the field of agriculturalproduct quality measurement technologies, and discloses a kind of abienol-based hapten, artificial antigen and antibody as well as the preparation methods and applications thereof. The invention firstly discloses a kind of abienol-based hapten, based on which the corresponding artificial antigens and antibodies are yielded then. The abienol-based haptens yielded herein retain the abienol-feature structure to the maximum, and meanwhile possess carboxy groups that may induce coupling with carrier proteins; the abienol-based artificial antigens, vielded through coupling between the aforesaid abienol-based haptens and the carrier proteins, produce antibodies of finer specificity and sensitivity via the innate immune response, laying the foundation for subsequent establishment of abienolrelated immunoassay methods. The abienol-based antibodies produced from the aforesaid abienolbased artificial antigens feature remarkable valence, sensitivity and affinity, and thus may be adopted in the rapid and sensitive immunodetection of abienol in agricultural products, tobacco leaves in particular.

21: 2021/09879. 22: 2021-12-02. 43: 2022-02-02 51: A61K; A61P

71: Hangzhou Normal University

72: CHEN, Guozhong, TAO, Hongmiao, LOU, Dan 54: TRADITIONAL CHINESE HERBAL COMPOSITION FOR TREATING MYASTHENIA GRAVIS WITH SPLEEN AND STOMACH QI DEFICIENCY AND PREPARATION METHOD THEREOF 00: -

The present disclosure belongs to the technical field of traditional Chinese medicine (TCM), and particularly relates to a traditional Chinese herbal composition for treating myasthenia gravis with spleen and stomach qi deficiency, including the following components: 15-25 parts by weight of Codonopsis Radix, 15-25 parts by weight of Astragali Radix, 6-14 parts by weight of Angelicae Sinensis Radix, 2-10 parts by weight of Cimicifugae Rhizoma, 2-10 parts by weight of Bupleuri Radix, 2-10 parts by weight of Citri Reticulatae Pericarpium, and 2-10 parts by weight of Glycyrrhizae Radix et Rhizoma Praeparata Cum Melle.

21: 2021/09880. 22: 2021-12-02. 43: 2022-02-02 51: A01G

71: Shandong Institute of Pomology 72: Xue Xiaomin, Chen Ru, Wang Guiping, Nie Peixian, Dong Fang

## 54: TALL-THIN CYLINDRICAL TREE SHAPE SUITABLE FOR ULTRA-DENSE APPLE CULTIVATION AND SHAPING AND PRUNING METHOD

00: -

The invention provides a tall-thin cylindrical tree suitable for ultra-dense cultivation and a shaping and pruning method, which belongs to the technical field of fruit tree management. The tall-thin cylindrical tree suitable for ultra-dense cultivation has the following characteristics: the stem height is 0.6-0.8 m, the tree height is 3.0 m, the crown diameter is controlled at 0.6-0.9 m, small and medium-sized fruit branches are directly planted on the middle stem, the axial length of the branches is controlled at 0.25-0.4 m, and each branch group is controlled at 3-4. The tree-shaped structure of the invention can yield 750-1,000 kg per mu in 2 years, 1,500-3,000 kg per mu in 3-4 years, and 4,000-6,000 kg after 5 years.

71: China Institute of Water Resources and
Hydropower Research
72: WAN, Xiaohong, WU, Wenqiang, ZHANG,
Panwei, LI, Kun, XU, Dongyu, ZHAO, Xiaohui, GAO,
Bo, LIU, Xiaoru, LANG, Hang, WU, Yanchun,
KONG, Weiwei, JIN, Yuyan, GAN, Lin, LIANG, Kai,
CHANG, Jiaxin, YE, Wei, XIANG, Xiaoshi, HUANG,
Xiaodan, LU, Guang, DONG, Qingwen
54: CONTAINER CLEANING DEVICE AND
CLEANING METHOD THEREOF
00: -

The present invention discloses a container cleaning device and a cleaning method thereof, relating to the

<sup>21: 2021/09881. 22: 2021-12-02. 43: 2022-02-02</sup> 51: B08B; F26B 71: China Institute of Water Resources and
field of container cleaning equipment, comprising: a flushing mechanism and a clamping mechanism, wherein the clamping mechanism comprises a flexible clamping pad and a support unit, wherein the flexible clamping pad is provided with at least one vertical clamping hole for clamping and fixing the container, and an inner edge of the vertical clamping hole extends along an axial direction thereof in one direction to form a wiping cylinder; in the present invention, a vertical clamping hole is provided on a flexible clamping pad to clamp the container, and a problem of easily causing a certain degree of damage to the container when the vertical clamping hole is in rigid contact with the container is avoided by means of the flexible clamping, and a wiping cylinder is provided at the vertical clamping hole.



21: 2021/09882. 22: 2021-12-02. 43: 2022-02-02 51: C02F

71: Tianjin Research Institute for Water Transport Engineering, Ministry of Transport 72: Chen Yaohongling, Wang Qingbiao, Wang Yishen, Jing Liang, Zhang Chunyi, Xue Yonghua, Liu Xiaomeng, Zhang Binbin, Bai Lu, Li Jinzhao 54: DIFFUSER DEVICE FOR RAPIDLY REMOVING SEAWATER

00: -

The invention discloses a diffuser device for rapidly removing seawater. The flowing concentrated seawater is continuously added with low concentration by more than two liquid injection shells, which reduces the mixing difficulty between seawater of different concentrations and accelerates the treatment and discharge speed of seawater. By setting more than two liquid guide pipe heads, multipoint inlet and outlet points are set, which avoids the seawater extraction at a single point and the increase of the mixed seawater concentration after continuous work, thus losing the effect of reducing the mixed concentration. Through the flow direction control of the control part, when the concentration of seawater flowing out of the liquid injection shell is similar to that of seawater in the liquid mixing component, the reverse flow can be carried out, while avoiding the waste of operation time caused by the mixing of seawater with similar concentrations, the additional points of seawater flowing out can be increased, and the discharge points of concentrated seawater can be further increased, and the concentrated seawater passing through can be driven by the protruding part to generate self-rotating vortex for automatic mixing and internal mutual contact.



#### 21: 2021/09883. 22: 2021-12-02. 43: 2022-02-02 51: A61L

71: Liaoning Zhongxuan Biotechnology Co., Ltd. 72: Caikun TANG, Kun QI, Dan LI, Yuncheng GUAN, Ying SHAN, Baoquan WANG, Yuan YUAN 54: METHOD FOR PREPARING SEAWEED POLYSACCHARIDE COLLAGEN GEL 00: -

A method for preparing a seaweed polysaccharide collagen gel is disclosed herein. The seaweed polysaccharide collagen gel of the present disclosure is applied to hemostasis of acute and chronic wounds, absorption of seepage, autolytic debridement, protection of exposed nerve endings, relief of pain, maintenance of a moist environment of the wounds, acceleration of wound healing and inhibition of scar generation.

21: 2021/09887. 22: 2021-12-02. 43: 2022-02-01 51: B09C

71: CHINA UNIVERSITY OF GEOSCIENCES (BEIJING)

72: YAO, Jun, LI, Miaomiao, LIU, Siyuan, LIU, Bang, LIU, Jianli, LI, Hao, SONG, Qi, HUANG, Peng, MA, Bo, ZHU, Xiaozhe, CUI, Weihua

# 54: METHOD FOR REMEDIATING COMBINED POLLUTION OF ANTIMONY AND ZINC AND USE THEREOF

00: -

The present disclosure provides a method for remediating combined pollution of antimony and zinc and use thereof, and particularly relates to the field of soil remediation. A sulfate-reducing bacteria flora provided by the present disclosure can convert Sb(III) and Zn(II) into sulfide precipitate simultaneously, changes a free form of the Sb(III) and the Zn(II) into insoluble precipitate, reduces a degree of environmental pollution, provides bioremediation materials for remediation of heavy metal pollution in mines, and has a good industrial application prospects.



21: 2021/09888. 22: 2021-12-02. 43: 2022-02-02 51: G01N 71: SHANDONG MANAGEMENT UNIVERSITY

72: LI, Xiaolei

#### 54: MOLECULAR SENSOR CAPABLE OF DETECTING FE3+, CU2+ AND ZN2+ IN WATER AND TECHNICAL USE THEREOF 00: -

The present disclosure provides a molecular sensor capable of detecting Fe3+, Cu2+ and Zn2+ in water and technical use thereof, and relates to the technical field of functional material detection; the disclosed molecular sensor is prepared by using 8hydroxyjulolidine-9-aldehyde and 2,7diaminofluorene as reaction raw materials through nucleophilic addition-elimination. In the molecular sensor, dual action sites, phenolic hydroxyl and ortho-imine, synergistically have a strong coordination ability for metal ions; in addition, coordination of nitrogen atoms of an imine-bridged group in a molecule leads to changes in a conjugation degree of the molecule, such that the molecular sensor can show a dual detection function based on ultraviolet (UV) absorption and fluorescence emission for the Fe3+, Cu2+ and Zn2+ in different types of water.



21: 2021/09889. 22: 2021-12-02. 43: 2022-02-02 51: A61K; A61P

71: NORTHWEST A AND F UNIVERSITY 72: LU, Dezhang, JI, Linlong, YIN, Yupeng, LI, Liuyang, LI, Jipeng, WU, Chenchen, LIANG, Yue, TANG, Tianran, BAI, Lingge, WANG, Zhengru 54: COMPOUND ANESTHETIC FOR CATS, PREPARATION METHOD AND APPLICATION THEREOF

00: -

The invention relates to a compound anesthetic for cats, a preparation method and an application thereof.

21: 2021/09890. 22: 2021-12-02. 43: 2022-02-02 51: G01N

71: SOUTH CHINA SEA INSTITUTE OF OCEANOLOGY, CHINESE ACADEMY OF SCIENCES, SANYA INSTITUTE OF OCEANOLOGY, SCSIO 72: TIAN, Yuhang, CHEN, Zhong, YAN, Wen, ZHANG, Bin

#### 33: CN 31: 202111086431.0 32: 2021-09-16 54: AN ACOUSTIC VERTICAL RADIAL LAYERED MEASURING DEVICE FOR SEAFLOOR SUBSTRATE

00: -

The present invention discloses an acoustic vertical radial layered measuring device for seafloor substrate, and relates to the technical field of seafloor substrate acoustic property measurement, comprising: a base, a sample lifting platform and a main frame, and the sample lifting platform is arranged on the base; the main frame is arranged on the base, the main frame is provided with a number of oil sac adjusting frames, the oil sac adjusting frame has a degree of freedom to move along the height direction of the main frame, the oil sac adjusting frame is provided with an oil sac transducer, wherein the sample lifting platform cooperates with a number of oil sac adjusting frames to clamp the sample tube. The present invention can carry out radial layered measurement on of multifrequency sound velocity and sound attenuation coefficient for seafloor substrate with different diameters.



21: 2021/09891. 22: 2021-12-02. 43: 2022-02-02 51: A01M; B05B

71: OCEAN UNIVERSITY OF CHINA 72: ZHANG, Baocheng, WANG, Qiang, LI, Huajun, ZHANG, Kaisheng, ZHAO, Bo, CHU, Hao 54: SPRAYING EQUIPMENT FOR RED TIDE CONTROL AND CONTROL METHOD 00: -

The invention discloses an automatic environmentfriendly medicament spraying equipment applicable for controlling ecological pollution of ocean red tide and a control method thereof. Through a bag-slitting and feeding device, a medicament packaging bag is opened to separate the packaging bag and the powdery medicament therein; the powdery medicament falls into a storing device below, and enters a material mixing device through the material conveying pipeline device; a power device drives a centrifugal pump to pump water into the material mixing device, to supply power for thoroughly mixing powdery medicament and water and for spraying out the mixed solution; the water and powdery medicament are thoroughly mixed in a mixing chamber by the material mixing device, and then sprayed out; a control system consisting of a switch and a circuit can achieve the operation automation of the complete equipment, etc. The invention is energy-saving and efficient, and has simple structure, etc.



21: 2021/09918. 22: 2021-12-03. 43: 2022-02-02 51: C12Q

71: Tropical Crops Genetic Resources institute Chinese Academy of Tropical Agricultural Sciences 72: Zhao Zhichang, Gao Aiping, Huang Jianfeng, Luo Ruixiong

#### 54: AN EARLY SCREENING METHOD FOR MANGO FRUIT COLOR BASED ON DOUBLE-FRAGMENT ANALYSIS 00: -

The invention is an early screening method for mango fruit color based on double-fragment analysis, which is characterized by the following steps: A: DNA extraction of samples; B: PCR amplification of samples; C: Recovery, ligation and

sequencing of amplified fragments; D: fragment Analysis and determination of fruit color. This method has the following outstanding substantive features and significant progress: 1. Mango hybrids or seedlings have a long child period, and it takes 5 to 6 years to determine the color of the fruit after flowering. This method can determine the fruit color of the hybrids or seedlings as soon as possible; 2. After the hybrid seedlings or seedlings germinate, the leaf samples are analyzed, and the samples are easy to obtain; 3. This method is simple and easy to perform. The detection can be completed in 4 to 5 days, which greatly shortens the identification period of mango fruit color; 4. The method is extended to mango production, which can facilitate the early selection of mango fruit color, and provide technical support for the directional breeding of mango fruit color and the selection of parents.

21: 2021/09919. 22: 2021-12-03. 43: 2022-02-02 51: A23L

71: Zhejiang University

72: Wu Dan, Chen Jianchu 54: TEA PIGMENT SAUSAGE

#### **54.** I 00: -

The invention discloses a tea pigment sausage, which is prepared from the following raw materials in parts by weight: 50-70 parts of lean meat; 18-30 parts of white fat; 2.5-3 parts of 60-degree liquor; 3.5-30 parts of tea pigment; and 12-16 parts of flavoring agent. The processing method of the tea pigment sausage of the invention adopts the conventional processing method, that is, it is prepared by batching, mixing, filling, rinsing, sun exposure or drying in turn. The tea pigment sausage of the invention has mellow flavor and light tea fragrance, and in the storage period, after the storage time reaches 30 days, its sensory indexes are higher than those of ordinary sausage added with nitrite.

21: 2021/09920. 22: 2021-12-03. 43: 2022-02-02 51: B08B

71: Shenyang Jianzhu University 72: Cao Jianzhao, Zhu Xiaoyan, Hu Yunjian, Chen Nan, Kan Fenglong, Hu Nan, Wang Changtao 54: WATER COOLING AND AUTOMATIC DUST REMOVAL DEVICE FOR CAMERA 00: - The invention belongs to the field of machinery, particularly to a water cooling and automatic dust removal device for camera. The technical scheme of the invention is as follows: a water cooling and automatic dust removal device for camera comprises an outer cylinder, heat insulation cotton, a cooling water pipe, an inner cylinder, a dust removal mechanism and a temperature sensor; a camera, the dust removal mechanism and the temperature sensor are arranged in the inner cylinder, the cooling water pipe is wound around the inner cylinder, the heat insulation cotton wraps the cooling water pipe, and the outer cylinder covers the heat insulation cotton. The water cooling and automatic dust removal device for camera provided by the invention can work on the hot rolled strip production line, and identify and photograph the profile and side bending of the hot rolled strip.

21: 2021/09921. 22: 2021-12-03. 43: 2022-02-02 51: E01C

71: Shandong University, SHANDONG HI-SPEED GROUP CO, LTD, Suzhou Research Institute, Shandong University

72: Song Xiuguang, Zhang Yingchao, Wu Jianqing, Lv Chen, Li Zhouyuan, Guo Xinming, Zhang Hongbo, Wang Zijian, Chang Yutao, Chen Xiguang 54: INTELLIGENT PAVEMENT DISEASE IDENTIFICATION AND REPAIR METHOD, SYSTEM, EQUIPMENT AND MEDIUM BASED ON CONVOLUTIONAL NEURAL NETWORK AND 3D PRINTING REPAIR TECHNOLOGY 00: -

The invention relates to a method, system, equipment and medium for pavement disease identification and repair based on convolutional neural network and 3D printing repair technology, and comprises the following steps: (1) training the improved network model of YOLO V3; (2) intelligent pavement disease identification through the trained YOLO V3 network model; (3) according to the road surface disease identification result obtained in step (2), use 3D printing repair technology to repair the disease. The invention can complete the processes of road disease identification, positioning, automatic repair and the like, and has the advantages of high degree of automation, good safety and good economy.



- 21: 2021/09922. 22: 2021-12-03. 43: 2022-02-02 51: G06K
- 71: ShanDong JiaoTong University
- 72: Zhou Baoxing, Song Lei, Li Jin

# 54: METHOD FOR LOCATING AND ELIMINATING GROSS ERRORS OF POINT CLOUD DATA BASED ON CREDIBILITY INFORMATION 00: -

The invention discloses a method for locating and eliminating gross errors of point cloud data based on reliability information, which comprises the following steps: collecting point cloud data of an object to be measured; point cloud data preprocessing, including: point cloud data dimension reduction and point cloud data regularization; Determination of point cloud data neighborhood and surface fitting, including: adaptive partition of point cloud data neighborhood and surface fitting of point cloud data in the neighborhood; confidence calculation includes: according to the iterative calculation method, calculating the distance of each point in the point cloud data to the quadric surface in its corresponding neighborhood, and selecting the average and variance of the distances in the

neighborhood of each point in the point cloud data to calculate the confidence of each point in the point cloud data; gross error location and elimination: determine whether the point is gross error according to the confidence of each point in the point cloud data, and eliminate the located gross error. The method can not only improve the calculation efficiency, but also effectively distinguish gross errors from outliers, and avoid confusion caused by mutual shielding between gross errors and outliers.



#### 21: 2021/09923. 22: 2021-12-03. 43: 2022-02-02 51: A01C; A01N

71: Qingdao Agricultural University

72: Yang Chunhong, Zhang Qingfeng, Liu Tongxian 54: BIOCHEMICAL COMPREHENSIVE PREVENTION AND CONTROL METHOD OF BEMISIA TABACI

00: -

The invention discloses a biochemical comprehensive prevention and control method of Bemisia tabaci, belonging to the technical field of agricultural pest control. The biochemical comprehensive prevention and control method of Bemisia tabaci includes: seedling raising: uniformly mixing seedling raising soil and botanical insecticide, sowing tomato seeds, and cultivating to obtain

tomato seedlings; Land preparation: deep digging, applying microbial organic fertilizer, evenly mixing, furrowing, and covering with plastic film; transplanting: planting tomato seedlings and spraying plant extracts; Physical control: hang a yellow board for early warning after transplanting, and hang a yellow board every 10m2 area; Biological control: when the number of Bemisia tabaci per plant reaches 0.5-1.0, release Aphida formosana; Chemical control: spraying chemicals when the number of Bemisia tabaci per plant reaches 3-10. The invention achieves the purpose of effectively controlling Bemisia tabaci by combining physical control, biological control and chemical methods.

21: 2021/09924. 22: 2021-12-03. 43: 2022-02-02 51: C12N

# 71: Institute of Animal Scinces of CAAS 72: Jia Hong, Zhu Hongfei, Xin Ting 54: RECOMBINANT ADENOVIRUS EXPRESSING CD2V PROTEIN OF AFRICAN SWINE FEVER VIRUS AND CONSTRUCTION METHOD THEREOF

00: -

The invention discloses a recombinant adenovirus expressing CD2v protein of African swine fever virus and a construction method thereof, belonging to the technical field of genetic engineering. The recombinant adenovirus vector expressing the CD2v protein of African swine fever virus includes pAD-CMV-3×FLAG adenovirus vector and the gene sequence shown in SEQ ID NO: 1. According to the invention, the recombinant adenovirus expression plasmid pAD-CMV-EGFP-EP402R is obtained through a series of intermediate processes by using the recombinant adenovirus shuttle vector pENTR-EGFP-TOPO. Transfect the finally obtained linearized recombinant adenovirus plasmid into AD293 cells: according to the cytopathy caused by adenovirus infection, the recombinant virus was screened, and finally the packaging process of adenovirus is realized, and the recombinant adenovirus expressing the CD2v protein of African swine fever virus was obtained, which laid a foundation for the construction of recombinant adenovirus vaccine expressing the CD2v protein of African swine fever virus.



21: 2021/09925. 22: 2021-12-03. 43: 2022-02-02 51: E21B

71: Southwest Petroleum University 72: Wang Jun, Xiong Youming, Xu Jianian 54: GUIDE TOOL IN MULTI-BRANCH STIMULATION TOOL 00: -

The invention discloses an in-pipe guide tool of a multi-branch stimulation tool, which comprises a guide device and a plurality of flexible drill rods arranged in the guide device, and is characterized in that the guide device comprises a shell, a guide block assembly and a lower joint; comprises a leading-in cavity, a guiding cavity and a fixing cavity; the guide block assembly is arranged in the guide cavity and is in interference fit with the guide cavity; the fixing cavity is in threaded connection with the lower joint; the side wall of the guide cavity is provided with a plurality of directional holes penetrating through the guide block assembly; one end of the flexible drill rod is arranged in the lead-in cavity, and the other end passes through the guide block assembly and extends out of the directional hole. The invention is a drill pipe directional tool for multi-branch stimulation drilling, which has the advantages of simple structure, easy installation, high safety, simple processing, few accessories, capability of completing the directional function without using electronic components and rubber parts, and low tool use cost. It also solves the problems of flexible drill pipe guiding and preventing winding, reduces the processing cost of operation and reduces the operation period.



21: 2021/09927. 22: 2021-12-03. 43: 2022-02-02 51: A61K

71: Guizhou Institute of modern agricultural development

72: Li Yongfu, He Yangbo

#### 54: A METHOD FOR SIMULTANEOUSLY PREPARING LOW-MOLECULAR-WEIGHT CHITOSAN AND D-GLUCOSAMINE SULFATE BY USING OF IRRADIATION ASSISTED MICROWAVE THERMAL ACID HYDROLYSIS 00: -

The invention discloses a method for simultaneously preparing low-molecular-weight chitosan and Dglucosamine sulfate by using of irradiation assisted microwave thermal acid hydrolysis, which belongs to the technical field of health food processing. The method is to dissolve chitosan in acetic acid solution to obtain chitosan solution, and H2O2 is added into the chitosan solution obtained. Then irradiation treatment is done. After irradiation treatment, it is evenly mixed with dilute sulfuric acid, then microwave thermal acid hydrolysis is carried out under the condition of microwave. And then the hydrolytic solution is concentrated to remove water, the concentrate is precipitated with absolute ethanol overnight. The precipitated solution is filtered, which is freeze-dried to constant weight. In the method of the invention, the use amount of the concentrated sulfuric acid is small, the reaction condition is mild, the environmental pollution is small, the requirement of the production equipment is low, the production is green and safe, which is suitable for preparing lowmolecular-weight chitosan and D-glucosamine sulfate.

21: 2021/09928. 22: 2021-12-03. 43: 2022-02-01 51: A01G

71: Institute Of Water Resources for Pastoral Area.MWR

72: Wang Jian, Li Jinrong, Yu Xiangqian, Liu Hu, Tian Xiumin, Miao Henglu, Rong Hao, Abi Yasi, Ge Nan, Cheng Bo, Dong Lei, Li Hongfang, Li Yingkun, Wang Ru, Luo Xiangying, Han Zhaoen

# 54: WATER AND SOIL CONSERVATION DEVICE FOR DESERTIFICATION AREAS AND USING METHOD THEREOF

#### 00: -

The invention discloses a water and soil conservation device for desertification areas, which comprises hollow side columns, an upper plate is arranged at the upper ends between the hollow side columns in a connecting mode, a receiver is arranged on the upper plate in a connecting mode, a filter screen is arranged at the upper end inside the receiver in a connecting mode, and a lower pipe which penetrates through the upper plate is arranged under the receiver in a connecting mode; built-in storage cylinders are arranged in the hollow side columns in a connecting mode, the upper ends of the built-in storage cylinders are connected with the lower pipe through flow dividing pipes, and water feeding pipes are arranged at the upper ends, away from the flow dividing pipes, of the built-in storage cylinders in a connecting mode; a water dripping grid pipe is arranged at the lower ends between the hollow side columns in a connecting mode through side connecting pipes, the side connecting pipes are connected with the hollow side columns, and pressure regulating valves are arranged on the side connecting pipes in a connecting mode; high pipes which extend out of the hollow side columns are arranged at the upper ends of the built-in storage cylinders in a connecting mode, the high pipes are provided with a same embedded grid pipe in a connecting mode through communicating pipes, and inserting rods are arranged at the lower ends of the hollow side columns in a connecting mode; and the water and soil conservation device for desertification areas has the advantages that the growth of green vegetation is facilitated, and the excessive washing volume towards the soil is prevented.

71: QINGDAO UNIVERSITY OF TECHNOLOGY 72: YAN, Nan, BAI, Xiaoyu, ZHANG, Mingyi, WANG, Yonghong, LIU, Junwei, WANG, Yanting, WANG, Xueling, ZHANG, Qijun, WEI, Guo, FANG, Xiang 54: STATIC PRESSURE ENLARGED HEAD PRESTRESSED HIGH-STRENGTH CONCRETE PIPE PILE

00: -

<sup>21: 2021/09929. 22: 2021-12-03. 43: 2022-02-02</sup> 51: E02D

The present invention belongs to the technical field of ground foundation engineering equipment, and relates to a static pressure enlarged head prestressed high-strength concrete pipe pile. The pile end of the prestressed high-strength concrete pipe pile is welded with a steel plate with a closed circle or an open circular ring structure to form a closed or an open enlarged head; the diameter of the steel plate is greater than that of the prestressed high-strength concrete pipe pile; a stiffening rib is welded on the outer side of the pile end of the prestressed high-strength concrete pipe pile corresponding to the steel plate; the stiffening rib is a trapezoidal steel plate of the same thickness as the steel plate, the geometry of the stiffening rib not exceeding the outer edge of the steel plate.



21: 2021/09930. 22: 2021-12-03. 43: 2022-02-02 51: G01M

71: SHANDONG UNIVERSITY OF SCIENCE AND TECHNOLOGY

72: WAN, Lirong, DAI, Hanzheng, SUN, Zhiyuan, LU, Zhengguo, WANG, Chenglong, NIU, Hao

#### 54: MULTI-FUNCTIONAL TEST BENCH FOR POWER SPLIT HYDRAULIC MECHANICAL COMPOSITE TRANSMISSION SYSTEM 00: -

The present invention relates to a multi-functional test bench for a power split hydraulic mechanical composite transmission system. By means of the test bench, performance test of a hydraulic transmission unit of a hydraulic mechanical composite transmission system can be simply and reliably carried out, test time and costs can be greatly reduced, and performance test of the hydraulic transmission unit to be tested, the ratio test of mechanical and hydraulic power flows, and the stage switching stability test can be realized.



21: 2021/09931. 22: 2021-12-03. 43: 2022-02-01 51: B62D; E02F

71: SHANDONG UNIVERSITY OF SCIENCE AND TECHNOLOGY

72: ZENG, Qingliang, SUN, Zhiyuan, WAN, Lirong, DAI, Hanzheng, TIAN, Mingqian

# 54: BUCKET LOADER APPLICABLE TO COMPLEX WORKING CONDITION AND USE THEREOF

#### 00: -

The present invention relates to a bucket loader applicable to a complex working condition and use thereof. By adopting a novel walking device, the loader can rapidly change wheel-type and crawlertype forms according to different working conditions, thereby reducing the energy consumption while improving the trafficability, and improving the working efficiency.



21: 2021/09932. 22: 2021-12-03. 43: 2022-02-02 51: F15B; F16H

71: China University of Mining and Technology (Beijing)

72: ZENG, Xiaoteng, WANG, Dalong, ZOU, Jia 54: TAP-POSITION-CHANGEABLE CONFLUENCE DEVICE

00: -

The present invention relates to a tap-positionchangeable confluence device. The present invention can realize the confluence output of hydraulic power flow and mechanical power flow in a performance test process of a hydraulic-mechanical composite transmission system, and can realize the change of three tap positions, so that the proportional test and allocation of the mechanical and hydraulic power flows and the tap-position changing dynamic performance test are realized, thereby realizing the performance test of different configurations of hydraulic transmission units of the hydraulic-mechanical composite transmission system.



21: 2021/09933. 22: 2021-12-03. 43: 2022-02-02 51: E02D

71: QINGDAO UNIVERSITY OF TECHNOLOGY 72: BAI, Xiaoyu, YAN, Nan, WANG, Fengjiao, ZHANG, Mingyi, HOU, Dongshuai, ZHANG, Jingke, TU, Bingxiong, ZHANG, Qijun, WANG, Bo, HAN, Chao

# 54: LOADING DEVICE FOR NON-METAL ANTI-FLOATING ANCHOR ROD CREEP TEST

The present invention is in the technical field of insitu test equipment, and relates to a loading device for a non-metal anti-floating anchor rod creep test. An anchor rod body is a solid rod-shaped structure; the anchor rod body and a steel sleeve are bonded together; steel I-beams are perpendicular to a concrete cushion layer and symmetrically placed on both sides of the anchor rod body; a reaction beam has a box-shaped cross section formed by welding two steel I-beams; a steel backing plate is provided on the reaction beam; the steel backing plate, a center hole jack, a spring, a steel plate, an anchor cable axial force gauge and an anchorage are stacked on the reaction beam and sheathed outside the steel sleeve; the anchorage is welded outside the steel sleeve; the mounting structure of the dial indicator is fixed on the L-shaped organic glass.



21: 2021/09934. 22: 2021-12-03. 43: 2022-02-01 51: F16H

71: China University of Mining and Technology (Beijing)

72: ZENG, Xiaoteng, WANG, Dalong, ZOU, Jia 54: SPLITTING DEVICE WITH VARIABLE TRANSMISSION RATIO AND APPLICATION THEREOF

#### 00: -

The present invention relates to a splitting device with a variable transmission ratio and application thereof. The splitting device of the present invention adopts a gear transmission, has a compact

structure, is simple and reliable, has high test stability, can achieve a change in a transmission ratio, is unnecessary to replace separately, and saves test time and cost.



21: 2021/09935. 22: 2021-12-03. 43: 2022-01-26 51: C08K; C08L

71: Tianjin University of Science And Technology 72: JIANG, Guichang, SUN, Hao, LIN, Yuecheng 54: TRANSPARENT AND TOUGHENED MODIFIED POLYPROPYLENE PLASTIC AND PREPARATION THEREOF

00: -

In order to solve the technical problems of low transparent performance and toughness of polypropylene plastics, the present disclosure provides a transparent and toughened modified polypropylene plastic and a preparation method thereof. In the present disclosure, homopolypropylene, metallocene polypropylene, an antioxidant and a dispersant are mixed and added into an extruder to obtain strands, the strands are pelletized to obtain pellets, and the pellets are added into a torque rheometer for blow molding or placed into a tablet press for pressing to form a film. In the present disclosure, the transparent performance and toughness of the polypropylene plastic are improved by adding the metallocene polypropylene. The present disclosure also provides a preparation method of the transparent and toughened modified polypropylene plastic. The transparent modified polypropylene plastic in the present disclosure has higher transparency and tensile strength than ordinary polypropylene.

21: 2021/09936. 22: 2021-12-03. 43: 2022-12-01 51: G06Q 71: QINGDAO UNIVERSITY OF TECHNOLOGY, CHINA RAILWAY 19TH BUREAU GROUP FIFTH

#### ENGINEERING CO., LTD., THE FOURTH CONSTRUCTION CO., LTD OF CHINA CONSTRUCTION EIGHTH ENGINEERING DIVISION

72: SUN, Bo, ZHANG, Yongjun, MIAO, Jijun, DING, Dangsheng, WANG, Fulai, YAN, Mingdong, WU, Honggang, LIU, Sijia, SONG, Chen, ZHAO, Jie, NI, Xiangyang, MA, Tianhui, WANG, Yan, DU, Mingqing, NAN, Ning 54: ROCK FOUNDATION PIT SAFETY

# EVALUATION METHOD BASED ON ENTROPY WEIGHT METHOD AND MODIFIED AHP 00: -

The application discloses a rock foundation pit safety evaluation method based on an entropy weight method and a modified AHP, including: 1) selecting foundation pit risk evaluation factors, establishing a hierarchical mechanism, and building a two-level fuzzy comprehensive evaluation model for evaluating the safety of a foundation pit; 2) classifying the excavation construction safety of the entire foundation pit; 3) layering the foundation pit risk evaluation factors according to AHP, comparing every two foundation pit risk evaluation factors of the same layer to establish a judgment matrix; judging the relative importance of each factor of each layer; and 4) calculating entropy and entropy weights of all foundation pit risk evaluation factors, to construct a foundation pit risk evaluation factor weight column vector ; during combining subjective weights and objective weights, an entropy value is introduced as a combined weight value.



21: 2021/09937. 22: 2021-12-03. 43: 2022-01-26 51: F16K

71: Anhua Huasheng Bioenergy Co., Ltd 72: WANG, Rehua, ZHOU, Wenfeng, WANG, Xifu,

JIA, Xingliang, SHEN, Maiding, WAN, Weihua, HUANG, Jun, WANG, Xiyi

# 54: DISCHARGE VALVE FOR STOKEHOLE FEEDING SYSTEM

# 00: -

The present invention discloses a discharge valve for a stokehole feeding system. The discharge valve includes an outer shell with an inner mounting cavity, the outer shell is provided with a feed port and a discharge port which are communicated with the inner mounting cavity respectively. A rotatablyarranged mounting shaft is arranged in the inner mounting cavity and connected with a driving component for driving the mounting shaft to rotate. A plurality of partition plate sets are sequentially spaced on the mounting shaft to divide the inner mounting cavity into a plurality of guide cavities, the guide cavities are alternately communicated with the feed port and the discharge port to guide fuel collected by the feed port to the discharge port for discharge. According to the discharge valve for the stokehole feeding system of the present invention, feeding is smooth, uniform and continuous.



21: 2021/09938. 22: 2021-12-03. 43: 2022-01-26 51: G06Q

71: QINGDAO UNIVERSITY OF TECHNOLOGY, CHINA RAILWAY 19TH BUREAU GROUP FIFTH ENGINEERING CO., LTD.

72: ZHANG, Yongjun, XU, Meng, LI, Jinming, MIAO, Jijun, LIU, Yanchun, YAN, Mingdong, WU, Honggang, ZHANG, Weiguo, WANG, Fulai, CHEN, Guanping, ZHANG, Yongliang, NIE, Wen 54: EARLY WARNING METHOD FOR SAFETY CONSTRUCTION OF SUBWAY STATION 00: -

The present invention falls within the technical field of construction safety, and in view of the abovementioned problems that existing subway construction safety evaluation methods cannot effectively reduce the adverse effects caused by subjectivity and cannot be effectively used in practice, an early warning method for subway station safety construction is provided. Specific steps are as follows: collecting the scoring results of experts, calculating the reliability distribution function, and taking the mean value of confidence interval with higher reliability; calculating the standard deviation; calculating the coefficient of variation; and evaluating construction safety using principal component analysis and linear regression least square method.



21: 2021/09939. 22: 2021-12-03. 43: 2022-01-26 51: G06F

71: QINGDAO UNIVERSITY OF TECHNOLOGY, CHINA RAILWAY 19TH BUREAU GROUP FIFTH ENGINEERING CO., LTD., THE FOURTH CONSTRUCTION CO., LTD OF CHINA CONSTRUCTION EIGHTH ENGINEERING DIVISION

72: ZHANG, Yongjun, ZHANG, Weiguo, WANG, Chunsheng, YAN, Mingdong, ZHU, Ming, WANG, Jing, WANG, Zaiquan, WU, Honggang, XU, Meng, GAO, Ming, WANG, Qingsong, LI, Shuguang, DING, Dangsheng

# 54: CORRESPONDENCE ANALYSIS METHOD FOR CAUSES OF GROUND SURFACE SETTLEMENT IN SUBWAY TUNNEL EXCAVATION

00: -

The present invention discloses a correspondence analysis method for causes of ground surface

settlement in subway tunnel excavation,

characterized by including the following steps: 1) consulting subway inspection reports of a region, collecting a plurality of section tunnels from the subway inspection reports as inspection samples, and collecting and counting data of causes of the ground surface settlement caused by the excavation of the section tunnels that are used as the inspection samples; 2) organizing the causes of the ground surface settlement caused by the excavation of each section tunnel in each subway section collected and counted in the step 1), and writing the causes as an index matrix; 3) calculating a normalized matrix according to the index matrix obtained in the step 2); and 4) writing a tunnel section-settlement cause matrix according to the normalized matrix calculated in the step 3).

21: 2021/09940. 22: 2021-12-03. 43: 2022-01-26 51: G06F; G06N

71: QINGDAO UNIVERSITY OF TECHNOLOGY, CHINA RAILWAY 19TH BUREAU GROUP FIFTH ENGINEERING CO., LTD.

72: ZHANG, Yongjun, WANG, Junyi, ZHU, Ming, MA, Tianhui, WANG, Zaiquan, ZHANG, Yongliang, DU, Mingqing, LIANG, Zhengzhao, LIU, Fei, YAN, Mingdong, WEN, Jinhao, WANG, Qingsong, LI, Shuguang

#### 54: NOVEL METHOD FOR PREDICTING SETTLEMENT OF METRO TUNNEL DURING CONSTRUCTION BASED ON LSTM NETWORK 00: -

The present application discloses a novel method for predicting the settlement of a metro tunnel during construction based on an LSTM network, including the following steps: 1) acquiring enough settlement data, which is complete in a cycle; 2) building and training a settlement displacement prediction model of LSTM; 3) loading data, and differentiating the data to be stable; 4) converting the data into supervised data; 5) classifying data into training data for training the model and test data, and standardizing the data; and 6) loading the network model, and performing training and prediction according to other parameters of the model, such as number of iterations, step size, and number of neurons.



#### 21: 2021/09941. 22: 2021-12-03. 43: 2022-02-01 51: G01L

71: QINGDAO UNIVERSITY OF TECHNOLOGY, Qingdao Metro Group Co., Ltd. Operating Branch, CHINA RAILWAY 19TH BUREAU GROUP FIFTH ENGINEERING CO., LTD.

72: ZHANG, Yongjun, MA, Qiangqiang, LIU, Jijian, LIU, Bing, ZHANG, Yongliang, GUO, Wei, XU, Wenxie, YAN, Mingdong, NI, Xiangyang, WEN, Jinhao, ZHANG, Weiguo, XU, Meng, CHEN, Guanping

# 54: WIND PRESSURE MONITORING AND DANGER FOREWARNING METHOD FOR MIDDLE WALL OF TUNNEL

00: -

The present invention belongs to the technical field of wind pressure monitoring, and for the problems that the existing wind pressure monitoring method for a middle wall of a tunnel has a large error and cannot reflect the actual stress condition of the middle wall, a wind pressure monitoring and danger forewarning method for a middle wall of a tunnel is provided. Step 1, selecting a wind pressure monitoring section; step 2, installing and arranging a wind pressure monitoring system; step 3, setting the control parameters of the signal collecting instrument and the sensor base, and setting the monitoring cycle; step 4, collecting and uploading the wind pressure data; step 5, equation fitting and superposition of the data; step 6, calculating the overall stress: and step 7. stability checking calculation and danger forewarning of the middle wall.



21: 2021/09942. 22: 2021-12-03. 43: 2022-02-01 51: F25B

71: Qingdao University of Science and Technology 72: YIN, Xiaohong, KONG, Dehao, WANG, Xinli 54: CASCADE ENERGY-SAVING CONTROL METHOD OF A VAPOUR COMPRESSION AND REFRIGERATION SYSTEM 00: -

The present disclosure discloses a cascade energysaving control method of a vapour compression refrigeration system, including an evaporator, an expansion valve, a condenser, a compressor, an MPC controller and a PI controller. A refrigeration demand changes along with a change of environment, an outer loop adjusts a value of degree of superheat according to current refrigeration capacity and takes the value as a set value of the degree of superheat in an inner loop, and meanwhile, the inner loop MPC controller is respectively connected to an output of the PI controller and a vapour compression hardware system at both sides, thereby realizing real-time tracking of a system set value. The beneficial effect of the present disclosure is to improve a heat transfer efficiency of the vapour compression refrigeration system.



21: 2021/09943. 22: 2021-12-03. 43: 2022-01-26 51: E04B; E04G

#### 71: Central South University

72: KUANG, Yachuan, TIAN, Run'an, CHEN, Yujie, YU, Zhiwu, MO, Xiaofei, SONG, Zhexuan 54: FABRICATED SHEAR WALL JOINT STRUCTURE AND SPLICING METHOD THEREOF 00: -

A fabricated shear wall joint structure and a splicing method thereof are provided. Vertical closed Ushaped hoops are connected to positioning bulges to ensure accurate in-place installation of a fabricated shear wall and stability during construction and installation, a temporary support during the construction of the shear wall is reduced, connection is reliable, construction is convenient, the construction speed is high, horizontal full-length reinforcements are arranged at joint positions to form reinforcement cages, and a shear wall structure with an embedded frame structure is formed by casting concrete in place in the reinforcement cages and edge constraint components of the shear wall, and the shear wall structure has the advantages of being good in integrity and anti-seismic property, and the like.



21: 2021/09945. 22: 2021-12-03. 43: 2022-01-26 51: B01D

71: Qingdao Agricultural University

72: ZHENG, Qingzhu, TIAN, Xia, WANG, Jinyi 54: CONTINUOUS CLEANING DEVICE FOR REVERSE OSMOSIS MEMBRANE MODULE AND METHOD FOR CLEANING REVERSE OSMOSIS MEMBRANE MODULE USING SAME 00: -

The present disclosure relates to a continuous offline cleaning device for a reverse osmosis membrane module.



21: 2021/09956. 22: 2021-12-03. 43: 2022-01-26 51: G16H

71: SHANDONG PROVINCIAL HOSPITAL AFFILIATED TO SHANDON FIRST MEDICAL UNIVERSITY

72: ZHAI, Hong, XU, Min, LI, Cuirong, YU, Che, WEI, Ren, LEI, Yuxin, CAO, Feng, YANG, Jun, HE, Huihui, JIANG, Ying

#### 33: CN 31: 202110076283.8 32: 2021-01-20 54: METHOD AND SYSTEM FOR REAL TIME REPORT OF MONITORING DATA OF KEY CROWD

#### 00: -

The present invention provides a method and system for real time report of monitoring data of key crowd, comprising: obtaining the detection data of suspected key crowd by polling actively a corresponding test data in real time from a hospital test LIS system according to name of each detection item of infectious diseases to be detected in a data dictionary; guerying corresponding medical image diagnosis results from a medical image database according to the ID number of the suspected key crowd; judging whether current suspected key patients belong to the key crowd based on the medical image diagnosis results, generating corresponding detection number of key crowd according to test number of key crowd; storing the detection number of key crowd and detection information corresponding to the detection number of key crowd into key crowd detection database.



21: 2021/09957. 22: 2021-12-03. 43: 2022-01-26 51: A61F

#### 71: WUXI SECOND PEOPLE'S HOSPITAL 72: JIANG, Yu, CHEN, Lina 54: AN OPERATING METHOD OF A DEVICE FOR PRODUCING PLASTERS USED IN ORTHOPEDICS ON A SMALL SCALE 00: -

An operating method of a device for producing plasters used in orthopedics on a small scale is disclosed. The device includes a main body, an ointment box, and a plurality of film rolling shafts. The ointment box and film rolling shaft are arranged at a side of the main body. The ointment box includes a box body, an upper ointment discharging layer, and a lower ointment discharging layer. Surfaces of the upper ointment discharging layer and the lower ointment discharging layer are respectively provided with a plurality of holes. The box body is hollow. One end of the box body is enclosed, and the other end of the box body is connected to an ointment supplying mechanism. The plurality of holes on the surfaces of the upper ointment discharging layer and the lower ointment discharging layer are in communication with an interior of the box body.



21: 2021/09995. 22: 2021-12-03. 43: 2022-01-31 51: G06F; G06Q

71: JILIN UNIVERSITY

72: HE, Jinxin, LI, Wenqing, LI, Qingyi, LIU, Ruichen 54: LAND SURFACE TEMPERATURE RETRIEVAL METHOD BASED ON SATELLITE DATA 00: -

The present invention belongs to the technical field of geothermal resource exploration, and particularly discloses a land surface temperature retrieval method based on satellite data, including multiple steps: satellite data acquisition; radiometric calibration and atmospheric correction; surface temperature result extraction; and comparative analysis of geothermal area. In the present invention, the land surface temperature is retrieved by utilizing a satellite data source; the data source has the characteristics of high speed, low cost and wide use range; by performing radiometric calibration and atmospheric correction on the data source, extracting the surface temperature results and performing comparative analysis on the geothermal area, a more accurate surface temperature value and a more accurate geothermal area analysis chart can be obtained; and geothermal resources can be intuitively and accurately discovered.



21: 2021/09996. 22: 2021-12-03. 43: 2022-02-03 51: F16K

71: HEZE BETTER CONSTRUCTION MACHINERY CO., LTD.

#### 72: GUOXU HUANG, BAOPING WANG 54: BUFF VALVE 00: -

A buffer valve is disclosed. The buffer valve includes a valve body provided with a second oil port. A valve sleeve connected to the lower end of the valve body. The overflow valve core is arranged in the valve body in a sliding way. The middle part of the buffer piston is in sliding fit in the valve sleeve and forms a buffer cavity with the valve sleeve, the buffer piston is internally provided with a first through-flow hole and a damping hole which is communicated with the first through-flow hole and the buffer cavity. A low port of the first through-flow hole forms a first oil port. The screw sleeve is fixedly connected to the upper part of the valve sleeve. The adjusting rod is connected on the screw sleeve and forms a spring cavity with the overflow valve core. The SPR is arranged in the SPR cavity.



21: 2021/09997. 22: 2021-12-03. 43: 2022-01-31 51: C22C

71: SHANDONG JIAOTONG UNIVERSITY 72: SUN, YUEJUN, ZHONG, LI, SU, NA, ZHAO, KANGPEI, DING, DAICUN 54: SHORT-TIME HIGH-EFFICIENCY HEAT

#### TREATMENT PROCESS FOR LIQUID DIE FORGOING AL-MG-SI ALLOY 00: -

A short-time high-efficiency heat treatment process for a liquid die forging Al-Mg-Si alloy is disclosed. The process includes the following steps of sending a liquid die forging Al-Mg-Si alloy blank casting into a heat treatment furnace to be heated, keeping the temperature after reaching a set temperature, carrying out solid solution treatment, and discharging out of the furnace and quenching with water after the solid solution treatment is finished. The blank after the solid solution treatment is sent into an aging treatment furnace to be heated, the temperature is kept after the aging temperature is reached. The method is characterized in that the solid solution treatment temperature is 560-570°C, the solid solution treatment heat preservation time is 120-180 minutes, water cooling is carried out, and the temperature of the water is controlled to be 25-30°C.

21: 2021/09999. 22: 2021-12-06. 43: 2022-01-31 51: G05F; H02J 71: GANSU NATURAL ENERGY RESEARCH INSTITUTE 72: HUA, Yaping, ZHOU, Jianping

#### 54: OPTIMUM DESIGN METHOD FOR PHOTOVOLTAIC POWER STATION 00: -

Disclosed is an optimum design method for a photovoltaic power station, comprising: S1, collecting information of an installation site of the photovoltaic power station and specifically collecting geological structures, characteristics of the earth surface, longitude and latitude information and weather information; S2, designing photovoltaic arrays of the photovoltaic power station according to the information collected in S1; S3, selecting and arranging equipment and specifically including selection and arrangement of combiner boxes as well as selection and arrangement of inverters. In the optimum design method for the photovoltaic power station, the series number of modules of each string can be calculated more reasonably, and the efficiency of a photovoltaic power station system can be effectively improved; through calculation on a spacing between every two adjacent arrays, the photovoltaic modules can be effectively ensured to be not shielded during working time, so as to further improve the power generation efficiency.



21: 2021/10124. 22: 2021-12-08. 43: 2022-02-07 51: A23K 71: ANIMAL HUSBANDRY AND VETERINARY BRANCH, HEILONGJIANG ACADEMY OF AGRICULTURAL SCIENCES 72: GAO, SHENGYUE, HE, XINMIAO, SONG, YAN, WANG, JIAHUI, WANG, WENTAO, TANG, LINGLING, LIU, ZIGUANG, HUANG, XUANKAI, CHEN, HESHU, LI, MENGSHU, WANG, RUI 54: FINE FEEDING METHOD FOR BREEDING SOWS 00: -

The present invention relates to the technical field of sow feeding, and particularly relates to a fine feeding

method for breeding sows. The method includes the following steps: S1, feeding replacement gilts; S2, feeding multiparous to-be-bred sows; S3, feeding pregnant sows; S4, feeding predelivery sows; S5, conducting delivery of the sows; and S6, feeding lactating sows. The fine feeding method for breeding sows provided by the present invention can conduct fine feeding according to different stages of the breeding sows and promote metabolism, and can increase sow immunity, decrease postpartum weight loss of the lactating sows, promote quick estrus of the sows and shorten a breeding cycle. The present invention increases a litter size of piglets and weight of neonatal piglets, and increases the annual production frequency of the breeding sows and reproductive performance of the breeding sows.

21: 2021/10125. 22: 2021-12-08. 43: 2022-02-07 51: A01C

71: INSTITUTE OF COTTON RESEARCH, SHANXI AGRICULTURAL UNIVERSITY 72: YANG, SULONG, XI, KAIPENG, SHI, JUNDONG, LIU, JING, TAO, MINGANG, QIU, YURONG, YANG, BIN, FENG, WENLONG, LI, PENGBO, YAO, ZHONG 54: NAKED SEEDLING TRANSPLANTING METHOD FOR INCREASING COTTON YIELD IN MADAGASCAR

00: -

The present invention discloses a naked seedling transplanting method for increasing cotton yield in Madagascar, which comprises the following steps: selecting a planting field of dark brown soil, and returning straws to the field after preceding crops in the field are harvested; conducting deep tillage for 25-30cm; 2-3 weeks before a rainy season, conducting seedling culture to obtain cotton seedlings; when the cotton seedlings grow 1-2 true leaves, transplanting naked seedlings into the field with a row spacing of 0.25m×0.7m or 0.2m×0.5m; conducting fertilization of cotton according to occurrence of diseases and insect pests and growth of the cotton and conducting disease and pest control; and meanwhile, conducting disbudding, pruning and topping of the cotton.

21: 2021/10126. 22: 2021-12-08. 43: 2022-02-07 51: G06F; H04L 71: YUAN, GUANG

#### 72: YUAN, GUANG

# 54: ANALYSIS SYSTEM BASED ON BIG DATA 00: -

The present invention discloses an analysis system based on big data, comprising: an analysis architecture creation module used to determine data analysis targets based on data features, characteristics and/or attributes and create an analysis architecture based on big data according to data analysis targets; a collection module used to collect web page data according to preset data collection rules; a screening module used to filter and normalize the collected web page data to obtain screening data; a classification module used to classify the screening data and extract features to obtain multiple types of feature data; and an analysis module used to perform multi-dimensional analysis and mining on the multiple types of feature data according to corresponding computing resources in the analysis architecture to obtain a plurality of data push solutions under items to be retrieved. The present invention can classify, extract, and quickly and accurately analyze the web page data.



21: 2021/10130. 22: 2021-12-08. 43: 2022-02-03 51: B01J; C07C 71: Linyi University 72: SUN, Yunqiang, PENG, Yin, JIANG, Zhiguo, YU, Han, DAI, Zhichao, HU, Zunfu, HAN, Zhicheng 54: MAGNETIC MATERIAL SUPPORTED RHODAMINE B CATALYST, PREPARATION METHOD THEREOF AND CATALYTIC APPLICATION IN SYNTHESIS OF PHENOL

# 00: -

The present disclosure discloses a method for preparing a magnetic material supported rhodamine B catalyst, comprising the following steps: a. dispersing silica-coated magnetic ferroferric oxide spherical particles uniformly in the toluene solution, then adding an organosilicon source dropwise, to prepare a functionalized magnetic ball; b. removing unreacted silane of the functionalized magnetic ball using an organic solvent as an eluent; c. dissolving Rhodamine B in water, adding the aminofunctionalized magnetic ball, conducting an EDC-NHS reaction in an aqueous medium, to obtain a magnetic material supported rhodamine B catalyst. The catalyst can be applied in the reaction of phenylboronic acid hydroxylation and conversion to phenol. The heterogeneous catalyst can be quickly recovered under the action of an external magnetic field based on the magnetism of supporter, with a recovery rate as high as 99% or more.



21: 2021/10131. 22: 2021-12-08. 43: 2022-02-03 51: A61H; A63B

71: HUBEI UNIVERSITY OF TECHNOLOGY 72: Wang Fanrong, Fang Zuchun, Xie Zhonghui 54: METHOD FOR JUDGING RUNNING TREND BASED ON POWER ACQUISITION DEVICE 00: -

The invention provides a method for judging the running trend based on a power acquisition device. The power acquisition device comprises a training frame, a training movable part, a power acquisition sensor, a microprocessor, a display module and a voice broadcast module. The power acquisition sensor acquires the power signals of multiple times in real time in each cycle and transmits the power signals to the microprocessor; the microprocessor preprocesses the real-time collected power signals in each cycle to obtain the preprocessed power signals in each cycle; the microprocessor calculates the acceleration in two adjacent cycles according to the preprocessed power signal in each cycle, further makes trend judgment according to the acceleration in two adjacent cycles, updates the data of the display module according to the result of trend judgment, and controls the voice broadcast module to perform voice broadcast counting. Compared with using infrared equipment, the invention has that advantage of optimizing the system structure, improving the accuracy of trend judgment, and being free from interference of unused light.

21: 2021/10133. 22: 2021-12-08. 43: 2022-02-03 51: A23B; B65D

71: Shanghai Jiao Tong University 72: DENG, Yun, DING, Yanfang, YIN, Hao, ZHOU, Xuefu, ZHONG, Yu, WANG, Danfeng 33: CN 31: 202011607080.9 32: 2020-12-30 54: COMPOSITE PRESERVATION FILM, PREPARATION METHOD AND APPLICATION THEREOF 00: -

The present disclosure provides a composite preservation film and a preparation method and application thereof. The composite preservation film provided by the present disclosure comprises the following raw materials in parts by weight: 0.4 to 1.2 parts of garlic stem cellulose nanocrystals, 2 to 6 parts of garlic leaf extract, and 1 to 2 parts of chitosan. The composite preservation film prepared by the present disclosure has a uniform and compact structure, a smooth surface, strong mechanical properties, barrier properties, oxidation resistance, bacteriostasis and thermal stability, etc., which is beneficial to the moisture state, oxidation resistance and thermal stability of black garlic during storage. It is beneficial to the maintenance of water state, antioxidant and bioactive substances of black garlic during storage, and the composite preservation film is rich in raw materials, low in cost, environmentally friendly and degradable, and provides a practice for the recycling of agricultural by-products.



21: 2021/10134. 22: 2021-12-08. 43: 2022-02-03 51: A61K: C12P: C12R: A61P

71: Qingdao Agricultural University

72: WANG, Fengwu, ZHANG, Jing, YUAN, Meng

# 54: MARINE FUNGUS FERMENTED EXTRACT AND USE THEREOF AS ANTI-SENILE DEMENTIA DRUG

00: -

The present invention relates to a marine fungus fermented extract and use thereof as an anti-senile dementia drug.

21: 2021/10135. 22: 2021-12-08. 43: 2022-02-03 51: B01D; B09B

71: Shanghai University

72: Li Xiaowei, Wang Xuan, Li Man, Huang Xiang, Pan Fengying, Liu Lulu

# 33: CN 31: 202110066925.6 32: 2021-01-19 54: METHOD FOR DEGRADING MICROPLASTICS IN ORGANIC SOLID WASTE

00: -

The invention discloses a method for degrading microplastics in organic solid waste, which is characterized by comprising the following steps: S1, injecting organic solid waste containing microplastics into a reaction kettle; S2, adding metal peroxide into a reaction kettle, uniformly mixing the metal peroxide with the organic solid waste and finally obtaining a mixture; S3, heating the reaction kettle to make the mixture undergo thermal hydrolysis reaction to obtain microplastics hydrolysate. Compared with the prior art, the invention has the advantages that the microplastics hydrolysate obtained by thermal hydrolysis reaction has good biodegradability, and continuous anaerobic digestion can improve the gas production rate, which is not only beneficial to the resource utilization of microplastics hydrolysate, but also can simultaneously realize the stabilization and reduction treatment of organic solid waste

#### 21: 2021/10136. 22: 2021-12-08. 43: 2022-02-03 51: C02F; D06B

71: Institute of chemistry co. Ltd Henan Academy of Sciences

72: Chen Jihong, Wang Jun, Tian Zhenbang, Huang Zuohua, Zhao Junhui, Li Jingyuan, Shi Hongbin, Huang Weiqing, Mo Chaofeng, Cui Junfeng, Zhao Kejiang, Li Binbin, Li Zhenfeng, Zhao Fusheng, Zhao Liang, Zhao Guanghui

#### 54: METHOD FOR TREATING CORD FABRIC DIPPING WASTE LIQUID AND SLUDGE RESOURCE UTILIZATION 00: -

The invention discloses a method for treating cord fabric dipping waste liquid and sludge resource utilization. The cord fabric dipping waste liquid treatment and sludge resource utilization method includes the following steps: S1: grid filtration; S2: oxidation coagulation; S3: plate and frame filterpress; S4: sludge treatment; S5: advanced treatment. The advantages of the invention are as follows: (1) sodium ferrate and hydrogen peroxide combined oxidation and coagulation process is adopted to process the cord fabric dipping waste liquid, which improves the oxidation and coagulation removal efficiency of the pollution factors in the cord fabric dipping waste liquid, and significantly reduces the viscosity of sludge; (2) The use of high-pressure membrane filter-press can treat the sludge harmlessly, and the sludge has a low water content, which reduces the cost of sludge treatment; (3) The viscosity of sludge can be reduced, so that the sludge cake after press-filter by high pressure diaphragm does not adhere to the filter cloth, which is beneficial to the removal of sludge cake, and the sludge-water separation effect is obvious.

21: 2021/10137. 22: 2021-12-08. 43: 2022-02-03 51: C08J; C08L; H01M 71: TAISHAN UNIVERSITY 72: TAN, Qinglong, HAN, Yinfeng, LI, Qun, JIA, Cong, ZHUO, Linhai, WANG, Chang'an, CHENG, Xueli, ZUO, Jian, WANG, Mingjuan 54: NON-IONIZED PBI/PVP MEMBRANE AND PREPARATION METHOD THEREOF AND FLOW BATTERY

## 00: -

The present disclosure discloses a method for preparing a non-ionized PBI/PVP membrane, comprising the following steps: step A: preparing a PBI/PVP membrane casting solution: adding PBI/PVPkn-x and 10-1,000 ml of an organic solvent into a container with a stirring device; stirring while heating to 20-60°C till a polymer is dissolved to form a uniform and transparent PBI/PVP polymer solution; when the polymer solution is cooled to a room temperature, removing bubbles and insolubles, to obtain the PBI/PVP membrane casting solution, wherein n=16, 18, 23 or 30, and x is a mass fraction of PVPKn; and step B: forming a membrane: heating and drying the PBI/PVP membrane casting solution in the step A, to obtain a PBI/PVP membrane.



21: 2021/10138. 22: 2021-12-08. 43: 2022-02-03 51: C22B

71: Leshan Normal University

72: Cao Fenghong, Cao Yi, Jiang Minggang, Zhang Yong, Qin Chaohui

# 54: INTEGRATED CRUCIBLE FOR MELTING AND MELT-SPINNING AMORPHOUS MAGNESIUM ALLOY

00: -

The invention relates to an amorphous magnesium alloy, in particular to an integrated crucible for melting and melt-spinning amorphous magnesium alloy, which comprises a crucible, an agitator, a tapered check valve, a melt-spinning crucible and a quenching roller. When the magnesium alloy solution is smelted in the melting crucible, the tapered check valve prevents the magnesium liquid from flowing out; after the molten magnesium alloy is smelted to be qualified, lift the check valve handle, and then the molten magnesium alloy will pass through the melt-spinning crucible and be ejected from the quenching roller through the nozzle, thus throwing out the required alloy sheet. The crucible for melting and melt-spinning amorphous magnesium alloy of the invention integrates melting, stirring and melt-spinning, which is favorable for obtaining amorphous or microcrystalline magnesium alloy thin strips with high yield, ensures the safety and labor-saving production of amorphous magnesium alloy, and can continuously carry out industrial production.

21: 2021/10139. 22: 2021-12-08. 43: 2022-02-02 51: B01D

71: Shaoxing Jinye Environmental Protection
Technology Co., Ltd.
72: SHEN, Yimin, XU, Guofu, MA, Peihua, WANG,
Guoxian, GE, Minmin, LU, Zhiqiang, XU, Guojun,
FANG, Guanglin, ZENG, Bin, CHEN, Feng

54: DOUBLE-BARREL SERIES CYCLONE SEPARATOR 00: -

The present disclosure discloses a double-barrel series cyclone separator. The double-barrel series cyclone separator comprises a front-stage separation barrel and a rear-stage separation barrel, wherein the pipe diameter of the front-stage separation barrel is larger than that of the rear-stage separation barrel; an air outlet of the front-stage separation barrel is connected with an air inlet of the rear-stage separation barrel; a fan is connected between the air outlet of the front-stage separation barrel and the air inlet of the rear-stage separation barrel; the front-stage separation barrel is of a negative pressure structure; the rear-stage separation barrel is of a positive pressure structure; the fan is arranged at the top of the front-stage separation barrel and is in a vertical arrangement state; and a spraying part is arranged in the rearstage separation barrel and is connected with a pipeline and a pressure pump.



21: 2021/10140. 22: 2021-12-08. 43: 2022-02-02 51: A01K

71: Shihezi University

72: Meng Hanying, Chen jing, Li Lun, He Wanjie, Zhang Weiwei, Chen Jing 54: AN INSECT SELECTIVE BEHAVIOR RESEARCH DEVICE

#### 00: -

The present invention discloses an insect selective behavior research device, characterized in that said insect selective behavior research device comprises an insect chamber, one side of said insect chamber connects to the first selection chamber in a fixed way, the inside of said first selection chamber and the second selection chamber is provided with a soil layer, the top of both said soil layers is provided with a weighing device, one side of the top of two said soil layers connects to the first square trough plate in a fixed way, the inside of two said first square trough plates connects to a control drive in a flexible way, when the slope of the mobile block contacts to the slope of the trapezoidal block, the mobile block moves backward under flexible connection between the protective spring and the flexible rod to separate from the control drive, under the elastic effect of the compression spring, the slide block is driven to go back to the original position, that is, the electromagnet can be driven to move inside the magnetic coil to generate current, enabling the magnetic coil to be live, current on the magnetic coil is transmitted via the lead wire to the weighing part where the soil layer is weighed, and the weight of insects is obtained, so that the quantity of insects can be obtained through calculation.



21: 2021/10141. 22: 2021-12-08. 43: 2022-02-02 51: A01K

71: Shihezi University

72: Chen jing, Meng Hanying, He Wanjie, Zhang Weiwei, Li Lun, Ye Siying

# 54: AN INSECT BEHAVIOR OBSERVATION AND RECORD DEVICE

00: -

The present invention discloses an insect behavior observation and record device characterized in that said insect behavior observation and record device comprises the body of said observation and record device, the top of said body of observation and record device connects to a mobile device in a flexible way, one side of the inner top of said body of observation and record device connects to the first toothed plate in a fixed way, the part of the inner top of said body of observation and record device that nearby the first toothed plate connects to the second toothed plate in a fixed way, and the first toothed plate and the second toothed plate mesh each other with a gear. When observing insects at different positions, the motor can be started, the gear connecting to the motor in a transmission way is driven by the transmission shaft, and the meshing between the first toothed plate and the second toothed plate via the gear drives the camera that connects to the gear in a flexible way to rotate. With the protective function of the chute, insects will not escape due to the big clearance arising from the movement of the main shaft of the motor, it facilitates clear and all-round observation and record of insects at different positions and also facilitates provision of accurate experiment data for subsequent experiments.



21: 2021/10142. 22: 2021-12-08. 43: 2022-02-02 51: C08F

- 71: Jiangsu Jinshan New Material Co., Ltd.
- 72: ZHANG, Jielai

# 33: CN 31: 202110284813.8 32: 2021-03-17 54: LEVEXTREL RESIN AND PREPARATION METHOD THEREOF

00: -

The present disclosure discloses a levextrel resin and a preparation method thereof. The levextrel resin includes an aqueous phase and an oil phase. The oil phase includes the following raw materials: a hydrocarbon compound, an ester compound, an organic phosphoric acid compound, an organic phosphine oxide compound, bis(2-ethylhexyl) phosphate P204, toluene or isobutanol and a peroxy initiator or an azo initiator. The aqueous phase includes the following raw materials: polyvinyl alcohol or gelatin, anhydrous calcium chloride, trisodium phosphate dodecahydrate, sodium lignin naphthalene sulfonate, hydroxyethyl cellulose, sodium chloride and water. The present disclosure has the following beneficial effects: the levextrel resin of the present disclosure can achieve efficient recovery of rare earths, and an extractant has relatively stable properties and a large loading capacity

21: 2021/10143. 22: 2021-12-08. 43: 2022-02-02 51: E21B

71: The first exploration team of Anhui Coal Geology Bureau, Anhui university of science and technology 72: Yan Qi, Sun Jiaying, Yan Jiaping

54: ULTRASONIC VIBRATION COMBINED TYPE WELL CLEANER AND ITS METHOD FOR WELL CLEANING 00: -

This invention provides ultrasonic vibration combined type well cleaner and its method for well cleaning, which comprises inner casing pipe that is arranged inside of the return pipe in the well, and well cleaning pipe that is arranged inside of the inner casing pipe with its end extends out of the return pipe. The upper part of the inner casing pipe is sleeved with packing assembly that is provided with a plurality of liquid return through holes, and each liquid return through hole is provided with one-way regulating valve, he lower part of the inner casing pipe is provided with ultrasonic vibration component, and the bottom of the inner casing pipe is provided with cleaning solution injection component, opening head of packer assembly and supporting head of ultrasonic vibration assembly are arranged outside the well cleaning pipe from top to bottom, and opening plug of cleaning solution injection assembly communicated with the well cleaning pipe is arranged at the bottom of the well cleaning pipe, which improves both sealing performance and efficiency of well cleaning operation, and saves the time of well cleaning operation is saved.

71: WANG, Lingling, DING, Yapeng, DING, Kedan 72: WANG, Lingling, DING, Yapeng, DING, Kedan 54: TOPICAL TRADITIONAL CHINESE HERBAL COMPOSITION FOR MAINTAINING BEAUTY AND KEEPING YOUNG, PREPARATION METHOD AND USE THEREOF 00: -

The present disclosure relates to a topical traditional Chinese herbal composition for maintaining beauty and keeping young, a preparation method and use thereof, and belongs to the technical field of preparation of traditional Chinese medicine. In the topical traditional Chinese herbal composition for maintaining beauty and keeping young provided by the present disclosure, raw materials include the following components: 5-15 parts by weight of Sophorae Flavescentis Radix, 5-15 parts by weight of Glycyrrhizae Radix et Rhizoma, 5-15 parts by weight of Polygonati Odorati Rhizoma, 5-15 parts by weight of Ophiopogonis Radix, 5-15 parts by weight of Mori Cortex, 5-15 parts by weight of Chuanxiong Rhizoma, 5-15 parts by weight of Angelicae Sinensis

<sup>21: 2021/10144. 22: 2021-12-08. 43: 2022-02-02</sup> 51: A61K; A61P; A61Q

Radix, 10-30 parts by weight of Astragali Radix, 5-15 parts by weight of Atractylodis Macrocephalae Rhizoma, and 5-15 parts by weight of Poria

21: 2021/10145. 22: 2021-12-08. 43: 2022-02-02 51: E21F; G06F

71: Guizhou University of Engineering Science

72: GUAN, Jinfeng, ZHOU, Kan, CHEN, Xihua, XU, Guosheng, LI, Huigui

#### 54: RISK DYNAMIC ANALYSIS METHOD OF GAS OUTBURST IN COAL WORKING FACE 00: -

The present disclosure belongs to a technical field of mining, and is specifically a risk dynamic analysis method of gas outburst in a coal working face, the analysis method is as follows: step 1, performing regional and mine gas geological law analysis to preliminarily determine a tectonic stress field feature and a mine gas occurrence feature in the coal working face; and step 2, using underground roadway and gas drainage engineering to perform an observation of a roadway deformation and failure feature and a stress trace feature, a detection of microstructure in a coal seam.



21: 2021/10146. 22: 2021-12-08. 43: 2022-02-02 51: A23J 71: Qingdao Agricultural University 72: Dai Lei, Liu Chaoran, Cui Song, Ji Na, Sun Qingjie, Qin Yang, Zhou Liyang 54: METHOD FOR IMPROVING FUNCTIONAL PROPERTIES OF PLANT PROTEIN 00: -

The invention discloses a method for improving the functional properties of plant protein, which uses a pH-driving combined annealing treatment method and belongs to the technical field of functional food processing. By using vegetable protein and emulsifier as raw materials and adopting pH-driving combined with annealing treatment to prepare composite particles, the functional properties (such as solubility, water dispersibility, emulsification, wettability, etc.) of vegetable protein are improved, and the solubility is increased to over 85 percent. Moreover, the preparation process of the invention is simple, and the particle size distribution of the obtained composite particles is uniform. Composite particles are used to load active ingredients (curcumin, resveratrol, quercetin, lycopene, etc.), and the embedding rate can be as high as 90 percent, which greatly improves the physical stability and photo-thermal stability of active ingredients, and provides a new way for stabilizing functional factors. In addition, the composite particles have good emulsibility and wettability, which can be used as an effective particle stabilizer of Pickering emulsion, expanding the application range of plant protein.



21: 2021/10147. 22: 2021-12-08. 43: 2022-02-02 51: G01N 71: North China University of Science and Technology 72: Xu Hong, Xu Dingjie, Li Tian, Li Shifeng, Cai Wenchen, Gao Xuemin, Mao Na, Jin Fuyu, Li Yaqian

# 54: AUTOMATIC ANTIBODY INCUBATION AND WASHING MEMBRANE DEVICE FOR WESTERN BLOT EXPERIMENT

00: -

The invention discloses a temperature control box, wherein a swing pipe is arranged in that temperature control box; the out wall of the swing pipe is fixedly connected with an antibody storage tank; the inner wall of that temperature control box is fixedly provided with a liquid storage tank and a driving part; the liquid storage tank is connected with the swing pipe through a water pump; the rear end of the swing pipe is fixedly provided with a transmission shaft; the side wall of that transmission shaft is rotatably connected with the inner wall of the temperature control box; and the transmission shaft is used for cooperating with the driving part to rotate the swing tube and the antibody storage tank relative to the temperature control box. According to the invention, the time of manually incubating antibodies, repeatedly replacing and dumping TBST by experimenters in the western blot experiment process is reduced, and the experiment efficiency is improved. In addition, there is no need for the experimenter to change the liquid regularly during the experiment, which greatly saves the manpower, reduces the possible errors of the experimenter and improves the stability of the experiment results, and realizes the full automation after film transfer.



21: 2021/10148. 22: 2021-12-08. 43: 2022-02-02 51: D01F; D21H 71: Beihua University 72: Wen Mingyu, Liu Yang, Duan Xixin 54: FLAME-RETARDANT ANTIBACTERIAL COMPOSITE WALLPAPER AND PREPARATION

METHOD THEREOF

00: -

The invention discloses a flame-retardant antibacterial composite wallpaper and a preparation method thereof, belonging to the technical field of wall decoration materials. The flame-retardant antibacterial composite wallpaper comprises a base laver: the back of the base laver is sequentially provided with an antibacterial layer, a flameretardant layer and a waterproof layer; the base layer is provided with an antibacterial coating layer; antibacterial coating layer is provided with a threedimensional printing layer; the three-dimensional printing layer is provided with a scratch-proof layer; and the scratch-proof layer is provided with a film coating layer. The composite wallpaper base material of the invention is cheap and easily available, has the properties of moisture absorption, ventilation and easy biodegradation, and is sequentially provided with an antibacterial layer, a flame retardant layer and a waterproof layer. The base layer of composite wallpaper is made of cheap and easy-to-get materials with excellent moisture absorption, breathability and biodegradability, and is provided with an antibacterial layer, a flameretardant layer and a waterproof layer in turn; the antibacterial layer and the antibacterial coating layer are distributed on both sides of the base layer, and the scratch-proof layer and the coating layer are sprayed outside the three-dimensional printing layer. In the invention, multiple barriers is set for guaranteeing the flame-retardant, antibacterial and mildew-proof performance of wallpaper; in addition, the adhesive used in the preparation process contains flame-retardant fillers, further improving the flame retardant performance of wallpaper. Finally, for advantages of simple preparation method and excellent performance, the invention is suggested to popularize.



# 21: 2021/10149. 22: 2021-12-08. 43: 2022-02-02 51: G01F; G01N

71: Anhui University of Science and Technology 72: Zhang Xuesen, Yang Li, Zhu Yanna, Wang Xiangqian

# 54: WIDE-RANGE DUST MONITORING SYSTEM AND METHOD IN COAL MINE

00: -

The invention relates to the technical field of dust monitoring, in particular to a coal mine large-scale dust monitoring system and method, which includes a coal mining module, a first detection module, a first dust-reducing module, transportation module; bearing and accommodating module, coal crushing module, a second detection module, a second dustreducing module, central processing module, intelligent control module, alarm module, the coal mining module includes a coal mining machine for mining coal; the transportation module includes a conveyor belt for transporting coal; the bearing and accommodating module comprises a closed accommodating chamber for dust and sound insulation. According to the invention, the setting of a coal mining module, a first detection module, a first dust-reducing module, transportation module; bearing and accommodating module, coal crushing module, a second detection module, a second dustreducing module, central processing module, intelligent control module, and an alarm module is arranged, which has the functions of large-scale monitoring, automatic dust-reducing, intelligent control, efficient dust-reducing, remote alarm and so on.



# 21: 2021/10152. 22: 2021-12-08. 43: 2022-02-02 51: C21C

71: WUST Automation System Company, Ltd.
72: HU, Zhigang, ZHU, Yingtao
54: OXYGEN LANCE WITH FUNCTION OF ON-LINE CONTINUOUS DETECTION OF MOLTEN
STEEL TEMPERATURE IN CONVERTER AND
USE METHOD THEREOF

00: -

The present disclosure discloses an oxygen lance applied to converter smelting and having an on-line continuous temperature detection function and a use method thereof. An auxiliary pipe is installed inside a main oxygen blowing pipe channel of the oxygen lance, and an optical path formed by a lens and a reflector is installed in the auxiliary pipe. With the optical path, a thermal radiation signal of molten steel in a converter is transmitted to an infrared camera outside the oxygen lance. An infrared multiwavelength method is used to detect molten steel temperature. The continuous temperature detection of molten steel during oxygen blowing of the converter is realized, and the control accuracy of molten steel temperature target in converter steelmaking is improved.



21: 2021/10182. 22: 2021-12-09. 43: 2022-02-07 51: A61K

71: JIUQUAN XINYUAN AGRICULTURE CO., LTD., JIUQUAN ACADEMY OF AGRICULTURAL SCIENCES, GAOTAI COUNTY FORESTRY TECHNOLOGY EXTENSION STATION, ZHANGYE ACADEMY OF AGRICULTURAL SCIENCES 72: MA, Dong, GAO, Yanlin, SUN, Xiangchun, ZHENG, Rong, MIAO, Chunqing, WANG, Xueqiang, WANG, Juan, CHEN, Peng, JIA, Yujuan, WANG, Xinhai, WANG, Weiming

# 54: MÉTHOD FOR CULTIVATING CISTANCHE DESERTICOLA MA

#### 00: -

The present invention provides a method for cultivating Cistanche deserticola Ma. The method includes the following steps: a, coating pasty attapulgite on the surface of inoculation paper, then sowing Cistanche deserticola Ma seeds on the attapulgite, and drying in the shade to obtain the inoculation paper for later use; and b, digging inoculation ditches beside Haloxylon ammodendron, and burying the above inoculation paper for later use in the inoculation ditches for cultivation. According to the method for cultivating Cistanche deserticola Ma provided by the present application, an inoculation success rate is high; a ratio of growing multiple pieces of Cistanche deserticola Ma on each Haloxylon ammodendron root is high; and the yield of Cistanche deserticola Ma can be greatly increased.

21: 2021/10185. 22: 2021-12-09. 43: 2022-02-07 51: A01H

71: JIUQUAN XINYUAN AGRICULTURE CO., LTD, JIUQUAN ACADEMY OF AGRICULTURAL SCIENCES, ZHANGYE ACADEMY OF AGRICULTURAL SCIENCES 72: SUN, Xiangchun, WANG, Xueqiang, MA, Dong, ZHENG, Rong, MIAO, Chunqing, WANG, Juan, JIA, Yujuan, SONG, Xuelin, YANG, Yong, WANG, Xinhai, WANG, Weiming 54: CORN SEED PREPARATION METHOD THROUGH ROW POLLINATION 00: -

Disclosed is a corn seed preparation method comprising: covering mulching films after land preparation; sowing corn female and male parent seeds; planting 1 row of the male every 5 rows of the female, a distance between two adjacent rows is 0.45-0.55 m; planting the parents at an interval; planting the male at two stages; detasseling the female at a heading stage; performing natural cross pollination; and cultivating the seeds to harvest hybrid corn seeds. By adjusting the planting spacing and adjusting batch planting time of the parents and the own batch planting time of the male, the mulching films are covered to stabilize differences of growth stages of the parents. The planting ratio of 5: 1; pollination demands of the female parent are met; and purity of the obtained hybrid seeds is up to 95% or higher. Moreover, artificial participation is not needed during pollination.

21: 2021/10186. 22: 2021-12-09. 43: 2022-02-07 51: G01N

71: INNER MONGOLIA ACADEMY OF AGRICULTURAL AND ANIMAL HUSBANDRY SCIENCES

72: SUN, Lin, XUE, Yanlin, WU, Xiaoguang, XIAO, Yanzi, WANG, Chao, ZHANG, Fujin, NA, na, WU, Nier, QI, Limoge, ZHAO, Yi

# 54: MONITORING DEVICE FOR MILDEWING OF FORAGE GRASS

00: -

The present invention discloses a monitoring device for mildewing of forage grass, comprising an alarm box; supporting strips having humidity sensors are arranged on the inner wall of the box; a probing hole is formed in a top plate of the box having a probing

end of the humidity sensor stretching out of the probing hole; an air hole with an air pump having a pipeline connected with an exhaust pipe is formed in a bottom plate of the box; a pipeline at one end of the exhaust pipe is connected with a mildewing inductor having an oxygen concentration inductor; the tail end of the oxygen concentration inductor is communicated with an exhaust port formed in the side wall of the box; and an alarm system is electrically connected with the humidity sensor, the mildewing inductor and the oxygen concentration inductor respectively.

21: 2021/10187. 22: 2021-12-09. 43: 2022-02-02 51: B08B; G07D

71: Henan Polytechnic

72: Xuexia Dou, Hua Tian, Yongkuan Zhu,

Mengyuan Jiang, Baige Zhang, Yifan Wang, Ruoxi Yang, Jingwen Liu

# 54: INVOICE ANTI-COUNTERFEITING DETECTOR FOR FINACIAL ROBOTS

00: -

The disclosure provides an invoice anticounterfeiting detector for financial robots, comprising a frame body and an anti-counterfeiting detector body installed on the frame body, wherein the frame body is provided with a dust removal mechanism including a fan, an air outlet plate and a baffle; the fan is installed on the frame body and has an output end to be connected with an air outlet pipe; the air outlet pipe is connected with an air outlet plate at one end away from the fan; and the air outlet plate is slidably connected to the frame body. When dusting the anti-counterfeiting detector body, the air outlet plate is raised out of the storage groove by the wind of the fan, the baffle is raised out of the sliding groove, and the dust catching rack is raised out of the dust collecting groove, thereby enclosing the anti-counterfeiting detector body and removing, restraining and collecting the dust on the anticounterfeiting detector body to avoid the dust from escaping to the surroundings, while reducing the area occupied by the dust removal mechanism on the surface of the frame body to avoid interference with the normal use of the anti-counterfeiting detector body.



21: 2021/10188. 22: 2021-12-09. 43: 2022-02-02 51: B29B; F26B

71: ZHANGJIAGANG LIANDA MACHINERY CO., LTD

72: ZHENG, Yong, PAN, Xueming

33: CN 31: 202110478686.5 32: 2021-04-30 54: STUFF CANISTER ASSEMBLY OF INFRARED DEHUMIDIFICATION, CRYSTALLIZATION, DRYING ALL-IN-ONE MACHINE 00: -

The present invention discloses a stuff canister assembly of an infrared dehumidification, crystallization, drying all-in-one machine, including a stuff canister body rotatably mounted on a stand. A discharge port is arranged on a side wall of the stuff canister body and is hinged with a discharge cover plate; a magnetic structure for supplying a closure force to the discharge cover plate to keep the discharge cover plate at a closure station is arranged between the discharge cover plate and the stuff canister body; a cover pull structure is arranged on the stand and located below the stuff canister body; when the stuff canister body rotates along a discharge rotation direction, the cover pull structure pulls the discharge cover plate to be opened; and when the stuff canister body rotates along an operation rotation direction, the cover pull mechanism actively or passively keeps a clearance from the discharge cover plate.



21: 2021/10189. 22: 2021-12-09. 43: 2022-02-02 51: A23F

71: Qinghai Huashi Technology Investment Management Co., Ltd., Qinghai Huashi Highland Barley Biological Technology Development Co., Ltd., Qinghai Zhongcheng Food Testing Co., Ltd. 72: HAO, Jing, DU, Yan, MA, Ping, ZHANG, Chengping, JI, Chengjun, WU, Jing, ZHANG, Jianling, FAN, Meixiang, QI, Xingfang 54: METHOD FOR PREPARING HIGHLAND BARLEY BRAN TEA RICH IN WATER-SOLUBLE DIETARY FIBERS 00: -

The present disclosure relates to a method for preparing the highland barley bran tea rich in the water-soluble dietary fibers. Mixing 1-2 parts by weight of a small chrysanthemum bud powder with 0.5-1.5 parts by weight of a Echeveria 'silhouette' powder, 0.2-0.8 part by weight of a Lycium barbarumL. powder and 5-10 parts by weight of a highland barley bran powder to obtain mixed powder; adding water to the mixed powder, uniformly mixing, and then performing granulation and drying to obtain the highland barley bran tea with the moisture content less than or equal to 10.0%. The highland barley bran tea prepared in the present disclosure has high soluble dietary fiber content, the production process is simple and easy to master and the production cost is low.

21: 2021/10190. 22: 2021-12-09. 43: 2022-02-02 51: A01H; C12N 71: Northwest A and F University 72: MAO, Hude, KANG, Zhensheng, HUANG, Xueling 33: CN 31: 202111073339.0 32: 2021-09-14

# 54: PROTEIN TAPYL1, CODING GENE AND USE THEREOF

00: -

The present disclosure discloses a protein TaPYL1, and a coding gene and use thereof. The protein TaPYL1 has an amino acid sequence shown in SEQ ID NO: 1. Experiments prove that the overexpression of the gene TaPYL1 in the wheat variety Fielder can increase the drought resistance and/or yield of the wheat. The increased drought resistance is manifested by increased survival rate, reduced water loss rate, increased photosynthesis rate and water use efficiency, and decreased stomatal conductance and transpiration rate. The increased yield is manifested by increased grain length and width and improved yield per plant. The protein TaPYL1 can regulate the drought resistance of a plant. The present disclosure has important application values.



#### 21: 2021/10191. 22: 2021-12-09. 43: 2022-02-02 51: A01C; C05G

71: Chongqing Academy of Agricultural Science

72: Xu Ze, Yang Haibin, Deng Min, Sheng Zhonglei, Wu Xiuhong

#### 54: TEA GARDEN FERTILIZING METHOD WITH REDUCED QUANTITY AND TIMES 00: -

The invention discloses a tea garden fertilizing method with reduced quantity and times, which comprises the following steps: 1) acidizing and improving the soil with pH value lower than 4.5 in early October of each year; 2) applying tea formula fertilizer every year from mid-October to mid-November. The nitrogen content of tea formula fertilizer is 21 percent, phosphorus content is 9 percent, potassium content is 9 percent, selenium content is 1.5 percent, zinc content is 1.5 percent and rare earth content is 1.5 percent; 3) applying urea-formaldehyde slow-release fertilizer in late January of each year. The fertilizing method of the

invention can meet the growth requirements of tea trees only by applying topdressing once a year, greatly reducing the number of fertilizing times and the amount of fertilizing by more than 25 percent; meanwhile, the fertilizing method can increase the contents of selenium, zinc and tea polyphenols in tea leaves, increase the yield of tea leaves, improve the soil and enhance the soil vitality.

21: 2021/10192. 22: 2021-12-09. 43: 2022-02-02 51: C02F

71: Institute of Animal Science and Veterinary Medicine, Shandong Academy of Agricultural Sciences

72: Guo Jianfeng, Wang Huaizhong, Liu Xiaohui, Lin Haichao, Zhao Xueyan, Wang Yanping, Tao Zhiyong 54: WASTEWATER TREATMENT DEVICE FOR PIG FARM 00: -

The invention discloses a wastewater treatment device for pig farm, which comprises sewage delivery pipes, a lifting plate, an annular rotating plate, a device body, connecting pipes, sewage suction components, lifting rings and connecting rods; the annular rotating plate is rotatably arranged at the outer edge of the top opening of the device body, the lifting plate is vertically installed above the annular rotating plate, multiple groups of sewage delivery pipes are vertically arranged side by side through the lifting plate, and the bottom ends of the multiple groups of sewage delivery pipes correspond to the connecting pipes arranged in the device body, connecting rings are fixedly sleeved near the bottom ends of the multiple groups of connecting pipes, and connecting rods are fixedly welded among the multiple groups of connecting rings; the outer ends of the two groups of connecting rods fixedly connected to the outer sides of the outer two groups of connecting rings are both rotatably connected with the lifting rings which are vertically arranged in the device body through bearings, and the bottom ends of the plurality of groups of connecting pipes are respectively connected with a group of the sewage suction components. The wastewater treatment device for pig farm has the advantages of reasonable structural design, simple and convenient use and operation, so the device can be widely popularized and used.



21: 2021/10193. 22: 2021-12-09. 43: 2022-02-02 51: C12G; C12N; C12R 71: BEIJING TECHNOLOGY AND BUSINESS UNIVERSITY 72: REN, Qing, XU, Jialiang, SUN, Zhanbin, YAN, Yi, SUN, Leping, XING, Xuan 54: NEW PLANOMICROBIUM BEIGONGSHANGENSIS STRAIN AND USE THEREOF 00: -The present disclosure provides a new

Planomicrobium beigongshangensis strain and use thereof. The strain is P. beigongshangensis, deposited at the China General Microbiological Culture Collection Center (CGMCC) with an accession number of CGMCC NO. 19207. It is demonstrated that the present disclosure provides a new P. beigongshangensis strain, which is isolated from pit mud of baijiu, can produce fragrant flavor substances, and can be used for fermenting and making liquor.

Planococcus citreus NCIMB 1493 <sup>7</sup> (NR. 026090)
<sup>211</sup> Physics we reflect sensite M8 <sup>T</sup> (NR 075553)
Planotoccus representation of Control Press (11 (NR 042395)
Planning to be NEATLETING <sup>T</sup> (NR 148201)
26 4 Planococcus mariamas (P-9 (NK 02547)
Planococcus plakoritats AS/ASP6 (II) (NR 109414)
sp Planococcus matriensus S1 (NR_025592)
Planococcus ruber CW1 <sup>T</sup> ( NR_157741)
Planococcus faecalis AJ003 <sup>1</sup> (NR 137406)
Planococcus kocurii NCIMB 629 <sup>T</sup> (NR 026091)
Planococcus antarcticus CMS 26or <sup>3</sup> (NR 025469)
Planacurcus dombaensis BU <sup>†</sup> (NR: 044073)
Planararan serving 110.15 <sup>4</sup> (NP 156838)
Planomicrobium korcense (G07 <sup>†</sup> (NR 025011)
Planomicrobium alkanoclasticum MAE2 <sup>†</sup> (NR 024864)
Parameterson Planenticrobium neuroperabilium CMS 53co <sup>T</sup> (NR 028050)
Control of the second sec
6 Planomicrobium begongshangensis
Psychrobacillus lasticapitis NEAU-31GS17 (NR_159144)
as Sporosarcina soli 180° (NR_043527)
10 Sporosarcina contaminans CCUG 53915 <sup>1</sup> (NR 116955)
10 Sporosarcina koreensis F73 <sup>T</sup> (NR 043526)
Sporasarcina hateola Y1 <sup>T</sup> (NR 112844)
Sporosarcina saromensis HG645 <sup>T</sup> (NR_041359)
1 MARES

#### 21: 2021/10194. 22: 2021-12-09. 43: 2022-02-02 51: G01H; G01N

71: Xi'an University of Technology

72: Zhu Guojun, Li Kang, Feng Jianjun, Luo Xingqi 33: CN 31: 202110250580.X 32: 2021-03-08 54: JUDGMENT METHOD FOR CAVITATION INITIATION OF HYDRAULIC TURBINE BY COMBINING VIBRATION TEST AND PRESSURE PULSATION TEST

00: -

The invention discloses a determination method for cavitation inception of hydraulic turbine by combining vibration test and pressure pulsation test. By collecting vibration speed and pressure pulsation signals of a hydraulic turbine under different working conditions, a method for judging cavitation incipient by using the change of first-order differences Delta Ai and Delta Bi of amplitude of vibration speed and pressure pulsation signals along with cavitation coefficient Sigma is proposed for the first time. When cavitation does not occur in the turbine, the firstorder differences Delta Ai and Delta Bi between vibration speed and pressure fluctuation signal amplitude increase slowly with the decrease of cavitation coefficient Sigma. At the beginning of cavitation, the micro bubbles in the turbine play a buffering role, which reduces the impact of water flow on the turbine wall, resulting in lower amplitude of vibration speed and pressure pulsation signal. When cavitation is further serious, the vibration and pressure pulsation of the turbine will intensify, so the cavitation incipient point can be found through vibration test and pressure pulsation test.



21: 2021/10195. 22: 2021-12-09. 43: 2022-02-02 51: C04B

71: Fuzhou University, FUJIAN YONGZHENG CONSTRUCTION QUALITY INSPECTION CO., LTD

72: GU, Yin, SUN, Ying, HUANG, Xinyi, CHAO, Pengfei, MAO, Guijun

33: CN 31: 202110202016.0 32: 2021-02-23 54: SPRAYABLE AND HIGH-DUCTILITY POLYVINYL ALCOHOL-REINFORCED ENGINEERED CEMENTITIOUS COMPOSITE (PVA-ECC) AND PREPARATION METHOD THEREOF

00: -

The present disclosure discloses a sprayable and high-ductility polyvinyl alcohol-reinforced engineered cementitious composite (PVA-ECC) and a preparation method thereof. The sprayable and highductility PVA-ECC includes the following components in parts by weight: 10 parts of a cementitious material, 5 parts of a fine quartz sand, 0.003-0.006 parts of hydroxypropyl methylcellulose (HPMC), 0.02-0.1 parts of a water reducing agent, 0.17-0.23 parts of a polyvinyl alcohol (PVA) fiber and 2.8-3 parts of water; where the PVA fiber accounts for 1.5-2% of the sprayable and high-ductility PVA-ECC. The sprayable engineered cementitious composite (ECC) provided by the present disclosure has relatively high impermeability and chemical corrosion resistance, and has a rebound rate in

concrete controlled within 5%. The sprayable ECC provided by the present disclosure has excellent mechanical properties, where a compressive strength can reach 50 MPa, a uniaxial tensile strain is 3-5%, and there is obvious multiple cracking and strain hardening.



#### 21: 2021/10196. 22: 2021-12-09. 43: 2022-02-02 51: A61F; A61K; A61P 71: ZHEJIANG OCEAN UNIVERSITY 72: SONG, Ru, YANG, Shuyi, WEI, Rongbian

54: PREPARATION METHOD OF WATER-SOLUBLE ASTAXANTHIN NANOEMULSION AND PREPARATION METHOD OF SELF-HEATING ANTI-FATIGUE EYE PATCH

00: -

The present disclosure provides a preparation method of a water-soluble astaxanthin nanoemulsion. The preparation method is environmentally friendly, simple and feasible. The obtained astaxanthin nanoemulsion and water can be mutually soluble in each other in any ratio. Furthermore, the astaxanthin nanoemulsion has high temperature stability and can be mixed with a hydrophilic matrix material according to a ratio requirement. For example, the astaxanthin nanoemulsion and an aqueous system can be mutually soluble in each other, and after being heated at 60 degrees Celsius for 4 hours, more than 90% of astaxanthin are still retained. Heating antifatigue eye patches can be prepared from the astaxanthin nanoemulsion and used to prevent and improve uncomfortable symptoms of eyes such as asthenopia and xerophthalmia with the anti-oxidation and fatigue reduction effects of the astaxanthin.

#### 21: 2021/10197. 22: 2021-12-09. 43: 2022-02-02 51: C12C

71: Jinan Kerun Biotechnology Co., Ltd.
72: Ll, Jiyuan, ZHAO, Ping, ZHAO, Wenjuan
54: PREPARATION METHOD OF SECONDARY
FRESH-KEEPING FERMENTED BEER
00: -

The present disclosure relates to a preparation method of secondary fresh-keeping fermented beer, which mainly includes the following steps: making fermentation preparations of conventional beer, and conducting pure-bred fermentation according to strict aseptic conditions of draft beer to prepare primary fermentation puree beer; removing bacteria in the puree beer prepared in the above step to prepare a secondary fermentation base liquor; adding 6-10% in mass fraction of a tender fermentation liquor prefermented with a low-alcohol yeast to the prepared base liquor as a fermentation substrate to prepare a secondary fermentation raw liquor; and adding a low diacetyl strain liquor to the secondary fermentation raw liquor to prepare a secondary fermentation liquor, then filling the secondary fermentation liquor, and controlling subsequent storage and transportation temperatures to conduct slow freshkeeping fermentation to prepare the secondary fresh-keeping fermented beer.

#### 21: 2021/10198. 22: 2021-12-09. 43: 2022-02-02 51: G01N

71: Shandong University of Science and Technology 72: SUN, Wenbin, KONG, Lingjun, ZHU, Xia, ZHANG, Peng, DONG, Faxu, LIU, Weitao, HAO, Jianbang, ZHANG, Jiyang, YANG, Can 54: METHOD AND SYSTEM FOR WARNING, AND PREVENTION AND CONTROL BY STAGE OF WATER INRUSH DISASTERS BY TECTONIC ACTIVATION

00: -

The invention discloses a method and system for warning, and prevention and control by stage of a water inrush disaster by tectonic activation. The method includes: dividing a water inrush process by space-time nodes by factor change laws in an entire space-time evolution process of a water inrush disaster by tectonic activation; obtaining water inrush disaster stages according to the space-time nodes; determining whether a tectonic activation stage begins according to microseismic signals generated

by rock breakage; performing warning, prevention and control on tectonic activation when the tectonic activation stage begins, and predicting a water inrush rising path by the microseismic signals; performing warning, prevention and control on the water inrush rising path and a water inrush position, and monitoring the water inrush rising path and the water inrush position; and when the complete water inrush pathway is formed, performing warning, prevention and control on a water inrush pathway.



#### 21: 2021/10200. 22: 2021-12-09. 43: 2022-02-02 51: A23L

71: Hebei Normal University of Science And Technology, Hebei Sport University
72: LIU, Suwen, FU, Mengfan, SHI, Donglin, GUO, Shuo, ZHANG, Dong, WANG, Hao, ZHOU, Junyi
54: ANTI-FATIGUE POLYPHENOL COMPOSITE MEAL POWDER AND PREPARATION METHOD THEREOF

00: -

The invention provides anti-fatigue polyphenol composite meal powder. The anti-fatigue polyphenol composite meal powder is developed through microencapsulation technology by using the characteristics of raw materials. The powder is free of pigments and preservatives, good in appearance and taste, suitable for the public taste, outstanding in anti-fatigue function, purplish red in color and luster, delicate in taste, sour-sweet and tasty, good in brewing performance and rich in nutrition.



21: 2021/10201. 22: 2021-12-09. 43: 2022-02-02 51: B01J; H01M; B82Y 71: Linyi University 72: LIU, Yue 54: REDOX CATALYST BASED ON HETEROATOM-DOPED CARBON NANOTUBE LOADED WITH IRON PHOSPHIDE NANOPARTICLES AND PREPARATION METHOD THEREOF

00: -

The present disclosure belongs to the technical field of preparation of novel nano materials, and relates to a redox catalyst based on a heteroatom-doped carbon nanotube loaded with iron phosphide nanoparticles. The nano-catalyst uses a polyphosphazene nanotube as a heteroatom-doped carbon nanotube precursor, and an organic iron salt or an inorganic iron salt as an iron element precursor. After the iron element precursor is adsorbed by the polyphosphazene nanotube, hightemperature carbonization is conducted in an inert atmosphere to obtain a composite material based on a heteroatom-doped carbon nanotube loaded with iron phosphide nanoparticles. The composite material, as a redox catalyst, has an excellent redox catalytic performance, a catalytic activity close to that of commercial Pt/C catalysts and a lower cost and an easier preparation method. In addition, the composite material has better catalytic durability and methanol toxicity resistance than the commercial Pt/C catalysts.



21: 2021/10202. 22: 2021-12-09. 43: 2022-02-02 51: H01M; B82Y 71: Linyi University 72: CHEN, Kuiyong 54: REDOX CATALYST BASED ON HETEROATOM-DOPED CARBON MICROSPHERES LOADED WITH IRON PHOSPHIDE NANOPARTICLES AND PREPARATION METHOD THEREOF 00: -

The present disclosure belongs to the technical field of preparation of novel nano materials, and relates to a redox catalyst based on heteroatom-doped carbon microspheres loaded with iron phosphide nanoparticles. The nano-catalyst is prepared by using polyphosphazene microspheres as a precursor of heteroatom-doped porous carbon microspheres, and using an organic iron salt or an inorganic iron salt as an iron phosphide precursor, where the iron salt is adsorbed by the polyphosphazene microspheres and carbonized under an inert atmosphere. The catalyst has a catalytic activity close to that of commercial Pt/C catalysts and a lower cost and an easier preparation method. In addition, the catalyst has better catalytic stability, methanol toxicity resistance and carbon monoxide toxicity resistance than the commercial Pt/C catalysts.



21: 2021/10203. 22: 2021-12-09. 43: 2022-02-02 51: A01K

71: Institute of Animal Science and Veterinary Medicine, Shandong Academy of Agricultural Sciences

72: GUO JIANFENG, ZHAO XUEYAN, LIU XIAOHUI, LIN HAICHAO, XIE QINGZHU, HU HONGMEI, LI JINGXUAN, HAO LIHONG 54: FEED MIXING EQUIPMENT FOR PIG BREEDING

# 00: -

The invention discloses a feed mixing equipment for pig breeding, which comprises a equipment body, a feed inlet and a discharge outlet. The top of the equipment body is provided with a feed inlet; the bottom of the feed inlet is provided with a feed channel; a second motor is arranged in the middle of the feed channel; the top of the second motor is connected and distributed with stirring rods; the side of the second motor is welded and distributed with brackets; the inside of the equipment body is provided with a rotating drum; the left end of the inner side of the equipment body is provided with a spray head; the outer end of the spray head is electrically connected with a pressurizing equipment; ntc temperature sensors and HIH-3602 humidity sensors are distributed at the right end of the inner side of the equipment body; the middle of the bottom of the equipment body is provided with a discharge port. The connection of the feed mixing equipment for pig breeding is stable, while mixing the feed, it can intelligently monitor the temperature and humidity of the internal feed in real time, and

efficiently control the discharge of the feed; the pressurization equipment connected with the spray head can efficiently spray water with high pressure to clean the inside of the equipment, which is convenient to use.



21: 2021/10204. 22: 2021-12-09. 43: 2022-02-02 51: G06Q

71: Chongqing Academy of Agricultural Science 72: Yang Haibin, Xu Ze, Sheng Zhonglei, Deng Min, Zhang Ying

#### 54: RECOMMENDED FERTILIZATION SYSTEM FOR CAMELLIA SINENSIS 00: -

The invention belongs to the technical field of tea planting, and discloses a recommended fertilization system for Camellia sinensis, which comprises an information collection module, an information transmission module, an information analysis module, an abnormal value search module, a central control module, an abnormal value elimination module, a database construction module, a fertilizer effect determination module and a recommended fertilization module. According to the invention, the fertilization habits of tea farmers are investigated, a reasonable fertilizer effect curve is constructed based on the fertilization habits of tea farmers, and a convenient recommended fertilization program is developed, so that the problem that farmers cannot calculate and apply fertilizer can be solved, and the tea farmers can be guided to apply fertilizer scientifically and reasonably. The recommended

fertilization system for Camellia sinensis, provided by the invention, establishes a fertilizer effect curve by using SG filtering method through the investigation of large samples of fruit farmers in the region, develops a convenient recommended fertilization system, solves the problem that farmers can't calculate and apply, and provides scientific and reasonable fertilization guidance.



#### 21: 2021/10205. 22: 2021-12-09. 43: 2022-02-02 51: A01P

71: Agricultural Environment and Resources Institute of Yunnan Academy of Agricultural Sciences
72: Zhang Qing, Zhu Hongye, Yang Jida, Fu Chengxiu, Yang Peiwen
54: BACTERICIDAL TREATMENT AGENT FOR

# WASTE VEGETABLE LEAVES AND PREPARATION METHOD AND APPLICATION THEREOF

#### 00: -

The invention discloses a bactericidal treatment agent for waste vegetable leaves and its preparation and application, belonging to the technical field of waste vegetable leaf treatment. The bactericidal treatment agent comprises the following raw materials in parts by weight: 35-50 parts of wormwood, 20-40 parts of Forsythia suspensa, 15-30 parts of Lonicera japonica, 4-10 parts of Gleditsia sinensis, 2-6 parts of Taraxacum mongolicum, 0.1-0.15 part of bis-quaternary ammonium salt, 0.1-0.15 part of glutaraldehyde, 0.05-0.1 part of chlorothalonil and 0.03-0.08 part of propamocarb; according to the

invention, wormwood, Forsythia suspensa, Lonicera japonica, Gleditsia sinensis and Taraxacum mongolicum are used as raw materials, which can play a certain bactericidal efficacy; on this basis, bisquaternary ammonium salt, glutaraldehyde, chlorothalonil and propamocarb are added, and their bactericidal mechanisms are different; each component has good coordination and cooperation, can play a synergistic role, and has the advantages of broad spectrum, high efficiency, strong peeling permeability and the like.

21: 2021/10206. 22: 2021-12-09. 43: 2022-02-02 51: A61B

71: The first affiliated hospital of bengbu medical college

72: Dong Huaifu, Zheng Haiyan, Dong Xiaoyu, Chen Shuang

# 54: FIXING DEVICE FOR CHILDREN LUMBAR PUNCTURE OPERATION

00: -

The invention relates to the technical field of medical instruments, in particular to a fixing device for children's lumbar puncture operation, which comprises a frame assembly, wherein two first rotating shafts are rotatably connected to two side walls of the frame assembly respectively; one end close to each other of the two first rotating shafts is fixedly connected with a first rotating disk and a second rotating disk respectively; one end close to each other of the first rotating disk and the second rotating disk is fixedly connected with a placement groove; the bottom of the placement groove is provided with an opening, and the first rotating disk and the second rotating disk are connected with a first power part. The invention can achieve the purpose of replacing the hands of medical staff and maintaining the bow posture of children.



21: 2021/10209. 22: 2021-12-09. 43: 2022-02-02 51: F24F

71: LADE, Rohit Ashok, MOHANASUNDARAM, Ramkumar, DADHEECH, Pankaj, SHETTY, Niyat, URKUDE, Ashish Manohar, HAQUE, Mahmudul, PALLIVALAPPIL, Abdul Shareef, DAHIYA, Vineet, ROUT, Sandeep, BHANU, Battu Balaji, PATIL, Vijay Narendranath, SUBRAMANIAN, Muthukumar 72: LADE, Rohit Ashok, MOHANASUNDARAM, Ramkumar, DADHEECH, Pankaj, SHETTY, Niyat, URKUDE, Ashish Manohar, HAQUE, Mahmudul, PALLIVALAPPIL, Abdul Shareef, DAHIYA, Vineet, ROUT, Sandeep, BHANU, Battu Balaji, PATIL, Vijay Narendranath, SUBRAMANIAN, Muthukumar 54: SMART MONITORING AND CONTROL OF AN INDOOR VEGETATION ENVIRONMENT SYSTEM USING ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING APPROACH 00. -

The present invention relates to Smart monitoring and control of an indoor vegetation environment system using artificial intelligence and machine learning approach. The objective of the present invention is to solve the problems in the prior art technologies related assistive device indoor vegetation environment.



21: 2021/10211. 22: 2021-12-09. 43: 2022-02-03 51: Y02A

71: SHANGHAI OCEAN UNIVERSITY

72: SUN, Xiaohong, LI, Darong, ZHAO, Jiayi, ZHAO, Yong

# 54: PRIMERS, KIT, AND METHOD FOR RAPID DETECTION OF VIBRIO CHOLERAE (V. CHOLERAE) BASED ON RECOMBINASE-AIDED AMPLIFICATION (RAA)-LATERAL FLOW DIPSTICK (LFD)

00: -

The present disclosure discloses primers, a kit, and a method for rapid detection of Vibrio cholerae (V. cholerae) based on a recombinase-aided amplification (RAA)-lateral flow dipstick (LFD). The primers for detecting V. cholerae based on RAA-LFD have strong specificity and can accurately detect V. cholerae from other Vibrio bacteria and pathogens. The method of the present disclosure has high sensitivity, with genome sensitivity of 2.5 fg and pure bacterial solution sensitivity of 6.9 x 102 CFU/mL, which is ten times more sensitive than PCR. The method is based on RAA-LFD that the present disclosure can detect V. cholerae at 32 °C to 38 °C for 20 min, which has low requirements on instruments and has promising application prospects in detection on aquaculture sites.

# A 4 75 75 76 75 75 76 75 76 75 76 75 75 76 75 75 76 75 76 75 76 75 75 76

#### 21: 2021/10302. 22: 2021-12-13. 43: 2022-02-07 51: C12N

#### 71: Qingdao Agricultural University

72: Aihua Wang, Hua Xin, Chunmei Zhao, Lili Cong, Wangdan Xiong, Guofeng Yang, Guoyong Jiang 54: NANNOCHLOROPSIS OCEANICA WITH CORN ANTIMICROBIAL PROTEIN AND CONVERSION METHOD AND APPLICATION THEREOF 00: -

The invention discloses Nannochloropsis oceanica with corn antimicrobial protein and a conversion method and application thereof. The conversion method comprises the steps of constructing a recombinant plasmid, converting cells of Nannochloropsis oceanica, expressing recombinant corn antimicrobial protein z108 beta in the cells of Nannochloropsis oceanica, and extracting and purifying the recombinant corn antimicrobial protein z108 beta. The technical method of converting the corn antimicrobial protein in Nannochloropsis oceanica has the advantages that operating is easy, the production cost of the corn antimicrobial protein is low and the purity of the corn antimicrobial protein is high; in addition, polypeptides of the corn antimicrobial protein are expressed in water through Nannochloropsis oceanica so that the corn antimicrobial protein is released to the water in secretory protein form, and the corn antimicrobial protein plays an important role in purifying water, eliminating microbial contamination and optimizing water sources, and has potential application value in disease prevention and treatment for aquaculture and in the purification of culture water.


21: 2021/10303. 22: 2021-12-13. 43: 2022-02-07 51: A01C

71: Qingdao Agricultural University

# 72: Jinhao Lan, Yuanxia Liu 54: TREATMENT METHOD FOR IMPROVING CORN SEED VIGOR UNDER LOW TEMPERATURE STRESS

00: -

The invention relates to a method for pretreating seeds before seed sowing and particularly relates to a treatment method for improving corn seed vigor under low temperature stress. The method comprises (1) selecting seeds having uniform sizes, pump shapes and no diseases and insect injury, disinfecting the screened corn seeds through 30% sodium hypochlorite for 30s, then washing the seeds through distilled water 2 to 3 times and air-drying the seeds for next use, (2) putting the seeds obtained in the step (1) into 1500-fold diluted water-soluble ionized silicic acid Na2SiO3, stirring the mixture for 1h and carrying out seal moisture retention through a plastic bag for 8h, and (3) carrying out forced air drying on the seeds at a temperature of 25 DEG C until water content of 26-30%. Through control of the reasonable silicate concentration index and dehydration index, seed vigor is effectively improved. The effect of the invention is not reflected exceeding the numerical range disclosed in the present invention.

21: 2021/10304. 22: 2021-12-13. 43: 2022-02-07 51: C12Q 71: Jiangxi Agricultural University

72: Li Bo, Min Daozhang, Zheng Chen, Gou Yuting, Xiang Dongying

# 54: MOLECULAR IDENTIFICATION METHOD FOR COPTIS CHINENSIS

The invention discloses a standard gene database for molecular identification of Coptis. The nucleotide sequence is the sequence in the sequence table, including the ycf1 sequence matrix of Coptis plants, which contains 19 species of coptis plants known worldwide. The molecular identification method includes: extracting total DNA from sample; PCR amplification of vcf1 gene fragment; splicing of vcf1 sequence sequencing results to obtain ycf1 base According to the NJ tree, we constructed the NJ tree of ycf1 sequence. The advantages of the invention are as follows: the specific primer pairs suitable for the amplification of vcf1 sequence of Coptis plants are designed, and the target sequence can be obtained efficiently; whether the counterfeit Coptis comes from home or abroad, it can be accurately identified; the identification efficiency of traditional method in Coptis is only 20 percent-40 percent, while the ycf1 sequence identification efficiency of the invention is more than 95 percent, which greatly improves the score of Coptis chinensis The success rate of sub identification.



## 21: 2021/10305. 22: 2021-12-13. 43: 2022-02-07 51: B61L

71: BEIJING JIAOTONG UNIVERSITY 72: SU, Shuai, WANG, Zhikai, SU, Boyi 33: CN 31: 202110017463 .9 32: 2021-01-07 54: AUTOMATIC ADJUSTMENT METHOD AND SYSTEM FOR METRO TRAIN RESCUE 00: -

The present invention relates to an automatic train rescheduling method and system for metro train rescue. The method includes: obtaining fault information and train information of trains to be rescheduled; according to the fault information, determining arrival time at each segment after the faulty train and the rescuer train couple together; constructing an automatic train operation diagram rescheduling model by constraints of a rolling stock circulation and train short-turning constraint model, a minimum train dwelling time constraint model, a train running time constraint model, and a train headway constraint model, with the objective of minimizing summation of the number of canceled train services and the deviation from the scheduled timetable; inputting the train information into the automatic train operation diagram rescheduling model, to obtain

actual operating data of each train to be rescheduled; and constructing an actual operation diagram.



# 21: 2021/10306. 22: 2021-12-13. 43: 2022-02-07 51: C12M; C12Q 71: Xi'an Jiaotong University 72: HU, Fei, PENG, Niancai, LIU, Yanfei 33: CN 31: 202110198318.5 32: 2021-02-22 54: ANTI-POLLUTION CONSUMABLE AND

METHOD FOR CLUSTERED REGULARLY INTERSPACED SHORT PALINDROMIC REPEATS (CRISPR) MOLECULAR DIAGNOSIS USING SAME

# 00: -

The present disclosure provides an anti-pollution consumable and a method for Clustered Regularly Interspaced Short Palindromic Repeats (CRISPR) molecular diagnosis using the same, belonging to the technical field of nucleic acid detection and molecular diagnostics. The anti-pollution consumable includes an outer reaction tube, a sleeve and an inner reaction tube, where the inner reaction tube includes a second hollow cylindrical upper body and a second-type conical lower body sequentially from top to bottom; a top end of the second hollow cylindrical upper body is externally connected with a fixing ring perpendicular to the second hollow cylindrical upper body; a number of drain holes are provided at a bottom of the secondtype conical lower body; the drain hole has a diameter of 0.01-0.8 mm; the drain hole is used for hydrophobic treatment: and the inner reaction tube is fixed inside the outer reaction tube through the sleeve. .



21: 2021/10307. 22: 2021-12-13. 43: 2022-02-07 51: E21F

71: SHANDONG UNIVERSITY OF SCIENCE AND TECHNOLOGY

72: SUN, Wenbin, YANG, Hui, CAO, Zhenbo, LIU, Weitao, LIU, Hongqiang, ZHAO, Wenqi, ZHAO, Jinhai, CHEN, Juntao, WANG, Shaoyu, ZHAO, Like, XUE, Yandong, ZHANG, Yujun

# 54: METHOD FOR INTELLIGENT IDENTIFICATION AND DIVISION OF TEMPORAL-SPATIAL EVOLUTION PROCESS OF WATER INRUSH DISASTERS BY TECTONIC ACTIVATION AND SENSING AND WARNING SYSTEM 00: -

The present invention discloses a method for intelligent identification and division of temporalspatial evolution process of water inrush disasters by tectonic activation and a sensing and warning system. The evolution of water inrush pathways and intelligent sensing of dynamic rise of a supplementing water source in a water inrush disaster process caused by tectonic activation can be realized based on monitoring of rock mass deformation and crack generation, expansion and penetration using microseismic signals and difference in resistivity of water, rock mass and air. A warning system is mainly divided into a downhole monitoring system and an aboveground data processing system, exports data sensed by microseismic signal sensors and on-line resistivity monitoring electrodes into visualized software, visually reflects crack clusters and water-rich zones, and concludes laws of parameters and characteristics at all stages, thereby realizing intelligent identification of the temporal-spatial evolution process caused by tectonic activation.



- 21: 2021/10310. 22: 2021-12-13. 43: 2022-02-04
- 51: C04B
- 71: Nanjing Tech University

72: Li Dongxu, Jiao Jiawei, Liao Dalong, Bao Ningzhong, Lu Duyou

# 33: CN 31: 202111415862.7 32: 2021-11-25 54: GYPSUM-BASED TILE ADHESIVE MATERIAL AND PREPARATION METHOD THEREOF 00: -

The invention discloses a gypsum-based ceramic tile bonding material and a preparation method thereof, belonging to the technical field of building materials. The raw materials of the gypsum-based tile adhesive material include, in parts by weight, 50-55 parts of gypsum, 20-30 parts of aggregate, 10-15 parts of fly ash, 8-12 parts of cement, 2-4 parts of redispersion emulsoid powder, 0.2-0.4 part of water retaining agent, 0.4-0.6 part of waterproof agent, 0.05-0.15 part of water reducing agent and 0.000 part of retarder, wherein, all raw materials are uniformly mixed to obtain the gypsum-based ceramic tile bonding material. The gypsum-based tile bonding material has high early strength, good volume stability and good water resistance. Most of the raw materials used are industrial solid wastes, which reduces the pressure of ecological environment, realizes the recycling of industrial solid wastes and promotes the green transformation of building materials.

21: 2021/10311. 22: 2021-12-13. 43: 2022-02-04 51: A01G

71: Guizhou Institute of Biology

72: WEN, Guangqin, NIE, Fei, WEN, Guangzhong, HUANG, Zhenxing, ZHOU, Ying, YANG, Feng, LIAO, Youjiang

# 54: BREATHABLE REFLECTIVE MULCHING FILM FOR PREVENTING AND CONTROLLING BLUEBERRY FRUIT FLIES AND MANUFACTURING METHOD THEREOF 00: -

The present disclosure provides a breathable reflective mulching film for preventing and controlling blueberry fruit flies. The specification of the breathable reflective mulching film is that the film thickness is 0.025-0.05 mm; and preferably, in the breathable reflective mulching film for preventing and controlling the blueberry fruit flies, the hole density of the breathable reflective mulching film is 5-8 cm × 10-15 cm. A special reflective film is used and achieves the effect that the number of insect holes in a garden is reduced; the mulching film not only ensures the breathability, moisture preservation, etc. of the ground, but also enhances the reflected light of the ground, and changes the dark and moist environment under the crowns of the blueberry to realize an environment which is not beneficial to mating and spawning of fruit fly adults, so the number of the insect holes in the garden are significantly reduced.

21: 2021/10312. 22: 2021-12-13. 43: 2022-02-04 51: A23K

71: Guizhou Institute of Animal Husbandry and Veterinary Science

72: Chen Haolin, Han Yong, Mao Fengxian, Yang Yang, Yuan Chao, Wang Defeng, Su Chaozhi, Li Dongguang

# 54: FEED FOR IMPROVING LAMB STRESS RESISTANCE AND FOR PREGNANT NANNY GOATS AND METHOD THEREOF 00: -

The invention discloses a feed for improving lamb stress resistance and for pregnant nanny goats and a method thereof. The feed is prepared from the following raw materials in parts by mass: 45-60 parts of corn, 5-15 parts of wheat bran, 5-15 parts of soybean meal, 2-8 parts of DDGS, 5-15 parts of wheat flour, 2-10 parts of whey powder, 2-10 parts of animal protein powder, 2-5 parts of multivitamins, 1-3 parts of salt, 1-5 parts of pungent litse fruit powder, 1-5 parts of milk-vetch root powder, and 1-3 parts of a phagostimulant. The multivitamins include vitamins A, E, D3 and B9. By feeding nanny goats, the functional feed can regulate the physiological and biochemical functions of the nanny goats so as to regulate the physiological and biochemical functions of lambs, so that the lambs can obtain better physiological state, the weaning stress of the lambs is reduced, and the survival rate of the lambs is improved.

- 21: 2021/10313. 22: 2021-12-13. 43: 2022-02-04 51: A01D
- 71: Qingdao Agricultural University
- 72: Jinhao Lan, Yuanxia Liu

# 54: CORN HARVESTER AND METHOD FOR HARVESTING CORN BY UTILIZING SAME 00: -

The invention discloses a corn harvester and a method for harvesting corn by utilizing the same. The corn harvester comprises a header which is connected with the corn harvester through a bridge, wherein a corn ear upper part cutting mechanism, a corn ear lower part cutting mechanism, a gathering mechanism, a guiding and shunting mechanism, a conveying mechanism and a threshing mechanism are fixedly connected onto the header. The method for harvesting corn comprises the steps as follows: the part, located above a corn ear, of each corn stalk is cut off by the corn ear upper part cutting mechanism; the corn is guided into a guiding and shunting cavity by the guiding and shunting mechanism; the gathering mechanism backwards shifts the stalk with the corn ear; the part, located below the corn ear, of each stalk is cut off by the corn ear lower part cutting mechanism; the corn with the stalk is conveying to the threshing mechanism by the conveying mechanism; and the threshing mechanism threshes the corn with the stalk. The corn harvester and the method for harvesting the corn by utilizing the same have the effects as follows: staggered-ridge harvest is realized, loss in the harvesting process is reduced, the energy is saved, the adaptability is high, and lodging corn can further be harvested.



21: 2021/10314. 22: 2021-12-13. 43: 2022-02-04 51: C12M

71: Ezhou Institute of Industrial Technology, Huazhong University of Science and Technology, Huazhong University of Science and Technology 72: YANG, Guang, CHEN, Kun, SHI, Zhijun 54: CULTURE DEVICE FOR DYNAMIC ENVIRONMENTS FOR MICROBIAL GROWTH 00: -

Embodiments of the present disclosure provide a culture device and culture experiment device for dynamic environments for microbial growth. The culture device for dynamic environments for microbial growth includes: a test tube for containing a microbial culture solution; a hollow stirring rod with one end extending into the test tube, and the other end exposed outside the test tube; a vent pipe for introducing gas, one end of the vent pipe being connected to the other end of the hollow stirring rod through a movable port, and a first belt pulley being disposed outside the other end of the vent pipe; and a motor including a motor body, a motor shaft, and a second belt pulley on the motor shaft, the first belt pulley being connected to the second belt pulley through a driving belt.



- 21: 2021/10315. 22: 2021-12-13. 43: 2022-02-04 51: A61K; A61Q
- 71: Linhai Secondary Vocational and Technical School
- 72: ZHANG, Xiaoyou 54: GALLIC ACID HAIR DYE AND USE METHOD THEREOF

#### 00: -

The present disclosure provides a gallic acid hair dye and a use method thereof, and belongs to the technical field of hair dyes. According to the gallic acid hair dye provided in the present disclosure, there is a dynamic balance between a ferrous ion and a ferric ion at a certain pH value. By introducing Fe(III), a concentration and an existence state of Fe(II) in a solution are inhibited to a certain extent so that a part of gallic acid molecules cannot react with Fe(II). Therefore, a color of dyed hair can be adjusted, and the hair can be gradually changed from black blue to golden yellow.



21: 2021/10316. 22: 2021-12-13. 43: 2022-02-04 51: B01D

71: Linhai Secondary Vocational and Technical School

72: ZHANG, Xiaoyou

54: POLYVINYL ALCOHOL (PVA)/ATTAPULGITE (ATP) COMPOSITE MEMBRANE, AND PREPARATION METHOD AND USE THEREOF 00: -

The present disclosure provides a polyvinyl alcohol (PVA)/attapulgite (ATP) composite membrane, and a preparation method and use thereof, and belongs to the technical field of membrane separation.



21: 2021/10317. 22: 2021-12-13. 43: 2022-02-04 51: A61K; A61Q 71: Linhai Secondary Vocational and Technical School

72: ZHANG, Xiaoyou

# 54: ORGANICALLY MODIFIED ATTAPULGITE-DYE HYBRID PIGMENT, AND PREPARATION METHOD AND USE THEREOF 00: -

The present disclosure provides an organically modified attapulgite-dye hybrid pigment, and a preparation method and use thereof.



21: 2021/10318. 22: 2021-12-13. 43: 2022-02-04 51: C09B: C09K

71: Linhai Secondary Vocational and Technical School

72: ZHANG, Xiaoyou

## 54: ATTAPULGITE-DYE REVERSIBLE THERMOCHROMIC COMPOSITE PIGMENT AND PREPARATION METHOD THEREOF 00: -

The present invention relates to the technical field of chromotropic pigments and provides an attapulgitedye reversible thermochromic composite pigment and a preparation method thereof.



- 21: 2021/10319. 22: 2021-12-13. 43: 2022-02-04 51: C08G; C09D
- 71: LINYI UNIVERSITY

72: MA, Dengxue, XIA, Qiying, LI, Faqiang, HUANG, Chuanfeng

# 54: PREPARATION OF MODIFIED WATERBORNE POLYURETHANE HIGH-TEMPERATURE-RESISTANT COATING

#### 00: -

The present disclosure discloses a method for preparing a modified waterborne polyurethane hightemperature-resistant coating. The method for preparing the modified waterborne polyurethane high-temperature-resistant coating comprises the following steps: 1, weighing raw materials; 2, removing impurities in the raw materials; 3, stirring isocyanate and polypropylene glycol for reaction; 4, adding dropwise a catalyst for continuous reaction to obtain a waterborne polyurethane prepolymer; 5, adding triethylamine; and 6, stirring and mixing other chemicals such as lithium silicate with waterborne polyurethane, and vacuumizing to remove a solvent to obtain the waterborne polyurethane hightemperature-resistant coating. According to the preparation method disclosed by the present disclosure, the lithium silicate is mixed with the waterborne polyurethane, so that the heat resistance, the water resistance and the film-forming property of the waterborne polyurethane coating are improved.



21: 2021/10320. 22: 2021-12-13. 43: 2022-02-04 51: A01G

71: Shandong Academy of Agricultural Sciences 72: WEN, Dan, YANG, Ning, WANG, Xiao, WANG, Kean, KONG, Xianghua

# 54: A METHOD FOR PROMOTING THE GROWTH OF STRONG SEEDLINGS VIA PHYSICAL STIMULATION TO CUCUMBER COTYLEDONS 00: -

The invention discloses a method for promoting the growth of strong seedlings via physical stimulation to cucumber cotyledons, belonging to the technical field of cultivation of cucumber seedlings. The cotyledon is physically stimulated. Said physical stimulation comprises mechanical destruction at any position of the unilateral cotyledon or removal of part of the unilateral cotyledon. After the stimulation, the cucumber seedlings are put in the shady and leeward place till wounds healing, and then they are placed in the seedling environment for continuous cultivation. The physical stimulation promotes the production of endogenous hormones and the growth of root and seedling. Poisoning and pollution resulting from the application of exogenous hormones are solved. So, the invention is environmental friendly and cost-saving. The cucumber seedlings cultivated herein are superior to those conventionally cultivated by biomass, root vitality and sound seedling index. The invention is easy to operate, suitable for vegetable plug seedling.



21: 2021/10321. 22: 2021-12-13. 43: 2022-02-04 51: A01C; A01G; E03B

71: Gansu Province Academy of Qilian Water Resource Conservation Forests Research Institute 72: Jiangang Zhu, Jun Wang, Xinping Cheng 54: LANDSCAPING CULTIVATION DEVICE 00: -

The utility model belongs to the technical field of landscaping, and particularly relates to a landscaping cultivation device which comprises a cultivation device. When a temperature and humidity sensor detect that the temperature in a cultivation box is low, a heating pipe can be controlled by a controller to heat the interior of the cultivation box, and the temperature in the cultivation box can be kept through a heat preservation layer; root systems of nursery stocks can penetrate through the through holes to be in contact with the nutrition pool to absorb nutrients. Meanwhile, the through holes can achieve the ventilation condition of the root systems of the nursery stocks, the water absorption sponge layer can adsorb rainwater, water molecule evaporation can be reduced when the nursery stocks lack water. The irrigation frequency is

reduced, and rainwater can be collected through the water collection tank when it rains. When nursery stocks need to be watered, rainwater in the water collecting tank is pumped into the water collecting tank through the water pump and then pumped into the atomizing spray head through the water inlet pipe to be sprayed out, the effect of recycling the rainwater is achieved, and resource waste is avoided.



21: 2021/10322. 22: 2021-12-13. 43: 2022-02-04 51: H04B

# 71: TAIYUAN INSTITUTE OF TECHNOLOGY 72: GUO, Caiping, ZHANG, Linhua 54: ELECTRONIC COMMUNICATION DEVICE FOR ENGINEERING

00: -

The present utility model relates to an electronic communication device for engineering, comprising a rectangular case and a processor, a communication component, an anti-interference component, and a dust-removing component inside the rectangular case. The dust-removing component comprises a dust raising assembly and a dust collecting assembly, wherein the dust raising assembly comprises multiple lead screw sliding block mechanisms, and a fan is mounted on the sliding block of each lead screw sliding block mechanism. The dust collecting assembly comprises a blower, an air suction pipe communicated with one end of the blower, and an air discharge pipe communicated with the other end of the blower. The air suction pipe is located on the opposite side of the first side of the rectangular case, and the other end of the air discharge pipe extends out of the rectangular case.



# 21: 2021/10323. 22: 2021-12-13. 43: 2022-02-04 51: G06N

71: Qingdao University of Science and Technology 72: He Yan, Wang Longjin, An Shun 54: METHOD FOR ON-LINE TRACKING CALCULATION METHOD OF WAVE PEAK FREQUENCY 00: -

The objective of the invention is to provide an online tracking calculation method for peak frequency of sea waves, which comprises the following steps: collecting ship heading signals, and carrying out high-pass filtering processing to obtain approximate values of high-frequency motion components of ship heading; establishing a high-frequency wave interference component model, and discretizing the model to obtain a discrete identification model of high-frequency wave interference components based on heading signals; the augmented random gradient algorithm is used to track and calculate the model parameters of high frequency components of sea waves online. According to the identified model parameters, the wave peak frequency is calculated online. The invention can realize adaptive tracking of the peak frequency of sea waves under complex sea conditions, improve the adaptability of the filter and effectively reduce invalid steering.

21: 2021/10324. 22: 2021-12-13. 43: 2022-02-04
51: C07C; C09K
71: North China University of Science and Technology
72: LI, Zhihui, REN, Qianqian, QIU, Mingwei, DU, Peipei, XU, Bo, LONG, Yue, ZHAO, Pengyue, WANG, Zhengzheng, CAO, Yaran, XING, Lei
33: CN 31: 202111113500.2 32: 2021-09-23
54: LOW-TEMPERATURE COMPOSITE PHASE CHANGE MATERIAL AND PREPARATION METHOD THEREOF
00: -

The present disclosure provides a low-temperature composite phase change material and a preparation method thereof, and belongs to the technical field of composite materials. The method for preparing a low-temperature composite phase change material, comprising the following steps: (1) modifying blast furnace slag with an acidic solution or an alkaline solution to obtain modified blast furnace slag; (2) mixing paraffin wax, graphene oxide and a dispersant to obtain paraffin wax containing graphene oxide; (3) mixing the modified blast furnace slag and the paraffin wax containing graphene oxide obtained, to obtain a lowtemperature composite phase change material.



21: 2021/10325. 22: 2021-12-13. 43: 2022-02-04 51: B01D; G01F

71: Qingdao Agriculture University

72: Zheng Qingzhu, Tian Xia, Qi Kaixia, Shi Yanxi 54: EXPERIMENTAL DEVICE FOR DIFFUSION KINETICS OF ULTRAFILTRATION MEMBRANE PORE-FORMING AGENT 00: -

The invention relates to an experimental device for diffusion kinetics of ultrafiltration membrane poreforming agent, which comprises a power drive device, an inner tank and an outer tank; a first stirring head is arranged in the inner tank, and a second stirring head is arranged in the outer tank: the power drive device is used for driving the first stirring head and the second stirring head to rotate; a bracket for fixing the inner tank is arranged in the outer tank; a placing frame is arranged in the inner tank, and the included angle between the placing frame and the horizontal plane is 30-45 degrees. The ultrafiltration membrane additive diffusion kinetics experimental device of the invention can accurately control the temperature of the gel bath, and can carry out related experimental research such as the influence of temperature on the additive diffusion kinetics. The invention ensures that the

concentration of additives at all points in the gel bath is always uniform, effectively overcomes the influence of sampling points on the measurement results, makes the experimental results more accurate, and studies the diffusion kinetics of ultrafiltration membrane pore-forming agent more effectively.



21: 2021/10326. 22: 2021-12-13. 43: 2022-02-04 51: B01D

71: Anhui University of Science and Technology 72: Zhang Guisheng, Zhu Yanna, Huang Yourui, Ma Tianbing, Xu Jiachang, Tu Qingyi, Shi Peisong 54: MINE MULTI-PARTICLE DUST PREPARATION AND INTELLIGENT SPRAYING DEVICE 00: -

The invention discloses a mine multi-particle dust preparation and intelligent spraying device, which comprises a device body, wherein the device body is provided with a dust preparation cavity and an intelligent spraying cavity; a drive cavity, a transmission cavity, a vibration cavity, a damping cavity, a control cavity, a rotating cavity and a balance cavity are arranged in the dust preparation cavity; a drive motor and a driving wheel are installed in the drive cavity; and vibrating screens, a funnel, an electromagnetic valve and a spraying gear are installed in the vibration cavity. The application results show that the device has firm structure, good sealing performance, reasonable layout of electrical system, stable control, stable vibration of screen body, strong motor power, convenient use and operability, convenient design and maintenance of three doors, large storage

space in funnel, adjustable spraying amount and spraying intensity, accurate preparation and intelligent spraying of test dust with different particle sizes, and suitability for popularization and application.



21: 2021/10327. 22: 2021-12-13. 43: 2022-02-04 51: C12N

71: INSTITUTE OF COTTON RESEARCH, SHANXI AGRICULTURAL UNIVERSITY

72: MA, Yanbin, WEN, Jin, LI, Huanli, WANG, Xinsheng, QIN, Xin

54: TRANSFORMANT R1-2HD OF GLYPHOSATE-RESISTANT UPLAND COTTON AND IDENTIFICATION METHOD THEREOF 00: -

The present disclosure relates to the field of cotton cultivar breeding, and in particular provides a transformant R1-2HD of a glyphosate-resistant upland cotton, where the transformant R1-2HD is obtained by introducing a glyphosate-tolerant gene G10evo-EPSPS into an R15 cotton receptor selfselected by the Institute of Cotton Research, Shanxi Agricultural University through an Agrobacteriummediated method. The glyphosate-tolerant gene of the transformant R1-2HD of transgenic cottons of the present disclosure is genetically stable in different generations, and has a significantly improved glyphosate resistance. Meanwhile, an exogenous gene G10evo-EPSPS of the transformant R1-2HD has a specific insertion site. In addition, an insertion specificity of the insertion site can be identified by primers provided in the present disclosure or by designing a novel combination primer based on a genomic sequence near the insertion site.



21: 2021/10328. 22: 2021-12-13. 43: 2022-02-04 51: A01M

71: Qingdao Agricultural University, Shandong

Provincial Yantai Apple big data Co., Ltd

72: Li Juan, Zhao Longgang, Li Changzhong, Zhao Luhai, Deng Limiao, Jiang Zhiyou

# 54: ORCHARD PEST DETECTION SYSTEM BASED ON DEEP LEARNING AND METHOD THEREOF

00: -

The invention relates to an orchard pest detection system based on deep learning and a detection method thereof. The detection system comprises a detection device and a detection cloud; the detection device comprises a base, a camera, a telescopic motion module, a rotary motion module, a 5G transmission module, a photosensitive module, a power supply module and a controller. According to the invention, an image acquisition device, a transmission device and a power generation device are combined, the collected leaf pest information is sent to the cloud in time to identify the pests and diseases, and the result is sent to the client. The deep learning method is applied to the identification of pests and diseases in orchards. By identifying the images of the data received in the background, the problems such as inconvenient shooting by manual handheld devices in orchards are effectively solved, and the upper and lower surfaces of leaves can be photographed to effectively monitor and detect the pests and diseases in orchards, thus saving labor.

21: 2021/10329. 22: 2021-12-13. 43: 2022-02-04 51: G05D

71: Qingdao University of Science and Technology
72: Wang Longjin, He Yan, An Shun
54: AUTOMATIC COLLISION AVOIDANCE
SYSTEM FOR UNMANNED SHIPS
00: -

The invention discloses an automatic collision avoidance system for unmanned ships, which comprises a heading and position measuring module, a communication unit, a navigation control unit, an automatic obstacle avoidance unit and a display unit. The heading and position measuring module is used for measuring the navigation angle and obstacle information of the bow; the communication unit is used for transmitting the navigation angle of the bow and the obstacle information; the navigation control unit is used for collecting a preset navigation angle value and controlling the navigation angle of the bow to be equal to the preset navigation angle value; the obstacle avoidance unit is used for judging the route based on the obstacle information, and updating the

current route information based on the result of the route judgment and the preset navigation angle value to complete obstacle avoidance; the display unit is used to display the current navigation angle and current navigation channel information. According to the invention, the navigation route of the ship can be more accurate by presetting the navigation angle value and identifying and tracking obstacles in a certain range, so as to realize an accurate obstacle avoidance strategy.



21: 2021/10330. 22: 2021-12-13. 43: 2022-02-04 51: B66B

71: Qingdao Agricultural University

# 72: SUN, Xiuli

# 54: ELEVATOR WITH BUILDING STRUCTURE OF EXTERNAL HOST

00: -

The present invention discloses an elevator with a building structure of an external host, which comprises an elevator power device and guide wall plates, wherein the guide wall plates are symmetrically distributed on two sides of the elevator power device, and two sets of guide wall plates are fixedly connected to the elevator power device; two sets of guide grooves are penetratingly connected to inner walls of the two sets of guide wall plates; a

plurality of lighting devices are simultaneously mounted on the inner walls of the two sets of guide wall plates, and the lighting devices on inner sides of the two sets of guide wall plates are symmetrically arranged; a car is slidably connected to a middle of the two sets of guide wall plates, and a traction machine is fixedly mounted on an upper end of the elevator power device.



21: 2021/10331. 22: 2021-12-13. 43: 2022-02-04 51: A23K; A61K; C12N; C12R; A61P 71: Henan Agricultural University 72: ZHANG, Hongying, YAO, Chunxiao, NING, Changshen, YANG, Mingfan, CHANG, Juan 54: FERMENTED TRADITIONAL CHINESE MEDICINE IMMUNOPOTENTIATOR, AND PREPARATION METHOD AND USE THEREOF 00: -

The present disclosure provides a fermented traditional Chinese medicine immunopotentiator and belongs to the technical field of feed additives.



21: 2021/10337. 22: 2021-12-13. 43: 2022-02-04 51: G01V 71: CENTRAL SOUTH UNIVERSITY 72: HUANG, Linqi, LI, Xibing, SHI, Ying, WANG, Shaofeng, GUO, Zhenwei 54: METHOD FOR CALCULATING FIRST ARRIVAL TIME DIFFERENCE OF MICROSEISMIC SIGNALS

00: -

The present invention discloses a method for automatically calculating the first arrival time difference of microseismic signals, including: acquiring microseismic signals using two sensors; performing cross wavelet transform on the two microseismic signals; decomposing a cross wavelet transform result into an energy spectrum and a phase spectrum; auto-encoding the energy spectrum and the phase spectrum; inputting data to a neural network for calculation, to obtain a result as a final calculation result of the first arrival time difference of the microseismic signals. It is unnecessary to independently calculate arrival time and then calculate the difference, so introduction of two errors is avoided. Similar characteristics of signals of the same source and the advantage of deep learning that image feature information may be extracted well are used, so signals of the same source are recognized accurately, and the first arrival time difference is more accurate.



# 21: 2021/10338. 22: 2021-12-13. 43: 2022-02-04 51: G01V

71: CENTRAL SOUTH UNIVERSITY 72: GUO, Zhenwei, LI, Hao, LIU, Jianxin, HUANG, Linqi, LIU, Chunming, WANG, Bochen 54: IMAGE STRUCTURE TENSOR GUIDANCE-BASED MARINE CONTROLLED-SOURCE ELECTROMAGNETIC INVERSION METHOD 00: -

The invention discloses an image structure tensor guidance-based marine controlled-source electromagnetic inversion method, including: A) acquiring a seismic image, and establishing an objective function of inversion based on the roughness of a model vector, the degree of deviation of the model vector from a preference model vector, and a difference between actual data and a model; B) obtaining an inversion structure tensor matrix based on a structure tensor and a Gaussian difference operator; C) decomposing the matrix into two eigenvalues and two orthogonal eigenvectors; D) determining a geological boundary according to the eigenvalues, and calculating an absolute value of cosine of an included angle between an eigenvector of a grid adjacent to the geological boundary and an eigenvector of a center grid corresponding to the grid; and E) assigning an adjustment coefficient to the absolute value, and

using the absolute value as a coefficient of the roughness.



## 21: 2021/10339. 22: 2021-12-13. 43: 2022-02-04 51: C21C; C22C

71: NORTH CHINA UNIVERSITY OF SCIENCE AND TECHNOLOGY

# 72: WANG, Yan, ZHU, Liguang, WANG, Shuoming 54: PRE-MOLTEN SLAG-MAGNESIUM PARTICLE CORED WIRE AND APPLICATION AND PRODUCTION PROCESS OF STEEL FOR HIGH HEAT INPUT WELDING 00: -

The present disclosure discloses a pre-molten slagmagnesium particle cored wire and a production process of steel for high heat input welding, wherein the cored wire comprises an outer layer and a core; the outer layer is made of low-carbon steel with a thickness of 0.5-1.0 mm; the core is made of slowrelease passivated magnesium particles, the core comprises a slow-release agent and passivated magnesium particles, the slow-release agent is calcium aluminate pre-molten slag, the slow-release agent accounts for 5-90% of the content of the core, and the passivated magnesium particles account for

10-95% of the content of the core. The present disclosure also discloses an application of the cored wire of the present disclosure in preparing steel for high heat input welding.



# 21: 2021/10358. 22: 2021-12-13. 43: 2022-02-04 51: C04B

71: SHANDONG UNIVERSITY

72: HUANG, Chuanzhen, LI, Shijie, LIU, Hanlian, ZHU, Hongtao, ZOU, Bin, YAO, Peng, WANG, Jun 33: CN 31: 202011417309.2 32: 2020-12-07 54: METHOD FOR PREPARATION OF BIONIC CERAMIC TOOL AND THE PREPARED BIONIC CERAMIC TOOL THEREOF

00: -

The invention discloses a method for preparation of a bionic ceramic tool and the prepared bionic ceramic tool thereof. The bionic ceramic tool is alternately layered with a hard layer material and a soft layer material when charging. A non-linear pressure die is used for pre-compression after a hard layer material or a soft layer material is layered. Different layers are pre-compressed with different or the same non-linear pressure dies, and the last layer is pre-compressed with a linear pressure die with a cross-section. The interface of the transition zone between the heterogeneous layers has different textures which are interdigitated, thereby expanding the crack propagating path, enhancing the bonding strength of the interface and strengthening the fracture toughness as well, and prolonging the service life.



21: 2021/10367. 22: 2021-12-14. 43: 2022-02-04 51: C08F; C09K

71: Zhongman Petroleum and Natural Gas Group Corp., Ltd.

72: LU, Xinzhou

# 54: DRILLING FLUID NANO-BLOCKING AGENT, PREPARATION METHOD THEREOF, AND WATER-BASED DRILLING FLUID CONTAINING SAME

# 00: -

The present disclosure discloses a drilling fluid nano-blocking agent, a preparation method thereof, and a water-based drilling fluid containing the nanoblocking agent. The drilling fluid prepared from the nano-blocking agent disclosed by the present disclosure is good in blocking performance, and has effective support on a drilling shaft.



21: 2021/10368. 22: 2021-12-14. 43: 2022-02-04 51: G01N

71: Zhanjiang Customs Technology Center

72: TIAN, Qiong, LI, Jun, YE, Jinyan, YANG, Shujie, LU, Yunyu

# 54: METHOD FOR DETERMINING 14 PRIMARY AND SECONDARY COMPONENTS IN CHROMIUM ORE BY FUSION SAMPLE PREPARATION-X-RAY FLUORESCENCE SPECTROMETRY

00: -The present disclosure discloses a method for determining 14 primary and secondary compor

determining 14 primary and secondary components in a chromium ore by fusion sample preparation-Xray fluorescence spectrometry. The method of the present disclosure determines the content of 14 primary and secondary components in the chromium ore by fusion sample preparation-X-ray fluorescence spectrometry, and measurement accuracy and precision of the method meet the requirements. Synthetic calibration samples are prepared by mixing standard material series of the chrome ore with a standard material of a vanadium ferrotitanium concentrate and a NiO spectral pure reagent in different proportions, thereby broadening the analysis range of elements. A Li2B4O7-LiBO2 mixed flux is used as a flux to overcome the defect that the P content in the sample cannot be accurately determined in the use of sodium metaphosphate as the flux. Sodium nitrate is used as an oxidant to increase the success rate of a fuse piece.



# 21: 2021/10369. 22: 2021-12-14. 43: 2022-02-04 51: B01F

71: Ningbo University of Technology 72: Duan Shucheng, Wu Hung-Chun, Wang Ruiqi, Lin Jiacheng, Qiu Xian, Dai Yuxuan, Chen Tuoxi, Shen Yanyan, Lu Ding, Ge Chenxin, Zhou Ruobing 54: DISINFECTANT MAKING DEVICE CAPABLE

# OF AUTOMATICALLY BLENDING POWDER AND LIQUID

#### 00: -

The invention discloses a disinfectant manufacturing device for automatically blending powder and liquid, which comprises a shell, wherein the shell is internally provided with a powder placing chamber, a water injection pipe, a powder and liquid mixing chamber, and a centrifugal separator mechanism; automatic blending valves are arranged between the powder placing chamber and the powder and liquid mixing chamber and between the water injection pipe and the powder and liquid mixing chamber; the bottom end of the powder and liquid mixing chamber is provided with an ultrasonic array; the upper end of the centrifugal separator mechanism is connected with the lower end of the powder and liquid mixing chamber; and the lower end of the centrifugal separator mechanism is connected with an infusion pipe. A control panel is arranged on the shell, and the automatic adjusting valve, the ultrasonic wave array and the centrifugal separator are all electrically connected with the control panel. The mentioned device can provide users with quick and convenient access to disinfectant with required concentration in public places.



21: 2021/10370. 22: 2021-12-14. 43: 2022-02-04

# 51: G01N

71: Guizhou Minzu University 72: Liu Taoze, Liu Bangyu, Liu Juncong, Zhang Shuyi, Li Liangliang, Xu Qingya 54: SHIPBOARD MONITORING EQUIPMENT FOR DETECTING CO2 PARTIAL PRESSURE OF SURFACE WATER AND RELATED ENVIRONMENTAL PARAMETERS 00: -

The invention discloses a shipboard monitoring equipment for detecting CO2 partial pressure and related environmental parameters of surface water, which comprises a collecting device for collecting water; a test platform for storing water and detecting; a display platform for receiving data and displaying it in real time; a power supply platform for supplying power and controlling equipment; a data processing platform is used for processing detection results and storing data; the acquisition device, the test platform, the display platform and the data processing platform are sequentially connected, and the power supply platform is respectively connected with the acquisition device, the test platform, the data processing platform and the display platform. According to the invention, real-time observation and data recording are mainly carried out on CO2 partial pressure in surface water and related geographical and environmental parameters, and data are matched and integrated, so that the detection platform can facilitate installation and replacement of various detection probes to the greatest extent. In addition, various detection probes do not need to be directly put into water for detection, thus avoiding the damage and loss of the detection probes.



## 21: 2021/10371. 22: 2021-12-14. 43: 2022-02-04 51: A23N

71: Hainan University

72: Yang Ranbing, Zha Xiantao, Xing Jiejie, Qing Yiren, Yang Songmei

# 54: SOIL CLEANING DEVICE FOR POTATOES 00: -

The invention discloses a soil cleaning device for potatoes, which comprises a water collecting tank, a screen plate, a protective cover, high-pressure cleaning nozzles, a cleaning drum, a brushing assembly, a feeding transmission belt, an air-drying box and an air-drying assembly, wherein the screen plate is arranged in the water collecting tank, the protective cover is arranged on the water collecting tank and above the screen plate, and a first bracket and a second bracket are arranged on the protective cover; the cleaning drum is rotatably arranged on the first bracket and the second bracket: the cleaning drum is obliquely arranged, the brushing assembly is arranged in the cleaning drum, the high-pressure cleaning nozzles are arranged on the top wall of the protective cover and above the cleaning drum, the air-drying box is located at one side of the water collecting tank, the air-drying assembly is arranged in the air-drying box, and the feeding transmission belt is located between the cleaning drum and the air-drying assembly. The invention relates to the technical field of potatoes processing, in particular to a soil cleaning device for potatoes with good cleaning effect, which utilizes flowing water flow to wrap and buffer potatoes in cleaning.



- 21: 2021/10372. 22: 2021-12-14. 43: 2022-02-04 51: C12N
- 71: Tibet University

72: Phudor, Wang Jinhu, Li Jing, Yang Jun, Du Mei 54: CULTURE MEDIUM FOR SEPARATION, PURIFICATION AND AMPLIFICATION CULTURE OF PLATEAU MICROALGAE 00: -

The invention discloses a culture medium for separation, purification and amplification culture of

plateau microalgae, belonging to the field of microalgae biotechnology. The culture medium comprises Ca(NO3)2·4H2O, CaCl2·2H2O, NaNO3, KNO3, K2HPO4, MgSO4-7H2O, citric acid, ferric ammonium citrate, EDTA-2Na, Na2CO3, betasodium glycerophosphate, vitamin B12, vitamin H, vitamin B1, trace metal solution, 4-hydroxyethyl piperazine ethanesulfonic acid, Na2SiO3·9H2O and soil extract 40-60 mL/ L. The method of filtering first, then pre-culturing and then diluting and separating is adopted in the invention, which has the advantages of simple equipment, simple and convenient operation and small workload, and is especially suitable for the preliminary separation of water samples taken from natural waters. The method has the characteristics of strong pertinence, short culture period and large culture biomass, is not easily interfered by bacteria, and has simple sampling operation.



21: 2021/10373. 22: 2021-12-14. 43: 2022-02-04 51: G05B

71: Qingdao University of Science and Technology 72: Deng Fang, Yang Hualin, Wang Longjin, He Yan 54: OFFSET-FREE NONLINEAR PREDICTIVE CONTROL METHOD OF SHIP DYNAMIC POSITIONING SYSTEM BASED ON DISTURBANCE OBSERVER 00: -

The invention provides an offset-free nonlinear predictive control method of ship dynamic positioning system based on disturbance observer. The method includes the following steps: considering the influence of low-frequency environmental interference caused by wind, waves and currents, establishing a dynamic positioning ship motion mathematical model; Estimate the unknown environmental interference based on the interference observer, and get the estimated interference value and it acts as a feedback signal in the outer loop control link, which can counteract its influence on the controlled object; Based on the nominal model of the dynamic positioning system without interference, the NMPC optimization problem is defined, and the optimal control input sequence in the control time domain is solved, and the first element of the sequence is applied to the system to obtain the control input at the current moment. This method can make the dynamic positioning ship which is disturbed by the environment track and set the position or route without bias, and improve the control accuracy and robustness of the dynamic positioning system.

# 21: 2021/10374. 22: 2021-12-14. 43: 2022-02-04 51: A01G

71: Ningbo University of Technology 72: Shen Yanyan, Wu Hung-Chun, Li Hongkai, Chen Wenbo, Duan Shucheng, Li Ru, Shao Yijie, Xu Hui, Li Jinxian, Huang Renai, Huang Shiqing 54: SOLAR VEGETABLE CULTIVATION BOX 00: -

The invention discloses a solar vegetable cultivation box, which comprises a box body, a Fresnel lens and an electric energy storage device are arranged above the box body, and a solar panel is arranged below the Fresnel lens. The solar panel is connected to the electric energy storage device, at least one vertical cultivating board is arranged in the box body, and the left and right outer sides of each cultivating board are provided with a plurality of horizontal first channels; each first channel is provided with a plurality of water basins, and the bottom of the water basin is connected with the first channel; the box body is also provided with an electronic light source, and the electric energy storage device is electrically connected with the electronic light source. The solar vegetable cultivation box has a simple and practical overall structure, low cost, convenient installation and disassembly, and does not rely on sunlight cultivation, and the cultivated vegetables are fresh and high-quality.



21: 2021/10375. 22: 2021-12-14. 43: 2022-02-04 51: A01G

71: Institute of Forest Resource Information Techniques, Chinese Academy of Forestry 72: PANG, Lifeng

# 54: THINNING TREE DETERMINATION METHOD OF SECONDARY FOREST TENDING AND MANAGEMENT DECISION 00: -

The present disclosure relates to a thinning tree determination method of a secondary forest tending and management decision. The method comprises: analyzing a forest stand state and a forest stand structure of a to-be-tended and managed forest stand according to sample plot data and sample tree data to obtain forest stand parameters of the to-betended and managed forest stand; and determining the thinning tree according to a management target and a management demand to the to-be-tended and managed forest stand and the forest stand parameters, and displaying the thinning trees through a GIS technology. According to the method provided by the present disclosure, the thinning trees can be accurately selected and implemented in mountains and plots, thus making the tending operation process be more smoothly.



21: 2021/10376. 22: 2021-12-14. 43: 2022-02-04 51: G01N

71: Tianjin Research Institute for Water Transport Engineering, Ministry of Transport
72: Li Jinzhao, Xue Yonghua, Liu Xiaomeng, Zhang Chunyi, Jing Liang, Zhang Binbin, Wang Yishen, Wang Qingbiao, Chen Yaohongling, Bai Lu
54: PRACTICAL ATMOSPHERIC PARTICULATE
SAMPLING CUTTER SYSTEM AND OPERATION
METHOD THEREOF
00: -

The invention discloses a practical atmospheric particulate sampling cutter system and its use method. The cutter consists of an atmospheric particulate sampling cutter and a filter membrane protection package. The atmospheric particle sampling cutter comprises a particle collision plate and a filter membrane supporting plate, which are fixed by a rotating shaft, the top of the rotating shaft is provided with a filter cover, and the bottom of the bottom particle collision plate is provided with a support column; each layer of filter membrane supporting flat plate can rotate 180 degrees around the rotation axis, the edges of each layer of filter membrane supporting flat plate are equipped with flange buckles with adjustable tightness, the edges of the opening side of each layer of filter membrane supporting flat plate are provided with outer protection plates, the upper and lower edges of the inner surface of each outer protection plate are provided with aprons, and each layer of filter membrane supporting flat plate is provided with clip openings; the filter envelope includes tin foil and envelope. The invention can not only replace the filter membrane conveniently, improve the working

efficiency, but also reduce the error of experimental data and improve the accuracy of monitoring data.



21: 2021/10377. 22: 2021-12-14. 43: 2022-02-04 51: A61L

71: Institute of Animal Health, Guangdong Academy of Agricultural Sciences

72: CAI RUJIAN, LI CHUNLING, YANG DONGXIA, ZHANG KUNLI, GOU HONGCHAO, SONG SHUI, JIANG ZHIYONG, LI YAN, CHU PINPIN 54: METHOD FOR DISINFECTING LIVESTOCK AND POULTRY FARMS BY USING STRONG ALKALINE ELECTROLYZED WATER 00: -

This invention discloses method for disinfecting livestock and poultry farms by using strong alkaline electrolyzed water, which comprises the following steps: stock solution is obtained by electrolysis with potassium carbonate as electrolyte, the redox potential (ORP) value of the alkaline stock solution is as low as -1000mV, and the pH value is between 13.20 and 13.60. The invention has strong reducibility of electrolyzed water, rapid and broadspectrum sterilization effect and is not easy to cause bacterial drug resistance. There is no addition of chemical substances in the preparation process, which will not cause burns to skin and mucous membrane by contact, and it is non-corrosive to metal objects, and is oxidized into water in the natural environment and sterilization process, and there will be no chemical residue to cause environmental pollution. Strong alkaline electrolyzed water can be used as a safe, green and environment-friendly disinfectant for environmental disinfection, air disinfection, drinking water disinfection and belt (livestock and poultry) disinfection in livestock and poultry farms.

# 21: 2021/10379. 22: 2021-12-14. 43: 2022-02-04 51: G06F

71: Zhejiang Wanli University
72: Zhigang CHEN, Xinxia SONG
33: CN 31: 202110254124.2 32: 2021-03-09
54: DATA SHARING METHOD AND SYSTEM
BASED ON MULTI-PARTY FULLY
HOMOMORPHIC ENCRYPTION
00: -

The present invention discloses a data sharing method and a system based on multi-party fully homomorphic encryption. The method comprises: generating an own private key, by each user terminal, by means of a private key generation algorithm; generating a collective public key oriented to a specified data sharing task, by the user terminals, through a protocol; generating a relinearization public key, by the user terminals; encrypting own data with the collective public key and uploading a ciphertext to a server, by each user terminal; carrying out homomorphic computation on the uploaded ciphertext and returning a computation result to each user terminal, by the server; carrying out rellinearization on the ciphertext with the rellinearization public key, by the server, after each time of homomorphic multiplication; decrypting the computation result through a joint decryption protocol or designating a receiver for decryption, by each user terminal. The method and system not only ensure the data privacy and security of all parties, but also realize data sharing, achieve the same efficiency as that of single-key fully homomorphic encryption, and support thousands of participants. In addition, the decryption is flexible, and a method for decryption for a designated receiver can be provided.



21: 2021/10380. 22: 2021-12-14. 43: 2022-02-04 51: C05G

71: Henan Academy of Agricultural Sciences
Xiaomai Institute, Henan Academy of Agricultural
Sciences Institute of Grain Crops
72: ZHAO, Xia, ZHANG, Deqi, LI, Ang, LI,
Xiangdong, LI, Chuan, JIN, Haiyang, LI, Fuli, MU,
Xinyuan, CAO, Yanyong, ZHANG, Gaiping, HU,
Xiuli, QI, Hongzhi, WANG, Shuaili, MA, Junfeng, XU,
Jiamin, WEN, Tao, ZHOU, Zhe, LI, Chunmiao, LI,
Jiangwu, YANG, Jinliang, WU, Lianhai
33: CN 31: 202111369336.1 32: 2021-11-18

54: MICROORGANISM PREPARATION AND ITS APPLICATION FOR PROMOTING THE YIELD INCREASE AND QUALITY IMPROVEMENT OF GRAIN CROPS

00: -

The invention belongs to the field of agriculture and forestry technology, particularly relating to a kind of microorganism preparation and its application for promoting the yield increase and quality improvement of grain crops. Mix yeast suspension, bacillus subtilis suspension, trichoderma suspension and bacillus polymyxa suspension at a mass ratio of 1-2:10-20:5-10:10-20, then after fermentation and purification, the microorganism preparation is obtained. The invention mixed uses yeast, bacillus, trichoderma and bacillus polymyxa, giving full play to the synergistic effect of various strains. It uses the metabolism of microorganisms to improve soil quality, which promotes the growth of grain crops, and increases their yield and fruit quality.

21: 2021/10381. 22: 2021-12-14. 43: 2022-02-04 51: G01R

71: Guangdong Polytechnic Normal University, Guangzhou Yiwei Electromotion Automobile Co., Ltd.

72: OUYANG, Jian, XIANG, Dan, LI, Jing, MO, Zhidong

33: CN 31: 202110307431.2 32: 2021-03-23 54: METHOD AND SYSTEM FOR DYNAMICALLY ESTIMATING SOC OF LITHIUM-ION POWER BATTERY, EQUIPMENT, AND MEDIUM 00: - The present invention relates to a method and system for dynamically estimating SOC of a lithiumion power battery, equipment, and a medium. The method includes modeling an equivalent circuit of the lithium-ion power battery, reading parameters of the battery model and an initial battery SOC value, and identifying and calculating the parameters of the battery model by using a least square method to obtain corresponding model parameters; constructing a basic formula for SOC estimation of the power battery according to the model parameters; reading an open-circuit voltage of the battery; and inputting the open-circuit voltage into a strong tracking Sigma point Kalman filter model to estimate an SOC value of the lithium-ion power battery. The method is simple and practical, balances the accuracy and computational complexity, meets the real-time requirements of SOC estimation in practical applications, and realizes real-time dynamic estimation on the SOC of the lithium-ion power battery.



<sup>21: 2021/10382. 22: 2021-12-14. 43: 2022-02-04</sup> 

- 51: C04B
- 71: Northeastern University

72: GU, Xiaowei, ZHANG, Weifeng, WANG, Hao, LI, Xiaohui

54: MULTI-SOLID WASTE ACTIVATED CONCRETE WITH HIGH-SILICON IRON ORE TAILINGS AND PREPARATION METHOD THEREOF 00: -

Disclosed are a multi-solid waste activated concrete with high-silicon iron ore tailings and a preparation method thereof. The concrete is prepared from raw

materials including 360–380 kg/m3 of a cement, 30– 40 kg/m3 of fly ash, 30–40 kg/m3 of a modified ultrafine sand of high-silicon iron ore tailings, 930– 950 kg/m3 of a waste stone of tailings, 870–930 kg/m3 of a fine sand of tailings, 160–170 kg/m3 of water, and 4–8 kg/m3 of an additive.

# 21: 2021/10383. 22: 2021-12-14. 43: 2022-02-04 51: A01B

71: Hebei Agricultural University, Hebei Saihanba Mechanical Forest Farm

72: LIU, Qiang, CHEN, Zhiqing, LI, Yongdong, ZHANG, Zhidong, WANG, Dongzhi, FANG, Limin, CUI, Yan, FAN, Dongdong, FU, Lihua, DING, Xiaodong, SHI, Chen, ZHANG, Jiandong, YIN, Hailong, HUANG, Yuexin, CHEN, Dali, ZHANG, Yanfang, ZHANG, Zhiwei, DING, Yuhui 54: AFFORESTATION TECHNIQUE FOR

# TACKLING KEY PROBLEMS IN ARID ROCKY BARREN HILLS

00: -

The present disclosure discloses an afforestation technique on arid rocky barren hills, and relates to the technical field of planting and afforestation under extreme forestry site conditions.

21: 2021/10386. 22: 2021-12-14. 43: 2022-02-04 51: G06F

71: Jiangxi College of Applied Technology, College of Applied Science Jiangxi University of Science and Technology

72: CHEN, Xuming, LAI, Yan, ZHU, Jianfa, LI, Liangxiao

# 33: CN 31: 202111291414.0 32: 2021-11-01 54: AN ACCOUNTING DATA PROCESSING METHOD BASED ON INTERNATIONAL ACCOUNTING STANDARDS 00: -

The invention discloses an accounting data processing method based on International Accounting Standards, comprising the following steps: collecting and processing the electronic data of accounting vouchers as the to-be-processed original accounting data; processing the original accounting data by adopting a distributed financial processing system; returning the processed financial data to the cloud server; calling the cloud server data for re-checking. Compared with the prior art, the invention has the following advantages: developing a new business model for handling accounting business and training accounting talents by using real financial data based on the internet technology. The method realizes both the guidance of students and the processing of accounting data, having both the educational attributes and commercial attributes of participating in the market industry competition. The invention helps teachers better link the enterprise reality to classroom instructions, and thereby the vitality and the quality of the education and teaching in higher education institutions is improved.



- 21: 2021/10387. 22: 2021-12-14. 43: 2022-02-04 51: C08B
- 71: Bozhou University

72: HU, Tingting, LI, Jinyang, ZUO, Yafeng, ZHAI, Junjie, MENG, Xiangsong, YANG, Yongjian 33: CN 31: 202110989617.0 32: 2021-08-26 54: AN EXTRACTION METHOD OF ACTIVE SUBSTANCE IN MULBERRY LEAVES 00: -

The invention relates to technical field of extraction of bioactive substance, in particular to an extraction method of active substance in mulberry leaves, the the invention, mulberry leaf superfine powder and cellulase are used for ultrasonic treatment, cell rupture is realized by enzymatic method and mechanical crushing method; then the eluate is subjected to multiple temperature alternating repeated deposition operations, which is determined by ninhydrin, a huge temperature difference is realized, and the protein removal rate in the mulberry leaf extraction liquid is improved; finally surfactants are used to perform auxiliary water extraction operations, separate the target components and improve the purity of the target components. On the basis of effective protein removal, the invention realizes the extraction of mulberry leaf polysaccharide, alkaloid, and mulberry leaf flavonoid, and studies the synergistic effects on lowering blood glucose.



21: 2021/10388. 22: 2021-12-14. 43: 2022-02-04 51: B01D

71: Xuzhou University of Technology, Jiangsu Lianyanggang Environmental Protection Technology Co., Ltd.

72: CAO, Wenping, QI, Xinhua, LI, Zebing, JIANG, Cheng

# 33: CN 31: 202111422944.4 32: 2021-11-26 54: A NANO MATERIAL FOR SEWAGE TREATMENT AND A PREPARATION METHOD THEREOF

00: -

The invention provides a nano material used for sewage treatment and a preparation method thereof, which belongs to the technical field of nano material. The nano material for sewage treatment is prepared according to the following steps: disperse modified attapulgite into water to obtain modified attapulgite solution: disperse modified activated carbon into water to obtain modified activated carbon solution for later use; disperse graphene oxide into water to obtain graphene oxide solution; while stirring, add modified attapulgite solution and modified activated carbon solution at one time: after the addition is completed, continue to stir until the modified attapulgite and modified activated carbon are supported on the surface of graphene oxide; washing and drying to obtain nano materials for sewage treatment. The nano material for sewage treatment prepared by the invention improves the adsorption effect and deodorization effect of heavy metals in sewage.

21: 2021/10399. 22: 2021-12-14. 43: 2022-02-04 51: Y02A

71: WEIFANG ZHIHUI ELECTRONIC TECHNOLOGY CO., LTD. 72: DONG, Longfei, DONG, Wenshan, DING, Wei 33: CN 31: 202110122536.0 32: 2021-01-29 54: SUPERCONDUCTING DIRECT-CURRENT MOTOR WITHOUT COMMUTATING DEVICE 00: -

The present invention discloses a superconducting direct-current motor without a commutating device, including an outer shell and a rotating shaft penetrating through the outer shell; a rotor assembly located in the outer shell is mounted on the rotating shaft, and a stator assembly arranged around the rotor assembly is mounted in the outer shell; the stator assembly includes a superconducting armature assembly, a superconducting shielding cover is arranged outside the superconducting armature assembly, a V-shaped groove protruding towards the superconducting armature assembly is formed on a peripheral wall of the superconducting shielding cover, a first cooling circuit is arranged on the superconducting shielding cover, and a first cooling port communicating with the first cooling circuit is formed on the outer shell; and direct current is induced in the superconducting armature assembly, and direct current also passes through the rotor assembly.



21: 2021/10400. 22: 2021-12-14. 43: 2022-02-04 51: C12N

71: SHANDONG UNIVERSITY OF SCIENCE AND TECHNOLOGY

# 72: CHEN, Shuiquan, ZANG, Meng, LI, Lin, SHAN, Qinglin, WANG, Dong, SUN, Shuo 33: CN 31: 202110599142.4 32: 2021-05-31 54: GORDONIA BACTERIUM PRODUCING LONG-CARBON-CHAIN MYCOLIC ACID AND APPLICATION THEREOF

#### 00: -

The present invention discloses a Gordonia bacterium producing long-carbon-chain mycolic acid and application thereof, and belongs to the technical field of desulfurization microorganisms. The Gordonia bacterium producing long-carbon-chain mycolic acid in the present invention is Gordonia sp. JT-2, with a preservation number of CCTCC NO: M 2021493. The Gordonia sp. JT-2 provided by the present invention has strong hydrophobicity, and can secrete more mycolic acid during desulfurization of actual oil products to further enhance the hydrophobicity. Therefore, the extremely high hydrophobicity of Gordonia sp. JT-2 in an oil-water multiphase system can be utilized to reduce the toxicity of hydroxylated desulfurization products to the bacteria, solve a problem of low oil-water mass transfer efficiency of sulfur-containing organic compounds and improve the desulfurization efficiency at the same time.



21: 2021/10401. 22: 2021-12-14. 43: 2022-02-04 51: C08G; C08J; C08L 71: ZHANG, Shihu 72: ZHANG, Shihu, WANG, Chao, LI, Shisheng, WANG, Zhenqiang, ZHANG, Xiaodi, YANG, Huatong, HAO, Dekai 54: ANTISTATIC POLYURETHANE SPONGE AND PREPARATION METHOD AND APPLICATION THEREOF

00: -

The present disclosure relates to a field of materials, specifically discloses an antistatic polyurethane

sponge, a preparation method and an application thereof. The antistatic polyurethane sponge comprises the following raw materials: a soluble polypyrrole derivative, polyether polyol, a filler, a catalyst, silicone oil, a foaming agent, isocyanate and a solvent. For the antistatic polyurethane sponge provided in the present disclosure, by using the soluble polypyrrole derivative as a conductive additive, the soluble polypyrrole derivative in a dissolved state can be dispersed in a material in a molecular chain form after being added into a foaming system, which can avoid the great increase of material viscosity and particle agglomeration. In addition, an ideal antistatic property can be obtained by adding a small amount of soluble polypyrrole derivative.

21: 2021/10402. 22: 2021-12-14. 43: 2022-02-04

72: ZHANG, Shihu, WANG, Chao, LI, Shisheng, WANG, Zhenqiang, ZHANG, Xiaodi, YANG, Huatong, HAO, Dekai

## 54: METHOD FOR PREPARING ANTISTATIC MATERIAL BY ONE-STEP METHOD, UV-CURED COATING AND APPLICATION 00: -

The present disclosure relates to a field of materials, and more particularly discloses to a method for preparing an antistatic material by a one-step method, a UV-cured coating and an application. According to the method for preparing an antistatic material by a one-step method, a surfactant, an oxidant, a conductive polymer monomer, a small amount of water and other components are mixed, and then uniformly mixed with ater-based UV curing system, and then cured by ultraviolet irradiation after coating, to form a cured coating with antistatic performance. The antistatic material prepared by this method as a coating solves the defects that the existing method for preparing the water-based antistatic ultraviolet UV-cured coating is operated in multiple steps, the conductive filler is difficult to disperse and the system viscosity is increased, and the antistatic material has wide market prospects.

21: 2021/10403. 22: 2021-12-14. 43: 2022-02-04 51: G06Q

<sup>51:</sup> C09D

<sup>71:</sup> ZHANG, Shihu

71: SHANGHAI MUNICIPAL CENTER FOR DISEASE CONTROL AND PREVENTION 72: XIA, Han, DAO, Li, XIA, Tian, FU, Chen, ZHANG, Cheng, YU, Huiting, CAI, Renzhi, XIAO, Ping, ZU, Ping, HUANG, Jiaqi, LIU, Xinghang, LIN, Weixiao, MAO, Dan, XU, Jin, QIAN, Chensi, YANG, Mei, WANG, Senran

# 54: LABORATORY INSPECTION AND TESTING SYSTEM

00: -

The invention relates to a laboratory inspection and testing system, including a system basic service module and a business processing module, which are mutually connected. The system basic service module is configured to provide basic service for the laboratory inspection and testing system and initialize business information. The business processing module is configured to perform a process based on the basic service provided by the system basic service module and process a business of the laboratory inspection and testing system according to initialized business information. With adoption of the laboratory inspection and testing system and method of the invention, the unified management over public health inspection and testing businesses can be implemented, a public health inspection and testing platform is established, testing processes and test data are efficiently managed and normatively operated, and quality control is implemented in the whole process of the laboratory inspection and testing business.

21: 2021/10405. 22: 2021-12-14. 43: 2022-02-04 51: G08B

71: VISHWAKARMA INSTITUTE OF TECHNOLOGY

72: SONDKAR, Shipla, MANE, Vijay, BHANUSE, Vijaykumar, JAISWAL, Ashish, JOSHI, Dhanajay, KIWANDE, Punit

# 54: A SELF-DEFENSE AND LOCATION TRACKING DEVICE FOR WOMAN SAFETY 00: -

The present invention relates to a self-defense and location tracking device for woman safety. The object of the proposed invention is toa security and precaution so that women never feel helpless while facing social challenges. The preferred embodiment propose to have a device which is the integration of multiple devices. This includes a women safety system using GPS and GSM modems. The system is interconnected with the shock taser glove for security and a voice recording system, which will turn on pressing the SoS Button. This messaging system is composed of a GPS receiver, Arduino board and a GSM Modem. When a woman is in danger and in need of self-defense then she can press the switch which is allotted to her and then shock taser glove and voice recording also gets activated with the system.By pressing the switch, the entire system will be activated then immediately a SMS will be sent to concern person with location using GSM and GPS.

21: 2021/10406. 22: 2021-12-14. 43: 2022-02-04 51: F04D

71: VISHWAKARMA INSTITUTE OF TECHNOLOGY 72: CHAUDHARI, Mangesh, DONGRE, Ganesh, SHIRBAVIKAR, Ketki, DESHMUKH, Shritej, DHEKANE, Chinmay, DEOKULE, Vedant, DEO, Rugved, DESHMUKH, Vishwajeet 54: A TWIN MODE CEILING FAN 00: -

The present invention relates to a twin mode ceiling fan. The object of the proposed invention is toprovide a new breed of ceiling fan which increases the coverage area of the fan and also the flow rate in the area. It depends on the number of the members in the room and also the size of the room. The proposed twin mode ceiling fan consist of two modes i.e. three blade mode and six blade mode. The performance of the twin mode ceiling fan can be altered according to the choice of the user.

21: 2021/10407. 22: 2021-12-14. 43: 2022-02-04 51: G06F

71: VISHWAKARMA INSTITUTE OF TECHNOLOGY

72: KULKARNI, M. M., GAIKWAD, Vijay, KANADE, Dyanesh, PATIL, Harshawardhan, NIKAM, Sanket, PANSARE, Rucha, NIKALJE, Sudhanshu, NEHUL, Sayali

# 54: A RAILWAY GATE CONTROL SYSTEM USING INTERNET OF THINGS

00: -

The present invention relates to a railway gate control system using Internet of Things.The object of the proposed invention is toautomate the entire process by proposing an induction loop system to be fitted a safe distance away from the level crossing. The induction loop system will wirelessly transmit

information about the train's position through 4G, which will then be received by a microcontroller at the level crossing. This microcontroller will then operate the boom barrier via an appropriate driver circuit. This also has the added benefit of reducing the time for which vehicles have to wait, thereby reducing the chances of vehicular traffic jams for long periods of time.

21: 2021/10408. 22: 2021-12-14. 43: 2022-02-04 51: G09F

71: VISHWAKARMA INSTITUTE OF TECHNOLOGY 72: MAHAJAN, C. M., RAIKWAR, Rajesh, KHANDEKAR, Tejas, KHAPRE, Kinisha, KHANDEKAR, Aryan, KHANDELWAL, Harshada, KHANDVIKAR, Tushar, KHAPLE, Pavan 54: A SUN TRACKING SOLAR SYSTEM 00: -

The present invention relates to a sun tracking solar system. The object of the proposed invention is to develop an automatic solar tracking system which is able to keep the solar panels aligned with the sun so as to maximize in harvesting alternative energy. The proposed system tracks the most intensity of sunshine. When the intensity of sunshine is decreasing, this method automatically changes its direction to induce maximum intensity of sunshine. LDR light detector is employed to trace the coordinates of the sun. While to rotate the acceptable position of the panel, a DC geared motor is employed. The microcontroller board Arduino UNO controls the system. This project is roofed for single axis. Finally, the project is in a position to trace and follow the sun intensity so as to induce maximum power at the output regardless motor speed.

21: 2021/10409. 22: 2021-12-14. 43: 2022-02-04 51: G06Q 71: VISHWAKARMA INSTITUTE OF TECHNOLOGY 72: JALNEKAR, Rajesh, GHADEKAR, P. P., NAVGHARE, Nilesh, PARKHE, Anish, PARGAONKAR, Jay, PARDHI, Vinay, PAREEK, Vyankatesh, PARHATEY, Ayush 54: A SMART IRRIGATION SYSTEM 00: -

The present invention relates to a smart irrigation system. The object of the proposed invention is

toprovide a watering system for betterment of plant health. The proposed smart irrigation system employs the use of an Arduino UNO microcontroller board. This system facilitates automatic watering of plants by monitoring soil moisture levels on a regular basis using a soil moisture sensor module to ensure that the plant stays healthy. This uses an Arduino UNO board to send high or low signals based on the input obtained from the soil moisture sensor module and a relay switch to either switch on or switch off the water pump based on the signal obtained from the Arduino UNO. This system provides an efficient method to water plants and also prevents overwatering or under watering which is ultimately very helpful for the health of the plant.

21: 2021/10410. 22: 2021-12-14. 43: 2022-02-04 51: A63H 71: VISHWAKARMA INSTITUTE OF TECHNOLOGY 72: SONAWANE, Shivam, SONDUR, Mrunal, SONKUSALE, Vishal, MAHAJAN, C. M., SHILASKAR, Swati, DOMBALE, Anita, SONAWANE, Swami, SONWANE, Aditya 54: A WIRELESS SOLAR POWERED CHARGER 00: -

The present invention relates to a wireless solar powered charger. The object of the proposed invention is tocharge mobile devices quite efficiently without the necessity of a wire. So battery of a device are charged wirelessly. The solar battery converts the sun light into electricity. Power from solar battery is distributed to rechargeable batteries through charging circuit. Output from charging circuit is connected to Qi wireless charging pad which transmits energy wirelessly into Qi receiver which is connected to port of the devices. With this type of wireless battery charging technology, power will supplied to the electrical cars and other equipment using green energy in future.

21: 2021/10411. 22: 2021-12-14. 43: 2022-02-04 51: H02S 71: VISHWAKARMA INSTITUTE OF TECHNOLOGY 72: KULKARNI, M. M., KANADE, Dnyaneshwar, KADAM, Ritesh, KADAM, Sailee, KALASE, Atharva, KAMBLE, Ketaki, KHARABE, Maithili **54: A SOLAR TRACKER SYSTEM** 00: -

The present invention relates to a solar tracker system. The object of the proposed invention is todesign and built a solar tracking system for renewable energy, collect free energy from the sun and store it in the battery. This makes the energy usable in standard-sized homes as a supplemental source of power or as an independent power source. The system is designed to respond to its environment in the shortest amount of time. Any source of error at both the software and the hardware level is eliminated, or at least controlled. The system is tested for real-time responsiveness, reliability, stability, and safety. The system is designed to be stable while it is operating. It is also designed to be resistant to weather, temperature and minor mechanical stresses. Furthermore, the system is fail-safe; it can recover from failures or at least indicate that it is in that condition.

21: 2021/10412. 22: 2021-12-14. 43: 2022-02-04 51: G07C

71: VISHWAKARMA INSTITUTE OF TECHNOLOGY

72: SHINDE, Sandeep, KANADE, Dnyaneshwar, NAWALE, Harshad, PAITHANPAGARE, Shraddha, PATANKAR, Maitreya, PATHAK, Gaurav, PATIL, Kaustubh

# 54: A MILEAGE CALCULATOR FOR CARBURETED VEHICLES

00: -

The present invention relates to a mileage calculator for carburetedvehicles. The object of the proposed invention is toprovide a device which will calculate the mileage of a carbureted vehicle, taking inputs such as fuel consumption and the speed of the vehicle. In the preferred embodiment, the proposed device calculates the data like mileage, instantaneous speed with help of sensors like IR sensor and Flow Sensor using Arduino UNO and NodeMCU microcontrollers. This device allow to easily get data like instantaneous mileage,

instantaneous speed, total distance travelled, total fuel consumed over a trip and total average from Blynk Application.

21: 2021/10431. 22: 2021-12-14. 43: 2022-02-04 51: B32B; B42D; G06K

71: DEMIDOV, Ivan Sergeevich

72: DEMIDOV, Ivan Sergeevich

# 33: RU 31: 2019118582 32: 2019-06-14 54: RADIO FREQUENCY IDENTIFICATION FLAT SHEET MATERIAL

00: -

The invention relates to the field of radio-frequency identification, in particular, to materials containing radio-frequency tags in their layers and intended for printing and stamping by commonly available printing methods. The technical result of the invention is to obtain the flexible flat sheet material in which the chips and other electronic components do not affect the level of the sheet material surface flatness. The flat sheet material with radio frequency identification contains the sequentially arranged first layer of flexible material, the first intermediate layer, the substrate layer with an antenna and a chip, the second intermediate layer, the second layer of flexible material, and the first intermediate layer made of the polymer composite.



- 21: 2021/10432. 22: 2021-12-14. 43: 2022-02-04 51: B42D; G06K
- 71: DEMIDOV, Ivan Sergeevich
- 72: DEMIDOV, Ivan Sergeevich
- 33: RU 31: 2019118539 32: 2019-06-14

54: RADIO FREQUENCY IDENTIFICATION SHEET MATERIAL (VARIATIONS) 00: -

The group of inventions relates to the field of radiofrequency identification, in particular, to materials containing radio-frequency tags in their layers and intended for printing and stamping by commonly available printing methods. The technical result is the creation of the technical solution as an alternative to the known one. The sheet material with the radio frequency identification is characterized by the fact that it is made in the form of a rectangular paper sheet with a length of 450-485 mm, width of 300-330 mm (according to the first variant) and a length of 700-750 mm, width of 500-530 mm (according to the second variant), and it contains an

antenna and a chip located inside the sheet, what's more, one of the angles of the sheet is made geometrically different from three others.



- 21: 2021/10433. 22: 2021-12-14. 43: 2022-02-04 51: G06K
- 71: DEMIDOV, Ivan Sergeevich
- 72: DEMIDOV, Ivan Sergeevich
- 33: RU 31: 2019118570 32: 2019-06-14

# 54: RADIO FREQUENCY IDENTIFICATION SHEET

00: -

The utility model relates to the field of radio frequency identification, in particular, to the one containing a radio frequency tag in printing paper for typographical printing. The technical result is the creation of the technical solution as an alternative to the known one. The sheet material with the radio frequency identification is characterized in by the fact that it is made in the form of a rectangular sheet with a layer for printing, a length of 480 mm and a width of 325 mm, and it contains an antenna and a chip placed inside the sheet, what's more one of the sheet angles is made with a 45 ° bevel and a length of 10 mm.



21: 2021/10446. 22: 2021-12-15. 43: 2022-02-07 51: A61K; C12K

71: INNER MONGOLIA AGRICULTURAL UNIVERSITY, JILIN AGRICULTURAL UNIVERSITY 72: XU, Xiaojing, XIE, Mengyuan, LI, Nuo, QUAN, Puhong, GUAN, Pingyuan

#### 54: PRIMER-PROBE COMBINATION AND KIT FOR DETECTING BOVINE ESCHERICHIA COLI, AND APPLICATION 00<sup>-</sup> -

The present invention discloses a primer-probe combination and kit for detecting bovine Escherichia coli and application, which belong to the technical field of pathogenic bacteria detection. The primerprobe combination for detecting bovine Escherichia coli comprises primers and a probe for detecting a fimbriae antigen F5 gene and primers and a probe for detecting a fimbriae antigen F41 gene. Detection of the Escherichia coli fimbriae antigen F5 gene and detection of the fimbriae antigen F41 gene can be realized simultaneously by using the primer-probe combination for detecting bovine Escherichia coli disclosed by the present invention. The present

invention has high detection sensitivity, strong specificity and good repeatability, and is suitable for popularization and application.



21: 2021/10449. 22: 2021-12-15. 43: 2022-02-04 51: A61K; A61P

71: JINING UNIVERSITY, SHANDONG INOMIC INSTITUTE OF PHARMACEUTICAL RESEARCH CO., LTD

72: LI, Mingli, XING, Jinhua, LIU, Bingjun, SUN, Liping, ZHANG, Li, LV, Yingkun

# 33: CN 31: 202110782602.7 32: 2021-07-12 54: ANTIBACTERIAL EYE DROPS AND PREPARATION METHOD THEREOF 00: -

The present disclosure provides a method for preparing the antibacterial eye and belongs to the technical field of eye drops. The antibacterial eye drops provided herein comprise hydroxypropyl-Bcyclodextrin inclusion moxifloxacin hydrochloride, sodium hydroxide, sodium chloride, boric acid and water. The moxifloxacin hydrochloride is included by the hydroxypropyl-B-cyclodextrin, so that the bitter taste of the antibacterial eye drops is obviously reduced in the using process, the medication comfort is obviously enhanced, and the medication dependency is obviously improved. In the present disclosure, the moxifloxacin hydrochloride-sodium hydroxide solution is added into the hydroxypropyl-B-cyclodextrin aqueous solution in the spraying manner for inclusion, the time required by inclusion is short, and no organic solvents or preservatives are required to be added, and the sterility control difficulty and risk of the eye drops are greatly reduced, so the inclusion compound can be used in the antibacterial eye drops.

21: 2021/10450. 22: 2021-12-15. 43: 2022-02-04 51: A01H; C12N; C12Q 71: INSTITUTE OF COTTON RESEARCH, SHANXI AGRICULTURAL UNIVERSITY 72: MA, Yanbin, LI, Huanli, WANG, Xia, WEN, Jin, WANG, Xinsheng

# 54: UPLAND COTTON TRANSFORMANT R1-3 AND IDENTIFICATION METHOD THEREOF 00: -

The present disclosure relates to the field of cotton breeding, in particular to an upland cotton transformant R1-3 and an identification method thereof.



FIG. 1

21: 2021/10451. 22: 2021-12-15. 43: 2022-02-04 51: G01N

71: Beijing Xianghu Science And Technology Development Co., Ltd.

72: YANG, Xuanping, HU, Wenxiang, HU, Zhaoxi, YANG, Xinwei

# 54: HIGH-PRESSURE COMPONENT AND MICROWAVE-ULTRASONIC COOPERATIVE HIGH-PRESSURE COMBINED APPARATUS USING THE SAME

00: -

The present application relates to a high-pressure component and a microwave-ultrasonic cooperative high-pressure combined apparatus using the same, wherein the high-pressure component is composed of an inner tank of a high-pressure reaction kettle and an outer tank of the high-pressure reaction kettle sleeved and connected, and the high-pressure component is a reaction kettle structure; the inner tank of the high-pressure reaction kettle is sleeved inside the outer tank of the high-pressure reaction kettle; and the high-pressure component is provided with a connection structure for temperature signal measurement and a connection structure for pressure signal measurement. By providing a highpressure reaction kettle structure in the resonant cavity body and simultaneously introducing ultrasonic and microwave signals thereto, the technical solution of the present applicant can make

solute dissolution in the digestion and synthesis process rapid and complete, thereby improving the yield; and the high-pressure requirements for the reaction process can be realized.



21: 2021/10452. 22: 2021-12-15. 43: 2022-02-04 51: A01G

71: Institute of Leisure Agriculture, Shandong Academy of Agricultural Sciences72: YAO, Huimin, WANG, Yue, WANG, Jianghui, CHEN, Shujun

# 54: MINIATURE INTELLIGENT VEGETABLE CULTIVATION BOX

#### 00: -

A miniature intelligent vegetable cultivation box is provided. The miniature intelligent vegetable cultivation box comprises a main box, a cultivation table is arranged in the main box, and a cavity is formed in the upper surface of the cultivation table; a transverse plate is fixedly connected to an inner wall of the cavity; gauze is fixedly connected to the upper surface of the transverse plate; a soil layer is arranged on the upper surface of the gauze; a cover plate is connected to the upper surface of the cultivation table in a sleeving manner; and a sunshine lamp and a partition plate are fixedly connected to an inner wall of the main box. According to the miniature intelligent vegetable cultivation box, an external water source can be injected into the main box by arranging a water pump.



21: 2021/10453. 22: 2021-12-15. 43: 2022-02-04 51: C07C

71: East China University of Science and Technology

72: Sun Li, Zeng Zuoxiang, Xu Jumei, Wang Ying, Xue Weilan, Li Shating

# 54: TECHNOLOGY FOR PURIFYING LACTIC ACID BY ESTERIFICATION-HYDROLYSIS METHOD BASED ON CATALYTIC REACTION DISTILLATION COUPLING

00: -

The invention discloses a technology for purifying lactic acid by esterification-hydrolysis method based on catalytic reaction distillation coupling technology. The method comprises the following steps: firstly, making low-concentration lactic acid crude product and isoamyl alcohol make countercurrent contact in an esterification rectification tower, and carrying out reactive rectification to obtain isoamyl lactate; the bottom product rich in isoamyl lactate is sent to a purification tower to obtain high-purity isoamyl lactate; high-purity isoamyl lactate is hydrolyzed in the hydrolysis reaction rectification tower to obtain high-purity lactic acid at the bottom of the tower, and the top product rich in isoamyl alcohol is sent to the recovery tower for recycling. The invention has the advantages of high separation efficiency, low operation cost, good selectivity and the like.

21: 2021/10454. 22: 2021-12-15. 43: 2022-02-04 51: C02F

71: Zhengzhou University

72: Wang Chongging

54: METHOD FOR PREPARING CARBON MATERIALS AND TREATING WASTEWATER 00: -

The invention relates to a method for preparing carbon materials and treating wastewater, belonging

to the technical field of solid waste treatment. According to the invention, the catalyst is prepared through freezing crushing, flotation pre-separation and carbonization, so that the resource utilization of electronic waste is realized, and the prepared catalyst is used for high-efficiency heterogeneous catalytic degradation of organic wastewater, thereby realizing the green technical route of "treating waste with waste". The invention provides a recycling technology of electronic wastes, which has strong adaptability of raw materials, high comprehensive utilization rate, high catalytic activity of catalysts and environmental friendliness, and provides technical support for recycling of electronic wastes.

21: 2021/10456. 22: 2021-12-15. 43: 2022-02-04 51: B01J

71: Taiyuan University of Technology 72: Feng Yu, Zhang Man, Mi Jie, Wang Jiancheng, Sun Yangjie, Zhang Xin, Ru Ziwei 54: METHOD FOR PREPARING ZNO/MCM-41 DESULFURIZATION SORBENT BY MICROWAVE-BASED IN-SITU ONE-STEP METHOD 00: -

The invention discloses a method for preparing ZnO/MCM-41 desulfurization sorbent by microwavebased in-situ one-step method, which comprises the following steps: uniformly mixing thioacetamide and zinc acetate as raw materials for ZnO synthesis, sodium silicate as raw material for MCM-41 molecular sieve synthesis and cetyltrimethyl ammonium bromide as template to form a sol, using microwave as heat source, synthesizing the sol into desulfurization sorbent precursor ZnS/MCM-41 in one step, and then pressing and molding the precursor, and regenerating in-situ to obtain ZnO/MCM-41 desulfurization sorbent. The desulfurization sorbent of the invention has rich pore structure, improves the mass transfer and desulfurization efficiency of the desulfurization sorbent, not only maintains a single sulfur capacity of more than 12 percent, but also remains relatively stable in multiple desulfurization-regeneration cycles. After ten cycles of use, it still has a sulfur capacity retention rate of 98 percent.

21: 2021/10457. 22: 2021-12-15. 43: 2022-02-04 51: A61K; C08B; C08K; C08L; A61P; B82Y 71: Qingdao Agricultural University

# 72: LI, Qiu, HOU, Ranran, GAO, Fei 33: CN 31: 202110624162.2 32: 2021-06-04 54: METHOD FOR PREPARING ECHINACEA PURPUREA POLYSACCHARIDE NANOPARTICLES 00: -

The present disclosure discloses a method for preparing Echinacea purpurea polysaccharide nanoparticles, comprising the following steps: step 1: extraction and isolation of crude polysaccharides from Echinacea purpurea: weighing 500 g of Echinacea purpurea dry powder to pass through an 80-mesh sieve, extracting Echinacea purpurea polysaccharides according to extraction conditions, centrifuging, collecting supernatant to concentrate, filtering the remaining medicinal solution twice to discard medicinal residues, and mixing the filtered medicinal solution. The present disclosure prepares nano-silvered Echinacea purpurea polysaccharides by extracting and purifying the Echinacea purpurea polysaccharides, and then mixing a solution of the Echinacea purpurea polysaccharides with an AgNO3 solution. The nano-silvered Echinacea purpurea polysaccharides prepared have strong antioxidant and antibacterial activity, and are capable of removing free radicals and realizing antibacterial effect. The present disclosure makes breakthrough in the unrealized process and technique in the prior art, and has significant creativity.



21: 2021/10458. 22: 2021-12-15. 43: 2022-02-04 51: A01G

71: Lu'an Kekedaer Biotechnology Co., Ltd.

72: CHENG, Rui

# 54: METHOD AND DEVICE FOR GROWING DENDROBIUM WITH LIVE BARK 00: -

The present disclosure provides a method and device for growing dendrobium with live bark. Currently, dendrobium fixed on the bark surface with a hemp rope has a weak root system at an early

stage, is prone to fall and absorbs insufficient nutrients. Aiming at such problems, the present disclosure provides a method for growing dendrobium with live bark, including: cutting a bark by a T-shaped structure until reaching a trunk, and splitting the bark toward two sides to expose the trunk; fixing installed hoops and a planting device above the cut position, and inserting roots of the dendrobium obtained after hardening-seedling into the open bark; and finally, tying the open bark to the body of the trunk. By adjusting a hanging height of a hanger rod in use, the roots of the dendrobium can be inserted into the cut bark to absorb nutrients from the bark.



21: 2021/10459. 22: 2021-12-15. 43: 2022-02-04 51: E21D; E21F

71: SHANDONG UNIVERSITY OF SCIENCE AND TECHNOLOGY

72: YU, Fenghai, ZHAO, Tongbin, TAN, Yunliang, YIN, Yanchun

# 54: FORCE MONITORING AND EARLY WARNING DEVICE FOR U-SHAPED STEEL SUPPORT IN COAL MINE

00: -

The present disclosure relates to a force monitoring and early warning device for a U-shaped steel support in a coal mine, which includes a connecting device and a monitoring device. The connecting device includes a base, a Z-shaped presser foot piece and a magnet, and a leg of the U-shaped steel support is installed on the base through the Zshaped presser foot piece, and is attracted to the magnet arranged in the base; the monitoring device includes a pressure sensor, a processor and an audible and visual alarm, and one side of the pressure sensor is embedded in the base, and is electrically connected to the processor; and the audible and visual alarm is connected to the processor, and sends out an alarm signal.



21: 2021/10460. 22: 2021-12-15. 43: 2022-02-04 51: C02F

71: Yanbian University

72: LI, Guangchun, CHENG, Xiaoxiao, JIN, Xu, CUI, Huazi

# 54: BIOACTIVE WATER AND PREPARATION METHOD THEREOF

00: -

The present disclosure belongs to the technical field of environmental microorganisms and wastewater treatment. Turfy soil, bentonite, calcium alginate, cement and bacillus are used to prepare a composition containing bacterial spores. The prepared composition and pumice are put into water for aeration to prepare bioactive water.



# 21: 2021/10461. 22: 2021-12-15. 43: 2022-02-04 51: E02D; E21B; E21D

71: Shandong University of Science and Technology 72: Gao Kuidong, Chen Sheng, Zeng Qingliang, Cheng Jingyi, Li Yanhe, Yang Zhanbiao, Zhang Zhijun, Sun Liqing, Lin Lisong, Jiang Shoubo, Liu Jihai, Wang Xinyu, Meng Zhaosheng, Lu Zhenguo 33: CN 31: 202121289545.0 32: 2021-06-09 54: UNDERGROUND MINE PNEUMATIC EXPLOSION-PROOF ANCHOR CABLE AUTOMATIC INSTALLATION CART 00: -

The utility model relates to the field of anchor cable installation equipment, in particular to an underground mine pneumatic explosion-proof anchor cable automatic installation cart, which includes an installation bottom plate, a rotating platform, an anchor cable feeding mechanism and an anchor cable clamping mechanism. The rotating platform is installed on the installation bottom plate and rotates horizontally relative to the installation bottom plate, the anchor cable feeding mechanism is fixedly installed on the rotating platform and propels an anchor cable downward, and the anchor cable clamping mechanism is disposed on the rotating platform in a sliding manner; a fixing support frame and a rotating support frame are respectively fixedly disposed on the installation bottom plate and the rotating platform, and an anchor cable penetrates the fixing support frame, the rotating support frame, the rotating platform and the installation bottom plate in sequence. By adopting the installation way of rotation and feeding coordination, the force of anchor cable feeding is effectively enhanced, gravel in an anchor cable hole can be pushed, and the time and labor cost required for supplementary drilling and slag removal are effectively saved. A pneumatic slip ring connects the fixed part and the rotating part of the equipment, which can meet the working requirements of unlimited rotation of the rotating platform and facilitate the installation of equipment components.



## 21: 2021/10462. 22: 2021-12-15. 43: 2022-02-04 51: A23L

71: Qinghai Huashi Technology Investment Management Co., Ltd., Qinghai Huashi Highland Barley Biological Technology Development Co., Ltd., Qinghai Zhongcheng Food Testing Co., Ltd. 72: LIANG, Feng, DU, Yan, HAO, Jing, ZHOU, Wenju, TU, Zhaoxin, ZHANG, Chengping, QI, Xingfang, WAN, Youcun

# 54: HIGHLAND BARLEY-BASED FUNCTIONAL RED YEAST RICE RICH IN ERGOSTEROL AND PREPARATION METHOD OF HIGHLAND BARLEY-BASED FUNCTIONAL RED YEAST RICE 00: -

The present disclosure belongs to the technical field of food processing, and in particular to a preparation method of a highland barley-based functional red yeast rice rich in ergosterol.

21: 2021/10464. 22: 2021-12-15. 43: 2022-02-04 51: F04D

71: XI'AN FANS-TECH FLUID MACHINERY CO., LTD.

72: CHEN, Zonghua

# 54: CENTRIFUGAL IMPELLER AND ITS HOLLOW BLADES

00: -

The present disclosure provides a hollow blade, including a blade body having a cavity, and a pressure surface and a suction surface of the blade body respectively provided with a first flow hole and a second flow hole, the air from outside of the

pressure surface passed through the cavity and flowed into outside of the suction surface through the first flow hole and the second flow hole. The hollow blade provided by the present disclosure has a cavity, and the cavity can slow down the speed of the airflow passing through the first flow hole and the second flow hole, so that it flows out from the suction surface at a lower and more uniform speed, and reduces airflow impact on the main airflow in the impeller channel



21: 2021/10469. 22: 2021-12-15. 43: 2022-02-04 51: G06F

71: SHANGHAI MUNICIPAL CENTER FOR DISEASE CONTROL AND PREVENTION 72: XIA, Tian, XIA, Han, FU, Chen, ZHANG, Cheng, DAO, Li, JIANG, Yilan, ZU, Ping, LIU, Xinghang, LIN, Weixiao, MAO, Dan, YU, Huiting, XU, Jin, QIAN, Chensi, YANG, Mei, WANG, Senran 54: PUBLIC HEALTH REFINED MANAGEMENT-BASED DATA QUALITY CONTROL SYSTEM 00: -

The invention relates to a public health refined management-based data quality control system including a data sharing and exchanging region and a validation module. The data sharing and exchanging region includes a data buffer, a validation rule region and a data returning region. The data buffer stores original data from a source platform. The validation rule region stores a data validation rule. The data returning region stores data which does not pass validation and is required to be returned to the source platform. The validation module calls the data validation rule to check the original data received from the source platform. The validation includes longitudinal inter-table balance validation. Through the system and the method, data of various public health business systems accessing a regional health information platform may be effectively monitored and comprehensively evaluated from horizontal, longitudinal and smallprobability dimensions to implement automatic and intelligent management over the data.



21: 2021/10470. 22: 2021-12-15. 43: 2022-02-04 51: F16L; F16T; F17D 71: SHANDONG BAOTA NEW ENERGY CO., LTD. 72: XIAO, Kaiwen, YU, Biao, LIU, Bo, JIN, Peng, MU, Jianfeng, LI, Zhentang, WANG, Jilong, WANG, Hongtao, TIAN, Zhen, TANG, Wei, WU, Chuansheng, LI, Yan, YUAN, Baoxiang, XU, Huazhi 54: CLOSED LIQUID DISCHARGE METHOD FOR TORCH LINE AND SYSTEM THEREOF 00: -

The present invention discloses a closed liquid discharge method for a torch line and a system thereof, the method comprising: (1) providing a liquid storage tank and a liquid separation tank; (2) closing the pipeline between the liquid storage tank and the torch line, and charging a certain amount of nitrogen; (3) discharging the liquid collected in the liquid storage tank to the liquid separation tank; (4) performing a liquid separation treatment, and discharging the gas phase to a blow tank; (5) closing a pipeline between the liquid separation tank and the liquid storage tank, closing a gas phase discharge port, and charging a certain amount of nitrogen; (6) discharge the liquid phase to the emptying line. In the present invention, the problem that liquid discharge is not smooth due to liquid self-pressure flow is solved, and the risk of leakage is reduced.



21: 2021/10763. 22: 2021-12-22. 43: 2022-02-07 51: A61B

71: JIANGSU CANCER HOSPITAL

72: ZHANG, Yufeng, FENG, Yong, QIAO, Wei, YIN, Li, HE, Xia

# 54: SHIELDING RADIATION PROTECTION EQUIPMENT

00: -

Disclosed is shielding radiation protection equipment and relates to the field of medical instruments comprising a base; moving wheels and an adjustable walking wheel mechanism are arranged at the lower end of the base; the walking wheel mechanism comprises wheel frames, walking wheel mounting shafts, walking wheel bodies, screw rods, screw rod sliding blocks, clamping blocks, transmission shaft and a foot treadle; a lower protective plate is arranged at the upper end of the base, and an upper protective plate is arranged on the lower protective plate; an adjustable protective gloves mechanism is arranged on the upper protective plate; and the protective gloves mechanism comprises a bar-type through opening, bar-type movable plates, round through openings, protective gloves, a bar-type groove and a second screw rod. The flexibility of position in transfer and the stability of the position in working can be realized.



21: 2021/10778. 22: 2021-12-22. 43: 2022-02-04 51: A01C

# 71: TOBACCO RESEARCH INSTITUTE OF CHINESE ACADEMY OF AGRICULTURAL SCIENCES

72: MA, Xinghua, LIANG, Xiaofang, WANG, Dequan, SUN, Yanguo, GUAN, Ensen, DU, Chuanyin, SHI, Yi

# 54: MULTISPLIT NITROGEN APPLICATION VIA DRIP IRRIGATION IMPROVES FLUE-CURED TOBACCO NITROGEN USE EFFICIENCY 00: -

The present invention relates to a method for nitrogen application via drip irrigation for improving nitrogen use efficiency (NUE) of flue-cured tobacco. In the method, nitrogen application via drip irrigation is combined with split nitrogen application to decrease a proportion of base fertilizer nitrogen, increase a proportion of top-dressed fertilizer nitrogen, and supply nutrients in accordance with nitrogen requirements of flue-cured tobacco, achieving integration of water and fertilizer and a reduction of the loss of nitrogen fertilizer. The NUE in this present invention is increased by more than 20% compared with that in the conventional technology

21: 2021/10857. 22: 2021-12-23. 43: 2022-02-07 51: G05B

71: SHANDONG JIANZHU UNIVERSITY, SHANDONG PHOEBUS ENERGY SAVING TECHNOLOGY CO., LTD 72: DING, Xudong, YANG, Dongrun, DUAN,

Peiyong, YIN, Chunjie, LI, Hui, WANG, Xinli, NING, Chenguang

# 33: CN 31: 202111405800.8 32: 2021-11-24 54: METHOD FOR ONLINE MODELING OF HEAT PUMP SYSTEM BASED ON DATA AND DEVICE THEREOF

00: -

The present invention disclosing a method for online modeling of heat pump system based on data and device thereof, comprising obtaining historical observation data of a heat pump system; clustering the historical observed data of the heat pump system to obtain K class clusters, and solving an optimal cluster center for each the class cluster; using the optimal clustering center as the observation data for the model parameter identification of the heat pump system; using an error squared sum of an actual output value of the model and the output observation data as an optimization objective function, using a boundary of each input and output observation data of the model as a constraint, transforming a model parameter identification problem into a nonlinear optimization problem with constraint, solving the nonlinear optimization problem, and obtaining an optimal solution of the objective function, so that identified unknown parameters in the model and completing an establishment of the model of the heat pump system; obtaining online observation data of the heat pump system, and carrying out a parameter identification for the established heat pump system model based on the online observation data. By performing cluster analysis, a large amount of observation data can be reduced, which can improve the speed and accuracy of model parameter identification.



21: 2021/10858. 22: 2021-12-23. 43: 2022-02-07 51: C12N

71: BIOLOGY INSTITUTE OF SHANDONG ACADEMY OF SCIENCES. SHANDONG NORMAL UNIVERSITY, INSTITUTE OF GENETICS AND DEVELOPMENTAL BIOLOGY, CHINESE ACADEMY OF SCIENCES, NANJING AGRICULTURAL UNIVERSITY, BEIJING INSTITUTE OF TECHNOLOGY, GOLDEN STAR (RIZHAO) AGRICULTURAL SCIENCE AND TECHNOLOGY DEVELOPMENT CO., LTD. 72: HUANG, Yanhua, GUO, Kai, HUO, Xuexue, LI, Rong, TIAN, Zhixi, REN, Zongming, HUO, Yixin, LIU, Shulin, ZHENG, Zehui, HAO, Yongren 33: CN 31: 202111494975.0 32: 2021-12-08 54: KEY ENZYME GENE TVHSP70 OF TRICHODERMA VIRIDE FOR RESPONDING TO HIGH TEMPERATURE STRESS, RECOMBINANT **EXPRESSION VECTOR, ENGINEERING BACTERIA AND APPLICATION THEREOF** 00. -

The present invention relates to the technical field of microbiology, specifically to a key enzyme gene TvHSP70 of Trichoderma viride for responding to high temperature stress, recombinant expression vector, engineering bacteria and application thereof. wherein the nucleotide sequence of the CDS of the gene is any one of the following (a1) to (a3): (a1) a nucleotide sequence as shown in SEQ ID NO. 19; (a2) a variant of SEQ ID NO. 19 having one or more substitution, deletion or insertion as compared to SEQ ID NO. 19; (a3) a nucleic acid sequence that

hybridizes under stringent conditions to the nucleic acid sequences of (a1) or (a2) and encoding the same functional protein. The present invention constructed and screened Trichoderma spp. engineering strains with strong stress resistance, which effectively improved the performance of Trichoderma spp., including improving growth performance, stress resistance, antagonism against pathogenic bacteria and promoting plant growth.



# 21: 2021/10859. 22: 2021-12-23. 43: 2022-02-07 51: H02K

71: SHANDONG JIAOTONG UNIVERSITY 72: ZHANG, Yun, WANG, Zhixue, XIE, Jun, WANG, Xuejuan, LI, Xiaowei, HOU, Enguang, LIU, Guangmin, QIAO, Xin, XIE, Zhaoyan, WANG, Xiaohong

# 54: ROTOR POSITION SENSOR OF SIX-HALL THREE-OUTPUT MOTOR AND INSTALLATION METHOD THEREOF

00: -

Abstract: The present disclosure provides a rotor position sensor of six-Hall three-output motor and installation method thereof, and relates to the field of switched reluctance motor, and comprises an induction magnetic ring and two sets of Hall components. Each set of Hall components comprises three Hall elements, the three Hall elements of the first set are respectively arranged towards three continuous stator teeth, the three Hall elements of the second set are respectively arranged towards three continuous stator teeth different from the first group, the Hall elements corresponding to the same phase in the two sets of Hall components are connected to the same logic conversion module; a plurality of induction magnetic rings are evenly arranged along the circumferential direction of the rotating shaft corresponding to the rotor teeth, and a joint of the adjacent inductive magnetic rings coincide with the center lines of the corresponding rotor teeth. By arranging two sets of

Hall components, monitoring position conditions of the rotor in a forward rotation and a reverse rotation respectively and processing potential changes during the forward rotation and the reverse rotation cooperated with the logic conversion circuit are realized, and an accurate monitoring of the rotor position during the forward rotation and the reverse rotation under a situation of without increasing the number of lines led out of the motor is therefore realized.



21: 2021/10860. 22: 2021-12-23. 43: 2022-02-07 51: G01D

71: SHANDONG JIAOTONG UNIVERSITY 72: WANG, Zhixue, ZHANG, Yun, XIE, Jun, HOU, Enguang, LIU, Guangmin, QIAO, Xin, XIE, Zhaoyan, LI, Xiaowei, WANG, Xiaohong, WANG, Xuejuan 54: DEVICE FOR DISTRIBUTED MULTI-POINT WATER QUALITY SAMPLING WITH LONG-DISTANCE REMOTE CONTROL 00: -

The present invention discloses a device for distributed multi-point water quanlity sampling with long-distance remote control, and its technical solutions are as follows: comprising a remote
control, an information processing controller, a sampler lifting cable, a sampling controller and a sampler; the remote control are connected with the information processing controller via wireless transmission, the information processing controller is connected with a plurality of sampling controllers via the bus 485, and each sampling controller is connected to the sampler; the sampler and sampler lifting cable are connected, and the sampler lifting cable is connected to the bus 485. The present invention achieves multi-point, multiple times of longdistance remote control of water quality sampling at different depths, different locations and different times, with high reliability, high timeliness and high efficiency,



21: 2021/10912. 22: 2021-12-23. 43: 2022-01-31 51: C12G

71: SHANDONG BAIMAI SPRING WINE CO., LTD, JINAN QINGZHAO BIO- TECHNIQUE CO., LTD 72: WANG, Huihui, LI, Qingteng, LI, Shuntao, GAO, Shuo

### 54: CHINESE SPIRIT VINASSE DRYING DEVICE 00: -

Disclosed is a Chinese spirit vinasse drying device comprising a drying drum, a drying box and an air supply device, wherein vertical plates are symmetrically and rotatably connected on both sides of the drying drum, a first scraping plate is provided between the two vertical plates inside the drum, a plurality of layers of crawler belts, the ends of which is staggered, are provided in the drying box, a plurality of stirring paddles and a second scraping plate device are provided in the drying box, a plurality of knocking plates are located on the rotating paths of the stirring paddles, and rotatably connected in the drying box, a reset torsion spring is provided between the knocking plates are located at the opposite sides of a stirring motor, and the hot air inlets correspond to the stirring paddles in position



### HYPOTHECATIONS

No records available

JUDGMENTS

No records available

### OFFICE PRACTISE NOTICES

No records available

## **3. DESIGNS**

### DESIGNS

### APPLICATIONS FOR REGISTRATION OF DESIGNS IN TERMS OF ACT No. 195 OF 1993

The particulars appear in the following sequence: Copies of the application and representations cannot be supplied until application is registered and advertised. In all correspondence reference should be made to the number of the application. Application number, full name of applicant, class, articles to which design is to be applied and priority date (if any)

- APPLIED ON 2022-01-24 -

F2022/00071 - IVERSEN, Christen, Michael Class 29. A GLASS BREAKING DEVICE

A2022/00070 - IVERSEN, Christen, Michael Class 29. A GLASS BREAKING DEVICE

A2022/00069 - Philips Domestic Appliances Holding B.V. Class 07. PRESSURE COOKER

A2022/00068 - Philips Domestic Appliances Holding B.V. Class 07. PRESSURE COOKER

- APPLIED ON 2022-01-25 -

F2022/00072 - IMMINK, JOHAN VAN ZYL Class 06. BOOSTER CUSHION FOR CHILDREN

- APPLIED ON 2022-01-26 -

A2022/00075 - CONSITEX S.A. Class 09. BOTTLE

A2022/00073 - MILOSEVICH, Abigail Class 07. A COVER FOR A RECEPTACLE

F2022/00074 - MILOSEVICH, Abigail Class 07. A COVER FOR A RECEPTACLE

- APPLIED ON 2022-01-27 -

A2022/00077 - FOXESS CO., LTD. Class 13. BATTERY STORAGE MODULE

A2022/00076 - FOXESS CO., LTD. Class 13. BATTERY STORAGE MODULE

- APPLIED ON 2022-01-28 -

A2022/00088 - SEALY TECHNOLOGY, LLC Class 6. MATTRESS COVER

A2022/00083 - DART INDUSTRIES INC. Class 9. DRINKING FLASK

A2022/00086 - SEALY TECHNOLOGY, LLC Class 6. MATTRESS COVER

A2022/00079 - Anheuser-Busch InBev S.A. Class 31. DISPENSERS

A2022/00081 - Anheuser-Busch InBev S.A. Class 31. TAPS FOR DISPENSERS

A2022/00078 - Anheuser-Busch InBev S.A. Class 31. DISPENSERS

A2022/00082 - DART INDUSTRIES INC. Class 9. DRINKING FLASK

A2022/00084 - DART INDUSTRIES INC. Class 9. DRINKING FLASK

A2022/00085 - DART INDUSTRIES INC. Class 9. DRINKING FLASK

A2022/00080 - Anheuser-Busch InBev S.A. Class 31. TAPS FOR DISPENSERS

A2022/00087 - SEALY TECHNOLOGY, LLC Class 6. MATTRESS COVER

- APPLIED ON 2022-01-31 -

A2022/00098 - SEALY TECHNOLOGY, LLC Class 6. MATTRESS COVER

F2022/00091 - POYNTING ANTENNAS (PTY) LIMITED Class 14. UNIT CELL OF METAMATERIAL BODY FOR ANTENNA

A2022/00094 - SCHEWITZ, Larry Class 23. A WATER FILTER

F2022/00095 - SCHEWITZ, Larry Class 23. A WATER FILTER

F2022/00093 - SCHEWITZ, Larry Class 23. A WATER FILTER

A2022/00092 - SCHEWITZ, Larry Class 23. A WATER FILTER

A2022/00107 - SEALY TECHNOLOGY, LLC Class 6. MATTRESS COVER

A2022/00106 - SEALY TECHNOLOGY, LLC Class 6. MATTRESS COVER

A2022/00105 - SEALY TECHNOLOGY, LLC Class 6. MATTRESS COVER

A2022/00104 - SEALY TECHNOLOGY, LLC Class 6. MATTRESS COVER

A2022/00103 - SEALY TECHNOLOGY, LLC Class 6. MATTRESS COVER

A2022/00102 - SEALY TECHNOLOGY, LLC Class 6. MATTRESS COVER

A2022/00101 - SEALY TECHNOLOGY, LLC Class 6. MATTRESS COVER

A2022/00100 - REGENERON PHARMACEUTICALS, INC. Class 24. SUPPORT FOR A TEST DEVICE

A2022/00099 - SEALY TECHNOLOGY, LLC Class 6. MATTRESS COVER

F2022/00090 - POYNTING ANTENNAS (PTY) LIMITED Class 14. ANTENNA ASSEMBLY

F2022/00089 - POYNTING ANTENNAS (PTY) LIMITED Class 14. ANTENNA ASSEMBLY

A2022/00097 - REGENERON PHARMACEUTICALS, INC. Class 24. SUPPORT FOR A TEST DEVICE

A2022/00096 - REGENERON PHARMACEUTICALS, INC. Class 24. SUPPORT FOR A TEST DEVICE

- APPLIED ON 2022-02-01 -

F2022/00108 - LEWTHWAITE, John Edward, LEWTHWAITE, John Michael Class 23. FLUID FILTRATION DEVICE

F2022/00109 - ODENDAL, Nico DeWet Class 8. CONNECTORS

- APPLIED ON 2022-02-02 -F2022/00113 - DI MATTEO, Marco Class 8. ANCHORING WEDGE ARRANGEMENT A2022/00111 - GA.MA S.R.L. UNIPERSONALE Class 28. HAIR DRIERS F2022/00114 - GIDEON HITCHCOCK Class 07. TABLETOP BRAAI F2022/00112 - GA.MA S.R.L. UNIPERSONALE Class 28. HAIR DRIERS F2022/00110 - Christine Collins Class 09. DOUBLE-FOLD BOX - APPLIED ON 2022-02-03 -F2022/00117 - COLONIZING WINE (PTY) LTD Class 21. BOARD GAME A2022/00116 - CHANGING TIDES 1350 CC Class 7. BOWL A2022/00115 - COLONIZING WINE (PTY) LTD Class 21. BOARD GAME - APPLIED ON 2022-02-04 -F2022/00118 - CENTEX FLUID PRODUCTS AFRICA (PTY) LTD Class 23. LIQUID INTAKE F2022/00119 - TESSARA (PTY) LTD Class 05. MULTILAYER LAMINATED SHEET - APPLIED ON 2022-02-07 -A2022/00120 - Polyoak Packaging (Pty) Ltd Class 09. CONTAINER F2022/00122 - Polyoak Packaging (Pty) Ltd Class 09. CONTAINER F2022/00121 - SCHEWITZ, Larry Class 23. FILTER ELEMENT - APPLIED ON 2022-02-08 -A2022/00123 - TEBOGO JOSEPH MAHLAELA Class 02. BOILERSUIT (CLOTHING) - APPLIED ON 2022-02-09 -F2022/00125 - M E & amp; E McWade Engineered Products (Pty) Ltd Class 08. BRACKET A2022/00127 - Industrie Borla S.p.A. Class 24. DRIP CHAMBERS A2022/00124 - TRINH NGUYEN KHANH LE Class 21. FOLDING EXERCISE STAND FRAME A2022/00126 - Jura Elektroapparate AG Class 7. COFFEE MAKERS - APPLIED ON 2022-02-10 -A2022/00130 - ETA SA MANUFACTURE HORLOG?RE SUISSE Class 20. DISPLAY STAND FOR WATCHES A2022/00129 - ETA SA MANUFACTURE HORLOG?RE SUISSE Class 20. DISPLAY STAND FOR WATCHES A2022/00128 - DOLCE & amp; GABBANA S.R.L. Class 9. CAP FOR A BOTTLE

- APPLIED ON 2022-02-11 -

A2022/00146 - DART INDUSTRIES INC. Class 7. DIVIDED FOOD BOWL

- F2022/00144 SMA Solar Technology AG Class 13. BATTERY CHARGER
- A2022/00142 SMA Solar Technology AG Class 13. BATTERY CHARGER
- A2022/00148 Dr. Ing. h.c. F. Porsche Aktiengesellschaft Class 21. AUTOMOBILES
- F2022/00136 SMA Solar Technology AG Class 13. INVERTER
- F2022/00140 SMA Solar Technology AG Class 13. BATTERY CHARGER
- A2022/00141 SMA Solar Technology AG Class 13. BATTERY CHARGER
- A2022/00143 SMA Solar Technology AG Class 13. BATTERY CHARGER
- A2022/00147 Dr. Ing. h.c. F. Porsche Aktiengesellschaft Class 12. AUTOMOBILES
- A2022/00150 Dr. Ing. h.c. F. Porsche Aktiengesellschaft Class 12. AUTOMOBILES
- F2022/00138 SMA Solar Technology AG Class 13. INVERTER
- A2022/00131 SMA Solar Technology AG Class 13. INVERTER
- A2022/00149 Dr. Ing. h.c. F. Porsche Aktiengesellschaft Class 21. AUTOMOBILES
- A2022/00137 SMA Solar Technology AG Class 13. INVERTER
- A2022/00133 SMA Solar Technology AG Class 13. INVERTER
- F2022/00134 SMA Solar Technology AG Class 13. INVERTER
- A2022/00139 SMA Solar Technology AG Class 13. BATTERY CHARGER
- A2022/00135 SMA Solar Technology AG Class 13. INVERTER
- F2022/00145 XIAMEN ZHONGXINDA HYDROGEN TECHNIQUE CO., LTD Class 13. ELECTROLYZER
- F2022/00132 SMA Solar Technology AG Class 13. INVERTER

- APPLIED ON 2022-02-14 -

A2022/00160 - AECI MINING LIMITED Class 22. BOOSTERS FOR DETONATING BULK EXPLOSIVES

A2022/00159 - AECI MINING LIMITED Class 22. BOOSTERS FOR DETONATING BULK EXPLOSIVES

F2022/00156 - AECI MINING LIMITED Class 22. CLOSURES OF BOOSTERS FOR DETONATING BULK EXPLOSIVES

A2022/00152 - Alejandro Antonio Pereya Class 12. FRONT BUMPER

A2022/00151 - Alejandro Antonio Pereyra Class 12. FRONT BUMPER

F2022/00154 - AECI MINING LIMITED Class 22. BOOSTERS FOR DETONATING BULK EXPLOSIVES F2022/00157 - AECI MINING LIMITED Class 22. BOOSTERS FOR DETONATING BULK EXPLOSIVES F2022/00163 - AECI MINING LIMITED Class 22. BOOSTERS FOR DETONATING BULK EXPLOSIVES F2022/00164 - AECI MINING LIMITED Class 22. BOOSTERS FOR DETONATING BULK EXPLOSIVES A2022/00161 - AECI MINING LIMITED Class 22. BOOSTERS FOR DETONATING BULK EXPLOSIVES A2022/00153 - AECI MINING LIMITED Class 22. BOOSTERS FOR DETONATING BULK EXPLOSIVES A2022/00158 - AECI MINING LIMITED Class 22. BOOSTERS FOR DETONATING BULK EXPLOSIVES F2022/00162 - AECI MINING LIMITED Class 22. BOOSTERS FOR DETONATING BULK EXPLOSIVES F2022/00165 - Johannes Whitehead Class 12. SHELTA PLUS A2022/00155 - AECI MINING LIMITED Class 22. CLOSURES OF BOOSTERS FOR DETONATING BULK **EXPLOSIVES** - APPLIED ON 2022-02-15 -A2022/00167 - tonton miansi Class 02, TM FIRE TONTON MIANSI A2022/00166 - DART INDUSTRIES INC. Class 7. DISH RACK A2022/00168 - WAHL CLIPPER CORPORATION Class 28. HAIR CLIPPER BLADESET - APPLIED ON 2022-02-16 -F2022/00169 - KOEKEMOER, SAREL FRANCOIS Class 08. A LOCK A2022/00170 - KOEKEMOER, SAREL FRANCOIS Class 08. A LOCK - APPLIED ON 2022-02-17 -A2022/00171 - ABDULNASSER OMAR Class 09. BOTTLE - APPLIED ON 2022-02-18 -F2022/00174 - JANSE VAN RENSBURG, Johannes Jakobus, VISSER, Kalsey Jayde Class 9. A BOTTLE ASSEMBLY A2022/00175 - UVEX ARBEITSSCHUTZ GMBH Class 16. SAFETY GOGGLES A2022/00172 - AGRISMART ENGINEERING (PTY) LTD Class 26. LUMINAIRE ASSEMBLY F2022/00173 - AGRISMART ENGINEERING (PTY) LTD Class 26. LUMINAIRE ASSEMBLY

### CHANGE OF NAME IN TERMS OF REGULATION 24

No records available

### APPLICATION FOR THE RESTORATION OF A LAPSED DESIGN UNDER SECTION 23 OF THE ACT

Notice is hereby given that: SHANDONG LINGLONG TYRE CO., LTD No.777 Jinlong Road, Zhaoyuan City, Shandong Province, 2654000 People's Republic of China has made application for the restoration of the design registered to the said: SHANDONG LINGLONG TYRE CO., LTD for the Design: TYRES application number: A2014/01156 date: 05/08/2014 which become void on 27/05/2017 due to non-payment of the prescribed renewal fee.

Any person may give notice on Design Form No 11 of opposition to restoration of the design within two months of the advertisement hereof.

### **Registrar of Designs**

Notice is hereby given that: SOUTH AFRICAN BREWERIES PROPRIETARY LIMITED 56 Grosvenor Road, Bryanston, Johannesburg, 2196 South Africa has made application for the restoration of the design registered to the said: SOUTH AFRICAN BREWERIES PROPRIETARY LIMITED for the Design: BAG IN BOX CONTAINER BLANKS application number: F2018/00433 date: 22/03/2018 which become void on 22/09/2021 due to non-payment of the prescribed renewal fee.

Any person may give notice on Design Form No 11 of opposition to restoration of the design within two months of the advertisement hereof.

### **Registrar of Designs**

Notice is hereby given that: SOUTH AFRICAN BREWERIES PROPRIETARY LIMITED 56 Grosvenor Road, Bryanston, Johannesburg, 2196 South Africa has made application for the restoration of the design registered to the said: SOUTH AFRICAN BREWERIES PROPRIETARY LIMITED for the Design: BAG IN BOX CONTAINERS application number: A2018/00434 date: 22/03/2018 which become void on 22/09/2021 due to non-payment of the prescribed renewal fee.

Any person may give notice on Design Form No 11 of opposition to restoration of the design within two months of the advertisement hereof.

### **Registrar of Designs**

### APPLICATION TO CORRECT AND/OR AMEND DESIGNS APPLICATION OR REGISTRATION

No records available

### NOTICE OF REGISTRATION OF DESIGNS

Notice of registration of the designs mentioned below has been issued by the Registrar of Designs in terms of the Designs Act, 1993 (Act No. 195 of 1993)

### **INSPECTION OF DESIGNS**

A design application, may after a notice of registration has been published, be inspected during office hours at the Designs Office, Pretoria, at a charge of R3, 00

### **COPIES OF DOCUMENTS**

The Designs Office, Private Bag X400, Pretoria, supplies photocopies of all design documents at R1, 00 per page. (Payment to be affected by revenue stamps only.)

The numerical references denote the following: (21) Number of application. (22) Date of lodgement. (23) release date (if applicable). (DR) Date of registration. (52) Class. (24) Type of design. (71) Name(s) of applicant(s). (33) Country. (31) Number and. (32) Date of convention application. (54) Articles to which design is to be applied. (57) Brief statement of features.

**N.B.**: Date of registration (DR) is either Date of lodgement (22) or Date of convention of application (32) whichever is the earlier.

### **Registrar of Designs**

21: A2020/01663 22: 2020-12-22 23:
43: 2022-02-03
52: Class 32 24: Part A
71: PHILIP MORRIS PRODUCTS S.A.
33: EU 31: 008206890 32: 2020-10-19
54: LOGO, GRAPHIC SYMBOL, SURFACE
PATTERN, OR ORNAMENTATION

57: The design is to be applied to a logo, graphic symbol, surface pattern, or ornamentation. The features for which protection is claimed are those of shape and/or configuration and/or pattern and/or ornamentation, substantially as shown in the representations. The broken lines are for illustrative purposes only and form no part of the claimed design.



### PLAN VIEW

- 21: A2021/00346 22: 2021-03-31 23:
- 43: 2021-12-15
- 52: Class 9. 24: Part A
- 71: UNILEVER GLOBAL IP LIMITED
- 33: EM 31: 008193940-0001 32: 2020-10-02
- 54: Bottle

57: The design relates to a bottle. The features of the design are those of shape and/or configuration.



FRONT PERSPECTIVE VIEW

21: A2021/00349 22: 2021-03-31 23:

43: 2021-03-31 52: Class 12 24: Part A 71: SUPERCART SOUTH AFRICA (PTY) LTD 54: TROLLEY CHASSIS

57: The design is applied to a trolley chassis for a steel trolley, the rear of the chassis comprising spaced apart rear arms that are integrally formed with a handle that extends across the top of the rear arms. The features of the design for which protection is claimed include the shape and/or configuration of a trolley chassis, substantially as illustrated in the accompanying representations. The dotted portions are disclaimed and do not form any part of the claimed design.





21: A2021/00463 22: 2021-04-30 23: 43: 2022-02-03 52: Class 27 24: Part A 71: PHILIP MORRIS PRODUCTS S.A.

33: EU 31: 008229397-0004 32: 2020-11-02
54: AEROSOL GENERATING DEVICE, IN
PARTICULAR TOBACCO HEATING DEVICE
57: The design is to be applied to an aerosol generating device, in particular tobacco heating device. The features for which protection is claimed are those of shape and/or configuration, substantially as shown in the representations.



TOP PERSPECTIVE VIEW

Three-dimensional view from front

21: A2021/00380 22: 2021-04-13 23: 43: 2021-12-03

52: Class 23 24: Part A 71: JO JO TANKS (PTY) LIMITED

### 54: SOLAR WATER HEATER

57: The design is applied to a container for liquids. The container is filled from an attached or adjacent storage container. The novelty resides in the features of the shape, pattern, ornamentation and / or configuration of the container.

21: A2021/00466 22: 2021-04-30 23: 43: 2021-12-03

52: Class 24. 24: Part A

71: BUG BITE THING EUROPE APS

33: EM 31: 008220065-0001 32: 2020-10-30

### 54: Suction Apparatus

57: The design relates to a suction apparatus. The features of the design are those of shape and/or configuration and/or ornamentation.



FRONT VIEW

21: A2021/00469 22: 2021-05-03 23: 43: 2021-12-03 52: Class 23 24: Part A

71: TIMOTHY DAVID TURK

### 54: A BATH SPOUT

57: The novelty in the design as applied to a bath spout resides in the shape and/or configuration and/or pattern and/or ornamentation of the spout substantially as shown in the accompanying drawings.



- 21: A2021/00471 22: 2021-05-03 23:
- 43: 2021-05-03
- 52: Class 20 24: Part A
- 71: LATIEF, Surajudin
- 54: Licence Disc Holders

57: The design relates to a licence disc holder. The licence disc holder comprises a sheet element which may have an adhesive applied thereto at least along a circumferential edge region thereof for adhering to a substrate against which a licence disc is held by the licence disc holder.



Plan view

21: A2021/00475 22: 2021-05-04 23: 43: 2021-12-03 52: Class 25 24:

Page | 480

### 71: HALEY, Grant William 54: JACUZZI COVER ASSEMBLY

57: The design relates to a jacuzzi cover assembly. The features of the design are those of shape and/or configuration and/or pattern and/or ornamentation.

PERSPECTIVE VIEW

21: A2021/00478 22: 2021-05-04 23: 43: 2021-12-15 52: Class 3. 24: Part A 71: APPLE INC. 33: US 31: 29/758,168 32: 2020-11-12 **54: Case** 

57: The design relates to a case. The features of the design are those of shape and/or configuration and/or ornamentation.



FRONT PERSPECTIVE VIEW

21: A2021/00479 22: 2021-05-04 23: 43: 2021-12-15 52: Class 14. 24: Part A 71: APPLE INC.

### 33: US 31: 29/758,168 32: 2020-11-12

### 54: Earphones in a Case

57: The design relates to earphones in a case. The features of the design are those of shape and/or configuration and/or ornamentation.



### FRONT PERSPECTIVE VIEW

- 21: A2021/00480 22: 2021-05-04 23:
- 43: 2021-12-15
- 52: Class 14. 24: Part A
- 71: APPLE INC.
- 33: US 31: 29/757,988 32: 2020-11-11

### 54: Earphone

57: The design relates to an earphone. The features of the design are those of shape and/or configuration and/or ornamentation.



21: A2021/00486 22: 2021-05-10 23:

43: 2020-11-11

52: Class 9 24: Part A

71: Precision Valve Corporation

33: US 31: 29/758,011 32: 2020-11-11

### **54: ACTUATOR BUTTONS**

57: The design is for an actuator button comprising a generally rectangular body with rounded corners. A top wall is convexly curved with a pair of side walls that tapers gently to a concavely curved bottom wall. A top end of each side wall includes an upwardly projecting, inwardly curved members. A lower half of the body defines a U-shaped recess which includes a recessed member with a centrally positioned rectangular member, the rectangular member having side walls that flare outwardly from a top wall towards a bottom wall.



Three-dimensional view

21: A2021/00490 22: 2021-05-11 23: 43: 2021-12-03

52: Class 09 24: Part A

71: TONGAAT HULETT LIMITED

### 54: BOTTLES

57: The features of the design for which protection is claimed reside in the shape and/or configuration and/or pattern and/or ornamentation of a bottle substantially as illustrated in the accompanying representations, wherein the design of the upper neck of the bottle and the "H" logo on the front and the rear thereof may be varied and are thus not essential features of the design.



21: A2021/00515 22: 2021-05-17 23:

43: 2021-12-03

52: Class 7. 24: Part A

71: STASHER, INC.

33: US 31: 29/759,629 32: 2020-11-24

54: Container

57: The design relates to a container. The features of the design are those of shape and/or configuration and/or ornamentation.



21: A2021/00516 22: 2021-05-17 23:

- 43: 2021-12-03
- 52: Class 7. 24: Part A
- 71: STASHER, INC.
- 33: US 31: 29/759,629 32: 2020-11-24

### 54: Container

57: The design relates to a container. The features of the design are those of shape and/or configuration and/or pattern and/or ornamentation.



PERSPECTIVE VIEW

21: A2021/00517 22: 2021-05-17 23: 43: 2020-11-18 52: Class 15 24: Part A 71: Caterpillar Inc.

33: US 31: 29/758,751 32: 2020-11-18

54: ADAPTERS FOR MACHINE IMPLEMENTS

57: The features of the design are illustrated in the overall appearance of the design. It is this overall appearance that is particular to the claimed design. The adapter is a wear member and can be attached to a bucket or other machine implement for an excavator or similar machinery.



- 21: A2021/00518 22: 2021-05-17 23:
- 43: 2020-11-18
- 52: Class 15 24: Part A
- 71: Caterpillar Inc.

33: US 31: 29/758,754 32: 2020-11-18

## 54: ADAPTER COVERS FOR MACHINE IMPLEMENTS

57: The features of the design are illustrated in the overall appearance of the design. It is this overall appearance that is particular to the claimed design. This design relates to an adapter cover for machine implements. The adapter cover (or wear member) may be attached to an adapter for a bucket, or other machine implement, for an excavator or similar machinery.



- 21: A2021/00519 22: 2021-05-17 23:
- 43: 2020-11-18
- 52: Class 15 24: Part A
- 71: Caterpillar Inc.
- 33: US 31: 29/758,758 32: 2020-11-18

**54: ADAPTERS FOR MACHINE IMPLEMENTS** 

57: The features of the design are illustrated in the overall appearance of the design. It is this overall appearance that is particular to the claimed design. The adapter is a wear member and can be attached to a bucket or other machine implement for an excavator or similar machinery.



21: A2021/00520 22: 2021-05-17 23:
43: 2020-11-18
52: Class 15 24: Part A
71: Caterpillar Inc.
33: US 31: 29/758,763 32: 2020-11-18
54: ADAPTER COVERS FOR MACHINE
IMPLEMENTS
57: The features of the design are illustrated in the overall appearance of the design. It is this overall

overall appearance of the design. It is this overall appearance that is particular to the claimed design. This design relates to an adapter cover for machine implements. The adapter cover (or wear member) may be attached to an adapter for a bucket, or other machine implement, for an excavator or similar machinery.



- 21: A2021/00528 22: 2021-05-19 23:
- 43: 2021-12-03
- 52: Class 3. 24: Part A
- 71: APPLE INC.
- 54: Accessory for an Electronic Device

57: The design relates to an accessory for an electronic device. The features of the design are those of shape and/or configuration and/or ornamentation.



BOTTOM FRONT PERPECTIVE VIEW

- 21: A2021/00529 22: 2021-05-19 23:
- 43: 2021-12-03
- 52: Class 14. 24: Part A
- 71: APPLE INC.
- 54: Electronic Device

57: The design relates to an electronic device. The features of the design are those of shape and/or configuration and/or ornamentation.



TOP FRONT PERSPECTIVE VIEW

- 21: A2021/00530 22: 2021-05-19 23:
- 43: 2021-12-03
- 52: Class 3. 24: Part A
- 71: APPLE INC.
- 54: Accessory for an Electronic Device

57: The design relates to an accessory for an electronic device. The features of the design are those of shape and/or configuration and/or ornamentation.



### BOTTOM FRONT PERSPECTIVE VIEW IN AN OPEN CONFIGURATION

21: A2021/00544 22: 2021-05-21 23:

- 43: 2020-11-23
- 52: Class 9 24: Part A
- 71: Antonio Puig, S.A.
- 33: EM(ES) 31: 008281810-0001 32: 2020-11-23 54: BOTTLES

57: The design is for a bottle, comprising a cubeshaped body with sharp edges and defining a wide U-shaped recess. An upper wall of the body is convexly curved. A crown-shaped lid attaches to the upper wall and includes an inner rounded member surrounded by a lower band with spaced-apart square spikes, eight splayed-apart arches extending from the band to an upper disc, and a sun-shaped upwardly projecting member. From a top view, the lid presents a sun-shaped configuration, with the arches extending radially from the upwardly projecting member.



Figure 1

Three-dimensional view

21: A2021/00710 22: 2021-06-17 23:
43: 2022-02-03
52: Class 27 24: Part A
71: PHILIP MORRIS PRODUCTS S.A.
33: EU 31: 008365928-0006 32: 2020-12-23
54: LIGHTER AND EXTINGUISHER FOR
AEROSOL GENERATORS, IN PARTICULAR FOR
HEATED TOBACCO STICKS HAVING A CARBON

### HEATED TOBACCO STICKS HAVING A CARBON HEAT SOURCE.

57: The design is to be applied to a lighter and extinguisher for aerosol generators, in particular for heated tobacco sticks having a carbon heat source. The features for which protection is claimed are those of shape and/or configuration, substantially as shown in the representations. The parallel and jagged dash-dot-dash lines indicate a claim to different design heights and widths between the parallel lines. The stippling shadings only show contours, and neither ornamentation nor coloration nor surface finish.



- 21: A2021/00711 22: 2021-06-17 23:
- 43: 2022-02-03
- 52: Class 27 24: Part A
- 71: PHILIP MORRIS PRODUCTS S.A.
- 33: EU 31: 008365928-0007 32: 2020-12-23

54: LIGHTER AND EXTINGUISHER FOR AEROSOL GENERATORS, IN PARTICULAR FOR HEATED TOBACCO STICKS HAVING A CARBON HEAT SOURCE

57: The design is to be applied to a lighter and extinguisher for aerosol generators, in particular for heated tobacco sticks having a carbon heat source.

The features for which protection is claimed are those of shape and/or configuration, substantially as shown in the representations. The stippling shadings only show contours, and neither ornamentation nor coloration nor surface finish.



PERSPECTIVE VIEW

21: A2021/00713 22: 2021-06-17 23: 43: 2022-02-03

52: Class 27 24: Part A

71: PHILIP MORRIS PRODUCTS S.A. 33: EU 31: 008365928-0010 32: 2020-12-23 54: LIGHTER AND EXTINGUISHER FOR AEROSOL GENERATORS, IN PARTICULAR FOR HEATED TOBACCO STICKS HAVING A CARBON HEAT SOURCE

57: The design is to be applied to a lighter and extinguisher for aerosol generators, in particular for heated tobacco sticks having a carbon heat source. The features for which protection is claimed are those of shape and/or configuration, substantially as shown in the representations. The stippling shadings only show contours, and neither ornamentation nor coloration nor surface finish.



PERSPECTIVE VIEW

- 21: A2022/00018 22: 2022-01-06 23:
- 43: 2022-02-01
- 52: Class 2 24: Part A
- 71: GMF ASSURANCES, FÉDÉRATION

### FRANÇAISE DE RUGBY 54: SPORT BIB

57: The design relates to a SPORT BIB. The features of the design are those of configuration and/or ornamentation.



- 21: F2020/01024 22: 2020-07-24 23:
- 43: 2021-12-15
- 52: Class 29 24:
- 71: HUDACO TRADING (PTY) LIMITED
- 54: FACE MASK FILTER CARTRIDGE

57: The design relates to a face mask filter cartridge. The features of the design are those of shape and/or configuration and/or pattern.



FRONT PERSPECTIVE VIEW

21: F2020/01029 22: 2020-07-27 23:

43: 2022-01-25

52: Class 09 24: Part F

71: NU LIFE SCIENCES (PROPRIETARY) LIMITED

### 54: CAP FOR BOTTLES

57: The design is applied to a CAP for Bottles. The features of the design for which protection is claimed are those of shape and/or pattern and/or configuration.



21: F2020/01103 22: 2020-08-13 23: 43: 2022-01-11 52: Class 25 24: Part F 71: COCHRANE STEEL PRODUCTS (PTY) LTD

### 54: DETERRENT COMPONENT

57: The novelty of the design resides in the shape or configuration of a deterrent component substantially as shown in the accompanying drawings.

21: F2020/01403 22: 2020-10-28 23: 43: 2021-06-09 52: Class 09 24: Part F

71: BESTINN BUSINESS SOLUTIONS (PTY) LTD 54: RESEALABLE COVERS FOR BEVERAGE

### CONTAINERS

57: The features of the design for which protection is claimed reside in the shape and/or configuration of a resealable cover for a beverage container substantially as shown in the accompanying representations, wherein the features of the body of the beverage container shown in Figures 2 to 5 may be varied and do not form part of the design.



Figure 3 Perspective view of the cover, showing part of an exemplary beverage container, with the slider in an open position

21: F2021/00231 22: 2021-03-05 23: 43: 2021-11-02 52: Class 6 24: Part F 71: HAMMOND, John **54: TABLE** 

57: The design relates to a table. The features of the design are those of shape and/or configuration and/or pattern.



TOP PERSPECTIVE VIEW

21: F2021/00450 22: 2021-04-28 23: 43: 2021-12-15

52: Class 7 24: Part F

71: JANSE VAN RENSBURG, Andre, VAN DEN HEEVER VENTER, Barend, Gerhardus

### 54: GRILL CLEANER

57: The design is applied to a grill cleaner. The features of the design for which protection is claimed include the shape, pattern and/or configuration of a grill cleaner as shown in the drawings, showing the general appearance thereof.



21: F2021/00467 22: 2021-05-03 23: 43: 2021-05-03 52: Class 25 24: Part F 71: PIMMS GROUP (PTY) LTD. 54: MOUNTING PLATES FOR CABLE FIXING SYSTEMS 57: The design is for a (universal) mounting plate

57: The design is for a (universal) mounting plate which forms part of a cable fixation system. An optical fibre splice enclosure and/or cable joining enclosure (not illustrated) can be mounted to, or carried on, the mounting plate via a pair of upright slots defined in the mounting plate. The mounting plate can then be attached to or detached from a bracket (illustrated in last figure) via a sliding connector provided in a rear face of the mounting plate.



Three-dimensional view from front, top

- 21: F2021/00470 22: 2021-05-03 23:
- 43: 2021-12-03

52: Class 23 24: Part F

71: TIMOTHY DAVID TURK

### 54: A BATH SPOUT

57: The novelty in the design as applied to a bath spout resides in the shape and/or configuration and/or pattern and/or ornamentation of the spout substantially as shown in the accompanying drawings. It being a definitive feature of the design

that the spout includes a hand shower outlet and hand shower cradle.



21: F2021/00476 22: 2021-05-04 23:

- 43: 2021-12-03
- 52: Class 25 24:
- 71: HALEY, Grant William

### 54: JACUZZI COVER ASSEMBLY

57: The design relates to a jacuzzi cover assembly. The features of the design are those of shape and/or configuration and/or pattern.



PERSPECTIVE VIEW

21: F2021/00485 22: 2021-05-07 23: 43: 2021-12-15 52: Class 28 24: Part F 71: PICHE, Helen, Maria 54: A HAIR FASTENER INCLUDING AN ELASTICATED COVER 57: The drawing shown a side view of a by

57: The drawing shows a side view of a hair fastener and elasticated cover in use wherein the hair fastener has been fitted around a stem of a glass and the cover has been fitted over a rim of a glass showing the overall appearance thereof.



- 21: F2021/00712 22: 2021-06-17 23:
- 43: 2022-02-03
- 52: Class 27 24: Part F
- 71: PHILIP MORRIS PRODUCTS S.A.

33: EU 31: 008365928-0007 32: 2020-12-23

54: LIGHTER AND EXTINGUISHER FOR AEROSOL GENERATORS, IN PARTICULAR FOR HEATED TOBACCO STICKS HAVING A CARBON HEAT SOURCE

57: The design is to be applied to a lighter and extinguisher for aerosol generators, in particular for heated tobacco sticks having a carbon heat source. The features for which protection is claimed are those of shape and/or configuration, substantially as shown in the representations. The stippling shadings only show contours, and neither ornamentation nor coloration nor surface finish.





PERSPECTIVE VIEW

PERSPECTIVE VIEW

21: F2021/00714 22: 2021-06-17 23: 43: 2022-02-03 52: Class 27 24: Part F 71: PHILIP MORRIS PRODUCTS S.A. 33: EU 31: 008365928-0010 32: 2020-12-23 54: LIGHTER AND EXTINGUISHER FOR AEROSOL GENERATORS, IN PARTICULAR FOR HEATED TOBACCO STICKS HAVING A CARBON HEAT SOURCE

57: The design is to be applied to a lighter and extinguisher for aerosol generators, in particular for heated tobacco sticks having a carbon heat source. The features for which protection is claimed are those of shape and/or configuration, substantially as shown in the representations. The stippling shadings only show contours, and neither ornamentation nor coloration nor surface finish.

### HYPOTHECATIONS

No records available

JUDGMENTS

No records available

### **OFFICE PRACTISE NOTICES**

No records available

# 4. COPYRIGHT

### COPYRIGHT IN CINEMATOGRAPH FILMS

### NOTICES OF ACCEPTANCE

### (Applications filed in terms of Act No. 62 of 1977)

Any person, who has grounds for objection to the registration of the copyright in any of the following cinematographs films, may within the prescribed time, lodge Notice of Opposition on Form RF 5 contained in the Second Schedule to the Registration of Copyright in Cinematograph Films Regulations, 1980. The prescribed time is one month after the date of advertisement .This period may on application be extended by the Registrar.

The numerical denote the following: (21) Official application number. (22) Date of application. (43) Date of acceptance. (24) Date(s) and place(s) at which cinematograph films was made. (25) Date and place of first publication. (71) Name (s) of all applicant (s). (75) Name of author. (76) Name of producer (77) Name of director (54) Title of cinematograph film. (78) Name(s) of principal players or narrator. (26) Places at which cinematograph film may be viewed and conditions. (55) Specimen lodged/Not lodged. (56) Preview requested/Not requested. (57) Abstract (Storyline). (58) Category.

21: 2021/00022. 22: 2021/10/22. 43: 22/10/2021 24: 2021/08/04 to 2021/09/16; Pretoria 25: 2021/10/20; Pretoria 71: G&A Compass Publishing and Training (Pty) Ltd 25 Talbragar Ave, Craighall, Johannesburg, 2196, South Africa 75: Karl Johannes Gribnitz 76: G&A Compass Publishing and Training (Pty) Ltd 77: Robert Lee Appelbaum 54: Understanding and using G&A Compass Reports. 78: Pamela Ulrike Woltersdorf; Leila Welsh Greatorex; 26: Available on request at gnacompass.co.za 55: Specimen lodged/Not lodged. 56: Preview Requested/Not requested 57: The film breaks down the G&A Compass Expert Report. It explains how the expert report is created and how it is used to analyse the business rescue proceedings and the plan. The G&A Compass Expert Reports are designed to ultimately answer two fundamental questions: i) does the business rescue process or the plan comply with Chapter 6 of the Companies Act no 71 of 2008 as amended; and ii) could the affected parties have made an informed decision based on the information providing in the plan?

58: DO

### HYPOTHECATIONS

No records available

### JUDGMENTS

No records available

### **OFFICE PRACTISE NTOTICES**

No records available

## **5. CORRECTION NOTICES**

### TRADE MARK CORRECTION NOTICES

No records available

### PATENT CORRECTION NOTICES

No records available

### **DESIGNS CORRECTION NOTICES**

No records available

### **COPYRIGHT CORRECTION NOTICES**

No records available

### PATENTS

### **Advertisement List for February 2022**

### Number of Advertised Patents: 851

Application Number	Patent Title	Filing Date
2015/04218	METHOD FOR CARRYING OUT TRANSACTIONS	2015-06-11
2016/05314	SYSTEM FOR TIME SLOT COMMUNICATION	2016-08-01
2016/07596	FLOWER PRESERVATION METHOD AND DEVICE	2016-11-03
2017/05120	CELL PENETRATING ANTIBODIES	2017-07-27
2017/05584	MICROBIAL MICROFLUIDIC BIOSENSOR	2017-08-17
2017/05770	AMATOXIN-ANTIBODY CONJUGATES	2017-08-24
2017/05870	USED OIL RECYCLING PRETREATMENT AND FILTRATION ASSEMBLY	2017-08-29
2017/06882	MORPHINAN DERIVATIVE	2017-10-11
2017/06923	T CELL WHICH EXPRESSES A GAMMA-DELTA T CELL RECEPTOR (TCR) AND A CHIMERIC ANTIGEN RECEPTOR (CAR)	2017-10-12
2017/06945	FIXED DOSE COMBINATIONS COMPRISING ETC1002 AND ONE OR MORE STATINS FOR TREATING OR REDUCING CARDIOVASCULAR RISK	2017-10-13
2017/07313	SPECIFIC DETECTION OF CLUSTERIN ISOFORMS	2017-10-27
2017/08372	FOLDABLE PERSONAL VEHICLE	2017-12-11
2018/07613	DERIVATIVES OF AMANITA TOXINS AND THEIR CONJUGATION TO A CELL BINDING MOLECULE	2018-11-13
2019/00340	LAMINATED VEHICLE SIDE WINDOW WITH A LEADTHROUGH FOR THE FASTENING OF A CLAMPING ELEMENT	2019-01-17
2019/00718	DRAG REDUCING COMPOSITION	2019-02-04

Application Number	Patent Title	Filing Date
2019/00719	SOLID COMPOSITION CONTAINING ORAL ANTICOAGULANT	2019-02-04
2019/00724	SYSTEM AND PROCESS FOR PRODUCING DRY MIX CONSTRUCTION MATERIALS WITH IMPROVED ENGINEERING PROPERTIES	2019-02-04
2019/00793	PH-RESPONSIVE LIPIDS	2019-02-07
2019/00911	COMPOSITE ACTIVATED CARBON AND CONDUCTIVE POLYMER ADSORPTION MEDIA	2019-02-11
2019/01145	MANAGING SERVICES ASSOCIATED WITH URL- BASED TWO DIMENSIONAL CODES	2019-02-22
2019/01249	BILLBOARD CONCEALING A MOBILE TELEPHONY ANTENNA	2019-02-26
2019/01525	INTEGRATED PSYCHOMETRIC ASSESSMENT METHOD AND SYSTEM	2019-03-12
2019/03711	LIGHT SPECTRUM-MODIFYING NETTING FOR USE IN CITRUS FRUIT PRODUCTION	2019-06-10
2019/03727	PESTICIDAL COMPOSITION FOR PROTECTING SEEDS	2019-06-11
2019/03804	METHOD FOR PRODUCING HYDROPHOBISING LEATHER TREATMENT AGENTS	2019-06-12
2019/03873	METHODS OF TREATING COCHLEAR SYNAPTOPATHY	2019-06-14
2019/04046	IMPROVED METHODS FOR ENHANCING ANTIBODY PRODUCTIVITY IN MAMMALIAN CELL CULTURE AND MINIMIZING AGGREGATION DURING DOWNSTREAM, FORMULATION PROCESSES AND STABLE ANTIBODY FORMULATIONS OBTAINED THEREOF	2019-06-21
2019/04154	IN VITRO PROPAGATION OF CRITICALLY ENDANGERED EUPHORBIA SPECIES	2019-06-26
2019/04164	PREPARATION METHOD AND APPLICATION OF RECOMBINANT ONCOLYTIC INFLUENZA VIRUS	2019-06-26
2019/04166	VEHICLE MIRRORS	2019-06-26
2019/04168	FACILITY FOR PRODUCING AND TREATING A GAS STREAM THROUGH A VOLUME OF LIQUID	2019-06-26
2019/04510	SUPPORT FOR A MOBILE ELECTRONIC DEVICE	2019-07-09
2019/04705	RECOMBINANT BCG OVEREXPRESSING PHOP- PHOR	2019-07-17
2019/05079	METERING HYDRAULIC CONTROL SYSTEM FOR MINING MACHINE	2019-07-31
2019/05581	METHOD AND APPARATUS FOR PACKAGING RESPIRING PRODUCE	2019-08-23
2019/06149	PLANT ORGAN IMAGE SEPARATION METHOD AND SYSTEM	2019-09-18
2019/07099	LAYERED, COMPOSITE LENS AND METHODS OF CONSTRUCTION	2019-10-28
2019/07104	STRATEGY SEARCHING IN STRATEGIC INTERACTION BETWEEN PARTIES	2019-10-28
2019/07283	COMPOSITIONS, DEVICES AND METHODS FOR TREATING AUTISM	2019-11-01
2019/07392	APPARATUS AND PROCESS FOR PROCESSING OF GLASS CONTAINERS AND PROCESS FOR	2019-11-07

Application Number	Patent Title	Filing Date
	MANUFACTURING GLASS CONTAINERS INCLUDING SUCH A PROCESSING	
2019/07525	COMBINATION OF A 5-HT6 RECEPTOR ANTAGONIST AND AN ACETYLCHOLINESTERASE INHIBITOR FOR USE IN THE TREATMENT OF ALZHEIMER'S DISEASE IN A PATIENT SUBPOPULATION CARRYING APOE4 ALLELES	2019-11-13
2019/08036	MOUNTAIN LAND FRUIT TREE PLANTING SYSTEM AND PLANTING METHOD THEREOF	2019-12-03
2019/08037	MOUNTAIN LAND TRACK TRANSPORTATION SYSTEM	2019-12-03
2020/00139	STROLLER ACCESSORY AND DOUBLE STROLLER ASSEMBLY	2020-01-09
2020/00596	SEAL FOR PREVENTING CONTAMINATION FROM ENTERING A ROLLER BEARING	2020-01-29
2020/01471	STRAIN GAUGE ASSEMBLY, PARTICULARLY FOR AN AXLE COUNTER	2020-03-09
2020/02312	METHOD FOR PRODUCING A PRECOATED STEEL SHEET AND ASSOCIATED SHEET	2020-05-04
2020/03567	AUTOMATICALLY ADJUSTABLE DEVICE FOR AFFIXING TO THE NOSE OF ANIMALS	2020-06-12
2020/04013	HYGIENIC DEVICE FOR CONTAINER	2020-07-01
2020/04566	SYNERGISTIC COMBINATIONS OF MONOCHLORAMINE AND ORGANIC ACID, AND METHODS OF USING THE SAME FOR MICROBIAL CONTROL	2020-07-23
2020/04617	SPRINKLER HOUSING	2020-07-27
2020/04955	SURGICAL TOOL	2020-08-11
2020/04981	PLANT-GROWING TRAY	2020-08-12
2020/05029	AUTOTAXIN INHIBITOR COMPOUNDS	2020-08-05
2020/05148	METHOD AND APPARATUS FOR RECTAL ANAESTHESIA	2020-08-19
2020/05175	SYSTEM AND METHOD FOR A CONVERTIBLE USER APPLICATION	2020-08-20
2020/05233	OPHTHALMIC FORMULATION	2020-08-21
2020/05258	MODIFIED CREPING ADHESIVE FORMULATION AND CREPING METHODS USING SAME	2020-08-24
2020/05298	COMBINATION TUMOR IMMUNOTHERAPY	2020-08-20
2020/05320	ANTI CD6 ANTIBODIES FOR TREATING SEVERE ASTHMA	2020-08-26
2020/05414	EXPRESSION OF PNEUMOCOCCAL SURFACE PROTEIN A (PSPA	2020-08-31
2020/05446	A VAPOUR COMPRESSION APPARATUS	2020-08-31
2020/05452	DOWNHOLE CLEANING APPARATUS	2020-09-01
2020/05719	AN IMPROVED ELECTRODE FOR ELECTROCHEMICAL DEVICE	2020-09-15
2020/05780	MOBILE SCREEN BODY AND MOBILE MINERAL MATERIAL PROCESSING PLANT WITH SUPPORT LEGS	2020-09-17
2020/05901	ORTHOPEDIC BABY SEAT	2020-09-23
2020/06175	DISTRIBUTED PHOTOBIOMODULATION THERAPY SYSTEM AND METHOD	2020-10-05

Application Number	Patent Title	Filing Date
2020/07102	INTERMITTENT ELECTROLYSIS STREAMS	2020-11-13
2020/07230	METHOD FOR REDUCING EMISSION OF NITROGEN	2020-11-19
	OXIDES AND DIOXINS OF SINTERING FLUE GAS ON	
	BASIS OF CERIUM-BASED CATALYST	
2020/07464	A METHOD FOR CONSTRUCTING INNER DUMP	2020-11-30
	OPEN-PIT MINE BOTTOM RESERVOIRS SECTION	
	BY SECTION	
2021/00291	WORD SENSE DISAMBIGUATION USING A DEEP	2021-01-15
2021/00431		2021-01-20
2021/00512	PELLETS HAVING A MULTI-LAYER STRUCTURE	2021-01-25
	FOR DELAYED RELEASE OF THE ACTIVE	
2024/00005	SUBSTANCE IN THE DISTAL COLON	2024 02 04
2021/00695		2021-02-01
2021/00696	MATERIAL FEED PROCESS AND ASSEMBLY FOR A	2021-02-01
2021/00030	ROTARY MAGNETIC SEPARATOR	2021-02-01
2021/00767	NON-ALCOHOLIC FERMENTED BEER HAVING	2021-02-03
2021/00101	IMPROVED FLAVOUR	
2021/00781	METHOD FOR PROVIDING BLANKS FOR THE	2021-02-04
	PRODUCTION OF INSHOES, FOOTLETS, NO-SHOW	
	SOCKS, SHOES OF THE LIKE WITH DOUBLE	
	LAYERS, WITH A CIRCULAR HOSIERY KNITTING	
	MACHINE, AND INTERMEDIATE MANUFACTURE	
	OBTAINED WITH THE METHOD	
2021/00909	PROCESS FOR SANITIZING AND PRESERVING	2021-02-10
00001/01010	FOODSTUFFS AND BEVERAGES	
2021/01012	APPARATUS AND METHOD FOR UREA PHOTO-	2021-02-15
0001/01000		0004 00 47
2021/01082	METHOD FOR IMPROVING THE FORMABILITY OF	2021-02-17
2021/01286		2021 02 25
2021/01200		2021-02-25
2021/01308	ELECTRONIC BLASTING SYSTEM	2021-02-23
2021/01441		2021-03-03
2021/01441	CONTENT IN GASES AND METHOD THEREOF	2021 00 00
2021/01748	JOINT FOR ABOVE GROUND POOL FRAME	2021-03-16
2021/01774	A WHEEL ALIGNMENT ADAPTOR FASTENER	2021-03-17
2021/01791	METHOD AND DEVICE FOR STABILIZING	2021-03-17
	PRECURSOR FIBERS OR FILMS FOR PRODUCING	
	CARBON FIBERS OR FILMS	
2021/01976	COLD ROLLED AND HEAT-TREATED STEEL SHEET	2021-03-24
	AND METHOD OF MANUFACTURING THE SAME	
2021/02001	SIDE MIRROR FOR RAIL VEHICLE	2021-03-25
2021/02008	METHOD FOR MONITORING THE WEAR OF A	2021-03-25
	REFRACTORY LINING OF A BLAST FURNACE	
2021/02060	FRONT FLOOR REINFORCEMENT STRUCTURE	2021-03-26
	FOR A VEHICLE HAVING A BATTERY PACK IN THE	
	IUNNEL	

2021/02180         METHOD AND SYSTEM FOR FACILITATING         2021-03-31           2021/02204         A PRESS HARDENED PART WITH NAN         2021-03-31           2021/02204         A PRESS HARDENED PART WITH HIGH         2021-03-31           2021/02204         A PRESS HARDENED PART WITH HIGH         2021-03-31           2021/02327         CATAMENIA FULID REMOVAL         2021-04-08           2021/02328         WIND TURBINE TOWER SECTION, WIND TURBINE         2021-04-08           2021/02328         WIND TURBINE TOWER SECTION, WIND TURBINE         2021-04-08           2021/02560         CATALYST AND METHOD FOR PREPARING LOW         2021-04-14           AROMATIC HYDROCARBON LIQUID FULE BY         2021-04-16         1111           DIRECT CONVERSION OF SYNTHESIS GAS         2021-04-16         2021/02520           2021/02520         ELECTRICALLY CONTROLLED SWITCH FOR HIGH         2021-04-16           2021/02575         MULTI-ROTOR UAV INTELLIGENT PATROL SYSTEM         2021-04-19           2021/02575         MULTI-ROTOR UAV INTELLIGENT PATROL SYSTEM         2021-04-20           2021/02575         MULTI-ROTOR UAV INTELLIGENT PATROL SYSTEM         2021-04-20           2021/02575         MULTI-ROTOR UAV INTELLIGENT PATROL SYSTEM         2021-04-20           2021/02561         WIND TURBINE MAST SECTION, WIND TURBINE         2021-04-20<	Application Number	Patent Title	Filing Date
2021/02204       A PRESS HARDENED PART WITH HIGH RESISTANCE TO DELAYED FRACTURE AND A       2021/03.31         2021/02327       CATAMENIAL FLUID REMOVAL       2021-04-08         2021/02328       WIND TURBINE TOWER SECTION, WIND TURBINE       2021-04-08         2021/02326       WIND TURBINE TOWER SECTION, WIND TURBINE       2021-04-14         2021/0256       CATALYST AND METHOD FOR PREPARING LOW AROMATIC HYDROCARBON LIQUID FUEL BY DIRECT CONVERSION OF SYNTHESIS GAS       2021-04-14         2021/02519       GRIPPING GROUP FOR A SWITCH HAVING AN INTERNAL COMPACT STRUCTURE       2021-04-16         2021/02520       ELECTRICALLY CONTROLLED SWITCH FOR HIGH CURRENT SWITCHING OPERATIONS OF FIXED TERMINAL CONTACTS       2021-04-16         2021/02575       MULTI-SECTION ROD SUITABLE FOR CRUMBLY ROCK STRATUS OF MINE AND USING METHOD THEREOF       2021-04-20         2021/02519       MULTI-SECTION ROD SUITABLE FOR CRUMBLY ROCK STRATUS OF MINE AND USING METHOD       2021-04-20         2021/02516       WIND TURBINE MAST SECTION, WIND TURBINE       2021-04-20         2021/02614       DITHIOCARBAMATE OIL DISPERSIONS       2021-04-20         2021/02615       WIND TURBINE MAST SECTION, WIND TURBINE       2021-04-20         2021/02643       SHIELDED SELF-LATCHING LOCKING ASSEMBLY       2021-04-21         2021/02643       SHIELDED SELF-LATCHING LOCKING ASSEMBLY       2021-04-21         2021/03021 </td <td>2021/02180</td> <td>METHOD AND SYSTEM FOR FACILITATING SYSTEMATIC ESCALATION OF AN EVENT IN AN ORGANIZATIONAL HIERARCHY</td> <td>2021-03-31</td>	2021/02180	METHOD AND SYSTEM FOR FACILITATING SYSTEMATIC ESCALATION OF AN EVENT IN AN ORGANIZATIONAL HIERARCHY	2021-03-31
2021/02327CATAMENIAL FLUID REMOVAL2021-04-082021/02328WIND TURBINE TOWER SECTION, WIND TURBINE2021-04-082021/02456CATALYST AND METHOD FOR PREPARING LOW AROMATIC HYDROCARBON LIQUID FUEL BY DIRECT CONVERSION OF SYNTHESIS GAS2021-04-142021/02519GRIPPING GROUP FOR A SWITCH HAVING AN INTERNAL COMPACT STRUCTURE2021-04-162021/02520ELECTRICALLY CONTROLLED SWITCH FOR HIGH CURRENT SWITCHING OPERATIONS WITH DIFFERENT CONFIGURATIONS OF FIXED2021-04-162021/02575MULTI-ROTOR UAV INTELLIGENT PATROL SYSTEM 2021/025992021-04-202021/02575MULTI-ROTOR UAV INTELLIGENT PATROL SYSTEM ROCK STRATUS OF MINE AND USING METHOD THEREOF2021-04-202021/02614DITHICCARBAMATE OIL DISPERSIONS MAST AND ASSEMBLY METHOD2021-04-202021/02643SHIELDED SELF-LATCHING LOCKING ASSEMBLY FOR A UTILITY VAULT2021-04-202021/02643SHIELDED SELF-LATCHING LOCKING ASSEMBLY FOR A UTILITY VAULT2021-04-202021/0302A METHOD OF MANUFACTURING MARTENSITIC STEEL AND A MARTENSITIC STEEL THEREOF2021-04-212021/03031FILM MADE OF METAL ALLOY OUNDATION FOR WIND TURBINE TOWERS COMPRESSIBILITY AND RECOVERY2021-05-072021/0330FILM MADE OF METAL ALLOR A METAL ALLOY COMPRESSIBILITY AND RECOVERY2021-05-102021/03425COLD ROLLED AND ANNEALED STEEL SHEET, COMPRESSIBILITY AND RECOVERY2021-05-242021/03502DEVICE, EXCHANGE UNIN, WIND TURBINE TOWERS METHOD AND USE THEREOF2021-05-242021/03680DEMKERMENT SYSTEM METHOD AND SIGNATURE METHOD AND USE THEREOF2021-05-28<	2021/02204	A PRESS HARDENED PART WITH HIGH RESISTANCE TO DELAYED FRACTURE AND A MANUFACTURING PROCESS THEREOF	2021-03-31
2021/02328WIND TURBINE TOWER SECTION, WIND TURBINE TOWER AND ASSEMBLY METHOD2021-04-082021/02456CATALYST AND METHOD FOR PREPARING LOW AROMATIC HYDROCARBON LIQUID FUEL BY DIRECT CONVERSION OF SYNTHESIS GAS2021-04-142021/02519GRIPPING GROUP FOR A SWITCH HAVING AN CURRENT SWITCHING OPERATIONS WITH DIFFERENT CONFIGURATIONS OF FIXED TERMINAL COMPACT STRUCTURE2021-04-162021/02575MULTI-NCTOR UAV INTELLIGENT PATROL SYSTEM 	2021/02327	CATAMENIAL FLUID REMOVAL	2021-04-08
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2021/03091DUAL PASS, DUAL ANNEAL WELDING METHOD FOR JOINING HIGH STRENGTH STEELS2021/05-072021/03130FILM MADE OF METAL OR A METAL ALLOY2021-05-102021/03315FOUNDATION FOR WIND TURBINE TOWERS2021-05-172021/03383BULKY NONWOVEN FABRIC WITH ENHANCED COMPRESSIBILITY AND RECOVERY2021-05-192021/03425COLD ROLLED AND ANNEALED STEEL SHEET, METHOD OF PRODUCTION THEREOF AND USE OF 	2021/03022	A METHOD OF MANUFACTURING MARTENSITIC STEEL AND A MARTENSITIC STEEL THEREOF	2021-05-05
2021/03130FILM MADE OF METAL OR A METAL ALLOY2021-05-102021/03315FOUNDATION FOR WIND TURBINE TOWERS2021-05-172021/03383BULKY NONWOVEN FABRIC WITH ENHANCED COMPRESSIBILITY AND RECOVERY2021-05-192021/03425COLD ROLLED AND ANNEALED STEEL SHEET, METHOD OF PRODUCTION THEREOF AND USE OF SUCH STEEL TO PRODUCE VEHICLE PARTS2021-05-202021/03502DEVICE, EXCHANGE UNIT, KIT, AND METHOD FOR 	2021/03091	DUAL PASS, DUAL ANNEAL WELDING METHOD FOR JOINING HIGH STRENGTH STEELS	2021-05-07
2021/03315FOUNDATION FOR WIND TURBINE TOWERS2021-05-172021/03383BULKY NONWOVEN FABRIC WITH ENHANCED COMPRESSIBILITY AND RECOVERY2021-05-192021/03425COLD ROLLED AND ANNEALED STEEL SHEET, METHOD OF PRODUCTION THEREOF AND USE OF SUCH STEEL TO PRODUCE VEHICLE PARTS2021-05-202021/03502DEVICE, EXCHANGE UNIT, KIT, AND METHOD FOR 	2021/03130	FILM MADE OF METAL OR A METAL ALLOY	2021-05-10
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2021/03425COLD ROLLED AND ANNEALED STEEL SHEET, METHOD OF PRODUCTION THEREOF AND USE OF SUCH STEEL TO PRODUCE VEHICLE PARTS2021-05-202021/03502DEVICE, EXCHANGE UNIT, KIT, AND METHOD FOR REDUCING THE ODOR OF TANNED LEATHER2021-05-242021/03638ANTIFUNGAL COMPOUND, AND SYNTHESIS METHOD AND USE THEREOF2021-05-272021/03680DEMAGNETIZATION AND SIGNATURE MEASUREMENT SYSTEM2021-05-282021/03794METHOD AND ELECTRONIC DEVICE FOR CONTROLLING A MANUFACTURING OF A GROUP OF FINAL METAL PRODUCT(S) FROM A GROUP OF INTERMEDIATE METAL PRODUCT(S), RELATED COMPUTER PROGRAM, MANUFACTURING METHOD AND INSTALLATION2021-06-032021/03811METHOD OF LASER CUTTING A STEEL2021-06-03	2021/03383	BULKY NONWOVEN FABRIC WITH ENHANCED COMPRESSIBILITY AND RECOVERY	2021-05-19
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2021/03638ANTIFUNGAL COMPOUND, AND SYNTHESIS METHOD AND USE THEREOF2021-05-272021/03680DEMAGNETIZATION AND SIGNATURE MEASUREMENT SYSTEM2021-05-282021/03794METHOD AND ELECTRONIC DEVICE FOR CONTROLLING A MANUFACTURING OF A GROUP OF FINAL METAL PRODUCT(S) FROM A GROUP OF INTERMEDIATE METAL PRODUCT(S), RELATED COMPUTER PROGRAM, MANUFACTURING 	2021/03502	DEVICE, EXCHANGE UNIT, KIT, AND METHOD FOR REDUCING THE ODOR OF TANNED LEATHER	2021-05-24
2021/03680DEMAGNETIZATION AND SIGNATURE MEASUREMENT SYSTEM2021-05-282021/03794METHOD AND ELECTRONIC DEVICE FOR CONTROLLING A MANUFACTURING OF A GROUP OF FINAL METAL PRODUCT(S) FROM A GROUP OF 	2021/03638	ANTIFUNGAL COMPOUND, AND SYNTHESIS METHOD AND USE THEREOF	2021-05-27
2021/03794METHOD AND ELECTRONIC DEVICE FOR CONTROLLING A MANUFACTURING OF A GROUP OF FINAL METAL PRODUCT(S) FROM A GROUP OF INTERMEDIATE METAL PRODUCT(S), RELATED 	2021/03680	DEMAGNETIZATION AND SIGNATURE MEASUREMENT SYSTEM	2021-05-28
2021/03811 METHOD OF LASER CUTTING A STEEL 2021-06-03	2021/03794	METHOD AND ELECTRONIC DEVICE FOR CONTROLLING A MANUFACTURING OF A GROUP OF FINAL METAL PRODUCT(S) FROM A GROUP OF INTERMEDIATE METAL PRODUCT(S), RELATED COMPUTER PROGRAM, MANUFACTURING METHOD AND INSTALLATION	2021-06-02
	2021/03811	METHOD OF LASER CUTTING A STEEL	2021-06-03

Application Number	Patent Title	Filing Date
2021/03896	METHOD OF MAKING A TEE RAIL HAVING A HIGH STRENGTH BASE	2021-06-07
2021/03898	CIGARETTE-MAKING MACHINE AND METHOD FOR PRODUCING CIGARETTES	2021-06-07
2021/04147	SHOPPING TROLLEY	2021-06-17
2021/04235	UNDERGROUND RAW COAL AND GANGUE DISCHARGE SYSTEM	2021-06-21
2021/04387	HYDRAULIC INTELLIGENT AUTOMATIC WINDOW	2021-06-25
2021/05471	PRIMERS, REAGENTS, KITS FOR IDENTIFYING RETINOPATHY OF PREMATURITY WITH/WITHOUT MENTAL RETARDATION AND APPLICATION THEREOF	2021-08-02
2021/05541	CT RADIOMICS-BASED AUXILIARY ASSESSMENT METHOD AND SYSTEM FOR LUNG CANCER PROGNOSIS	2021-08-06
2021/05543	APPLICATION OF REGULATING PEROXIDASE FAMILY GENES IN FIBROSIS-RELATED DISEASES	2021-08-06
2021/05556	DOUBLE-ROW AXIAL PLUNGER PUMP BASED ON DIGITAL VARIABLE DISPLACEMENT	2021-08-06
2021/05557	CONVEYING ROBOT HAVING MONORAIL CRANE FOR COAL MINE WITH COMPLEX GEOLOGICAL CONDITIONS	2021-08-06
2021/05558	DEVICE FOR TRIMMING THICK BRANCHES OF TREE	2021-08-06
2021/06151	INTERNET OF THINGS-BASED MONITORING SYSTEM FOR SPECIAL ITEMS, METHOD THEREOF AND DEVICE THEREOF	2021-08-25
2021/06406	NOVEL COMPOUNDING METHOD FOR HIGH- EFFICIENTLY REMOVING PHOSPHORUS	2021-09-02
2021/06561	INDOOR POSITIONING ALGORITHM BASED ON SWARM INTELLIGENCE PERCEPTION AND MULTI- FUSION TECHNOLOGY	2021-09-07
2021/07010	ANTIFATIGUE HAW POLYPHENOL TABLET AND METHOD FOR PREPARING SAME	2021-09-17
2021/07192	OLIGO DNA GROUP OF SGRNA FOR TARGETED KNOCKING-OUT OSAUR2 GENE OF RICE BASED ON CRISPR-CAS9 TECHNOLOGY	2021-09-27
2021/07257	INTELLIGENT ROBOT	2021-09-28
2021/07258	UNMANNED AERIAL VEHICLE PATROL INSPECTION SYSTEM	2021-09-28
2021/07259	OLIGO DNA GROUP OF SGRNA FOR SITE- DIRECTED KNOCKOUT OF RICE OSAURORA1 GENE	2021-09-28
2021/07260	AN AUXILIARY DEVICE FOR COLLEGE ENGLISH TRANSLATION PRACTICE	2021-09-28
2021/07261	PRECISE SOWING DEVICE FOR KENAF	2021-09-28
2021/07262	MULTI-FACTOR-BASED CANCER RISK ASSESSMENT AND GRADING MODEL FOR HIGH- RISK POPULATION OF GASTRIC CANCER	2021-09-28
2021/07263	NANO TIO2/ POLYANILINE/GRAPHENE COMPOSITE MATERIAL WITH HIGH INSTANTANEOUS	2021-09-28

Application Number	Patent Title	Filing Date
	PHOTOCURRENT AND PREPARATION METHOD THEREOF	
2021/07264	METHOD FOR PREPARING CALCIUM CITRATE FROM EGGSHELL	2021-09-28
2021/07265	CARBON FIBER BACTERIOSTATIC ULTRA- FILTRATION MASK AND PREPARATION METHOD THEREOF	2021-09-28
2021/07266	FLEXIBLE ULTRASONIC GUM DIPPING DEVICE	2021-09-28
2021/07267	POLYANILINE PHOTOSENSITIVE CHIP AND PREPARATION METHOD THEREOF	2021-09-28
2021/07275	TRADITIONAL CHINESE MEDICINE FORMULATION FOR PREVENTING DISEASES IN ECOLOGICAL CULTURE OF SOFTSHELL TURTLES, PREPARATION METHOD AND METHOD FOR USE THEREOF	2021-09-28
2021/07292	PATH PLANNING METHOD AND SYSTEM BASED ON DISTRIBUTED PARALLEL COMPUTING	2021-09-28
2021/07308	METHOD FOR IMPROVING ACCURACY OF NONDESTRUCTIVE TESTING OF CARBON FIBROUS WIRES	2021-09-29
2021/07309	MULTI-FACTOR-BASED CANCER RISK ASSESSMENT AND GRADING MODEL FOR HIGH- RISK POPULATION OF ESOPHAGEAL CANCER	2021-09-29
2021/07310	MAGNETIC SATURATION CONTROLLABLE SHUNT REACTOR WITH AC AND DC EXCITATION	2021-09-29
2021/07311	NO-CLEAN RANGE HOOD MECHANISM WITH VORTEX WIND AND LARGE SUCTION FORCE	2021-09-29
2021/07312	PREPARING METHOD OF FORSYTHIA SUSPENSA GREEN TEA	2021-09-29
2021/07313	INSTALLATION PROCESS AND METHOD FOR BUILDING WATER SUPPLY PIPELINE	2021-09-29
2021/07314	SPLICED BUILDING WITH INTELLIGENT HOME SYSTEM	2021-09-29
2021/07315	SEWAGE TREATMENT EQUIPMENT	2021-09-29
2021/07317	A SANITARY GARMENT	2021-09-29
2021/07318	COAL CRUSHING DEVICE FOR CONVEYOR AND UNDERGROUND COAL CONVEYING SYSTEM	2021-09-29
2021/07319	METHOD FOR PREVENTING AND TREATING SCAB DISEASE	2021-09-29
2021/07320	NGS-BASED MULTIPLEX PANEL FOR SIMULTANEOUSLY DETECTING 22 MICROHAPLOTYPES AND 7 COMPOUND MARKERS	2021-09-29
2021/07637	TABLE	2021-10-11
2021/07642	HANDSTAND ROLLER SKATING FITNESS TRAINING DEVICE	2021-10-11
2021/07779	METHOD AND SYSTEM FOR PLAYING MEDIA CONTENT IN TELECOMMUNICATION NETWORK	2021-10-13
2021/07854	MULTIFUNCTIONAL SWALLOWING EXERCISE DEVICE FOR REHABILITATION NURSING	2021-10-15
2021/07855	COMPOSITE SUCKER ROD WITH SELF-ADJUSTING ANTI-IMPACT STRUCTURE	2021-10-15

Application Number	Patent Title	Filing Date
2021/07856	WHEAT QUALITY-RELATED PROTEIN PDIA3, ENCODING GENE AND USE THEREOF	2021-10-15
2021/07857	GLASS CAPABLE OF ENHANCING THERMAL SHOCK RESISTANCE AND PREPARATION METHOD THEREOF	2021-10-15
2021/07858	LIQUID SODIUM SILICATE ENERGY-SAVING PRODUCTION DEVICE AND PRODUCTION METHOD	2021-10-15
2021/07909	FORAGE GRASS SAMPLING SCISSORS	2021-10-18
2021/07915	METHOD FOR DETERMINING AN OPTIMAL ARRANGEMENT OF CIRCULAR PIPE SUPPORTS OF STEEL SILO COMPOSITE SHEAR WALL	2021-10-18
2021/07928	IMMUNOASSY-BASED TUMOR MEDICATION GUIDANCE SYSTEM AND METHOD	2021-10-18
2021/07961	STUDENT SEAT SIGN-IN DEVICE	2021-10-19
2021/07977	BACILLUS SUBTILIS, MICROBIAL INOCULUM, AND USE THEREOF IN CONTROLLING PLANT DISEASES	2021-10-19
2021/07982	AN AUXILIARY BUNDLING DEVICE FOR PLASTIC PACKAGING BAGS	2021-10-19
2021/08117	SURFACING ROBOT AND RING-SHAPED DIAPHRAGM SURFACING SYSTEM	2021-10-21
2021/08118	GUIDE RAIL-FREE AUTOMATIC TRACKING FLEXIBLE CRAWLING ROBOT APPLIED TO UNDERWATER LOCAL DRY WELDING	2021-10-21
2021/08121	GUIDE RAIL-FREE AUTOMATIC TRACKING FLEXIBLE CRAWLING ROBOT	2021-10-21
2021/08122	FLEXIBLE WELDING AND CUTTING ROBOT FOR SPECIAL-SHAPED CROSS-SECTION WORKPIECES	2021-10-21
2021/08136	METHOD FOR SIMULATING THE BLOCKAGE MECHANISM OF GEOTHERMAL WATER REINJECTION	2021-10-22
2021/08148	A SIMULTANEOUS LOCATION AND MAPPING BASED AUTONOMOUS NAVIGATION SYSTEM	2021-10-22
2021/08191	PREPARATION METHOD AND APPLICATION OF POLYPHENOL COMPLEXES WITH ANTIOXIDANT AND AMYLASE INHIBITION FUNCTIONS	2021-10-25
2021/08226	MAGNETIC TAG SENSOR AND METHOD FOR MANUFACTURING SAME, AND RIVERBED SCOUR DETECTION DEVICE	2021-10-25
2021/08279	NON-CONTRAST CT SCANNING IMAGE-BASED AORTIC DISSECTION SEGMENTATION METHOD AND APPARATUS	2021-10-27
2021/08283	AN IOT ENABLED SAND AIR JET MACHINING SYSTEM	2021-10-27
2021/08327	NON-AUTOCLAVED BAKING-FREE BRICK AND PREPARATION METHOD THEREOF	2021-10-28
2021/08328	METHOD FOR TREATING NATURAL GAS DRILLING SHALLOW WASTE AND APPLICATION	2021-10-28
2021/08329	CERAMSITE AND PREPARATION AND METHOD THEREOF	2021-10-28
2021/08330	NUMERICAL CONTROL INCREMENTAL FORMING METHOD BASED ON SELF-RESISTANCE ELECTRIC HEATING AND INTELLIGENT ALGORITHM	2021-10-28

Application Number	Patent Title	Filing Date
2021/08331	A METHOD FOR IMPROVING CYCLE STABILITY OF CATHODE MATERIAL FOR LITHIUM-ION BATTERY	2021-10-28
2021/08332	WESTERN MEDICINE GRANULE FORMING DEVICE	2021-10-28
2021/08333	WOOD DEFECT DETECTION METHOD BASED ON COMPUTER IMAGE TECHNOLOGY AND TRANSFER LEARNING	2021-10-28
2021/08334	EARLY WARNING METHOD OF GROUND SETTLEMENT DUE TO SUBWAY CONSTRUCTION BASED ON CASE-BASED REASONING AND SYSTEM DYNAMICS	2021-10-28
2021/08335	OIL CONTAMINATION DETECTOR	2021-10-28
2021/08336	THREE-STAGE TUBULAR T-SHAPED DEGASSING DEVICE WITH MICROBUBBLE AXIAL FLOW AND SPIRAL FLOW FIELDS	2021-10-28
2021/08337	SAPONIFIED COLLECTOR FOR USE IN HIGH CARBON FLY ASH FLOTATION, PREPARATION METHOD AND APPLICATION THEREOF	2021-10-28
2021/08338	PREPARATION METHOD OF A CATALYST FOR PREPARING CYCLOALKANE BY PHENOL HYDRODEOXYGENATION	2021-10-28
2021/08339	ENRICHED DOUBLE-LAYER PLATFORM FERMENTATION BED BREEDING SYSTEM	2021-10-28
2021/08340	RAPID STERILIZATION DEVICE FOR ASEPTIC OPERATION INOCULATION APPARATUS AND APPLICATION METHOD THEREOF	2021-10-28
2021/08341	CHITOSAN NANOPARTICLES FOR DELIVERING FISH OIL AND PREPARATION METHOD THEREOF	2021-10-28
2021/08342	DIGITAL TWIN EVOLUTION MECHANISM AND METHOD FOR INTELLIGENT MINE SCENES	2021-10-28
2021/08343	FLUORESCENT PROBE, PREPARATION METHOD AND APPLICATION THEREOF	2021-10-28
2021/08344	SPAT LAND-SEA RELAY TRANSPORTATION METHOD	2021-10-28
2021/08356	HONEYCOMB MESH COMBINED PACKING MATERIAL	2021-10-28
2021/08391	BIOMARKERS FOR PREDICTING PROGRESSION OF INTRAVENOUS LEIOMYOMATOSIS	2021-10-29
2021/08400	ADAPTIVE FITTING DEVICE FOR MAIN SHAFT OF PERMANENT MAGNET SUSPENSION TYPE GRINDING ROBOT	2021-10-29
2021/08401	THREE-DIMENSIONAL BRAIDED THERMOPLASTIC COMPOSITE MATERIAL AUTOMOBILE RIM AND PREPARATION AND APPLICATION THEREOF	2021-10-29
2021/08402	PREMIXED FEED FOR IMPROVING ODOR OF PIG FECES AND APPLICATION THEREOF	2021-10-29
2021/08403	METHOD FOR RECYCLING FIBER REINFORCED COMPOSITE SUCKER ROD	2021-10-29
2021/08404	THE APPLICATION OF ORAL BACTERIA LIQUID CARRIER	2021-10-29
2021/08405	RECOVERY METHOD FOR FIBER-REINFORCED COMPOSITE MATERIAL SUCKER ROD	2021-10-29
Application Number	Patent Title	Filing Date
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2021/08406	TENSILE FASTENING DEVICE FOR A WOOD FRAME STRUCTURE	2021-10-29
2021/08407	INTERFACIAL REINFORCED CARBON NANOTUBE SIZING AGENT FOR CARBON FIBER AND PREPARATION METHOD THEREOF	2021-10-29
2021/08408	3D PRINTER AND ITS PRINTING METHOD ALLOWING FOR INFINITE PRINT LENGTH	2021-10-29
2021/08409	DOUBLE-TARGET-SURFACE MULTI-LATTICE DISTRIBUTED ACOUSTIC PRECISION TARGET AND WARHEAD SHOCK WAVE MACH ANGLE TESTING METHOD	2021-10-29
2021/08410	THERMOPLASTIC COMPOSITE MATERIAL DIRECTLY FORMED BY LASER AND PREPARATION METHOD AND APPLICATION THEREOF	2021-10-29
2021/08411	VEHICLE ORIENTED PUBLIC NURSING FACILITY	2021-10-29
2021/08431	CIRCULATION COOLING DEVICE FOR COMPOSITE FOOT PAD PRODUCTION WORKSHOP AND PRODUCT COLLECTION METHOD	2021-10-29
2021/08435	PLASTIC GRANULATION PRODUCTION LINE AND MATERIAL ROD COOLING FLUME EQUIPPED THEREFOR	2021-10-29
2021/08465	QUANTITATIVE METHOD OF PROTEIN BASED ON NON-ISOTOPE LABELED PEPTIDE SEGMENT ADDITION COMBINED WITH MRM	2021-11-02
2021/08466	MIAO MEDICINE COMPOSITION, MIAO MEDICINE FUNCTIONAL FEED, AND PREPARATION METHOD AND APPLICATION THEREOF	2021-11-02
2021/08467	ASPHALT CONCRETE MODIFIER	2021-11-02
2021/08468	METHOD FOR ESTABLISHING TILLANDSIA SIMPLE SEQUENCE REPEAT (SSR) MARKER AND USE THEREOF	2021-11-02
2021/08469	NEEDLING TYPE GARLIC SPROUT HARVESTER	2021-11-02
2021/08470	PRE-MIXED COCKTAIL AND RELATED PREPARATION METHOD OF JAPANESE APRICOT	2021-11-02
2021/08471	METHOD OF SYMBIOTIC GROWTH OF CYPERUS ESCULENTUS L. AND RHIZOPHAGUS INTRARADICES IN PLANT ROOTS AND DETERMINATION OF MOLD ACTIVITY	2021-11-02
2021/08473	DENDROBIUM HUOSHANENSE ENZYME AND PREPARATION METHOD THEREOF	2021-11-02
2021/08474	PROCESS OF PRODUCING FUNCTIONAL BEVERAGE FOR ENHANCING IMMUNITY	2021-11-02
2021/08475	METHOD FOR PREPARING CHONDROITIN SULFATE/DIACYLGLYCEROL NANOEMULSION TO PROMOTE EFFICIENT SECRETION OF MUCOPOLYSACCHARIDE FROM CARTILAGE	2021-11-02
2021/08476	EDIBLE FUNGUS CONTAINING ORGANIC SELENIUM AND PREPARATION METHOD THEREOF	2021-11-02
2021/08477	STRUCTURE OF REINJECTION WELL FOR IMPROVING REINJECTION ABILITY	2021-11-02
2021/08478	METHOD FOR INCREASING THE TITER OF BACTERIOPHAGE T4 BY SYNERGIZING 1, 3-	2021-11-02

Application Number	Patent Title	Filing Date
	DIGLYCERIDE AND COLLAGEN PEPTIDE WITH HIGH-VOLTAGE ELECTROSTATIC FIELD	
2021/08479	QUANTITATIVE FERTILIZATION DEVICE FOR CAMELLIA SEMISERRATA	2021-11-02
2021/08480	PREPARATION METHOD OF LACTIC ACID BACTERIA CELL-BOUND POLYSACCHARIDE CAPABLE OF IMPROVING NEMATODE ANTIOXIDANT CAPACITY	2021-11-02
2021/08481	TOBACCO LEAF HORIZONTAL STACKING TYPE CURING BARN	2021-11-02
2021/08482	SPECIFIC DNA SEGMENT AND PRIMER FOR SPECIES IDENTIFICATION OF MULBERRY	2021-11-02
2021/08483	MIXING METHOD OF PLANT-MIX HOT RECYCLED ASPHALT MIXTURE	2021-11-02
2021/08484	FEED FOR IMPROVING EGG LAYING PERFORMANCE AND HATCHABILITY OF POULTRY AND APPLICATION THEREOF	2021-11-02
2021/08485	INDUSTRIAL ROBOT SORTING SYSTEM AND METHOD	2021-11-02
2021/08486	UNSATURATED SEEPAGE TEST DEVICE AND TEST METHOD FOR ROCK MASS FRACTURE	2021-11-02
2021/08487	METHOD FOR CREATING SALT-TOLERANT AND DROUGHT-TOLERANT CORN	2021-11-02
2021/08488	METHOD FOR IDENTIFYING FEEDING AND RUMINATION OF DAIRY COWS BASED ON TRIAXIAL ACCELERATION	2021-11-02
2021/08489	ECOLOGICAL RESTORATION SYSTEM FOR BARREN AND DAMAGED MOUNTAINS	2021-11-02
2021/08490	FLOTATION METHOD FOR RECOVERING FINE- GRAINED CASSITERITE FROM TAILINGS	2021-11-02
2021/08491	OCEAN EXPLORATION, TRANSMISSION, AND PROCESSING TEACHING APPARATUS	2021-11-02
2021/08492	FLUX SYSTEM FOR LIQUID-PHASE SINTERING OF CERAMIC BODY AND PREPARATION METHOD THEREOF	2021-11-02
2021/08493	PREPARATION METHOD AND APPLICATION OF CUPROUS OXIDE MICRON PHOTOCATALYST WITH DIFFERENT MORPHOLOGIES	2021-11-02
2021/08494	LOOP-MEDIATED ISOTHERMAL AMPLIFICATION (LAMP) PRIMERS FOR VALSA MALI, AND VALSA MALI DETECTION KIT	2021-11-02
2021/08495	MIXED CRYSTAL TIO2/G-C3N4 HOLLOW NANOTUBE COMPOSITE MATERIAL AND PREPARATION METHOD THEREOF	2021-11-02
2021/08496	METHOD FOR CREATING IN-SITU MODULUS MASTER CURVE OF ASPHALT LAYER OF ASPHALT PAVEMENT	2021-11-02
2021/08497	SOLVENT SUITABLE FOR RAT PLASMA PROTHROMBIN TIME (PT) IN VITRO	2021-11-02
2021/08498	SILVER NANOCLUSTER-BASED CHITOSAN HYDROGEL DRESSING AND PREPARATION METHOD AND APPLICATION THEREOF	2021-11-02

Application Number	Patent Title	Filing Date
2021/08499	CARBON DOT/POLYURETHANE COMPOSITE MATERIAL AND PREPARATION METHOD AND APPLICATION THEREOF	2021-11-02
2021/08500	PNEUMATIC FISH CLEAVAGE GENERATING DEVICE AND SEEDLING INCUBATION METHOD AT CLEAVAGE STAGE	2021-11-02
2021/08501	METHOD FOR PREPARING TRIBLOCK POLYMER- GRAFTED REDUCED GRAPHENE OXIDE COMPOSITE MATERIAL AND APPLICATION THEREOF	2021-11-02
2021/08502	PREPARATION METHOD AND APPLICATION OF COPPER VANADATE AS CATHODE MATERIAL FOR LITHIUM ION BATTERY	2021-11-02
2021/08503	GRAPHENE THIN FILM AND PREPARATION METHOD AND APPLICATION THEREOF	2021-11-02
2021/08504	MAT CROSS-CUT SAW EQUIPMENT	2021-11-02
2021/08505	PREPARATION METHOD AND APPLICATION OF PHOSPHORIZED WS2 NANOSPHERE CATALYST	2021-11-02
2021/08506	DEVICE AND METHOD FOR ANNUAL BREEDING WOOLLY APPLE APHID	2021-11-02
2021/08507	FULL-PROCESS MECHANIZED HIGH-YIELD AND SYNERGISTIC PLANTING METHOD OF SUMMER CORN IN HUANG-HUAI-HAI FLUVO-AQUIC SOIL DISTRICT	2021-11-02
2021/08508	METHOD AND SYSTEM FOR DETERMINING MULTI- TARGET VEHICLE DISTRIBUTION ROUTE BASED ON IMPROVED GENETIC ALGORITHM	2021-11-02
2021/08509	REMOTE CONTROL HOLE DIGGER	2021-11-02
2021/08510	KIT AND METHOD FOR IDENTIFYING PERIODONTAL LIGAMENT STEM CELLS (PDLSCS)	2021-11-02
2021/08511	PREPARATION METHOD AND APPLICATION OF NICKEL-DOPED PYRRHOTITE FES NANOPARTICLES	2021-11-02
2021/08553	ANHYDRATION DEVICE AND ALGA COLLECTION BOAT USING SAME	2021-11-03
2021/08554	PREPARATION METHOD AND APPLICATION OF A POLYPEPTIDE VACCINE	2021-11-03
2021/08555	ROCK MASS MINING STRESS MONITORING DEVICE	2021-11-03
2021/08556	AUTOMATIC DINNER TRAY RECYCLING DEVICE	2021-11-03
2021/08557	MULTIDIMENSIONAL DYNAMIC SKI SIMULATOR	2021-11-03
2021/08558	ROCK-LIKE MATERIAL BIDIRECTIONAL PRESSURE TESTING DEVICE AND WORKING METHOD	2021-11-03
2021/08559	SYNTHETIC METHOD FOR PREPARING MICROSPHERE ZINC VANADATE AND ITS APPLICATION IN LITHIUM ION BATTERY	2021-11-03
2021/08560	MANGANESE DIOXIDE/IRON-PLATINUM COMPOSITE NANOMATERIAL WITH SYNERGISTIC CATALYSIS FUNCTIONS, PREPARATION METHOD AND APPLICATION THEREOF	2021-11-03
2021/08561		2021-11-03

Application Number	Patent Title	Filing Date
2021/08563	DOUBLE-COLUMN BRIDGE STRUCTURE WITH ENERGY- DISSIPATING AND SELF-CENTERING FUNCTIONS AND CONSTRUCTION METHOD	2021-11-03
2021/08564	GAS FILTERING SYSTEM FOR COMPOSTING	2021-11-03
2021/08565	RAPID AND HIGHLY SENSITIVE DIFFERENTIAL DIAGNOSIS KIT FOR BRUCELLOSIS VACCINE STRAIN AND WILD STRAIN AND USING METHOD THEREOF	2021-11-03
2021/08566	PREPARATION METHOD AND APPLICATION OF CEMENTED BACKFILL MATERIAL FOR LEAD-ZINC TAILINGS	2021-11-03
2021/08568	A DATA ANALYSIS METHOD AND SYSTEM FOR AI IDENTIFYING SPORTS TRAJECTORY	2021-11-03
2021/08598	METHOD FOR QUICKLY DELINEATING TARGET PROSPECTING AREA FOR GOLD DEPOSIT	2021-11-04
2021/08607	ROTATABLE UNIFORM AERATION APPARATUS FOR SEWAGE TREATMENT	2021-11-04
2021/08608	PHASE-CHANGE NANOCOMPOSITE FOR PROMOTING DRUG RELEASE BY BUBBLES AND PREPARATION METHOD AND USE THEREOF	2021-11-04
2021/08609	MAGNETIC SUSPENSION LINEAR MOTION DRIVING DEVICE	2021-11-04
2021/08610	PROCESS FOR PRODUCING FOAMED CERAMIC GREEN BUILDING MATERIAL BY USING MANGANESE SLAG	2021-11-04
2021/08611	BONE CHINA BODY WITH HIGH THERMAL STABILITY	2021-11-04
2021/08612	ENHANCEMENT DEVICE AND METHOD BASED ON HIGH NONLINEAR PHOTONIC CRYSTAL FIBER RAMAN LASER	2021-11-04
2021/08613	BONE CHINA BODY WITH HIGH STRENGTH AND HIGH THERMAL STABILITY	2021-11-04
2021/08636	INTELLIGENT SEPARATION DEVICE AND SEPARATION METHOD FOR PEANUT KERNEL AND PEANUT RED COAT	2021-11-04
2021/08646	APPLICATION OF COMPOUNDS INHIBITING SYNTHESIS OF VERY LONG CHAIN FATTY ACIDS IN PREVENTING AND TREATING MICROBIAL PATHOGENS AND METHOD THEREOF	2021-11-04
2021/08650	PHARMACEUTICAL COMPOSITION WITH ANTI- TUMOR EFFICACY, PREPARATION METHOD AND USES THEREOF	2021-11-05
2021/08651	INTELLIGENT TRANSACTION RECOMMENDATION SYSTEM BASED ON BIG DATA	2021-11-05
2021/08652	METHOD FOR SIMULATING FIBER-FORMING VISCOSITY OF MOLTEN RED MUD BASED ON MOLECULAR DYNAMICS	2021-11-05
2021/08653	METALLURGICAL SLAG GRANULATION-CATALYST PREPARATION AND MODIFICATION INTEGRATED DEVICE SYSTEM AND METHOD	2021-11-05
2021/08654	CORING SAMPLING BIOPSY NEEDLE	2021-11-05

Application Number	Patent Title	Filing Date
2021/08655	A FUZZY KEYWORDS ENABLED RANKED SEARCHABLE SCHEME IN CLOUD ENVIRONMENTS	2021-11-05
2021/08656	METHOD FOR SIMULATING STRUCTURAL STABILITY OF MOLTEN RED MUD FIBER-FORMING SYSTEM BASED ON MOLECULAR DYNAMICS	2021-11-05
2021/08657	EFFECTIVE AND PRACTICAL MATCHING METHOD FOR CLOUD MANUFACTURING TASKS AND SERVICE RESOURCES	2021-11-05
2021/08658	EFFICIENT MANGANESE REMOVAL METHOD	2021-11-05
2021/08659	INTELLIGENT LIFTING COLUMN SYSTEM APPLIED TO TIDAL LANE AND CONTROL METHOD THEREOF	2021-11-05
2021/08660	HIGH STRENGTH, HIGH TOUGHNESS RARE EARTH MAGNESIUM ALLOY	2021-11-05
2021/08661	METHOD FOR REMOVING ACRYLAMIDE BY ADSORPTION OF LACTIC ACID BACTERIA	2021-11-05
2021/08662	MAGNETORHEOLOGICAL DAMPER WITH TWO RING DAMPING GAPS	2021-11-05
2021/08663	PROPELLER WITH THREE HOOKE HINGES AND TWO SPHERICAL HINGES	2021-11-05
2021/08664	THREE-DEGREE-OF-FREEDOM CLEANING WORKING DEVICE FOR UNDERWATER WALL SURFACE CLEANING ROBOT	2021-11-05
2021/08676	DEVICE AND METHOD THEREOF FOR DRYING LUMP ORES IN STORAGE YARD BY USING WASTE GAS OF SINTERING RING COOLER	2021-11-05
2021/08700	TIO2-X-BASED PHOTOCATALYST WITH FRUSTRATED LEWIS PAIRS AS WELL AS PREPARATION METHOD AND APPLICATION THEREOF	2021-11-08
2021/08701	AG-AGX NANOWIRE AND PREPARATION METHOD THEREOF	2021-11-08
2021/08702	INTERACTIVE COGNITION RECOGNITION ATHLETIC TRAINING METHOD	2021-11-08
2021/08703	WATER-PERMEABLE BOX FOR MEASURING DENSITY OF CABLE FILLING CORD	2021-11-08
2021/08704	DEVICE FOR DETERMINING LIMIT SIZE POSITION OF OUTER DIAMETER OF CABLE	2021-11-08
2021/08705	HYDRODYNAMIC WATER BLOCKING DEVICE FOR UNDERGROUND GARAGE AND METHOD	2021-11-08
2021/08706	AIR CONDITIONER ENERGY-SAVING DEVICE FOR BASE STATION ROOM	2021-11-08
2021/08707	METHOD FOR CONSTRUCTING COMPREHENSIVE MULTIDIMENSIONAL ENERGY INDEX CMEI	2021-11-08
2021/08708	AERONAUTICAL ALUMINUM ALLOY MINIMUM- QUANTITY-LUBRICATION MILLING MACHINING DEVICE	2021-11-08
2021/08709	CORDYCEPS JAVANICA STRAIN BD01 AND APPLICATION THEREOF	2021-11-08
2021/08710	INTERNAL COOLING/EXTERNAL COOLING- SWITCHING MILLING MINIMUM-QUANTITY- LUBRICATION INTELLIGENT NOZZLE SYSTEM AND METHOD	2021-11-08

Application Number	Patent Title	Filing Date
2021/08711	PREPARATION METHOD AND APPLICATION OF COATING AGENT FOR PREVENTING AND CONTROLLING POTATO BLACKLEG DISEASE	2021-11-08
2021/08712	COAXIAL HOMODROMOUS DIFFERENTIAL RICE- WHEAT THRESHING AND SEPARATING CHAFFCUTTER	2021-11-08
2021/08713	METHOD FOR REGULATING RAPID COLOR CONVERSION OF SUCCULENTS	2021-11-08
2021/08714	RED CARBON NITRIDE PHOTOCATALYST WITH BROAD-SPECTRAL RESPONSE AND PRODUCT THEREOF	2021-11-08
2021/08715	REMANUFACTURING ENGINEERING TECHNOLOGY OF WASTE RADIAL TIRE STEEL WIRE DISLOCATION FOR RETREADING	2021-11-08
2021/08716	PREDICTION METHOD OF CHANNEL SILTATION CAUSED BY HYDRODYNAMIC CHANGE OF DREDGED TRENCH	2021-11-08
2021/08717	STABILIZING ROLL AND MANUFACTURE METHOD THEREOF	2021-11-08
2021/08718	PNEUMATIC PRECISION SEEDER	2021-11-08
2021/08719	TRADITIONAL CHINESE MEDICINE PREPARATION FOR TREATING INSOMNIA AND PREPARATION METHOD THEREOF	2021-11-08
2021/08720	ACID-TOLERANT STREPTOMYCES ALBULUS AND USE THEREOF IN EPSILON-POLY-L-LYSINE (EPSILON-PL) FERMENTATION	2021-11-08
2021/08721	MULTIPLEX PCR METHOD FOR SIMULTANEOUSLY DETECTING CDV, CPV, CCOV-I AND CCOV-II	2021-11-08
2021/08722	CONTROL MECHANISM FOR SWINGING ANGLE OF HEADER IN COMBINED RICE HARVESTING EQUIPMENT	2021-11-08
2021/08723	STEPLESS THRESHING AND SEPARATION ROTARY DRUM DEVICE	2021-11-08
2021/08724	BEDSTAND FOR WHOLE-FEED RICE-WHEAT COMBINE HARVESTER	2021-11-08
2021/08725	HALF-FEED ROTARY CONCAVE THRESHING DEVICE TEST BED	2021-11-08
2021/08726	ELECTROMAGNETIC INDUCTION STEAM CAR WASHING APPARATUS	2021-11-08
2021/08727	INORGANIC-ORGANIC HYBRID FLAME-RETARDANT MILDEW-PROOF COATING AND PREPARATION METHOD THEREOF	2021-11-08
2021/08728	ON-SITE RAPID HIGHLY SENSITIVE DIFFERENTIAL DIAGNOSIS KIT FOR PORCINE CIRCOVIRUS (PCV) 2, PCV3 AND PCV4 AND APPLICATION METHOD THEREOF	2021-11-08
2021/08729	ON-SITE RAPID AND HIGHLY SENSITIVE DIFFERENTIAL DIAGNOSIS KIT FOR PORCINE DIARRHEA VIRAL PATHOGENS AND APPLICATION METHOD THEREOF	2021-11-08
2021/08730	TEST DEVICE FOR EVALUATING THERMAL SHOCK LIFE OF THERMAL BARRIER COATINGS	2021-11-08

Application Number	Patent Title	Filing Date
2021/08731	LIQUID MATERIAL PLASMA SPRAY DEVICE	2021-11-08
2021/08732	DUST FALL SAMPLING DEVICE FOR ARID AND	2021-11-08
	SEMI-ARID AREAS	
2021/08733	BALL-PIN TRANSVERSE STABILIZER BAR	2021-11-08
	SUSPENDER, ASSEMBLING METHOD, AND	
	TRANSVERSE STABILIZER BAR ASSEMBLY	
2021/08734	BIOCHAR SOIL CONDITIONER FOR HEAVY METAL	2021-11-08
2021/08725		2021 11 08
2021/06/35	TONIFYING POWDER	2021-11-08
2021/08736	METHOD FOR PREPARING RUBBERY POLYMER	2021-11-08
2021/00/30	BI END MEMBRANE MODIFIED BY	2021 11 00
	POLYETHERAMINE BLENDING AND APPLICATION	
	THEREOF	
2021/08795	HIGH-PRECISION SPINDLE ROTATION SYSTEM	2021-11-09
	FOR A MACHINE TOOL AND CONTROL METHOD	
2021/08796	BROADBAND SINGLE-POLARIZATION RESIDUAL	2021-11-09
	DISPERSION COMPENSATION PHOTONIC	
	CRYSTAL FIBER	
2021/08798	PROTEIN NANOCARRIER AND USE THEREOF, AND	2021-11-09
	CARRIER LOADED WITH TARGETING SUBSTANCE	
0001/00000	AND PREPARATION METHOD THEREOF	
2021/08800	CELL MEMBRANE-COATED FE304@MN02	2021-11-09
2021/08801		2021-11-09
2021/08001	SYSTEM CONTROL METHOD STORAGE MEDIUM	2021-11-09
	DEVICE AND APPLICATION THEREOF	
2021/08802	CMF-TIO2-PDMS COMPOSITE MATERIAL WITH	2021-11-09
	SUPER-HYDROPHOBICITY AND PREPARATION	
	METHOD AND APPLICATION THEREOF	
2021/08807	KANDELIA CANDEL PLANTING METHOD IN TIDAL	2021-11-09
	FLATS OF HIGH-WIND-WAVE AND STRONG-TIDE	
	AREA	
2021/08830	MATERIAL CONVEYING DEVICE AND SCRAPER	2021-11-09
2021/08860	ERCP AUXILIARY MANIPULATOR DEVICE	2021-11-10
2021/08861	DEGASSING-FREE UNDERWATER DISSOLVED	2021-11-10
	CARBON DIOXIDE DETECTION DEVICE AND	
2021/08962		2021 11 10
2021/08862		2021-11-10
	STORAGE AND DATA PROCESSING METHOD	
	THEREOF	
2021/08863	NATURAL CHINESE HERBAL MEDICINE	2021-11-10
	FORMULATION FOR IMPROVING PORK QUALITY	
2021/08864	LOW DENSITY AND LOW PRESSURE SHEET	2021-11-10
	MOLDING COMPOUND AND PREPARATION	
	METHOD THEREOF	
2021/08865	IRON SUCROSE INJECTION AND PREPARATION	2021-11-10
	METHOD THEREOF	

Application Number	Patent Title	Filing Date
2021/08866	COMPOUND RESERPINE TABLETS AND PREPARATION METHOD THEREOF	2021-11-10
2021/08867	DIGITAL EDUCATION SOFTWARE APPLICATION TECHNOLOGY	2021-11-10
2021/08868	MULTI-SEISMIC-PROOF SELF-RESETTING ASSEMBLED TYPE FRAMEWORK-SWING WALL ENERGY CONSUMPTION STRUCTURE	2021-11-10
2021/08869	AUTOMATIC FLOW REGULATING SYSTEM FOR BLACK AND ODOROUS WATER BODIES IN RIVER CHANNELS	2021-11-10
2021/08870	INSPECTION ROBOT AND METHOD FOR MEASURING ROAD SURFACE FLATNESS	2021-11-10
2021/08871	DOUBLE-ENDED KIRSCHNER WIRE FOR PEDIATRIC HIP JOINT SURGERY	2021-11-10
2021/08872	PREFABRICATED PREFINISHED VOLUMETRIC CONSTRUCTION (PPVC) MODULAR BUILDING STRUCTURE SYSTEM AND ASSEMBLY METHOD THEREOF	2021-11-10
2021/08873	LOW-COST AND ENVIRONMENTALLY-FRIENDLY AMENDMENT FOR COASTAL SEVERELY SALINE- ALKALI LAND AND APPLICATION METHOD THEREOF	2021-11-10
2021/08874	COMPOUND CHINESE MEDICINE FOR TREATING CHICKEN COLIBACILLOSIS AND PREPARATION METHOD THEREOF	2021-11-10
2021/08875	ULTRASONIC STEREOSCOPIC IMAGING SCANNING DEVICE	2021-11-10
2021/08876	WRAPPING MATERIAL FOR REDUCED CONTAMINATION	2021-11-10
2021/08877	FRAGRANT PEAR POSTURE CORRECTION DEVICE	2021-11-10
2021/08878	CATHODE MATERIAL MO-VS4/N-GNTS OF MAGNESIUM-ION BATTERY AND USE THEREOF	2021-11-10
2021/08879	FERMENTED KORLA FRAGRANT PEAR FRUIT VINEGAR BEVERAGE AND PREPARATION METHOD THEREOF	2021-11-10
2021/08880	HSV-2 DNA VACCINE FOR INTRAMUCOSAL USE AND ITS PREPARATION METHOD AND APPLICATION	2021-11-10
2021/08881	MULTIFUNCTIONAL AUTOMATIC GARLIC PEELING MACHINE	2021-11-10
2021/08882	PRIMER SET, RAPID VISUAL FLUORESCENT DETECTION KIT, AND METHOD FOR DETECTING AFRICAN SWINE FEVER VIRUS	2021-11-10
2021/08883	PRIMER SET, KIT, AND METHOD FOR FLUORESCENT LAMP ASSAY FOR AFRICAN SWINE FEVER VIRUS	2021-11-10
2021/08884	AIR SUCTION TYPE PRECISION SEED-METERING DEVICE CAPABLE OF ADJUSTING SUCTION HOLE SIZES	2021-11-10
2021/08885	VEHICLE OVER-LIMITED EARLY WARNING SYSTEM AND METHOD	2021-11-10
2021/08886	A CENTRAL SPLIT NURSING BED	2021-11-10

Application Number	Patent Title	Filing Date
2021/08889	ARBORIZED FRUIT TREE PLANTING METHOD APPLICABLE TO COASTAL SALINE-ALKALI LAND	2021-11-10
2021/08917	SYSTEM FOR WARNING CONSTRUCTION PERSONNEL AND USING METHOD THEREOF	2021-11-11
2021/08921	METHOD FOR IDENTIFYING FRESHNESS OF SQUID BASED ON COLOR SPACE TRANSFORM AND PIXEL CLUSTERING	2021-11-11
2021/08925	FETAL MACROSOMIA-RELATED MIRNA MARKER AND USE THEREOF	2021-11-11
2021/08926	WAVE-DRIVEN PROFILER	2021-11-11
2021/08929	METHOD FOR REQUEST SCHEDULING IN UAV- ASSISTED MOBILE EDGE COMPUTING (MEC) NETWORK	2021-11-11
2021/08934	TUMOR AIDED DIAGNOSIS SYSTEM BASED ON ARTIFICIAL INTELLIGENCE	2021-11-11
2021/08972	WATER-SAVING IRRIGATION SYSTEM FOR FRUIT TREES AND APPLICATION THEREOF	2021-11-12
2021/08973	ONLINE FRUIT AND VEGETABLE IDENTIFICATION SYSTEM BASED ON RGB-D VISION AND METHOD THEREOF	2021-11-12
2021/08974	METHOD FOR INDUSTRIALLY EXTRACTING BO CHRYSANTHEMUM	2021-11-12
2021/08975	RV-TYPE GEAR RETARDER FOR SUBMERSIBLE SCREW PUMP	2021-11-12
2021/08976	PRODUCTION AND PROCESSING METHOD OF GENUINE MEDICINAL MATERIAL WHITE PEONY ROOT FOR REDUCING THE LOSS OF COMPONENT PAEONIFLORIN	2021-11-12
2021/08977	PRIMARY PROCESSING METHOD OF ANEMARRHENAE	2021-11-12
2021/08978	TECHNIQUE FOR DETECTING GEOTHERMAL WATER ENRICHMENT AREA IN PIEDMONT KARST GEOTHERMAL RESERVOIR	2021-11-12
2021/08979	SPECIAL CARBON-BASED FERTILIZER FOR COTTON FIELDS AND PREPARATION METHOD THEREOF	2021-11-12
2021/08980	PREPARATION METHOD OF AG/AGCL/IL/FEOOH/AC PHOTOCATALYTIC MATERIAL AND ITS APPLICATION	2021-11-12
2021/08981	FAST AND INTELLIGENT MINING METHOD FOR LONGWALL IRREGULAR WORKING FACES IN COAL MINE	2021-11-12
2021/08982	UNCERTAINTY-AWARE FEDERATED LEARNING METHOD AND SYSTEM IN MOBILE EDGE COMPUTING NETWORK	2021-11-12
2021/08983	A FACE RECOGNITION SYSTEM BASED ON CONVOLUTIONAL NEURAL NETWORK	2021-11-12
2021/08984	X-RAY PERSPECTIVE THREE-DIMENSIONAL POSITIONING AUXILIARY TOOL	2021-11-12
2021/08985	PREPARATION METHOD OF 2-METHYLQUINOLINE	2021-11-12

Application Number	Patent Title	Filing Date
2021/08986	METHOD FOR DEODORIZING AND ENHANCING FLAVOR OF MEAT AND MEAT PRODUCTS BY USING LACTOBACILLUS FERMENTATION BROTH	2021-11-12
2021/08989	MOLECULAR SENSOR WITH FLUORESCENCE DETECTION SIGNAL OF "OFF-ON-OFF" TO ACIDIC ENVIRONMENT AND APPLICATION THEREOF	2021-11-12
2021/08990	SPHERICAL STORAGE TANK MODEL FOR ANTI- SEISMIC DESIGN EXPERIMENT	2021-11-12
2021/08993	METHOD FOR CLASSIFICATION DESIGN OF SOIL- ROCK FOUNDATION PIT SUPPORT BASED ON DEPTH AND BURIED DEPTH OF MODERATELY WEATHERED ROCK	2021-11-12
2021/08994	PERMANENT SUPPORT STRUCTURE COMBINING ANTI FLOATING ANCHOR ROD AND UNDERGROUND HORIZONTAL STRUCTURE AND CONSTRUCTION METHOD THEREOF	2021-11-12
2021/09013	LIGNIN-BASED FLEXIBLE FIBROUS ELECTRODE, PREPARATION METHOD THEREFOR AND APPLICATION THEREOF	2021-11-12
2021/09027	A RAPID PERCEPTION AND PROTECTION METHOD FOR BLOCK FALLING AND SAND SLIDING IN EXCAVATION OF SANDY LOESS TUNNEL	2021-11-15
2021/09028	A DIVISION METHOD OF ENGINEERING GEOLOGICAL GENERALIZED MODEL FOR MINING NEAR LOOSE LAYER	2021-11-15
2021/09029	METHOD FOR PREPARATION OF METHYL BROMOPHENYLPROPIONATE BY ASYMMETRIC REDUCTION CATALYZED BY SACCHAROMYCES CEREVISIAE	2021-11-15
2021/09030	MANGANESE-VANADIUM SLAG AND METHOD FOR PRODUCING MANGANESE-VANADIUM SLAG IN CONVERTER	2021-11-15
2021/09032	PHOTONIC CRYSTAL FIBER	2021-11-15
2021/09033	VIBRATING MULTIFUNCTIONAL LAYERED PICKING INTEGRATED MACHINE FOR WINTER JUJUBES	2021-11-15
2021/09034	SMALL PAPER MACHINE	2021-11-15
2021/09035	PAPER MAKING MACHINE	2021-11-15
2021/09036	WARM AREA RAINSTORM IDENTIFICATION AND CLASSIFICATION METHOD AND SYSTEM	2021-11-15
2021/09037	AN OUTAGE PROBABILITY PERFORMANCE PREDICTION METHOD FOR MOBILE COMMUNICATION SYSTEM	2021-11-15
2021/09038	METHOD FOR ORGANIC HEAT CARRIER SYNTHETISED BY HIGH TEMPERATURE RESISTANCE	2021-11-15
2021/09039	METHOD AND DEVICE FOR GENERATING NUMERICAL VALUE OF CRITICAL PHOTON DETECTOR OPERATOR	2021-11-15
2021/09040	ANCHOR ROD AND METHOD FOR SUPPORTING FRACTURE ZONE	2021-11-15

Application Number	Patent Title	Filing Date
2021/09041	METHOD FOR PREPARING FLUORESCENT POLYMER FOR SIMULTANEOUSLY DETECTING TRIVALENT CHROMIUM IONS AND HEXAVALENT CHROMIUM IONS	2021-11-15
2021/09061	HAND-OPERATED DEVIATION-FREE CORRECTOR FOR STEREOTAXIC INSTRUMENT	2021-11-15
2021/09079	?-KETOSULFOXIDE DERIVATIVE FOR CARBOXYLIC ACID DRUGS AS WELL AS PREPARATION METHOD AND APPLICATION THEREOF	2021-11-15
2021/09081	EXPERIMENTAL APPARATUS FOR MEASURING AND SEPARATING ROTATION ERRORS OF PRECISION SPINDLE	2021-11-15
2021/09086	MOSE2/DEFECT-RICH ZNIN2S4/CDSE DUAL Z- SCHEME PHOTOCATALYST FOR PHOTOCATALYTIC WATER SPLITTING TO HYDROGEN	2021-11-16
2021/09087	EXTRACTION METHOD OF CHARACTERISTIC POINTS FOR GROUND OBJECT OF AERIAL PHOTOGRAPHS BASED ON UNMANNED AERIAL VEHICLE REMOTE SENSING TECHNIQUE	2021-11-16
2021/09088	METHOD AND DEVICE FOR PLANNING MOTION TRAJECTORY OF ROBOT	2021-11-16
2021/09089	AN INFRARED IMAGER AND A SIGNAL CORRECTION METHOD THEREOF	2021-11-16
2021/09090	MARKING METHOD FOR STOLON TIP OF STRAWBERRY	2021-11-16
2021/09091	INTRUSION DETECTION METHOD FOR NETWORK	2021-11-16
2021/09092	ORAL CHINESE MEDICINAL COMPOSITION FOR TREATING PSORIASIS	2021-11-16
2021/09093	REMOTE SENSING CLASSIFICATION AND IDENTIFICATION METHOD, DEVICE, EQUIPMENT AND STORAGE MEDIUM FOR SOIL GROUPS	2021-11-16
2021/09094	CHINESE MEDICINAL COMPOSITION FOR TREATING CHRONIC NONBACTERIAL PROSTATITIS	2021-11-16
2021/09095	PREPARATION AND APPLICATION OF COPOLYMER MODIFIED WATERPROOF AGENT	2021-11-16
2021/09096	PORTABLE DIGITAL REFRACTOMETER	2021-11-16
2021/09097	METHOD FOR INCREASING YIELD OF CORN STARCH	2021-11-16
2021/09098	EFFICIENT COAL SLURRY DEEP SEPARATION PROCESS	2021-11-16
2021/09099	HYBRID LOCOMOTIVE	2021-11-16
2021/09101	QUANTUM DOT INFRARED DETECTOR WITH HIGH ABSORPTIVITY	2021-11-16
2021/09102	TREATMENT PROCESS OF SURFACE FLOW- VERTICAL SUBSURFACE FLOW CONSTRUCTED WETLANDS	2021-11-16
2021/09103	ROCK BURST PREVENTION AND CONTROL METHOD OF BROKEN BOTTOM COAL DRILLING COMBINED WITH BLASTING PRESSURE RELIEF	2021-11-16

Application Number	Patent Title	Filing Date
2021/09104	THIN-WALLED STEEL PIPE HOLLOW-RIBBED CONCRETE COMPOSITE SLAB, FLOOR SLAB, BUILDING AND MANUFACTURING METHOD THEREOF	2021-11-16
2021/09105	SLIDING TRI-PETAL SLEEVE FOR CONNECTING STEEL BARS	2021-11-16
2021/09106	SPLICING NODE OF PRECAST CONCRETE SHEAR WALL AND CONSTRUCTION METHOD	2021-11-16
2021/09110	METHOD FOR IDENTIFYING PARTIAL DISCHARGE PATTERN OF TRANSFORMER BASED ON DISCHARGE FINGERPRINT DATABASE	2021-11-16
2021/09111	A METHOD OF PREPARATION FOR ? L-GLUTAMIC ACID SEED CRYSTAL	2021-11-16
2021/09112	A PRECISION TEMPERATURE CONTROL DEVICE AND METHOD SUITABLE FOR FRIEDEL CRAFTS REACTION IN IBUPROFEN PRODUCTION	2021-11-16
2021/09113	A PRECISION TEMPERATURE CONTROL DEVICE AND METHOD SUITABLE FOR FRIEDEL CRAFTS REACTION IN IBUPROFEN PRODUCTION	2021-11-16
2021/09114	CONSTRUCTION METHOD AND APPLICATION OF ENGINEERING STRAIN OF OENOCOCCUS OENI	2021-11-15
2021/09118	PREPARATION METHOD FOR FLUORESCENT AND TRANSPARENT COMPOSITE MATERIAL	2021-11-16
2021/09132	ROAD NETWORK BALANCED DRAINAGE METHOD AIMED AT REDUCING URBAN WATERLOGGING	2021-11-16
2021/09138	SAFE MAINTENANCE METHOD OF HIGHWAY TUNNEL STRUCTURE	2021-11-17
2021/09140	SPIRAL ANNULAR SHAPED CHARGE CUTTING LINER	2021-11-17
2021/09141	ROAD VEGETATION GREENING WEEDING SANITATION DEVICE AND WORKING METHOD THEREOF	2021-11-17
2021/09142	LOWER LIMB EXOSKELETON DEVICE FOR MULTI- POSITION REHABILITATION TRAINING	2021-11-17
2021/09143	A STRESS-RESISTANT ORGANIC SOIL AMENDMENT WITH BIOSTIMULATION AND ITS PREPARATION METHOD	2021-11-17
2021/09144	RAPID DETECTION METHOD OF WEISSELLA VIRIDESCENS BASED ON DROPLET DIGITAL PCR	2021-11-17
2021/09145	PLANTING METHOD TO INCREASE WHEAT YIELD ON DRY LAND	2021-11-17
2021/09146	MULTI-FUNCTIONAL SPIRAL PUSHING TYPE SUPPLEMENTARY FEEDING MACHINE FOR DAIRY COWS	2021-11-17
2021/09147	WIDE RIDGE AND FURROW SOWING CULTIVATION TECHNOLOGY OF WHEAT IN SALINE-ALKALI LAND	2021-11-17
2021/09148	ON-LINE DETECTION SYSTEM FOR INTEGRATION OF WATER AND FERTILIZER	2021-11-17
2021/09149	WASTE TREATMENT DEVICE USED IN PLANT PLANTING PROCESS	2021-11-17

Application Number	Patent Title	Filing Date
2021/09150	CONNECTING DEVICE FOR HYDRODYNAMIC MODEL EXPERIMENTS OF V-SHAPED OTTER BOARD	2021-11-17
2021/09151	METHOD FOR DETECTING OTA BY POLYMETHACRYLIC ACID LPFG	2021-11-17
2021/09152	METHOD FOR FARMING PROCAMBARUS CLARKII BY BIOFLOC TECHNOLOGY (BFT)	2021-11-17
2021/09153	BIOMARKERS RELATED TO THE OCCURRENCE AND DEVELOPMENT OF ESOPHAGEAL CANCER	2021-11-17
2021/09154	METHOD TO QUANTIFY THE RELIABILITY OF HUMAN FACTORS BASED ON FRACTURING OPERATION SHIFT	2021-11-17
2021/09155	HIGH-PERFORMANCE SMFE12-BASED PERMANENT MAGNET POWDER AND PREPARATION METHOD THEREOF	2021-11-17
2021/09156	INTELLIGENT INSPECTION VEHICLE FOR HIGH- SPEED TRACK	2021-11-17
2021/09157	RADIOTHERAPY POSITIONING DEVICE FOR TUMOR	2021-11-17
2021/09158	CORE SHELL STRUCTURE-BASED NANOPARTICLES FOR TARGETED DRUG- DELIVERY AND PREPARATION METHOD THEREOF	2021-11-17
2021/09159	SOIL CONDITIONING BACTERIAL AGENT AND COMBINATION THEREOF WITH LIME NITROGEN	2021-11-17
2021/09160	WIRELESS CHARGING SYSTEM USING BEAMFORMING ANTENNAS	2021-11-17
2021/09161	CALCULATION METHOD FOR ORTHOTROPIC STEEL BRIDGE DECK	2021-11-17
2021/09162	MULTILAYER THERMAL INSULATING LOADING DEVICE FOR HIGH-TEMPERATURE BLASTING BOREHOLE OF OPEN-PIT MINE	2021-11-17
2021/09163	PREPARATION METHOD OF ENZYME- HYDROLYZED SOYBEAN MEAL AND ITS APPLICATION IN FEED FOR MICROPTERUS SALMOIDES	2021-11-17
2021/09168	SEED CRYSTAL PREPARATION METHOD APPLIED TO CRYSTALLIZATION PROCESS	2021-11-17
2021/09170	AMERICAN GINSENG COMPOUND BEVERAGE AND PRAPARATION METHOD THEREOF	2021-11-17
2021/09171	FUZZY TOPSIS APPROACH BASED ON IMPROVED EUCLIDEAN DISTANCES	2021-11-17
2021/09191	COMPOSITE MATERIAL PRODUCTION LINE AND PRODUCTION METHOD BASED ON VERTICAL GRAVITY TENSIONING METHOD	2021-11-17
2021/09213	METHOD FOR CROSSBREEDING PELTEOBAGRUS FULVIDRACO AND PELTEOBAGRUS VACHELLI	2021-11-18
2021/09223	CHINESE MEDICINE COMPOSITION FOR TREATING HEART DISEASE AND PREPARATION METHOD THEREOF	2021-11-18
2021/09224	LNCRNA SFR1 AND ITS APPLICATION, PRODUCTS AND METHODS FOR REGULATING FOLLICULAR DEVELOPMENT	2021-11-18

Application Number	Patent Title	Filing Date
2021/09225	DEVICE AND METHOD FOR MEASURING AND CONTROLLING DIFFUSION RANGE OF CEMENT- BASED GROUT IN OVERBURDEN GROUTING	2021-11-18
2021/09232	METHOD FOR PREPARING STURGEON HEAD SEASONING	2021-11-18
2021/09246	METHOD FOR PREPARING HYDROXYETHYL CELLULOSE	2021-11-18
2021/09272	MACROPHAGE PYROPTOSIS MODEL, CONSTRUCTION METHOD AND APPLICATION THEREOF	2021-11-19
2021/09273	METHOD FOR MANUFACTURING HIGH-EFFICIENCY PLUM PRESERVATIVE	2021-11-19
2021/09275	GREENHOUSE BLUEBERRY POSTHARVEST PRUNING METHOD	2021-11-19
2021/09276	METHOD FOR MANUFACTURING HIGH-EFFICIENCY SWEET CHERRY PRESERVATIVE	2021-11-19
2021/09280	SQUARE-BUCKET TUNED LIQUID DAMPER CAPABLE OF SEMI-ACTIVELY REGULATING AND CONTROLLING DAMPING PERFORMANCE	2021-11-19
2021/09281	SELF-RESETTING WALL WITH TUNING-SWING- FRICTION COMPOSITE STAGED ENERGY DISSIPATION FUNCTION	2021-11-19
2021/09282	COLD-FORMED THIN-WALLED STEEL PLATE WALL SYSTEM WITH BUILT-IN FRICTION AND NEGATIVE RIGIDITY COMPOSITE DAMPING DEVICE	2021-11-19
2021/09284	COMBINED BUCKLING RESTRAINED BRACE WITH MULTI-YIELD STAGES AND MULTI-WAVE CORE UNITS	2021-11-19
2021/09289	A PROCESSING SYSTEM FOR BAMBOO PRODUCTS	2021-11-19
2021/09326	HIGH-EFFICIENCY AND ENERGY-SAVING FORESTRY SEEDLING CULTIVATION DEVICE AND CULTIVATION METHOD THEREOF	2021-11-19
2021/09327	METHOD FOR INDUCING FLOWER BUDS OF FEMALE TREES OF MYRICARUBRA(LOUR.)SIEB.ETZUCC. TO BE DIFFERENTIATED INTO MALE FLOWERS	2021-11-19
2021/09330	METHOD FOR IDENTIFYING POPULATIONS AND SPECIES OF CEPHALOPODS	2021-11-22
2021/09331	EM TREE NUTRIENT SOLUTION	2021-11-22
2021/09332	COMPOUND CHINESE HERBAL MEDICINE FOR CHICKEN RESPIRATORY DISEASES AND PREPARATION METHOD THEREOF	2021-11-22
2021/09333	METHOD FOR PROMOTING RAPID GERMINATION AND SEEDLING FORMATION OF ARTOCARPUS STYRACIFOLIUS PIERRE SEEDS	2021-11-22
2021/09334	CLOUD PLATFORM-BASED GARLIC CROP RECOGNITION METHOD BY COUPLLING ACTIVE AND PASSIVE REMOTE SENSING IMAGES	2021-11-22
2021/09335	METHOD FOR IDENTIFYING WALNUT VARIETIES BY SSR TECHNOLOGY	2021-11-22

Application Number	Patent Title	Filing Date
2021/09337	A METHOD FOR MICRO-EXTRACTION OF DNA FROM SINGLE PEPPER SEED	2021-11-22
2021/09338	METHOD FOR REMEDYING SOIL IN MINING AREA	2021-11-22
2021/09339	COMPREHENSIVE TREATMENT METHOD FOR NON-FERROUS METAL MINE WASTEWATER	2021-11-22
2021/09340	TRACHEAL INSTILLATION DEVICE FOR EXPERIMENTAL ANIMAL	2021-11-22
2021/09341	AIR PLATE TYPE TOTAL HEAT RECOVERY HEAT EXCHANGER WITH ROTATING FILTER DEVICE	2021-11-22
2021/09342	LOST FOAM STAINLESS STEEL COATING SPECIAL FOR LOST FOAM CASTING PROCESS AND MANUFACTURING METHOD THEREOF	2021-11-22
2021/09343	BIOLOGICAL IMPROVER FOR DESERTIFICATION SOIL AND PREPARATION METHOD THEREOF	2021-11-22
2021/09344	METHOD FOR DIAGNOSING STATE OF HEALTH OF BATTERY	2021-11-22
2021/09345	METHOD FOR TRANSPLANTING SWEET POTATO TISSUE-CULTURED SEEDLING WITH A HIGH SURVIVAL RATE	2021-11-22
2021/09346	SIMULATED MOVING BED CHROMATOGRAPHY (SMB) PURIFICATION METHOD FOR PURIFYING CICHORIUM INTYBUS L. BALSAM	2021-11-22
2021/09347	TRIPLE VACCINE FOR SALMONELLA, RIEMERELLAANATIPESTIFER AND ESCHERICHIA COLI	2021-11-22
2021/09348	METHOD FOR ECOLOGICAL RESTORATION OF WETLAND VEGETATION BASED ON WATER ACTIVATION OF SOIL SEED BANK	2021-11-22
2021/09349	MULTIFUNCTIONAL SPRAYING DEVICE FOR PEACH ORCHARDS	2021-11-22
2021/09350	WHOLE MAIZE FLOUR AND PREPARATION METHOD THEREOF	2021-11-22
2021/09356	CAP FOR CLOSING A CONTAINER AND ITS METHOD FOR MAKING THE CAP	2021-11-22
2021/09375	ENERGY-STORAGE WALL AND SOLAR GREENHOUSE	2021-11-22
2021/09390	METHOD FOR REGULATING FLOWERING PERIOD OF HELLEBORUS HYBRIDUS IN THE SOUTH OF THE YANGTZE RIVER REGION	2021-11-23
2021/09391	LONG AND SHORT ANCHOR CABLE COORDINATED ENERGY-ABSORBING AND YIELDING DEVICE AND CONSTRUCTION METHOD	2021-11-23
2021/09392	AN ARTIFICIAL RAINFALL SIMULATION DEVICE	2021-11-23
2021/09393	ELECTRIC CURRENT PULSE STRESS RELIEF CLAMPING DEVICE	2021-11-23
2021/09394	DETECTION DEVICE FOR HEIGHT DISTRIBUTION OF PM2.5 MASS CONCENTRATION AND DETECTION METHOD THEREOF	2021-11-23
2021/09395	CLOUD SERVICE COMPOSITION METHOD AND PLATFORM ORIENTED TO MOLD MAKING	2021-11-23

Application Number	Patent Title	Filing Date
2021/09396	METHOD FOR REMEDIATION OF POLYCYCLIC AROMATIC HYDROCARBONS-CONTAMINATED SOIL	2021-11-23
2021/09397	MOLECULAR MARKER AND METHOD FOR DETECTING SALMONELLA ENTERITIDIS INFECTION IN CHICKENS AND APPLICATION OF MOLECULAR MARKER	2021-11-23
2021/09398	HIGH-STRENGTH CREEP-RESISTANT HEAT- RESISTANT STEEL	2021-11-23
2021/09399	MODEL REFERENCE ADAPTIVE AIRCRAFT ROBUST CONTROL METHOD	2021-11-23
2021/09400	BUILDING FIREPROOF THERMAL INSULATION MATERIAL PRODUCING AND PROCESSING DEVICE	2021-11-23
2021/09401	MULTIFUNCTIONAL WORKBENCH FOR CIVIL ENGINEERING PRACTICE TEACHING	2021-11-23
2021/09402	FIREPROOF BOARD LAMINATING DEVICE FOR BUILDING WALLS	2021-11-23
2021/09403	SIMULATION EXPERIMENT DEVICE FOR WATER SUPPLY AND DRAINAGE TEACHING	2021-11-23
2021/09405	TRAINING SYSTEM FOR CARDIOPULMONARY- CEREBRAL RESUSCITATION BASED ON VIRTUAL SIMULATION	2021-11-23
2021/09406	ENHANCEMENT METHOD AND SYSTEM FOR LOW ILLUMINATION IMAGE	2021-11-23
2021/09407	FUSION ENCRYPTION METHOD BASED ON MULTI CHAOTIC SYSTEM	2021-11-23
2021/09408	GAS HYDRATE NANO-PROMOTER AND PREPARATION METHOD THEREOF	2021-11-23
2021/09409	STRANDING CAGE TYPE NATURAL GAS HYDRATE CONTINUOUS REACTION APPARATUS	2021-11-23
2021/09410	SPHERICAL NANO-MAGNETON WITH STABLE SOLUTION DISPERSIBILITY AND PREPARATION METHOD THEREOF	2021-11-23
2021/09411	PREPARATION METHOD OF COMPOSITE STRUCTURAL SENSOR USED FOR DETECTING CLENBUTEROL HYDROCHLORIDE	2021-11-23
2021/09412	METHOD FOR IMPROVING QUALITY OF SPLICING SEAM OF DIAMOND MONOCRYSTAL GROWN BY SPLICING METHOD	2021-11-23
2021/09413	METHOD FOR SPLICING GROWTH OF LARGE-SIZE MONOCRYSTAL DIAMOND	2021-11-23
2021/09416	PREPARATION METHOD AND APPLICATION OF THE NOVEL NISIN COMPOSITE NANOPARTICLES	2021-11-23
2021/09417	NANOFLUID MINIMUM QUANTITY LUBRICATION EXPERIMENTAL SYSTEM AND METHOD FOR ULTRASONIC VIBRATION ASSISTED GRINDING	2021-11-23
2021/09443	ASSISTIVE HANDWRITING DEVICE FOR PATIENTS HAVING PARKINSON'S DISEASE	2021-11-23
2021/09450	STAMPING MOULD AND SYSTEM FOR CARBON FIBER COMPOSITE DOUBLE HOLE CONNECTOR	2021-11-24
2021/09451	INDENT SELF-POSITIONING LONG-DIAMETER STRIKING TYPE SHELL BREAKING AND WHOLE	2021-11-24

Application Number	Patent Title	Filing Date
	KERNEL TAKING EQUIPMENT AND METHOD FOR HIGH-EXPOSED-KERNEL WALNUTS	
2021/09452	FRUIT VIBRATION GRADING EQUIPMENT	2021-11-24
2021/09453	TILTING TYPE LIFTING AND STIR-FRYING WALNUT KERNELS TO REMOVE RED SKIN DEVICE BASED ON ELECTROMAGNETIC HEATING	2021-11-24
2021/09454	A WALNUT EXTRUSION CRACK SYSTEM AND METHOD BASED ON ACCURATE SELF- POSITIONING	2021-11-24
2021/09455	A SQUEEZING AND SHEARING TYPE WALNUT SHELL BREAKING DEVICE AND METHOD	2021-11-24
2021/09456	INTEGRATED DEVICE, SYSTEM AND METHOD INTEGRATING MATERIAL SHELL REMOVING AND FRICTION TYPE CLEANING	2021-11-24
2021/09459	BALL-TYPE TRIPOD UNIVERSAL COUPLING	2021-11-24
2021/09460	CUTTING ROBOT BASED ON WEED IDENTIFICATION AND OPERATING SYSTEM THEREOF	2021-11-24
2021/09461	INTEGRATED BIOLOGICAL DENITRIFICATION DEVICE AND APPLICATION METHOD THEREOF	2021-11-24
2021/09462	RECYCLED SELF-FILLER MATERIAL AND PREPARATION METHOD THEREOF	2021-11-24
2021/09463	METHOD FOR IDENTIFYING THE GEOGRAPHICAL ORIGIN OF PEANUT OIL BY THE RAMAN SPECTRAL FINGERPRINTING TECHNIQUE	2021-11-24
2021/09464	EMPLOYMENT-MANAGING SYSTEM	2021-11-24
2021/09465	INTERNET OF THINGS-BASED INTELLIGENT AGRICULTURAL SYSTEM	2021-11-24
2021/09467	ACID SOIL CONDITIONER AND PREPARATION METHOD AND APPLICATION THEREOF	2021-11-24
2021/09468	METHOD FOR IDENTIFYING IMPACT DAMAGE REGION APPLICABLE TO CANTILEVER BEAM AND DEVICE THEREOF	2021-11-24
2021/09469	SEALED PLANT FERMENTED INDIGO VAT	2021-11-24
2021/09470	PREPARATION METHOD OF SPHERICAL AMMONIUM PERCHLORATE AND COMPOSITE PARTICLES THEREOF	2021-11-24
2021/09471	METHOD FOR MAKING HIGH-STRENGTH ADHESIVE TAPE PAPER AND APPLICATION THEREOF	2021-11-24
2021/09472	METHOD FOR SUPPLEMENTING LIGHT WITH RED LIGHT TO PROMOTE TOMATO FRUIT DEVELOPMENT AND LYCOPENE ACCUMULATION	2021-11-24
2021/09473	AN INTEGRATED POSITIONING SYSTEM AND METHOD FOR PEOPLE IN DISASTER-PRONE AREAS	2021-11-24
2021/09474	METHOD FOR PREPARING HIGH-AIR- PERMEABILITY MOISTURE-PROOF GUMMED PAPER AND APPLICATION THEREOF	2021-11-24
2021/09475	HARPINF PROTEIN AND USE THEREOF IN INDUCTION OF RESISTANCE OF POPULUS × CANADENSIS MOENCH POPLAR TO BACTERIAL CANKER	2021-11-24

Application Number	Patent Title	Filing Date
2021/09476	CEMENT-BASED COMPOSITE MATERIAL USING IRON TAILINGS AND PREPARATION METHOD THEREOF	2021-11-24
2021/09477	LARGE-DOPING-AMOUNT SOLID WASTE-BASED ALKALI-ACTIVATED FOAMED CONCRETE AND PREPARATION METHOD THEREOF	2021-11-24
2021/09478	DETECTION DEVICE FOR REACTION OF H2O, CO2 AND COKE	2021-11-24
2021/09479	METHOD FOR OPEN-PIT COAL MINING PLAN OPTIMIZATION BASED ON ENDOGENOUS VARIABLES OF CAPITAL CONSTRUCTION INVESTMENT	2021-11-24
2021/09480	NOVEL URBAN WETLAND PLANNING AND DESIGN METHOD	2021-11-24
2021/09481	ENVIRONMENTAL PROTECTION AND ENERGY SAVING AND SUPER GASOLINE FORMULATION FOR TREATING SMOG, AND PRODUCTION METHOD THEREOF	2021-11-24
2021/09482	ENVIRONMENTAL PROTECTION AND ENERGY SAVING SUPER DIESEL OIL FORMULATION FOR TREATING SMOG, AND PRODUCTION METHOD THEREOF	2021-11-24
2021/09484	WALNUT SHELL BREAKING DEVICE, WALNUT WHOLE KERNEL DEVICE AND METHOD	2021-11-24
2021/09485	A MACHINE TOOL WITH CUTTING TOOL AS MAIN MOVEMENT AND WORKING METHOD	2021-11-24
2021/09486	MICRO LUBRICATION MULTI DEGREE OF FREEDOM INTELLIGENT NOZZLE SYSTEM BASED ON CNC MILLING MACHINE	2021-11-24
2021/09487	MIMIMUM QUANTITY LUBRICATION INTELLIGENT SPRAYER-HEAD SYSTEM OF CNC HORIZONTAL LATHE BASED ON THREE-AXIS PARALLEL PLATFORM	2021-11-24
2021/09488	EXPERIMENTAL SYSTEM AND METHOD OF SPEED AND SIZE EFFECT IN SINGLE ABRASIVE GRINDING UNDER DOFFERENT LUBRICATION CONDITIONS	2021-11-24
2021/09489	A METHOD FOR DESINGING AND SYNTHESIZING CARBAZOLE BASED NOVEL MULTIFUNCTIONAL AGENTS AS POTENTIAL ANTI-ALZHEIMER AGENTS	2021-11-24
2021/09491	A SYSTEM FOR A COMPUTERIZED POULTRY CONFIGURATION FRAMEWORK FOR THE REGULATION OF REAL-TIME SMART POULTRY	2021-11-24
2021/09492	HIGH-STABILITY DOUBLE-HOOK CRANE	2021-11-24
2021/09493	VETERINARY BROMHEXINE HYDROCHLORIDE SOLUBLE POWDER AND PREPARATION METHOD AND USE THEREOF	2021-11-24
2021/09507	DISPLAY DEVICE FOR MULTI-ANGLE VIEWING OF INDUSTRIAL DESIGN PRODUCT	2021-11-24
2021/09524	WAXLESS PAD FOR SEMICONDUCTOR POLISHING AND PRODUCTION METHOD	2021-11-25

Application Number	Patent Title	Filing Date
2021/09525	ADSORPTION PAD FOR FINE POLISHING OF ELECTRONIC DISPLAY SCREEN AND PRODUCTION METHOD OF ADSORPTION PAD	2021-11-25
2021/09527	ADSORPTION PAD FOR DOUBLE-SIDED POLISHING OF THIN WAFER AND PRODUCTION METHOD	2021-11-25
2021/09528	TAPERED FIBER ACCELERATION SENSOR SYSTEM	2021-11-25
2021/09530	METHOD FOR PREPARING DAMPING CLOTH FOR POLISHING FOR THE PRODUCTION OF LCDS	2021-11-25
2021/09531	METHOD FOR PREPARING BARIUM SULFATE CRYSTAL WITH CONTROLLABLE MORPHOLOGY	2021-11-25
2021/09532	METHOD FOR PREPARING CHITOSAN COLLAGEN GEL	2021-11-25
2021/09533	FUNDUS CAMERA	2021-11-25
2021/09534	HYDROPHOBIC GUIDE PLATE OF FUEL CELL	2021-11-25
2021/09535	RECOMBINANT CANINE DISTEMPER VIRUS THAT EXPRESSES THE VP2 OF CANINE PARVOVIRUS TYPE 2A	2021-11-25
2021/09536	LARGE-SCALE FIELD PLANTING METHOD OF FICUS TIKOUA BUREAU IN AUTUMN	2021-11-25
2021/09537	ECOLOGICAL CONCRETE BASED ON MARINE SOLID WASTE AND PREPARATION METHOD THEREOF	2021-11-25
2021/09538	APPLIANCE STORAGE STRUCTURE FOR MAINTAINING MUFFLE ROLLER TYPE MESH BELT QUENCHING FURNACE	2021-11-25
2021/09540	WASTE EXPANDED POLYSTYRENE/POLYANILINE COMPOSITE ANTICORROSIVE COATING AND PREPARATION METHOD THEREOF	2021-11-25
2021/09541	BRACKISH WATER DESALINATION SYSTEM SUITABLE FOR GREENHOUSE IN SUMMER	2021-11-25
2021/09542	SHORT-CHAIN VOLATILE FATTY ACID AND PREPARATION METHOD THEREOF	2021-11-25
2021/09543	HEATING SYSTEM FOR SOLAR GREENHOUSE	2021-11-25
2021/09544	STABLE-STATE ORGANIC-INORGANIC RICE SPECIAL FERTILIZER PREPARED FROM BIOGAS RESIDUES AND PREPARATION METHOD THEREOF	2021-11-25
2021/09545	DEVICE AND METHOD FOR TESTING COMPRESSION AMOUNT OF PILE BODY OF ROCK- SOCKETED CAST-IN-PLACE PILE	2021-11-25
2021/09546	MULTI-PROCESS EVAPORATIVE CONDENSER	2021-11-25
2021/09547	NOVEL COMPOUND PRESERVATIVE FORMULA BASED ON ETHYL LAUROYL ARGININE AND APPLICATION MODE SUITABLE FOR PRESERVATION OF CHILLED MEAT SAUSAGES	2021-11-25
2021/09548	EDUCATIONAL INFORMATION MANAGEMENT SYSTEM AND METHOD	2021-11-25
2021/09549	LOST FOAM COATING AND USE THEREOF	2021-11-25
2021/09550	SHAPE MEMORY ALLOY-BASED MULTI- TEMPERATURE-STEP CONTROL DEVICE AND CONTROL METHOD	2021-11-25
2021/09551	VEHICLE VERIFICATION SYSTEM AND VERIFICATION METHOD	2021-11-25

Application Number	Patent Title	Filing Date
2021/09552	COMBINED TREATMENT METHOD FOR HIGH STANDARD DISCHARGE OF PAPERMAKING WASTEWATER	2021-11-25
2021/09553	DYNAMIC PATH PLANNING ALGORITHM BASED ON TRAFFIC TIME AND VEHICLE SPEED PREDICTION AND SYSTEM THEREOF	2021-11-25
2021/09554	SIMULATION METHOD FOR FIXED-POINT RUB- IMPACT BETWEEN MULTIPLE BLADES OF ROTOR AND CASING CONSIDERING CASING DEFORMATION	2021-11-25
2021/09555	TOPOGRAPHIC SURVEYING AND MAPPING DEVICE FOR URBAN AND RURAL PLANNING	2021-11-25
2021/09556	QUANTITATIVE IDENTIFICATION METHOD FOR BIROTOR MISALIGNMENT	2021-11-25
2021/09557	METHOD FOR PREDICTING DEVELOPMENT HEIGHT OF WATER-CONDUCTING FRACTURE ZONE CONSIDERING SOIL LAYER EFFECT IN SHALLOW BURIED COAL SEAM	2021-11-25
2021/09558	NEW TECHNOLOGY AND WORKING METHOD FOR RECOVERING WASTE HEAT OF SLAG FLUSHING WATER OF BLAST FURNACE	2021-11-25
2021/09559	DIABETIC RETINOPATHY DETECTION SYSTEM, METHOD, DEVICE AND TRAINING SYSTEM	2021-11-25
2021/09560	POLYETHER POLYURETHANE MATERIAL AND PREPARATION METHOD THEREOF	2021-11-25
2021/09561	POLISHING POWDER FOR FINE POLISHING OF ELECTRONIC DISPLAY SCREEN AND PRODUCTION METHOD THEREOF	2021-11-25
2021/09562	AN APPLICATION BASED ON IMPROVED MUTATION PROGRESSION METHOD IN THE EVALUATION OF SOIL RESTORATION IN RECLAIMED AREA	2021-11-25
2021/09569	A SYSTEM FOR A COMPUTERIZED POULTRY CONFIGURATION FRAMEWORK FOR THE REGULATION OF REAL-TIME SMART POULTRY	2021-11-25
2021/09571	CHERRY JUICE WINE AND PREPARATION METHOD THEREOF	2021-11-25
2021/09572	DEVICE AND METHOD FOR SANDA SIDE-KICK TECHNIQUE TRAINING	2021-11-25
2021/09617	METHOD FOR HARMLESS AND EFFICIENT EXTRACTION OF DNA FROM OYSTERS	2021-11-26
2021/09619	MULTI-FUNCITONAL AGRICULTURAL ROBOT	2021-11-26
2021/09622	NON-HYBRID OFFSPRING IDENTIFICATION METHOD BASED ON SIMPLIFIED GENOME SEQUENCING AND SINGLE-NUCLEOTIDE POLYMORPHISM (SNP) MINOR ALLELE FREQUENCY (MAF)	2021-11-26
2021/09665	LIVESTOCK AND POULTRY FEED ADDITIVE BASED ON POLYPHENOL SALT-TOLERANT MEDICINAL AND EDIBLE PLANTS	2021-11-26
2021/09673	SMART HEALTH MONITORING SYSTEM	2021-11-29
2021/09681	AN ELECTRONIC-IONIC POLYMER SENSOR FOR VOLTAGE GENERATION	2021-11-29

Application Number	Patent Title	Filing Date
2021/09688	CONVENIENT-TO-ADJUST EXAMINATION TABLE FOR OPHTHALMOLOGY	2021-11-29
2021/09697	ENVIRONMENT-AWARE NETWORK OPTIMIZATION METHOD AND SYSTEM	2021-11-29
2021/09699	PREPARATION PROCESS OF POROUS CARBON NANOSPHERES	2021-11-29
2021/09700	MIXED METAL PHOSPHIDE-BASED HOLLOW NANO- BOX AS WELL AS PREPARATION METHOD AND APPLICATION THEREOF	2021-11-29
2021/09757	METHOD FOR PREDICTING TOXICITY OF PRASEODYMIUM TO WHEAT ROOT ELONGATION	2021-11-30
2021/09758	EST-SSR MOLECULAR MARKER FOR PURITY DETECTION OF PEPPER HYBRIDS AND ITS APPLICATION	2021-11-30
2021/09759	METHOD FOR OBTAINING PREDICTIVE MODEL OF DIMENSION CHANGE TREND OF S136 SERIES STEEL BASED ON RETAINED AUSTENITE CONTENT	2021-11-30
2021/09760	METHOD FOR PLANTING ROSES ON BARREN HILLSIDE SANDY SOIL	2021-11-30
2021/09761	RAPID IDENTIFICATION METHOD OF TOMATO FUSARIUM WILT BASED ON PCR	2021-11-30
2021/09762	USE OF LITSEA CUBEBA EXTRACT AS ANTI-MOULD ADDITIVE OF SILAGE MAIZE	2021-11-30
2021/09763	DATA MONITORING SYSTEM AND METHOD OF AIR PARTICULATE MATTER BASED ON BP NEURAL NETWORK	2021-11-30
2021/09764	EXPERIMENTAL VISUALIZATION PLATE HEAT EXCHANGER	2021-11-30
2021/09765	MULTI-SCALE FEATURE EXTRACTION TECHNOLOGY BASED ON ORIGINAL TIME DOMAIN WAVEFORM OF PARTIAL DISCHARGE	2021-11-30
2021/09766	APPLE ORCHARD PEST TRAPPING AND RECOGNITION DEVICE AND METHOD	2021-11-30
2021/09773	RADIATION-PROOF WALL STRUCTURE FOR CT ROOM OF HOSPITAL	2021-11-30
2021/09775	EXPRESSION AND PURIFICATION METHOD OF RECOMBINANT SEX HORMONE-BINDING GLOBULIN N-TERMINAL 51-218AA	2021-11-30
2021/09776	FERMENTATION TANK OF EDIBLE FUNGUS LIQUID STRAIN WITH HIGH YIELD	2021-11-30
2021/09778	NUCLEOTIDE SEQUENCE AND USE THEREOF	2021-11-30
2021/09779	SIX-DIMENSIONAL FRACTIONAL ORDER HYPERCHAOTIC SYSTEM AND CHAOTIC SIGNAL GENERATOR	2021-11-30
2021/09805	DEVICE AND METHOD FOR TESTING WORKING PERFORMANCE OF LASER RADAR IN BAD WEATHER	2021-12-01
2021/09806	UNMANNED AERIAL VEHICLE RELAY SELECTION METHOD FOR POST-DISASTER EMERGENCY SCENARIOS IN UNDERGROUND SPACE	2021-12-01

Application Number	Patent Title	Filing Date
2021/09807	OXIDATION DEVICE AND OXIDATION EQUIPMENT FOR MANUFACTURING SEMICONDUCTOR COMPONENTS	2021-12-01
2021/09808	A HUMIC ACID EMBEDDED BIOCHAR-NANO HYDROXYAPATITE COMPOSITE MATERIAL AND A PREPARATION METHOD AND APPLICATION THEREOF	2021-12-01
2021/09809	ALL-FIBER FREQUENCY DIVISION MULTIPLEXING WAVELENGTH MODULATION LASER HETERODYNE DETECTION SYSTEM	2021-12-01
2021/09810	LOADING CONTROL AND DATA SYNCHRONIZATION MONITORING DEVICE FOR TRUE TRIAXIAL MULTI- FIELD COUPLING AND DYNAMIC DISTURBANCE PLATFORM	2021-12-01
2021/09811	SEPARATION DEVICE WITH TWO-STAGE GAS- LIQUID MIXTURE AND CONICAL SPIRAL FIELDS	2021-12-01
2021/09812	CARBON NITRIDE-POLYANILINE NANOCOMPOSITE AND ITS PREPARATION METHOD AS WELL AS CARBON NITRIDE-POLYANILINE INTUMESCENT FLAME RETARDANT COATING AND ITS PREPARATION METHOD	2021-12-01
2021/09813	DROPLET DIGITAL POLYMERASE CHAIN REACTION (DDPCR)-BASED RAPID DETECTION METHOD FOR ESCHERICHIA HERMANNII	2021-12-01
2021/09814	TEST DEVICE FOR SIMULATING HEAVY RAIN INDUCED MUCK LANDSLIDE	2021-12-01
2021/09815	FLUORESCENT MOLECULAR PROBE CAPABLE OF DETECTING BA2+ IN WATER AND APPLICATION THEREOF	2021-12-01
2021/09816	INTERNET-BASED INNOVATION AND ENTREPRENEURSHIP PLATFORM SYSTEM	2021-12-01
2021/09817	PHYTIC ACID DOPED CARBON NITRIDE- POLYANILINE NANOCOMPOSITE AND ITS PREPARATION METHOD AS WELL AS PHYTIC ACID DOPED CARBON NITRIDE-POLYANILINE INTUMESCENT FLAME RETARDANT COATING AND ITS PREPARATION METHOD	2021-12-01
2021/09818	GENETICALLY ENGINEERED STRAIN FOR EFFICIENTLY SYNTHESIZING MELATONIN AND CONSTRUCTION METHOD AND USE THEREOF	2021-12-01
2021/09819	APPLICATION OF FOOD ADDITIVES (HIGHER FATTY ALCOHOLS AND DERIVATIVES)	2021-12-01
2021/09861	METHOD FOR COMPARATIVE TRANSCRIPTOME ANALYSIS OF DIFFERENTIALLY EXPRESSED GENES	2021-12-02
2021/09862	DEVICE FOR TESTING SHEAR STRENGTH OF CIVIL ENGINEERING MATERIAL	2021-12-02
2021/09863	CAMPUS SPONGE ECOLOGICAL RAINWATER RECYCLING EQUIPMENT	2021-12-02
2021/09864	COMPOUND PLANT POLYSACCHARIDE CONCENTRATE AND APPLICATION THEREOF IN HEALTH CARE PRODUCTS	2021-12-02

Application Number	Patent Title	Filing Date
2021/09865	NEGATIVE EXPANSION MATERIAL, PREPARATION METHOD AND APPLICATION THEREOF	2021-12-02
2021/09866	METHOD FOR OPTIMIZING MICROSTRUCTURE AND PROPERTY OF SECONDARY ALUMINUM	2021-12-02
2021/09867	SOLUTION DEHUMIDIFICATION AIR-CONDITIONING SYSTEM BASED ON NATURAL COLD SOURCE DRIVE AND SOLAR ENERGY REGENERATION	2021-12-02
2021/09869	EXTERNAL MEASURING NIPPLE FOR LOST CIRCULATION LEAKAGE FLOW WHILE DRILLING	2021-12-02
2021/09870	A NEURAL BASED UNMANNED AERIAL VEHICLE (UAV) TRACKING SYSTEM	2021-12-02
2021/09871	CHINESE YAM SEEDER	2021-12-02
2021/09872	METHOD FOR REDUCING ORGANIC ACIDS IN BLUEBERRY WINE	2021-12-02
2021/09873	APPLICATION OF PECTOLINARIN IN PREPARATION OF ANTI-OSTEOSARCOMA DRUGS	2021-12-02
2021/09874	GRADUAL STOP CONTROL METHOD AND SYSTEM FOR MECHANICAL DEVICE, AND EQUIPMENT	2021-12-02
2021/09875	PREPARATION METHOD OF NANOMETER MOLYBDENUM DISULFIDE	2021-12-02
2021/09876	MECHANICAL EQUIPMENT POWER CONTROL METHOD AND SYSTEM, MEDIUM, AND ELECTRONIC DEVICE	2021-12-02
2021/09877	CHARGE CONTROL SYSTEM AND METHOD	2021-12-02
2021/09878	A KIND OF ABIENOL-BASED HAPTEN, ARTIFICIAL ANTIGEN AND ANTIBODY AS WELL AS THE PREPARATION METHODS AND APPLICATIONS THEREOF	2021-12-02
2021/09879	TRADITIONAL CHINESE HERBAL COMPOSITION FOR TREATING MYASTHENIA GRAVIS WITH SPLEEN AND STOMACH QI DEFICIENCY AND PREPARATION METHOD THEREOF	2021-12-02
2021/09880	TALL-THIN CYLINDRICAL TREE SHAPE SUITABLE FOR ULTRA-DENSE APPLE CULTIVATION AND SHAPING AND PRUNING METHOD	2021-12-02
2021/09881	CONTAINER CLEANING DEVICE AND CLEANING METHOD THEREOF	2021-12-02
2021/09882	DIFFUSER DEVICE FOR RAPIDLY REMOVING SEAWATER	2021-12-02
2021/09883	METHOD FOR PREPARING SEAWEED POLYSACCHARIDE COLLAGEN GEL	2021-12-02
2021/09887	METHOD FOR REMEDIATING COMBINED POLLUTION OF ANTIMONY AND ZINC AND USE THEREOF	2021-12-02
2021/09888	MOLECULAR SENSOR CAPABLE OF DETECTING FE3+, CU2+ AND ZN2+ IN WATER AND TECHNICAL USE THEREOF	2021-12-02
2021/09889	COMPOUND ANESTHETIC FOR CATS, PREPARATION METHOD AND APPLICATION THEREOF	2021-12-02
2021/09890	AN ACOUSTIC VERTICAL RADIAL LAYERED MEASURING DEVICE FOR SEAFLOOR SUBSTRATE	2021-12-02

Application Number	Patent Title	Filing Date
2021/09891	SPRAYING EQUIPMENT FOR RED TIDE CONTROL AND CONTROL METHOD	2021-12-02
2021/09918	AN EARLY SCREENING METHOD FOR MANGO FRUIT COLOR BASED ON DOUBLE-FRAGMENT ANALYSIS	2021-12-03
2021/09919	TEA PIGMENT SAUSAGE	2021-12-03
2021/09920	WATER COOLING AND AUTOMATIC DUST REMOVAL DEVICE FOR CAMERA	2021-12-03
2021/09921	INTELLIGENT PAVEMENT DISEASE IDENTIFICATION AND REPAIR METHOD, SYSTEM, EQUIPMENT AND MEDIUM BASED ON CONVOLUTIONAL NEURAL NETWORK AND 3D PRINTING REPAIR TECHNOLOGY	2021-12-03
2021/09922	METHOD FOR LOCATING AND ELIMINATING GROSS ERRORS OF POINT CLOUD DATA BASED ON CREDIBILITY INFORMATION	2021-12-03
2021/09923	BIOCHEMICAL COMPREHENSIVE PREVENTION AND CONTROL METHOD OF BEMISIA TABACI	2021-12-03
2021/09924	RECOMBINANT ADENOVIRUS EXPRESSING CD2V PROTEIN OF AFRICAN SWINE FEVER VIRUS AND CONSTRUCTION METHOD THEREOF	2021-12-03
2021/09925	GUIDE TOOL IN MULTI-BRANCH STIMULATION TOOL	2021-12-03
2021/09927	A METHOD FOR SIMULTANEOUSLY PREPARING LOW-MOLECULAR-WEIGHT CHITOSAN AND D- GLUCOSAMINE SULFATE BY USING OF IRRADIATION ASSISTED MICROWAVE THERMAL ACID HYDROLYSIS	2021-12-03
2021/09928	WATER AND SOIL CONSERVATION DEVICE FOR DESERTIFICATION AREAS AND USING METHOD THEREOF	2021-12-03
2021/09929	STATIC PRESSURE ENLARGED HEAD PRESTRESSED HIGH-STRENGTH CONCRETE PIPE PILE	2021-12-03
2021/09930	MULTI-FUNCTIONAL TEST BENCH FOR POWER SPLIT HYDRAULIC MECHANICAL COMPOSITE TRANSMISSION SYSTEM	2021-12-03
2021/09931	BUCKET LOADER APPLICABLE TO COMPLEX WORKING CONDITION AND USE THEREOF	2021-12-03
2021/09932	TAP-POSITION-CHANGEABLE CONFLUENCE DEVICE	2021-12-03
2021/09933	LOADING DEVICE FOR NON-METAL ANTI-FLOATING ANCHOR ROD CREEP TEST	2021-12-03
2021/09934	SPLITTING DEVICE WITH VARIABLE TRANSMISSION RATIO AND APPLICATION THEREOF	2021-12-03
2021/09935	TRANSPARENT AND TOUGHENED MODIFIED POLYPROPYLENE PLASTIC AND PREPARATION THEREOF	2021-12-03
2021/09936	ROCK FOUNDATION PIT SAFETY EVALUATION METHOD BASED ON ENTROPY WEIGHT METHOD AND MODIFIED AHP	2021-12-03

Application Number	Patent Title	Filing Date
2021/09937	DISCHARGE VALVE FOR STOKEHOLE FEEDING SYSTEM	2021-12-03
2021/09938	EARLY WARNING METHOD FOR SAFETY CONSTRUCTION OF SUBWAY STATION	2021-12-03
2021/09939	CORRESPONDENCE ANALYSIS METHOD FOR CAUSES OF GROUND SURFACE SETTLEMENT IN SUBWAY TUNNEL EXCAVATION	2021-12-03
2021/09940	NOVEL METHOD FOR PREDICTING SETTLEMENT OF METRO TUNNEL DURING CONSTRUCTION BASED ON LSTM NETWORK	2021-12-03
2021/09941	WIND PRESSURE MONITORING AND DANGER FOREWARNING METHOD FOR MIDDLE WALL OF TUNNEL	2021-12-03
2021/09942	CASCADE ENERGY-SAVING CONTROL METHOD OF A VAPOUR COMPRESSION AND REFRIGERATION SYSTEM	2021-12-03
2021/09943	FABRICATED SHEAR WALL JOINT STRUCTURE AND SPLICING METHOD THEREOF	2021-12-03
2021/09945	CONTINUOUS CLEANING DEVICE FOR REVERSE OSMOSIS MEMBRANE MODULE AND METHOD FOR CLEANING REVERSE OSMOSIS MEMBRANE MODULE USING SAME	2021-12-03
2021/09956	METHOD AND SYSTEM FOR REAL TIME REPORT OF MONITORING DATA OF KEY CROWD	2021-12-03
2021/09957	AN OPERATING METHOD OF A DEVICE FOR PRODUCING PLASTERS USED IN ORTHOPEDICS ON A SMALL SCALE	2021-12-03
2021/09995	LAND SURFACE TEMPERATURE RETRIEVAL METHOD BASED ON SATELLITE DATA	2021-12-03
2021/09996	BUFF VALVE	2021-12-03
2021/09997	SHORT-TIME HIGH-EFFICIENCY HEAT TREATMENT PROCESS FOR LIQUID DIE FORGOING AL-MG-SI ALLOY	2021-12-03
2021/09999	OPTIMUM DESIGN METHOD FOR PHOTOVOLTAIC POWER STATION	2021-12-06
2021/10124	FINE FEEDING METHOD FOR BREEDING SOWS	2021-12-08
2021/10125	NAKED SEEDLING TRANSPLANTING METHOD FOR INCREASING COTTON YIELD IN MADAGASCAR	2021-12-08
2021/10126	ANALYSIS SYSTEM BASED ON BIG DATA	2021-12-08
2021/10130	MAGNETIC MATERIAL SUPPORTED RHODAMINE B CATALYST, PREPARATION METHOD THEREOF AND CATALYTIC APPLICATION IN SYNTHESIS OF PHENOL	2021-12-08
2021/10131	METHOD FOR JUDGING RUNNING TREND BASED ON POWER ACQUISITION DEVICE	2021-12-08
2021/10133	COMPOSITE PRESERVATION FILM, PREPARATION METHOD AND APPLICATION THEREOF	2021-12-08
2021/10134	MARINE FUNGUS FERMENTED EXTRACT AND USE THEREOF AS ANTI-SENILE DEMENTIA DRUG	2021-12-08
2021/10135	METHOD FOR DEGRADING MICROPLASTICS IN ORGANIC SOLID WASTE	2021-12-08

Application Number	Patent Title	Filing Date
2021/10136	METHOD FOR TREATING CORD FABRIC DIPPING WASTE LIQUID AND SLUDGE RESOURCE UTILIZATION	2021-12-08
2021/10137	NON-IONIZED PBI/PVP MEMBRANE AND PREPARATION METHOD THEREOF AND FLOW BATTERY	2021-12-08
2021/10138	INTEGRATED CRUCIBLE FOR MELTING AND MELT- SPINNING AMORPHOUS MAGNESIUM ALLOY	2021-12-08
2021/10139	DOUBLE-BARREL SERIES CYCLONE SEPARATOR	2021-12-08
2021/10140	AN INSECT SELECTIVE BEHAVIOR RESEARCH DEVICE	2021-12-08
2021/10141	AN INSECT BEHAVIOR OBSERVATION AND RECORD DEVICE	2021-12-08
2021/10142	LEVEXTREL RESIN AND PREPARATION METHOD THEREOF	2021-12-08
2021/10143	ULTRASONIC VIBRATION COMBINED TYPE WELL CLEANER AND ITS METHOD FOR WELL CLEANING	2021-12-08
2021/10144	TOPICAL TRADITIONAL CHINESE HERBAL COMPOSITION FOR MAINTAINING BEAUTY AND KEEPING YOUNG, PREPARATION METHOD AND USE THEREOF	2021-12-08
2021/10145	RISK DYNAMIC ANALYSIS METHOD OF GAS OUTBURST IN COAL WORKING FACE	2021-12-08
2021/10146	METHOD FOR IMPROVING FUNCTIONAL PROPERTIES OF PLANT PROTEIN	2021-12-08
2021/10147	AUTOMATIC ANTIBODY INCUBATION AND WASHING MEMBRANE DEVICE FOR WESTERN BLOT EXPERIMENT	2021-12-08
2021/10148	FLAME-RETARDANT ANTIBACTERIAL COMPOSITE WALLPAPER AND PREPARATION METHOD THEREOF	2021-12-08
2021/10149	WIDE-RANGE DUST MONITORING SYSTEM AND METHOD IN COAL MINE	2021-12-08
2021/10152	OXYGEN LANCE WITH FUNCTION OF ON-LINE CONTINUOUS DETECTION OF MOLTEN STEEL TEMPERATURE IN CONVERTER AND USE METHOD THEREOF	2021-12-08
2021/10182	METHOD FOR CULTIVATING CISTANCHE DESERTICOLA MA	2021-12-09
2021/10185	CORN SEED PREPARATION METHOD THROUGH ROW POLLINATION	2021-12-09
2021/10186	MONITORING DEVICE FOR MILDEWING OF FORAGE GRASS	2021-12-09
2021/10187	INVOICE ANTI-COUNTERFEITING DETECTOR FOR FINACIAL ROBOTS	2021-12-09
2021/10188	STUFF CANISTER ASSEMBLY OF INFRARED DEHUMIDIFICATION, CRYSTALLIZATION, DRYING ALL-IN-ONE MACHINE	2021-12-09
2021/10189	METHOD FOR PREPARING HIGHLAND BARLEY BRAN TEA RICH IN WATER-SOLUBLE DIETARY FIBERS	2021-12-09

Application Number	Patent Title	Filing Date
2021/10190	PROTEIN TAPYL1, CODING GENE AND USE THEREOF	2021-12-09
2021/10191	TEA GARDEN FERTILIZING METHOD WITH REDUCED QUANTITY AND TIMES	2021-12-09
2021/10192	WASTEWATER TREATMENT DEVICE FOR PIG FARM	2021-12-09
2021/10193	NEW PLANOMICROBIUM BEIGONGSHANGENSIS STRAIN AND USE THEREOF	2021-12-09
2021/10194	JUDGMENT METHOD FOR CAVITATION INITIATION OF HYDRAULIC TURBINE BY COMBINING VIBRATION TEST AND PRESSURE PULSATION TEST	2021-12-09
2021/10195	SPRAYABLE AND HIGH-DUCTILITY POLYVINYL ALCOHOL-REINFORCED ENGINEERED CEMENTITIOUS COMPOSITE (PVA-ECC) AND PREPARATION METHOD THEREOF	2021-12-09
2021/10196	PREPARATION METHOD OF WATER-SOLUBLE ASTAXANTHIN NANOEMULSION AND PREPARATION METHOD OF SELF-HEATING ANTI- FATIGUE EYE PATCH	2021-12-09
2021/10197	PREPARATION METHOD OF SECONDARY FRESH- KEEPING FERMENTED BEER	2021-12-09
2021/10198	METHOD AND SYSTEM FOR WARNING, AND PREVENTION AND CONTROL BY STAGE OF WATER INRUSH DISASTERS BY TECTONIC ACTIVATION	2021-12-09
2021/10200	ANTI-FATIGUE POLYPHENOL COMPOSITE MEAL POWDER AND PREPARATION METHOD THEREOF	2021-12-09
2021/10201	REDOX CATALYST BASED ON HETEROATOM- DOPED CARBON NANOTUBE LOADED WITH IRON PHOSPHIDE NANOPARTICLES AND PREPARATION METHOD THEREOF	2021-12-09
2021/10202	REDOX CATALYST BASED ON HETEROATOM- DOPED CARBON MICROSPHERES LOADED WITH IRON PHOSPHIDE NANOPARTICLES AND PREPARATION METHOD THEREOF	2021-12-09
2021/10203	FEED MIXING EQUIPMENT FOR PIG BREEDING	2021-12-09
2021/10204	RECOMMENDED FERTILIZATION SYSTEM FOR CAMELLIA SINENSIS	2021-12-09
2021/10205	BACTERICIDAL TREATMENT AGENT FOR WASTE VEGETABLE LEAVES AND PREPARATION METHOD AND APPLICATION THEREOF	2021-12-09
2021/10206	FIXING DEVICE FOR CHILDREN LUMBAR PUNCTURE OPERATION	2021-12-09
2021/10209	SMART MONITORING AND CONTROL OF AN INDOOR VEGETATION ENVIRONMENT SYSTEM USING ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING APPROACH	2021-12-09
2021/10211	PRIMERS, KIT, AND METHOD FOR RAPID DETECTION OF VIBRIO CHOLERAE (V. CHOLERAE) BASED ON RECOMBINASE-AIDED AMPLIFICATION (RAA)-LATERAL FLOW DIPSTICK (LFD)	2021-12-09

Application Number	Patent Title	Filing Date
2021/10302	NANNOCHLOROPSIS OCEANICA WITH CORN ANTIMICROBIAL PROTEIN AND CONVERSION METHOD AND APPLICATION THEREOF	2021-12-13
2021/10303	TREATMENT METHOD FOR IMPROVING CORN SEED VIGOR UNDER LOW TEMPERATURE STRESS	2021-12-13
2021/10304	MOLECULAR IDENTIFICATION METHOD FOR COPTIS CHINENSIS	2021-12-13
2021/10305	AUTOMATIC ADJUSTMENT METHOD AND SYSTEM FOR METRO TRAIN RESCUE	2021-12-13
2021/10306	ANTI-POLLUTION CONSUMABLE AND METHOD FOR CLUSTERED REGULARLY INTERSPACED SHORT PALINDROMIC REPEATS (CRISPR) MOLECULAR DIAGNOSIS USING SAME	2021-12-13
2021/10307	METHOD FOR INTELLIGENT IDENTIFICATION AND DIVISION OF TEMPORAL-SPATIAL EVOLUTION PROCESS OF WATER INRUSH DISASTERS BY TECTONIC ACTIVATION AND SENSING AND WARNING SYSTEM	2021-12-13
2021/10310	GYPSUM-BASED TILE ADHESIVE MATERIAL AND PREPARATION METHOD THEREOF	2021-12-13
2021/10311	BREATHABLE REFLECTIVE MULCHING FILM FOR PREVENTING AND CONTROLLING BLUEBERRY FRUIT FLIES AND MANUFACTURING METHOD THEREOF	2021-12-13
2021/10312	FEED FOR IMPROVING LAMB STRESS RESISTANCE AND FOR PREGNANT NANNY GOATS AND METHOD THEREOF	2021-12-13
2021/10313	CORN HARVESTER AND METHOD FOR HARVESTING CORN BY UTILIZING SAME	2021-12-13
2021/10314	CULTURE DEVICE FOR DYNAMIC ENVIRONMENTS FOR MICROBIAL GROWTH	2021-12-13
2021/10315	GALLIC ACID HAIR DYE AND USE METHOD THEREOF	2021-12-13
2021/10316	POLYVINYL ALCOHOL (PVA)/ATTAPULGITE (ATP) COMPOSITE MEMBRANE, AND PREPARATION METHOD AND USE THEREOF	2021-12-13
2021/10317	ORGANICALLY MODIFIED ATTAPULGITE-DYE HYBRID PIGMENT, AND PREPARATION METHOD AND USE THEREOF	2021-12-13
2021/10318	ATTAPULGITE-DYE REVERSIBLE THERMOCHROMIC COMPOSITE PIGMENT AND PREPARATION METHOD THEREOF	2021-12-13
2021/10319	PREPARATION OF MODIFIED WATERBORNE POLYURETHANE HIGH-TEMPERATURE-RESISTANT COATING	2021-12-13
2021/10320	A METHOD FOR PROMOTING THE GROWTH OF STRONG SEEDLINGS VIA PHYSICAL STIMULATION TO CUCUMBER COTYLEDONS	2021-12-13
2021/10321	LANDSCAPING CULTIVATION DEVICE	2021-12-13
2021/10322	ELECTRONIC COMMUNICATION DEVICE FOR ENGINEERING	2021-12-13

Application Number	Patent Title	Filing Date
2021/10323	METHOD FOR ON-LINE TRACKING CALCULATION METHOD OF WAVE PEAK FREQUENCY	2021-12-13
2021/10324	LOW-TEMPERATURE COMPOSITE PHASE CHANGE MATERIAL AND PREPARATION METHOD THEREOF	2021-12-13
2021/10325	EXPERIMENTAL DEVICE FOR DIFFUSION KINETICS OF ULTRAFILTRATION MEMBRANE PORE- FORMING AGENT	2021-12-13
2021/10326	MINE MULTI-PARTICLE DUST PREPARATION AND INTELLIGENT SPRAYING DEVICE	2021-12-13
2021/10327	TRANSFORMANT R1-2HD OF GLYPHOSATE- RESISTANT UPLAND COTTON AND IDENTIFICATION METHOD THEREOF	2021-12-13
2021/10328	ORCHARD PEST DETECTION SYSTEM BASED ON DEEP LEARNING AND METHOD THEREOF	2021-12-13
2021/10329	AUTOMATIC COLLISION AVOIDANCE SYSTEM FOR UNMANNED SHIPS	2021-12-13
2021/10330	ELEVATOR WITH BUILDING STRUCTURE OF EXTERNAL HOST	2021-12-13
2021/10331	FERMENTED TRADITIONAL CHINESE MEDICINE IMMUNOPOTENTIATOR, AND PREPARATION METHOD AND USE THEREOF	2021-12-13
2021/10337	METHOD FOR CALCULATING FIRST ARRIVAL TIME DIFFERENCE OF MICROSEISMIC SIGNALS	2021-12-13
2021/10338	IMAGE STRUCTURE TENSOR GUIDANCE-BASED MARINE CONTROLLED-SOURCE ELECTROMAGNETIC INVERSION METHOD	2021-12-13
2021/10339	PRE-MOLTEN SLAG-MAGNESIUM PARTICLE CORED WIRE AND APPLICATION AND PRODUCTION PROCESS OF STEEL FOR HIGH HEAT INPUT WELDING	2021-12-13
2021/10358	METHOD FOR PREPARATION OF BIONIC CERAMIC TOOL AND THE PREPARED BIONIC CERAMIC TOOL THEREOF	2021-12-13
2021/10367	DRILLING FLUID NANO-BLOCKING AGENT, PREPARATION METHOD THEREOF, AND WATER- BASED DRILLING FLUID CONTAINING SAME	2021-12-14
2021/10368	METHOD FOR DETERMINING 14 PRIMARY AND SECONDARY COMPONENTS IN CHROMIUM ORE BY FUSION SAMPLE PREPARATION-X-RAY FLUORESCENCE SPECTROMETRY	2021-12-14
2021/10369	DISINFECTANT MAKING DEVICE CAPABLE OF AUTOMATICALLY BLENDING POWDER AND LIQUID	2021-12-14
2021/10370	SHIPBOARD MONITORING EQUIPMENT FOR DETECTING CO2 PARTIAL PRESSURE OF SURFACE WATER AND RELATED ENVIRONMENTAL PARAMETERS	2021-12-14
2021/10371	SOIL CLEANING DEVICE FOR POTATOES	2021-12-14
2021/10372	CULTURE MEDIUM FOR SEPARATION, PURIFICATION AND AMPLIFICATION CULTURE OF PLATEAU MICROALGAE	2021-12-14

Application Number	Patent Title	Filing Date
2021/10373	OFFSET-FREE NONLINEAR PREDICTIVE CONTROL METHOD OF SHIP DYNAMIC POSITIONING SYSTEM BASED ON DISTURBANCE OBSERVER	2021-12-14
2021/10374	SOLAR VEGETABLE CULTIVATION BOX	2021-12-14
2021/10375	THINNING TREE DETERMINATION METHOD OF SECONDARY FOREST TENDING AND MANAGEMENT DECISION	2021-12-14
2021/10376	PRACTICAL ATMOSPHERIC PARTICULATE SAMPLING CUTTER SYSTEM AND OPERATION METHOD THEREOF	2021-12-14
2021/10377	METHOD FOR DISINFECTING LIVESTOCK AND POULTRY FARMS BY USING STRONG ALKALINE ELECTROLYZED WATER	2021-12-14
2021/10379	DATA SHARING METHOD AND SYSTEM BASED ON MULTI-PARTY FULLY HOMOMORPHIC ENCRYPTION	2021-12-14
2021/10380	MICROORGANISM PREPARATION AND ITS APPLICATION FOR PROMOTING THE YIELD INCREASE AND QUALITY IMPROVEMENT OF GRAIN CROPS	2021-12-14
2021/10381	METHOD AND SYSTEM FOR DYNAMICALLY ESTIMATING SOC OF LITHIUM-ION POWER BATTERY, EQUIPMENT, AND MEDIUM	2021-12-14
2021/10382	MULTI-SOLID WASTE ACTIVATED CONCRETE WITH HIGH-SILICON IRON ORE TAILINGS AND PREPARATION METHOD THEREOF	2021-12-14
2021/10383	AFFORESTATION TECHNIQUE FOR TACKLING KEY PROBLEMS IN ARID ROCKY BARREN HILLS	2021-12-14
2021/10386	AN ACCOUNTING DATA PROCESSING METHOD BASED ON INTERNATIONAL ACCOUNTING STANDARDS	2021-12-14
2021/10387	AN EXTRACTION METHOD OF ACTIVE SUBSTANCE IN MULBERRY LEAVES	2021-12-14
2021/10388	A NANO MATERIAL FOR SEWAGE TREATMENT AND A PREPARATION METHOD THEREOF	2021-12-14
2021/10399	SUPERCONDUCTING DIRECT-CURRENT MOTOR WITHOUT COMMUTATING DEVICE	2021-12-14
2021/10400	GORDONIA BACTERIUM PRODUCING LONG- CARBON-CHAIN MYCOLIC ACID AND APPLICATION THEREOF	2021-12-14
2021/10401	ANTISTATIC POLYURETHANE SPONGE AND PREPARATION METHOD AND APPLICATION THEREOF	2021-12-14
2021/10402	METHOD FOR PREPARING ANTISTATIC MATERIAL BY ONE-STEP METHOD, UV-CURED COATING AND APPLICATION	2021-12-14
2021/10403	LABORATORY INSPECTION AND TESTING SYSTEM	2021-12-14
2021/10405	A SELF-DEFENSE AND LOCATION TRACKING DEVICE FOR WOMAN SAFETY	2021-12-14
2021/10406	A TWIN MODE CEILING FAN	2021-12-14
2021/10407	A RAILWAY GATE CONTROL SYSTEM USING INTERNET OF THINGS	2021-12-14

Application Number	Patent Title	Filing Date
2021/10408	A SUN TRACKING SOLAR SYSTEM	2021-12-14
2021/10409	A SMART IRRIGATION SYSTEM	2021-12-14
2021/10410	A WIRELESS SOLAR POWERED CHARGER	2021-12-14
2021/10411	A SOLAR TRACKER SYSTEM	2021-12-14
2021/10412	A MILEAGE CALCULATOR FOR CARBURETED VEHICLES	2021-12-14
2021/10431	RADIO FREQUENCY IDENTIFICATION FLAT SHEET MATERIAL	2021-12-14
2021/10432	RADIO FREQUENCY IDENTIFICATION SHEET MATERIAL (VARIATIONS)	2021-12-14
2021/10433	RADIO FREQUENCY IDENTIFICATION SHEET MATERIAL	2021-12-14
2021/10446	PRIMER-PROBE COMBINATION AND KIT FOR DETECTING BOVINE ESCHERICHIA COLI, AND APPLICATION	2021-12-15
2021/10449	ANTIBACTERIAL EYE DROPS AND PREPARATION METHOD THEREOF	2021-12-15
2021/10450	UPLAND COTTON TRANSFORMANT R1-3 AND IDENTIFICATION METHOD THEREOF	2021-12-15
2021/10451	HIGH-PRESSURE COMPONENT AND MICROWAVE- ULTRASONIC COOPERATIVE HIGH-PRESSURE COMBINED APPARATUS USING THE SAME	2021-12-15
2021/10452	MINIATURE INTELLIGENT VEGETABLE CULTIVATION BOX	2021-12-15
2021/10453	TECHNOLOGY FOR PURIFYING LACTIC ACID BY ESTERIFICATION-HYDROLYSIS METHOD BASED ON CATALYTIC REACTION DISTILLATION COUPLING	2021-12-15
2021/10454	METHOD FOR PREPARING CARBON MATERIALS AND TREATING WASTEWATER	2021-12-15
2021/10456	METHOD FOR PREPARING ZNO/MCM-41 DESULFURIZATION SORBENT BY MICROWAVE- BASED IN-SITU ONE-STEP METHOD	2021-12-15
2021/10457	METHOD FOR PREPARING ECHINACEA PURPUREA POLYSACCHARIDE NANOPARTICLES	2021-12-15
2021/10458	METHOD AND DEVICE FOR GROWING DENDROBIUM WITH LIVE BARK	2021-12-15
2021/10459	FORCE MONITORING AND EARLY WARNING DEVICE FOR U-SHAPED STEEL SUPPORT IN COAL MINE	2021-12-15
2021/10460	BIOACTIVE WATER AND PREPARATION METHOD THEREOF	2021-12-15
2021/10461	UNDERGROUND MINE PNEUMATIC EXPLOSION- PROOF ANCHOR CABLE AUTOMATIC INSTALLATION CART	2021-12-15
2021/10462	HIGHLAND BARLEY-BASED FUNCTIONAL RED YEAST RICE RICH IN ERGOSTEROL AND PREPARATION METHOD OF HIGHLAND BARLEY- BASED FUNCTIONAL RED YEAST RICE	2021-12-15
2021/10464	CENTRIFUGAL IMPELLER AND ITS HOLLOW BLADES	2021-12-15

Application Number	Patent Title	Filing Date
2021/10469	PUBLIC HEALTH REFINED MANAGEMENT-BASED DATA QUALITY CONTROL SYSTEM	2021-12-15
2021/10470	CLOSED LIQUID DISCHARGE METHOD FOR TORCH LINE AND SYSTEM THEREOF	2021-12-15
2021/10763	SHIELDING RADIATION PROTECTION EQUIPMENT	2021-12-22
2021/10778	MULTISPLIT NITROGEN APPLICATION VIA DRIP IRRIGATION IMPROVES FLUE-CURED TOBACCO NITROGEN USE EFFICIENCY	2021-12-22
2021/10857	METHOD FOR ONLINE MODELING OF HEAT PUMP SYSTEM BASED ON DATA AND DEVICE THEREOF	2021-12-23
2021/10858	KEY ENZYME GENE TVHSP70 OF TRICHODERMA VIRIDE FOR RESPONDING TO HIGH TEMPERATURE STRESS, RECOMBINANT EXPRESSION VECTOR, ENGINEERING BACTERIA AND APPLICATION THEREOF	2021-12-23
2021/10859	ROTOR POSITION SENSOR OF SIX-HALL THREE- OUTPUT MOTOR AND INSTALLATION METHOD THEREOF	2021-12-23
2021/10860	DEVICE FOR DISTRIBUTED MULTI-POINT WATER QUALITY SAMPLING WITH LONG-DISTANCE REMOTE CONTROL	2021-12-23
2021/10912	CHINESE SPIRIT VINASSE DRYING DEVICE	2021-12-23

## DESIGNS

## Advertisement List for February 2022

## Number of Advertised Designs: 40

Application Number	Design Articles	Filing Date
A2020/01663	LOGO, GRAPHIC SYMBOL, SURFACE PATTERN, OR ORNAMENTATION	2020-12-22
A2021/00346	Bottle	2021-03-31
A2021/00349	TROLLEY CHASSIS	2021-03-31
A2021/00380	SOLAR WATER HEATER	2021-04-13
A2021/00463	AEROSOL GENERATING DEVICE, IN PARTICULAR TOBACCO HEATING DEVICE	2021-04-30
A2021/00466	Suction Apparatus	2021-04-30
A2021/00469	A BATH SPOUT	2021-05-03
A2021/00471	Licence Disc Holders	2021-05-03
A2021/00475	JACUZZI COVER ASSEMBLY	2021-05-04
A2021/00478	Case	2021-05-04
A2021/00479	Earphones in a Case	2021-05-04
A2021/00480	Earphone	2021-05-04
A2021/00486	ACTUATOR BUTTONS	2021-05-10
A2021/00490	BOTTLES	2021-05-11

Application Number	Design Articles	Filing Date
A2021/00515	Container	2021-05-17
A2021/00516	Container	2021-05-17
A2021/00517	ADAPTERS FOR MACHINE IMPLEMENTS	2021-05-17
A2021/00518	ADAPTER COVERS FOR MACHINE IMPLEMENTS	2021-05-17
A2021/00519	ADAPTERS FOR MACHINE IMPLEMENTS	2021-05-17
A2021/00520	ADAPTER COVERS FOR MACHINE IMPLEMENTS	2021-05-17
A2021/00528	Accessory for an Electronic Device	2021-05-19
A2021/00529	Electronic Device	2021-05-19
A2021/00530	Accessory for an Electronic Device	2021-05-19
A2021/00544	BOTTLES	2021-05-21
A2021/00710	LIGHTER AND EXTINGUISHER FOR AEROSOL GENERATORS, IN PARTICULAR FOR HEATED TOBACCO STICKS HAVING A CARBON HEAT SOURCE.	2021-06-17
A2021/00711	LIGHTER AND EXTINGUISHER FOR AEROSOL GENERATORS, IN PARTICULAR FOR HEATED TOBACCO STICKS HAVING A CARBON HEAT SOURCE	2021-06-17
A2021/00713	LIGHTER AND EXTINGUISHER FOR AEROSOL GENERATORS, IN PARTICULAR FOR HEATED TOBACCO STICKS HAVING A CARBON HEAT SOURCE	2021-06-17
A2022/00018	SPORT BIB	2022-01-06
F2020/01024	FACE MASK FILTER CARTRIDGE	2020-07-24
F2020/01029	CAP FOR BOTTLES	2020-07-27
F2020/01103	DETERRENT COMPONENT	2020-08-13
F2020/01403	RESEALABLE COVERS FOR BEVERAGE CONTAINERS	2020-10-28
F2021/00231	TABLE	2021-03-05
F2021/00450	GRILL CLEANER	2021-04-28
F2021/00467	MOUNTING PLATES FOR CABLE FIXING SYSTEMS	2021-05-03
F2021/00470	A BATH SPOUT	2021-05-03
F2021/00476	JACUZZI COVER ASSEMBLY	2021-05-04
F2021/00485	A HAIR FASTENER INCLUDING AN ELASTICATED COVER	2021-05-07
F2021/00712	LIGHTER AND EXTINGUISHER FOR AEROSOL GENERATORS, IN PARTICULAR FOR HEATED TOBACCO STICKS HAVING A CARBON HEAT SOURCE	2021-06-17
F2021/00714	LIGHTER AND EXTINGUISHER FOR AEROSOL GENERATORS, IN PARTICULAR FOR HEATED	2021-06-17

Application Number	Design Articles	Filing Date
	TOBACCO STICKS HAVING A CARBON HEAT SOURCE	