

2022年度河南省教育厅科技成果奖优秀科技论文奖奖励名单公示

项目名称	主要完成单位	主要完成人	奖励等级
城镇化进程中生态环境响应的时空分异及影响因素研究	安阳工学院	史建军	壹等
Janus WSSe Monolayer: An Excellent Photocatalyst for Overall Water Splitting	安阳师范学院	鞠林, 别梅, 汤笑, 商晶, 寇良志	壹等
具有高性能光电探测特性的W03-x/Si n-n同型异质结	安阳师范学院	张希威, 苏意文, 汤振杰, 胡丹, 王 志, 侯悦昕, 王鑫炎	壹等
Ruthenium-catalyzed meta-selective C-H sulfonation of azoarenes with arylsulfonyl chlorides	安阳师范学院	李刚, 王军杰	壹等
Direct Intramolecular Aminoboration of Allenes	安阳师范学院	杨春华	壹等
Influence of adding nano-graphite powders on the microstructure and gas hydrogen storage properties of ball-milled Mg90Al10 alloys	安阳师范学院	尚宏伟, 李亚琴, 张羊换, 魏新, 祁焱, 赵栋梁	壹等
Two sensitive electrochemical strategies for the detection of protein kinase activity based on the 4-mercaptophenylboronic acid-induced in situ assembly of silver nanoparticles	安阳师范学院	刘林	壹等
Electrochemical immunosensors with protease as the signal label for the generation of peptide-Cu(II) complexes as the electrocatalysts toward water oxidation	安阳师范学院	夏宁	壹等
Construction of New Active Sites: Cu Substitution Enabled Surface Frustrated Lewis Pairs over Calcium Hydroxvanatite for CO2 Hydrogenation	安阳师范学院	郭九丽	壹等
Copper-catalyzed 1,1-alkynylalkylation of alkynes: access toward conjugated enynes	安阳师范学院	吕允贺, 王艳琴, 蒲卫亚, 朱雪莉, 武宁, 赵亚丽	壹等
Designing synthesis of porous biomass carbon from wheat straw and the functionalizing application in flexible all-solid-state supercapacitors	安阳师范学院	杜卫民	壹等
A relation between moments of Liu process and Bernoulli numbers	安阳师范学院	马冠忠, 杨向峰, 姚潇	壹等
Image encryption algorithm with matrix semi-tensor product	安阳师范学院	邹成业	壹等
Fuzzy weak hyper deductive systems of hyper equality algebras and their measures	安阳师范学院	杨永伟	壹等
Oracle Bone Inscriptions information processing based on multi-modal knowledge graph	安阳师范学院	熊晶, 刘永革, 刘梦婷	壹等
A first-principles study of doped black phosphorus carbide monolayers as NO2 and NH3 sensors	安阳师范学院	张静, 杨癸, 袁地, 田俊龙	壹等
Direct and Indirect Effects of Family Functioning on Loneliness of Elderly Chinese Individuals	安阳师范学院	周广亚	壹等
资产误定价、机构投资者与股价崩盘风险	河南财经政法大学	张肖飞	壹等
Sharp H1-norm error estimates of two time-stepping schemes for reaction-subdiffusion problems	河南财经政法大学, 南京航空航天大学, 武汉大学, 北京计算机科学研究中心	任金城, 廖洪林, 张继伟, 张智民	壹等
Migration characteristics of heavy metals during sludge pyrolysis	河南城建学院	张志远, 鞠睿, 周恒涛	壹等

项目名称	主要完成单位	主要完成人	奖励等级
Ultimate strength of pinned-end dual-angle cross combined section columns under axial compression	河南城建学院, 中国电建集团河南省电力勘测设计院有限公司, 西安交通大学	屈讼昭, 张斌, 郭咏华, 孙清	壹等
Visible quantum dot light-emitting diodes with simultaneous high brightness and efficiency	河南大学	申怀彬, 吝青丽, 曾在平, 贾瑜, 王书木, 杜祖亮, 李林松	壹等
Photoinduced Iron-Catalyzed ipso-Nitration of Aryl Halides via Single-Electron Transfer	河南大学	徐浩	壹等
Brain-Targeted Aggregation-Induced-Emission Nanoparticles with Near-Infrared Imaging at 1550 nm Boosts Orthotopic Glioblastoma Theranostics	河南大学	王杰菲, 刘义升, 上官萍, 师冰洋	壹等
Cu ₂ ZnSnS ₄ Quantum Dots as Hole Transport Material for Enhanced Charge Extraction and Stability in All-Inorganic CsPbBr ₃ Perovskite Solar Cells	河南大学	周正基, 邓月清, 张盼盼, 寇东星, 周文辉, 孟月娜, 袁胜杰, 武四新	壹等
Controllable Synthesis of Different Morphologies of CuO Nanostructures for Tribological Evaluation as Water-Based Lubricant Additives	河南大学	赵军华, 杨广彬, 张玉娟, 张晟卯, 张春丽, 高伟平, 张平全	壹等
Preparation of hexamethyl disilazane-surface functionalized nano-silica by controlling surface chemistry and its “agglomeration-collapse” behavior in solution polymerized styrene butadiene rubber/butadiene rubber composites	河南大学	田庆丰, 张春华, 唐源, 刘亚兰, 牛利永, 丁涛, 李小红, 张治军	壹等
Self-cleaning superhydrophobic coatings: Potential industrial applications	河南大学	刘山虎	壹等
A Description of Enzymatic Catalysis in N-Acetylhexosamine 1-Kinase: Concerted Mechanism of Two-Magnesium-Ion-Assisted GlcNAc Phosphorylation, Flexibility Behavior of Lid Motif upon Substrate Recognition, and Water-Assisted GlcNAc-1-P _{0.1} Release	河南大学	赵媛, 余柰	壹等
Enhancing Grain Growth for Efficient Solution-Processed (Cu, Ag) ₂ ZnSn(S, Se) ₄ Solar Cells Based on Acetate Precursor	河南大学	齐亚芳	壹等
Conversion of carbon dioxide into cyclic carbonates using wool powder-KI as catalyst	河南大学	常海波, 卜站伟, 乔聪震	壹等
Polystyrene assisted superhydrophobic silica coatings with surface protection and self-cleaning approach	河南大学	邢瑞敏	壹等
Long-term stabilization of Cd in agricultural soil using mercapto-functionalized nano-silica (MPTS/nano-silica): A three-year field study	河南大学	王洋洋	壹等
Enhanced molecular imprinted electrochemical sensor based on zeolitic imidazolate framework/reduced graphene oxide for highly recognition of rutin	河南大学	朱金花, 赵东保, 刘绣华	壹等
Analysis of flavors and fragrances by HPLC with Fe ₃ O ₄ @GO magnetic nanocomposite as the adsorbent	河南大学	校瑞, 卢明华	壹等
Simultaneous removal and oxidation of arsenic from water by δ-MnO ₂ modified activated carbon	河南大学	王玉龙	壹等
Specific Modification with TPGS and Drug Loading of Cyclodextrin Polyrotaxanes and the Enhanced Antitumor Activity Study in Vitro and in Vivo	河南大学	张艺, 周巧巧, 贾淑鑫, 林鲲鹏, 范广芳, 袁金涛, 于树玲, 石家华	壹等

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Biosynthesis of DHGA12 and its roles in Arabidopsis seedling establishment	河南大学	刘浩	壹等
Characterization and antibacterial activity of edible films based on carboxymethyl cellulose, Dioscorea opposita mucilage, glycerol and ZnO nanoparticles	河南大学	李晓静, 马凡怡	壹等
MYB77 Regulates High-affinity Potassium Uptake by Promoting Expression of HAK5.	河南大学	冯翠珠, 罗运鑫, 王鹏丹, 龙雨	壹等
Gradient coating of polydopamine via CDR	河南大学	赵美霞	壹等
Activation of 1-Aminocyclopropane-1-Carboxylic Acid Synthases Sets Stomatal Density and Clustered Ratio on Leaf Epidermis of Arabidopsis in Response to Drought	河南大学	江静, 贾明珠, 刘凌云, 耿晨	壹等
Contribution of anthropogenic CO ₂ to global radiative forcing and ecosystem's offset during 2000-2015 in China	河南大学	崔耀平, 李楠, 付一鸣, 刘小燕, 卢鹤立	壹等
Drought Monitoring over Yellow River Basin from 2003-2019 Using Reconstructed MODIS Land Surface Temperature in Google Earth Engine	河南大学	赵晓阳, 夏浩铭, 宋宏权	壹等
Transcriptome-wide analysis of pseudouridylation of mRNA and non-coding RNAs in Arabidopsis	河南大学	孙立荣, 柏胜龙, 白雪, 郝福顺, 宋纯鹏	壹等
Flavonoids improve drought tolerance of maize seedlings by regulating the homeostasis of reactive oxygen species	河南大学	李保珠	壹等
Neutrophils and Immunity: From Bactericidal Action to Being Conquered	河南大学	滕铁山	壹等
Variability of aboveground litter inputs alters soil carbon and nitrogen in a Coniferous-Broadleaf mixed forest of Central China	河南大学	苗仁辉, 郭美霞, 马俊, 刘银占, 刘彦春, 杨中领	壹等
IMCA Induces Ferroptosis Mediated by SLC7A11 through the AMPK/mTOR Pathway in Colorectal Cancer	河南大学	张磊, 王群, 汤昆	壹等
Discovery of the Polyamine Conjugate with Benzo[cd]indol- 2(1H)one as a Lysosome-Targeted Antimetastatic Agent	河南大学	李景华, 王超杰	壹等
Preparation and application of selenium nanoparticles in a lateral flow immunoassay for clenbuterol detection	河南大学	王志增, 任阳光	壹等
Colorectal cancer occurrence and treatment based on changes in intestinal flora	河南大学	王慧超, 林旭红	壹等
Exogenous Hydrogen Sulfide Regulates the Growth of Human Thyroid Carcinoma Cells	河南大学	吴东栋, 吉爱玲, 李彦章	壹等
Improving energy harvesting from random excitation by nonlinear flexible bi-stable energy harvester with a variable potential energy function	河南大学	周志勇	壹等
Inverse projection group sparse representation for tumor classification: a low-rank variation dictionary approach	河南大学	杨晓慧	壹等
A Galerkin finite element method for time-fractional stochastic heat equation	河南大学	邹广安	壹等
Controllability analysis of a gene network for Arabidopsis thaliana reveals characteristics of functional gene families	河南大学	王沛, 王道杰	壹等
Effects of toxin delay on the dynamics of a phytoplankton-zooplankton model	河南大学	张嘉防	壹等
A neurodynamic optimization approach to supervised feature selection via fractional programming	河南大学	王雅娣	壹等

项目名称	主要完成单位	主要完成人	奖励等级
Target Classification and Recognition for High-resolution Remote Sensing Images: Using the Parallel Cross-modal Neural Cognitive Computing Algorithm	河南大学	刘扬	壹等
Multiphysics discontinuous Galerkin method for a poroelasticity model	河南大学	葛志昊, 马梦霞	壹等
Classification of Phonocardiogram signals based on envelope optimization model and support vector machine	河南大学	杨利军	壹等
Behavior Analysis with an Evolutionary Game Theory Approach for Procurement Bid Evaluation Involving Technical and Business Experts	河南大学	刘旭旺	壹等
A diary study of work consequences for hotel employees victimized by supervisor from a demand-resource perspective on employee emotions	河南大学	朴寅祚	壹等
A multicommodity unpaired pickup and delivery vehicle routing problem with split loads and unloads	河南大学	徐东洋	壹等
The effect of time management training on time management and anxiety among nursing undergraduates	河南大学	张锋, 刘佳曦, 安梦斐, 谷璜	壹等
Is private supplementary tutoring effective? A longitudinally detailed analysis of private tutoring quality in China	河南大学	张玉环, 党宇, 何雅涵, 马晓, 王立东	壹等
The Functional Role of Individual-Alpha Based Frontal Asymmetry in the Evaluation of Emotional Pictures: Evidence from Event-Related Potentials	河南大学	索涛, 张恩涛	壹等
Robust Product Positioning Considering Customer Preferences	河南大学	齐微	壹等
影响女子篮球运动员起跳高度的下肢生物力学因素的灰色关联分析	河南大学	刘海涛	壹等
Systematic Comparison of Two Animal-to-Human Transmitted Human Coronaviruses: SARS-CoV-2 and SARS-CoV	河南大学, 河南省生物工程技术研究中心	郭向前, 谢龙祥, 王云龙	壹等
Nitrogen and sulfur codoped micro-mesoporous carbon sheets derived from natural biomass for synergistic removal of chromium(VI): adsorption behavior and computing mechanism	河南工程学院	陈锋, 张谋, 马路路, 任建刚	壹等
Remarkably strengthened microinjection molded linear low-density polyethylene (LLDPE) via multi-walled carbon nanotubes derived nanohybrid shish-kebab structure	河南工程学院	石素宇, 王琳艳	壹等
A novel two-photon fluorescent probe for efficiently detecting Zn ²⁺ and Cd ²⁺ ions	河南工程学院	岳丹, 王振领	壹等
A fully diagonalized spectral method using generalized Laguerre functions on the half line	河南工程学院	刘付军	壹等
Inhalation bioaccessibility of Cd, Cu, Pb and Zn and speciation of Pb in particulate matter fractions from areas with different pollution characteristics in Henan Province, China	河南工业大学	邢维芹, 赵强, 郑黎荣, 李立平	壹等
Transition-metal-free direct C-3 alkylation of quinoxalin-2(1H)-ones with ethers	河南工业大学	袁金伟, 傅俊豪, 尹记红, 董振华, 肖咏梅, 毛璞, 屈凌波	壹等
Peroxymonosulfate-enhanced photocatalysis by carbonyl-modified g-C ₃ N ₄ for effective degradation of the tetracycline hydrochloride	河南工业大学	史亚慧, 李进松, 万东锦, 刘永德	壹等
Aggregation-induced emission luminogen based molecularly imprinted ratiometric fluorescence sensor for the detection of Rhodamine 6G in food samples	河南工业大学	李媛媛	壹等

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Catalyst and additive-free oxidative dual C-H sulfenylation of imidazoheterocycles with elemental sulfur using DMSO as a solvent and an oxidant	河南工业大学	郭涛	壹等
Further interpretation of the strengthening effect of curdlan on frozen cooked noodles quality during frozen storage: Studies on water state and properties	河南工业大学	梁赢, 刘玫, 王金水	壹等
Distribution and degradation of DNA from non-genetically and genetically modified soybean (Roundup Ready): Impact of soybean protein concentrate and soybean protein isolate preparation	河南工业大学	杜艳, 陈复生, 布冠好, 张丽芬	壹等
Antibacterial activity of a polysaccharide produced from Chaetomium globosum CGMCC 6882	河南工业大学	王子朝	壹等
Aluminum dihydric tripolyphosphate/polypyrrole functionalized graphene oxide waterborne epoxy composite coatings for impermeability and corrosion protection performance of metals	河南工业大学	朱青松, 黄宇翔, 李一龙, 周满婷, 徐三魁	壹等
Anti-hyperglycemic and liver protective effects of flavonoids from Psidium guajava L. (guava) leaf in diabetic mice	河南工业大学	朱晓艾	壹等
Reduction of aflatoxin B1 by magnetic graphene oxide/TiO2 nanocomposite and its effect on quality of corn oil	河南工业大学	孙淑敏, 谢岩黎, 赵冉	壹等
Effect of transglutaminase on the quality and protein characteristics of aleurone-riched fine dried noodles	河南工业大学	关二旗, 杨玉玲, 李萌萌, 李念琦, 王天姣, 卢朝银, 陈蒙慧, 许飞	壹等
Separation studies of concrete and brick from construction and demolition waste	河南工业大学	胡魁, 陈玉静, Falak Naz, 曾长女, 曹世豪	壹等
Study of using enhanced heat-transfer flexible phase change material film in thermal management of compact electronic device	河南工业大学	李皖皖, 王飞, 程文龙, 赵晴	壹等
Effect of heat-source geometry on distribution and deposition of particulates in a ventilated chamber	河南工业大学	陈曦	壹等
Unsupervised feature selection by non-convex regularized self-representation	河南工业大学	苗建雨, 陈振松, 靳小波, 李佩佳, 牛凌峰	壹等
Optimal order finite difference/local discontinuous Galerkin method for variable-order time-fractional diffusion equation	河南工业大学	韦雷雷, 杨艳芳	壹等
Deep learning based automatic monitoring method for grain quantity change in warehouse using semantic segmentation	河南工业大学	李磊, 董卓莉, 曹鹤玲	壹等
Hybrid multiobjective evolutionary algorithm based on differential evolution for flow shop scheduling problems	河南工业大学	张闻强, 王宇	壹等
NbMoTiVSix refractory high entropy alloys strengthened by forming BCC phase and silicide eutectic structure	河南工业大学, 哈尔滨工业大学, 广东(东莞)材料基因高等理工研究院	徐琴, 陈德志, 谈重阳, 毕晓勤, 王琪, 张书彦, 陈瑞润	壹等
An integrated platform for fibrinogen quantification on a microfluidic paper-based analytical device	河南工业大学, 郑州申科化验仪器有限公司, 郑州奥美康复医院	关炎芳, 张坤, 刘彦胜, 白明洋	壹等
Effect of the N/P/S and transition-metal co-doping on the quantum capacitance of supercapacitor electrodes based on mono- and multilayer graphene	河南科技大学	周清晓, 琚伟伟, 张倩, 刘妍伶, 李佳霖	壹等

项目名称	主要完成单位	主要完成人	奖励等级
Enhanced S-Adenosylmethionine Production by Increasing ATP Levels in Baker's Yeast (<i>Saccharomyces cerevisiae</i>)	河南科技大学	陈雅维	壹等
Effect of MoO ₃ /carbon nanotubes on friction and wear performance of glass fabric-reinforced epoxy composites under dry sliding	河南科技大学	赫玉欣, 姚大虎	壹等
HPLC-DAD analysis of 15 monoterpene glycosides in oil peony seed cakes sourced from different cultivation areas in China	河南科技大学	刘普	壹等
Characterization of <i>Paeonia ostii</i> seed and oil sourced from different cultivation areas in China	河南科技大学	邓瑞雪	壹等
Assessment of 2-allyl-4,5-dimethoxyphenol safety and attractiveness to mature males of <i>Bactrocera dorsalis</i> (Hendel)	河南科技大学	邓淑桢, 李新阳, 王子明, 王俊博, 韩丹阳, 范嘉豪, 赵琪, 刘欢, 王新帅	壹等
Phytochemical profiles and antioxidant activity of <i>Rehmannia glutinosa</i> from different production locations	河南科技大学	刘伟, 尹冬雪, 张彤, 乔琦, 杨月琴, 王文璐	壹等
Prevalence, molecular characterization, and antibiotic susceptibility of <i>Bacillus cereus</i> isolated from dairy products in China	河南科技大学	赵胜娟, 陈俊亮, 费鹏, 王耀, 景浩楠	壹等
Qualitative study of the psychological experience of COVID-19 patients during hospitalization	河南科技大学	孙妞妞, 魏乐群, 王宏运, 王鲜茹, 高明霞	壹等
MicroRNA-320d regulates tumor growth and invasion by promoting FoxM1 and predicts poor outcome in gastric cardiac adenocarcinoma	河南科技大学	陈晓杰, 高社干, 赵智伟, 梁高峰, 孔金玉, 冯笔山	壹等
ROS self-generation and hypoxia self-enhanced biodegradable magnetic nanotheranostics for targeted tumor therapy	河南科技大学	李景华, 刘云, 李晓楠, 梁高峰, 阮长顺, 蔡开勇	壹等
The performance of a new shock advisory algorithm to reduce interruptions during CPR	河南科技大学	胡莹莹, 唐晗琪, 刘晨光, 景道远, 朱华栋, 张雅芝, 于学忠, 张国杰, 徐军	壹等
Nonlinear free vibration of a beam on Winkler foundation with consideration of soil mass motion of finite depth	河南科技大学	马建军, 刘丰军, 聂梦强, 王俊波	壹等
Relative Rates of Hydrogen Shift Isomerizations Depend Strongly on Multiple-Structure Anharmonicity	河南科技大学	邢利利, 王学涛	壹等
Finite-time dissipative synchronization for Markovian jump generalized inertial neural networks with reaction-diffusion terms	河南科技大学	宋晓娜, 满景涛, 宋帅	壹等
Data-driven reinforcement-learning-based hierarchical energy management strategy for fuel cell/battery/ultracapacitor hybrid electric vehicles	河南科技大学	孙昊琛, 付主木, 陶发展, 朱龙龙, 司鹏举	壹等
Quality assessment of images with multiple distortions based on phase congruency and gradient magnitude	河南科技大学	苗锡奎	壹等
Joint Optimization for Ambient Backscatter Communication System with Energy Harvesting for IoT	河南科技大学	冀保峰, 周本川, 李春国	壹等
Vbargain: A Market-driven Quality Oriented Incentive for Mobile Video Offloading	河南科技大学, 北京邮电大学	吴红海, 刘亮, 马华东	壹等
Near infrared electroluminescence from p-NiO/n-InN/n-GaN light-emitting diode fabricated by PAMBE	河南科技大学, 吉林大学	王辉, 巩晓阳, 李秋泽, 吴国光, 李万程, 杜国同	壹等
Mn-Doped g-C ₃ N ₄ Nanoribbon for Efficient Visible-Light Photocatalytic Water Splitting Coupling with Methylene Blue Degradation	河南科技学院	王吉超, 崔乘幸	壹等

项目名称	主要完成单位	主要完成人	奖励等级
Clay nanosheet-mediated delivery of recombinant plasmids expressing artificial miRNAs via leaf spray to prevent infection by plant DNA viruses	河南科技学院	刘起丽	壹等
The role of pyroptosis in cancer: pro-cancer or pro- “host” ?	河南科技学院	夏小静, 王鑫, 成哲, 秦万海, 雷连成, 姜金庆, 胡建和	壹等
The effect of non-Saccharomyces yeasts on biogenic amines in wine	河南科技学院	王宝石, 谭凤玲, 褚瑞超, 李光耀, 李林波, 杨天佑, 张明霞	壹等
Revealing the substitution preference of zinc in ordinary Portland cement clinker phases: A study from experiments and DFT calculations	河南理工大学	朱建平, 杨阔, 陈洋, 郭本凯	壹等
Probing the exact form and doping preference of magnesium in ordinary Portland cement clinker phases: A study from experiments and DFT simulations	河南理工大学	赵瑞奇, 张莉, 范广新, 张海波, 管学茂	壹等
AEE active Schiff base-bearing pyrene unit and further Cu ²⁺ -induced self-assembly process	河南理工大学	吴伟娜, 毛盼东, 王元	壹等
Efficient utilization of coal slime using anaerobic fermentation technology	河南理工大学	郭红玉	壹等
Adsorption and heat characteristics of coal-microorganisms during the cogeneration of H ₂ and CH ₄ following pretreatment with white rot fungi	河南理工大学	夏大平	壹等
A mathematical model of fluid flow in tight porous media based on fractal assumptions	河南理工大学	金毅	壹等
An experimental study of the vibration of a drill rod during roof bolt installation	河南理工大学	付孟雄, 刘少伟, 苏发强	壹等
The fractional Kelvin-Voigt model for circumferential guided waves in a viscoelastic FGM hollow cylinder	河南理工大学	张小明, 李智, 王现辉, 禹建功	壹等
Characterization of coarse aggregate morphology and its effect on rheological and mechanical properties of fresh concrete	河南理工大学	赵宇, 段懿航, 朱伶俐, 王有凯, 余政浩	壹等
Multi-scale Crack Propagation and Damage Acceleration during Uniaxial Compression of Marble	河南理工大学	唐胡丹	壹等
Experimental and numerical study of the effects of oxygen-enriched air on the laminar burning characteristics of biomass-derived syngas	河南理工大学	张乔生, 陈国艳, 邓浩鑫, 温小萍, 王发辉, 盛伟	壹等
Energy evolution mechanism in process of Sandstone failure and energy strength criterion	河南理工大学	王云飞, 崔芳	壹等
Particle mixing behavior of fine coal in density control of gas-solid separation fluidized bed	河南理工大学	吕波	壹等
Finite-time synchronization of delayed complex dynamic networks via aperiodically intermittent control	河南理工大学	景太艳, 张道远, 梅俊, 范玉玲	壹等
Anti-control of chaos for first-order partial difference equations via sine and cosine functions	河南理工大学	梁伟, 张子涵	壹等
Residual Transceiver Hardware Impairments on Cooperative NOMA Networks	河南理工大学	李兴旺, 李静静	壹等
高应力泥岩顶板巷道围岩失稳特征及控制分析 (Analysis of instability characteristics of surrounding rocks in mudstone roof gateway subjected to high stress and its control)	河南理工大学, 河南焦煤能源有限公司古汉山矿	辛亚军, 穆利斌	壹等
Impact of cellulose deoxidization temperature on the composition of liquid products obtained by subsequent pyrolysis	河南理工大学, 华中科技大学	梅艳阳, 杨晴	壹等

项目名称	主要完成单位	主要完成人	奖励等级
mtROS-mediated Akt/AMPK/mTOR pathway was involved in Copper-induced autophagy and it attenuates Copper-induced apoptosis in RAW264.7 mouse monocytes	河南牧业经济学院	罗琴, 宋予震, 康静静, 吴玉臣, 吴凤笋, 李月勤, 董青, 王军, 宋超, 郭红瑞	壹等
The first detection of Anaplasma capra an emerging zoonotic Anaplasma sp in erythrocytes	河南牧业经济学院	彭永帅, 卢晨阳, 闫亚群, 史柯, 陈倩, 赵聪, 菅复春, 宁长申	壹等
研究生教育质量提升的多元治理视域	河南牧业经济学院	徐晓飒	壹等
中国农村贫困户劳动力转移的减贫效应分析—基于河南省12个贫困县1211份调查数据	河南牧业经济学院	苗欣, 吴一平	壹等
A strategy for successive feedstock reuse to maximize photo-fermentative hydrogen production of Arundo donax L.	河南农业大学	蒋丹萍, 岳田, 张志萍, 贺超, 荆艳艳, 路朝阳, 张寰, 陈州, 张全国	壹等
s-Tetrazine-functionalized hyper-crosslinked polymers for efficient photocatalytic synthesis of benzimidazoles	河南农业大学	安万凯, 金秋, 秦毓辰, 任运来, 徐翠萍, 潘振良	壹等
Anisotropy control-induced unique anisotropic thermoelectric performance in n-type Bi ₂ Te ₂₋₇ Se ₀₋₃ thin films	河南农业大学	谭明, 李辉, 李聪, 刘小标	壹等
A spontaneous wheat-Aegilops longissima translocation carrying Pm66 confers resistance to powdery mildew	河南农业大学	李欢欢, 董振杰, 马超, 田修斌	壹等
Morinda officinalis polysaccharides improve meat quality by reducing oxidative damage in chickens suffering from tibial dyschondroplasia	河南农业大学	黄淑成, 曹芹芹, 杨玉荣, 徐婷婷, 岳珂, 刘芳, 仝宇鑫, 王学丘	壹等
An effective inactivant based on singlet oxygen-mediated lipid oxidation implicates a new paradigm for broad-spectrum antivirals	河南农业大学	褚贝贝, 曾磊, 王梦迪, 于朋伟, 齐艳丽	壹等
Function of the ERFL1a transcription factor in wheat responses to water deficiency	河南农业大学	李鸽子, 王永华, 康国章	壹等
The chicken pan-genome reveals gene content variation and a promoter region deletion in IGF2BP1 affecting body size	河南农业大学	王克君, 张晨曦, 杨岚, 樊学伟, 李东华, 张彦华, 黄河天, 李文婷	壹等
Mechanism by Which β -glucanase Improves the Quality of Fermented Barley Flour-based Food Products	河南农业大学	李真, 董英, 肖香, 周兴华	壹等
Homoeologous recombination-based transfer and molecular cytogenetic mapping of powdery mildew-resistant gene Pm57 from Aegilops searsii into wheat	河南农业大学	刘文轩	壹等
Improved estimation of winter wheat aboveground biomass using multiscale textures extracted from UAV-based digital images and hyperspectral feature analysis	河南农业大学	付元元	壹等
Detection and phylogenetic analysis of porcine circovirus type 3 in central China	河南农业大学	杨明凡	壹等
Elevated air stability in PBDT-DTNT-PCBM solar cells by focusing on roles of fibrillar-patterned nanostructures via graphene-polymer constituents	河南农业大学	丁攀, 焦有宙	壹等
可证明安全的基于属性代理签名 Provable Secure Attribute-based Proxy Signature	河南农业大学	孙昌霞, 刘羿, 曾霞, 司海平	壹等
Study on unbiased interval grey number prediction model with new information priority	河南农业大学	李晔, 李娟	壹等

项目名称	主要完成单位	主要完成人	奖励等级
创业生态系统40年：主体-环境要素演进视角	河南农业大学	沙德春, 孙佳星	壹等
Food safety concerns and consumer preferences for food safety attributes: Evidence from China	河南农业大学	刘瑞峰, Zhifeng Gao, Heather Arielle Snell	壹等
Grey relational decision making model of three-parameter interval grey number based on AHP and DEA	河南农业大学	李炳军, 朱晓宵	壹等
考虑大数据信息投入与成本分担的绿色供应链定价策略研究 (Pricing rules of Green Supply Chain considering Big Data information inputs and cost-sharing model)	河南农业大学	刘盼	壹等
Production efficiency prediction of pig breeding industry by optimized LSTM computer algorithm under environmental regulation	河南农业大学	贾云飞	壹等
The adoption and impact of engineering-type measures to address climate change: evidence from the major grain-producing areas in China	河南农业大学	马恒运	壹等
Study on the evolution of information sharing strategy for users of online patient community	河南农业大学	朱盼盼	壹等
To gain face or not to lose face: The effect of face message frame on response to public service advertisements	河南农业大学, 美国普渡大学, 江南大学	王晗蔚, 傅宏宇, 吴媛媛	壹等
Molecular detection and phylogenetic analysis of Porcine circovirus 4 in Henan and Shanxi Provinces of China	河南农业大学, 郑州大学	王振亚, 陈红英	壹等
Bacterial community structure after long-term organic and inorganic fertilization reveals important associations between soil nutrients and specific taxa involved in nutrient transformations	河南农业大学, 中国科学院南京土壤研究所, 河南省农业科学院植物营养与资源环境研究所	李芳, 陈林, 张佳宝, 尹钧, 黄绍敏	壹等
河南省中原经济区职业院校校企合作运行机制不健全的原因探析	河南轻工职业学院	韩静静	壹等
High Proton-Conductivity in Covalently Linked Polyoxometalate-Organoboronic Acid-Polymers	河南师范大学	李书军, 陈学年, 赵月, 李钢, 彭青坡, 邱朋涛	壹等
Nickel-catalyzed deaminative Sonogashira coupling of alkylpyridinium salts enabled by NN2 pincer ligand	河南师范大学	张兴杰, 祁迪, 焦晨晨, 刘小潘	壹等
Ultrasensitive recognition of AP sites in DNA at the single-cell level: one molecular rotor sequentially self-regulated to form multiple different stable Conformations	河南师范大学	冯北斗, 王魁, 杨勇刚, 仇华, 刘玉芳, 蒋凯	壹等
SYP22 and VAMP727 regulate BRI1 plasma membrane targeting to control plant growth in Arabidopsis	河南师范大学	张亮	壹等
A comparative genomics study of carbohydrate/glucose metabolic genes: from fish to mammals	河南师范大学	张玉茹	壹等
A novel deep output kernel learning method for bearing fault structural diagnosis	河南师范大学	毛文涛	壹等
A molecular-logic gate for COX-2 and NAT based on conformational and structural changes: visualizing the progression of liver disease	河南师范大学, 河南省人民医院	陈粤华, 王玉柱, 轩小鹏	壹等
运动对慢性病干预效果的研究进展	河南医学高等专科学校	王传中, 陈德炤, 李平, 张凤娟, 舒宝童, 李敏霞, 朱治林	壹等
基于人脸分块近似对称性预处理的人脸识别算法研究	河南艺术职业学院	吴凌云	壹等

项目名称	主要完成单位	主要完成人	奖励等级
Identification, evolution and expression analysis of WRKY gene family in Eucommia ulmoides	河南中医药大学	刘俊	壹等
消溃方灌肠治疗溃疡性结肠炎模型大鼠的作用机制研究	河南中医药大学	张慧俭, 周鹏飞, 刘世举, 刘佃温, 张新春	壹等
A small molecule compound berberine as an orally active therapeutic candidate against COVID-19 and SARS: A computational and mechanistic study	河南中医药大学	王真真	壹等
手足口病月发病率ARIMA乘积季节模型预测探讨	河南中医药大学	马晓梅, 刘颖, 杨梦利	壹等
高体三“三阴理论”学术思想探析	河南中医药大学	高达, 高天旭	壹等
实验动物多脏器组织石蜡切片统一制做流程及影响条件	河南中医药大学	张彩丽, 张俊霞, 刘湘花, 孙丽敏, 李瑞琴	壹等
Triptolide attenuates renal damage by limiting inflammatory responses in DOCA-salt hypertension	河南中医药大学	张静, 朱明军, 张诗雨, 谢世阳, 高原, 王幼平	壹等
Influence of Tanshinone IIA on apoptosis of human esophageal carcinoma Eca-109 cells and its molecular mechanism	河南中医药大学	张妍, 李姗, 何航, 韩倩倩	壹等
Resilient Distributed Coordination Control of Multiarea Power Systems Under Hybrid Attacks	河南中医药大学	程子豪	壹等
Competition-guided multi-neighborhood local search algorithm for the university course timetabling problem	河南中医药大学, 河南农业大学	宋婷, 许玉龙, 王栋	壹等
基于中医证据的中医临床疗效评价方法探讨	河南中医药大学, 河南省中医药研究院	符宇, 邵明义, 赵瑞霞, 远佳瑶, 余海滨, 崔伟峰	壹等
Molecular cloning and functional identification of a high-efficiency (+)-borneol dehydrogenase from Cinnamomum camphora (L.) Presl	河南中医药大学, 中国中医科学院中药研究所	马蕊, 苏平, 靳保龙, 郭娟, 田梅, 毛柳英, 唐金富, 陈同, 赖长江, 曾雯, 崔光红, 黄璐琦	壹等
Extending surfactant-modified 2:1 clay minerals for the uptake and removal of diclofenac from water	华北水利水电大学	孙垦	壹等
Multiple antibiotic resistance and DNA methylation in Enterobacteriaceae isolates from different environments	华北水利水电大学	袁伟, 张永丽, Luqman Riaz, 杨清香, 杜丘丘, 王瑞飞	壹等
Short-term forecasting and uncertainty analysis of wind turbine power based on long short-term memory network and Gaussian mixture model	华北水利水电大学	张晋华, 阎洁, 刘永前	壹等
Measurement and modeling of thermal conductivity of graphene nanoplatelet water and ethylene glycol base nanofluids	华北水利水电大学	高玉国, 王浩昌, Agus P. Sasmito, Arun S. Muiumdar	壹等
Influence of swirling intensity on lump coal particle pickup velocity	华北水利水电大学	周甲伟, 马子领	壹等
Fracture of 0.1 and 2 m long mortar beams under three-point-bending	华北水利水电大学	管俊峰	壹等
Identification of vehicle axle loads from bridge responses using preconditioned least square QR-factorization algorithm	华北水利水电大学	陈震	壹等
Enhancing continuous hydrogen production by photosynthetic bacterial biofilm formation within an alveolar panel photobioreactor	华北水利水电大学	张川, 马帅帅, 王贵红, 郭毅萍	壹等
Behavior of Rectangular-Sectional Steel Tubular Columns Filled with High-Strength Steel Fiber Reinforced Concrete Under Axial Compression	华北水利水电大学	刘世明	壹等
再生骨料掺配比再生透水混凝土性能的影响	华北水利水电大学	陈守开, 刘新飞, 郭磊, 汪伦焰	壹等

项目名称	主要完成单位	主要完成人	奖励等级
Probability Identification of Seismic Failure Modes of Reinforced Concrete Columns based on Experimental Observations	华北水利水电大学	马颖	壹等
Raster data projection transformation based-on Kriging interpolation approximate grid algorithm	华北水利水电大学	孟俊贞	壹等
Pricing weather derivatives with the market price of risk extracted from the utility indifference valuation	华北水利水电大学	李鹏	壹等
The asymptotic behavior of viscosity solutions of Monge-Ampère equations in half space	华北水利水电大学	贾小标	壹等
Deeply-learned and spatial-temporal feature engineering for human action understanding	华北水利水电大学	王合闯	壹等
Marketplace or reseller? Platform strategy in the presence of customer returns(考虑退货的平台运营决策·第三方or自营)	华北水利水电大学	王利莎, Jing Chen, 宋华明	壹等
Hybrid hydraulic-seasonal-time model for predicting the deformation behaviour of high concrete dams during the operational period / 基于混合hydraulic-seasonal-time模型的运行期内高混凝土坝变形安全预报	华北水利水电大学, 河海大学, 郑州大学, 长江勘测规划设计研究有限责任公司	杨光, 顾昊, 陈旭东, 赵鲲鹏	壹等
A redox-triggered C-centered free radicals nanogenerator for self-enhanced magnetic resonance imaging and chemodynamic therapy	黄河科技学院	陈健	壹等
N-rich porous carbons with a high graphitization degree and multiscale pore network for boosting high-rate supercapacitor with ultrafast charging	黄河科技学院	常彬彬	壹等
Functionalization: An Effective Approach to Open and Close Channels for Electron Transfer in Nitrogenated Holey Graphene C2N Anodes in Sodium-Ion Batteries	黄河科技学院	吴东海	壹等
Semimetallic carbon honeycombs: new three-dimensional graphene allotropes with Dirac cones	黄河科技学院	王帅伟	壹等
Self-templating graphene network composites by flame carbonization for excellent electromagnetic interference shielding	黄淮学院	李洋, 刘静静	壹等
Comparative study on fluid dynamic behavior and slamming loads of two bow-flare sections entering into water	黄淮学院	谢行, 刘方, 于鹏珪	壹等
Biaxial fatigue behavior of gradient structural purity titanium under in- phase and out-of-phase loading	黄淮学院	王启	壹等
符号图拓扑下Lur' e网络的二分同步	黄淮学院	刘芳, 宋强	壹等
A Liouville theorem for the higher-order fractional Laplacian	黄淮学院	卓然	壹等
基于贝叶斯分区数据挖掘的光纤网络异常分析算法	焦作大学, 长春理工大学光电工程学院	刘云朋, 霍晓丽, 刘智超	壹等
TRAVELING WAVE SOLUTION OF FRACTAL KdV-BURGERS-KURAMOTO EQUATION WITHIN LOCAL FRACTIONAL DIFFERENTIAL OPERATOR	焦作师范高等专科学校	孙建设	壹等
TIDE: Time-relevant deep reinforcement learning for routing optimization	解放军战略支援部队信息工程大学	孙鹏浩, 胡宇翔, 兰巨龙, 田乐	壹等
ICT: A Cryptanalysis Toolbox for Block Cipher Structure With Secret Components	解放军战略支援部队信息工程大学	张际焱, 崔霆, 金晨辉	壹等

项目名称	主要完成单位	主要完成人	奖励等级
面向物联网无线携能通信系统的机会安全传输方案	解放军战略支援部队信息工程大学	马克明, 陈亚军	壹等
Block precoding for peak-limited MISO broadcast VLC: Constellation-optimal structure and addition-unique designs	解放军战略支援部队信息工程大学	张艳语, 于宏毅, Jian-Kang Zhang	壹等
面向全空间信息系统的多粒度时空对象数据模型描述框架	解放军战略支援部队信息工程大学, 中国科学院地理科学与资源研究所	华一新, 周成虎	壹等
高职教育创新驱动发展精准对接新型工业化城市建设研究	开封大学	吴玺玖	壹等
Fluorescence Immunoassay Based on the Alkaline Phosphatase Triggered in Situ Fluorogenic Reaction of o-Phenylenediamine and Ascorbic Acid	洛阳理工学院	赵丹, 李娟	壹等
The design of quinoxaline based unfused non-fullerene acceptors for high performance and stable organic solar cells	洛阳理工学院	常美佳, 张雅敏	壹等
In-tube solid phase microextraction and determination of ractopamine in pork muscle samples using amide group modified polysaccharide-silica hybrid monolith as sorbent prior to HPLC analysis	洛阳理工学院	彭传云, 张少文, 吴春来, 冯勇	壹等
Rapid determination of 2,4-diaminopyrimidine residues through sample pretreatment using immunomagnetic bead purification along with HPLC-UV	洛阳师范学院	王立业	壹等
Genomic analyses of diverse wild and cultivated accessions provide insights into the evolutionary history of inube	洛阳师范学院	郭明欣	壹等
The nonexistence of global solutions for a time fractional nonlinear Schrodinger equation without gauge invariance	洛阳师范学院	张全国	壹等
Extremal graphs of given parameters with respect to the eccentricity distance sum and the eccentric connectivity index	洛阳师范学院	张慧慧	壹等
Lode相关断裂准则在6061-T6511H铝合金Taylor杆断裂预报中的应用	南阳理工学院, 重庆大学	杨庆年, 陈孝珍, 肖新科, 李凡	壹等
One-step construction of S-scheme heterojunctions of N-doped MoS2 and S-doped g-C3N4 for enhanced photocatalytic hydrogen evolution	南阳师范学院	苏凤云, 丁呈华	壹等
Efficiencies and mechanisms of chemical cleaning agents for nanofiltration membranes used in produced wastewater desalination	南阳师范学院	赵东升	壹等
重金属固定细菌联合钙多肽调控根际细菌群落阻控小麦Cd吸收机制	南阳师范学院	韩辉, 吴雪姣, 姚伦广, 陈兆进	壹等
One-Pot Synthesis of Phenylglyoxylic Acid from Racemic Mandelic Acids via Cascade Biocatalysis	南阳师范学院	唐存多, 史红玲	壹等
Samarium doping improves luminescence efficiency of Cs3Bi2Br9 perovskite quantum dots enabling efficient white light-emitting diodes	南阳师范学院	朱永胜	壹等
多元统计分析比较宛艾及31个产地艾叶HPLC指纹图谱	南阳医学高等专科学校	王宇卿, 庄果, 张须学, 耿榕徽	壹等
Gentamicin decorated phosphatidylcholine-chitosan nanoparticles against biofilms and intracellular bacteria	平顶山学院	邱渊皓, 徐丹	壹等
Thermomechanical coupling effect on characteristics of oxide film during ultrasonic vibration-assisted ELID grinding ZTA ceramics	平顶山学院	陈凡, 李光喜, 赵波, 别文博	壹等
Community detection based on the Matthew effect	平顶山学院	孙泽军, 孙亚南, 常新峰, 王启明, 颜学同, 潘中强, 李宇平	壹等
Methods to subtract the effect of the decay of different nuclear reaction products on the cross-section measurements and their application to the reactions studied	平顶山学院	宋月丽, 周丰群, 李勇, 张晓朋, 田明丽, 袁书卿, 畅心怡	壹等

项目名称	主要完成单位	主要完成人	奖励等级
Unraveling the selectivity puzzle of H ₂ evolution over CO ₂ photoreduction using ZnS nanocatalysts with phase junction	商丘师范学院	李盼, 罗千	壹等
Anchoring Black Phosphorus Nanoparticles onto ZnS Porous Nanosheets: Efficient Photocatalyst Design and Charge Carrier Dynamics	商丘师范学院	王立晶	壹等
Ferroelectric Perovskite Oxide@TiO ₂ Nanorods Heterostructures: Preparation, Characterization and Application as Platform for Photoelectrochemical Bioanalysis	商丘师范学院	于丽敏	壹等
Dual-Response Ratiometric Electrochemical Microsensor for Effective Simultaneous Monitoring of Hypochlorous Acid and Ascorbic Acid in Human Body Fluids	商丘师范学院	董辉, 周艳丽, 赵乐, 郝远强, 张银堂, 冶保献, 徐茂田	壹等
Finely Tuned Framework Isomers for Highly Efficient C ₂ H ₂ and CO ₂ Separation	商丘师范学院	刘双	壹等
Multifunctional Fe ₃ O ₄ cluster@ quantum dot-embedded mesoporous SiO ₂ nanoplatfrom probe for cancer cell fluorescence-labelling detection and photothermal therapy	商丘师范学院	尹乃强, 王贤玲	壹等
Environmentally-friendly strategy for separation of 1,3-propanediol using biocatalytic conversion	新乡医学院	崔彩霞, 张喆, 陈必强	壹等
Chimeric antigen receptor-modified macrophages trigger systemic anti-tumour immunity	新乡医学院	牛志远, 陈冠旭, 常伟, 孙朋洋, 罗志霞, 张会勇, 支灵通, 郭长江, 陈涵, 尹美辰, 朱武法	壹等
Modulation of Hippocampal Gamma Oscillations by Dopamine in Heterozygous Reeler Mice in vitro	新乡医学院	王璐, 赵丹丹, Chengbiao Lu	壹等
PM _{2.5} disrupts thyroid hormone homeostasis through activation of the hypothalamic-pituitary-thyroid (HPT) axis and induction of hepatic transthyretin in female rats 2.5	新乡医学院	董新文, 吴卫东, 姚三巧, 李海斌, 李志春, 张丽, 姜静, 许洁, 张丰泉	壹等
Graphene oxide@gold nanorods-based multiple-assisted electrochemiluminescence signal amplification strategy for sensitive detection of prostate specific antigen	信阳师范学院	曹俊涛	壹等
Enhanced Synergetic Catalytic Effect of Mo ₂ C/NCNTs@Co Heterostructures in Dye-Sensitized Solar Cells: Fine-Tuned Energy Level Alignment and Efficient Charge Transfer Behavior	信阳师范学院	陈明	壹等
Application of Bifunctional 2-Amino-1,4-naphthoquinones in Visible-Light-Promoted Photocatalyst-Free Alkene Perfluoroalkyl-Alkenylation	信阳师范学院	唐林, 杨芳	壹等
Robust manipulation of magnetism in LaAlO ₃ /BaTiO ₃ (A=Fe, Mn, and Cr) superstructures by ferroelectric polarization	信阳师范学院	陈东, 张光彪, 程振祥, 董帅, 王渊旭	壹等
Synergetic Excitonic and Defective Effects in Confined SnO ₂ /α-Fe ₂ O ₃ Nanoheterojunctions for Efficient Photocatalytic Molecular Oxygen Activation	信阳师范学院	查汝华	壹等
Boosting Coulombic Efficiency of Conversion-Reaction Anodes for Potassium-Ion Batteries via Confinement Effect	信阳师范学院	曹康哲	壹等
Stimulating the Reversibility of Sb ₂ S ₃ Anode for High Performance Potassium-Ion Batteries	信阳师范学院	刘会俏	壹等

项目名称	主要完成单位	主要完成人	奖励等级
Determination of the activity of alkaline phosphatase by using nanoclusters composed of flower-like cobalt oxyhydroxide and copper nanoclusters as fluorescent probes	信阳师范学院	王海波	壹等
Stability, microstructural and rheological properties of complex prebiotic emulsion stabilized by sodium caseinate with inulin and konjac glucomannan	信阳师范学院	许威	壹等
Morphology-tunable hollow Mn2O3 nanostructures: highly efficient electrocatalysts and their electrochemical sensing for phenolic endocrine disruptors via toughening of graphene oxide	信阳师范学院	孙俊永	壹等
Genomic, molecular evolution, and expression analysis of NOX genes in soybean (Glycine max)	信阳师范学院	张在宝	壹等
Detection of theophylline using molecularly imprinted mesoporous silica spheres	信阳师范学院	甘甜	壹等
Tellurium-impregnated P-doped porous carbon nanosheets as both cathode and anode for an ultrastable hybrid aqueous energy storage	信阳师范学院	武旭, 张欢欢	壹等
Double-step scale splitting iteration method for a class of complex symmetric linear systems	信阳师范学院	郑重, 黄封林	壹等
Unified model solving nine types of time-varying problems in the frame of zeroing neural network	信阳师范学院	李健	壹等
Optimal control and cost-effectiveness analysis of a Zika virus infection model with comprehensive interventions	信阳师范学院	王霞	壹等
Impact of leakage delay on bifurcation in high-order fractional BAM neural networks	信阳师范学院	黄承代	壹等
Studying of the isospin breaking decay $Y(2175) \rightarrow \phi f_0(980) \rightarrow \phi \eta \pi^0$ at BESIII	信阳师范学院	程晓东	壹等
Magnetically tunable multiband near-field radiative heat transfer between two graphene sheets	信阳师范学院	葛力新	壹等
Saliency-based adaptive compressive sampling of images using measurement contrast	信阳师范学院	李然	壹等
High-speed rail network in China: the contribution of fast trains to regional tourism and economic development	信阳师范学院	李明伟	壹等
基于交互决定论的农村宅基地退出意愿研究	信阳师范学院	范辉	壹等
Evaporation and cracked soda soil improved by fly ash from recycled materials	许昌学院	杨滨滨	壹等
Authentication of honey of different nectar sources and antioxidant property evaluation by phenolic composition analysis with chemometrics	许昌学院	张晓华, 卿湘东, 母淑婷	壹等
Corn protein hydrolysate as a new structural modifier for soybean protein isolate based O/W emulsions	许昌学院	王永辉	壹等
Isolation, Structure Elucidation, and Antioxidant Evaluation of Constituents from Angelica dahurica Roots	许昌学院	舒朋华	壹等
Fire Performance of Loaded Fibre Reinforced Polymer Multicellular Composite Structures with Fire-resistant Panels	许昌学院	张磊, 戴逸清, 柏宇, 陈伟, 叶继红	壹等
Film thickness in a grease lubricated ball bearing	许昌学院	岑辉	壹等

项目名称	主要完成单位	主要完成人	奖励等级
An unstructured mesh finite element method for solving the multi-term time fractional and Riesz space distributed-order wave equation on an irregular convex domain	许昌学院	史艳华	壹等
Identification of wool and cashmere SEM images based on SURF features	许昌学院	路凯, 罗俊丽, 钟跃崎, 柴新玉	壹等
A novel high-order approximate scheme for two-dimensional time-fractional diffusion equations with variable coefficient	许昌学院	王芬玲	壹等
N-lump and interaction solutions of localized waves to the (2 + 1)-dimensional generalized KP equation	许昌学院	张海侠	壹等
Fault diagnosis of rotating machinery components using a deep kernel extreme learning machine under different working conditions	许昌学院	杜根远, 许强, 杨欣毅	壹等
寿险业智力资本与经营绩效关系的实证分析	许昌学院	杨晓敏	壹等
Measuring the effects of socioeconomic factors on mental health among migrants in urban China: a multiple indicators multiple causes model	许昌学院	管明	壹等
Linking body esteem to eating disorders among adolescents: A moderated mediation model	许昌学院	李永占	壹等
Intrinsic-Structural-Modulated Carbon Cloth as Efficient Electrocatalyst for Water Oxidation	郑州大学	岳新政	壹等
Near-Infrared Chemiluminescent Carbon Nanodots and Their Application in Reactive Oxygen Species Bioimaging	郑州大学	沈成龙, 娄庆, 藏金浩	壹等
Subcellular mechanism of microbial inactivation during water disinfection by cold atmospheric-pressure plasma	郑州大学	许航博, 朱育攀, 马若男	壹等
Visible-Light Induced Radical Perfluoroalkylation/Cyclization Strategy to Access 2-Perfluoroalkylbenzothiazoles/benzoselenazoles by EDA Complex	郑州大学	刘琰, 陈晓岚	壹等
Enhancing effect of Fe-doping on the activity of nano Ni catalyst towards hydrogen evolution from NH ₃ BH ₃	郑州大学	李保军, 崔灿灿, 温豪	壹等
In situ Raman study of nickel bicarbonate for high-performance energy storage device	郑州大学	代书阁	壹等
Coupling effects of indium oxide layer on hematite enabling efficient photoelectrochemical water splitting	郑州大学	易莎莎	壹等
Ultrabroadband and High-Detectivity Photodetector Based on WS ₂ /Ge Heterojunction through Defect Engineering and Interface Passivation	郑州大学	吴翟	壹等
Guest-Triggered Aggregation-Induced Emission in Silver Chalcogenolate Cluster Metal-Organic Frameworks	郑州大学	李恺	壹等
Atomic Structure Evolution of Pt-Co Binary Catalysts: Single Metal Sites versus Intermetallic Nanocrystals	郑州大学	李星, 程少博, 单崇新	壹等
Highly Efficient Oxidation of Ethyl Lactate to Ethyl Pyruvate Catalyzed by TS-1 Under Mild Conditions	郑州大学	芦天亮, 邹俊鹏, 詹予忠, 杨晓梅, 周利鹏	壹等
Multiple Functional Organocatalyst-Promoted Inert C-C Activation: Mechanism and Origin of Selectivities	郑州大学	张敏, 汪洋, 李世俊, 汪兴华, 师汗汗, 李雪, 魏东辉	壹等
Hepatoprotective effects of oridonin against bisphenol A induced liver injury in rats via inhibiting the activity of xanthine oxidase	郑州大学	徐霞	壹等
Silver-Catalyzed Decarboxylative Radical Cascade Cyclization toward Benzoimidazo[2,1-a]isoquinolin-6(5H)-ones	郑州大学	孙凯, 於兵	壹等
Ultralong and efficient phosphorescence from silica confined carbon nanodots in aqueous solution	郑州大学	刘凯凯	壹等

项目名称	主要完成单位	主要完成人	奖励等级
A multifunctional cross-validation highthroughput screening protocol enabling the discovery of new SHP2 inhibitors	郑州大学	宋宜辉	壹等
FSL-Kla: A few-shot learning-based multi-feature hybrid system for lactylation site prediction	郑州大学	郭亚萍	壹等
Mycolicibacterium cell factory for the production of steroid-based drug intermediates	郑州大学	赵安琪, 王志, 刘金乐	壹等
Structure of tRNA-Modifying Enzyme TiaS and Motions of Its Substrate Binding Zinc Ribbon	郑州大学	董建树	壹等
Generic ledipasvir-sofosbuvir for patients with chronic hepatitis C: A real-life observational study	郑州大学	曾庆磊, 李志勤, 梁红霞, 余祖江	壹等
Nanoenabled Disruption of Multiple Barriers in Antigen Cross-Presentation of Dendritic Cells via Calcium Interference for Enhanced Chemo-Immunotherapy	郑州大学	刘军杰	壹等
Discovery of 5-Cyano-6-phenylpyrimidin Derivatives Containing an Acylurea Moiety as Orally Bioavailable Reversal Agents against P-Glycoprotein-Mediated Multidrug Resistance	郑州大学	王博, 马立英, 雷紫凝, 李中华, 赵兵, Zhe-Sheng Chen	壹等
Re-designing Interleukin-12 to enhance its safety and potential as an anti-tumor immunotherapeutic agent	郑州大学	王鹏举, 王继伟, 高冬玲, 李跃楠, 李灏泽, 褚涌超, 张忠献, 刘红法, 程振国	壹等
Luteolin ameliorates rat myocardial ischaemia-reperfusion injury through activation of peroxiredoxin II	郑州大学	魏博	壹等
Impact of obese levels on the hepatic expression of nuclear receptors and drug-metabolizing enzymes in adult and offspring mice	郑州大学	王沛	壹等
C-C Chemokine Ligand 2 (CCL2) Recruits Macrophage-Membrane-Camouflaged Hollow Bismuth Selenide Nanoparticles to Facilitate Photothermal Sensitivity and Inhibit Lung Metastasis of Breast Cancer	郑州大学	赵洪娟	壹等
Manganese-Based Nanoactivator Optimizes Cancer Immunotherapy via Enhancing Innate Immunity	郑州大学	侯琳, 田春雨, 闫莹珊, 张乐文	壹等
pH/Ultrasound Dual-Responsive Gas Generator for Ultrasound Imaging-Guided Therapeutic Inertial Cavitation and Sonodynamic Therapy	郑州大学	冯倩华, 张红岭	壹等
MiR-30b-5p attenuates oxaliplatin-induced peripheral neuropathic pain through the voltage-gated sodium channel Na(v)1.6 in rats	郑州大学	邵金平, 曹靖, 臧卫东	壹等
MET inhibitors for targeted therapy of EGFR TKI-resistant lung cancer	郑州大学	王启鸣, Shi-Yong Sun (孙士勇)	壹等
Myofibroblast Deficiency of LSD1 Alleviates TAC-Induced Heart Failure	郑州大学	赵文, 霍金玲, 王淙, 陈东, 焦乐敏, 安琪, 陈秀英, 戚玉若, 魏炳飞	壹等
Phthalates promote the invasion of hepatocellular carcinoma cells by enhancing the interaction between Pregnane X receptor and E26 transformation specific sequence 1	郑州大学	杜雅冰, 史晓奕, 马望, 温培豪, 余朴, 高志强, 崔抗	壹等
Erythropoietin Improves Poor Outcomes in Preterm Infants with Intraventricular Hemorrhage	郑州大学	宋娟, 徐发林	壹等
MAP3K7-IKK Inflammatory Signaling Modulates AR Protein Degradation and Prostate Cancer Progression	郑州大学	贾占奎, 黄珍林, 杨锦建	壹等

项目名称	主要完成单位	主要完成人	奖励等级
An in situ microenvironmental nano-regulator to inhibit the proliferation and metastasis of 4T1 tumor	郑州大学	张慧娟, 张晓戈, 任延平, 曹方, 张振中	壹等
Glycogen synthase kinase-3 β inhibition alleviates activation of the NLRP3 inflammasome in myocardial infarction	郑州大学	韩圣娜	壹等
MicroRNA-135a participates in the development of astrocytes derived from bacterial meningitis by downregulating HIF-1 α	郑州大学	董燕, 王军, 杜开先, 贾天明, 张燕	壹等
Activation of LncRNA TINCR by H3K27 acetylation promotes Trastuzumab resistance and epithelial-mesenchymal transition by targeting MicroRNA-125b in breast Cancer	郑州大学	韩明利	壹等
miR-363-3p inhibits migration, invasion, and epithelial-mesenchymal transition by targeting NEDD9 and SOX4 in non-small-cell lung cancer	郑州大学	常静侠	壹等
LncRNA GAS5 regulates migration and epithelial-to-mesenchymal transition in lens epithelial cells via the miR-204-3p/TGFR1 axis	郑州大学	李霄, 孙苗苗, 程安然, 郑广瑛	壹等
Ambient Air pollution, H19/DMR methylation in cord blood and newborn size: A pilot study in Zhengzhou City, China	郑州大学	李志远, 巴月	壹等
Structure-Based Design, Synthesis, and Biological Evaluation of New Triazolo[1,5-a]Pyrimidine Derivatives as Highly Potent and Orally Active ABCB1 Modulators	郑州大学	余斌	壹等
Clinical significance of the cribriform pattern in invasive adenocarcinoma of the lung	郑州大学	任景丽, 张瑞珍, 胡桂明, 邱金环	壹等
LSD1 deletion represses gastric cancer migration by upregulating a novel miR-142-5p target protein CD9	郑州大学	赵丽娟, 范琦琦, 李迎迎, 张婷, 郑一超	壹等
Up-regulated circBACH2 contributes to cell proliferation, invasion, and migration of triple-negative breast cancer	郑州大学	王新星, 薛兵建, 窦东伟	壹等
Long non-coding RNA DANCER promotes cervical cancer growth via activation of the Wnt/ β -catenin signaling pathway	郑州大学	常蕾, 田万家, 郭瑞霞, 苑中甫	壹等
Combatting medical plastic waste through visual elicitation: Insights from healthcare professionals	郑州大学	许林平, 李威, 杨惠, 闫媚妹	壹等
Experimental and numerical study on polymer grouting pretreatment technology in void and corroded concrete pipes	郑州大学	李斌, 王复明, 方宏远, 杨康建, 张曦君, 姬艳婷	壹等
High-performance piezoelectric wind energy harvester with Y-shaped attachments	郑州大学	王军雷, 周生喜	壹等
Experimental and practical investigation of the sealing efficiency of cement grouting in tortuous fractures with flowing water	郑州大学	杜雪明, 薛冰寒	壹等
Distributed Event-Triggered Secondary Control for Economic Dispatch and Frequency Restoration Control of Droop-Controlled AC Microgrids	郑州大学	李忠文, 程志平, 司纪凯, 董亮辉	壹等
Investigating the effectiveness of carbon nanomaterials on asphalt binders from hot storage stability, thermodynamics, and mechanism perspectives	郑州大学	王日冉, 熊玉超, 乐明静, 郝梅美, 乐金朝	壹等
A comprehensive investigation on the design and off-design performance of supercritical carbon dioxide power system based on the small-scale lead-cooled fast reactor	郑州大学	李航, 张国杰	壹等
Impact damage assessment in orthotropic CFRP laminates using nonlinear Lamb wave: Experimental and numerical investigations	郑州大学	铁瑛, 张青松, 侯玉亮, 李成	壹等

项目名称	主要完成单位	主要完成人	奖励等级
Process optimization for the production of high-concentration ethanol with <i>Scenedesmus raciborskii</i> biomass	郑州大学	Mohammad Asraful Alam, 袁 涛, 能文龙, 张蓓笑	壹等
Experimental and numerical study on the heat transfer and flow characteristics in shell side of helically coiled tube heat exchanger based on multi-objective optimization	郑州大学	王光辉, 王定标, 吕奕明, 裴元帅	壹等
Influence of Intermediate Principal Stress and Principal Stress Direction on Drained Behavior of Natural Soft Clay	郑州大学	王钰轲	壹等
Modern developmental aspects in the field of economical harvesting and biodiesel production from microalgae biomass	郑州大学	许敬亮, Gul Muhammad, Md Mofijur, Md Jahirul Islam, 吕永坤, Hwai Chyuan Ong	壹等
Numerical investigation on the heating performance of a transcritical CO2 vapor-injection heat pump system	郑州大学	彭旭, 杨雨桢, 向飒	壹等
A new intelligent traffic signal model based on open source road information	郑州大学	闫超德, 潘滋巍, 孔博, 陈柯如, 李紫薇, Muhammad Waseem Boota, 刘晓	壹等
Numerical modeling of rebar-matrix bond behaviors of nano-SiO2 and PVA fiber reinforced geopolymer composites	郑州大学	张鹏, 高真, 王娟, 王珂珣	壹等
BSPR: Basket-sensitive personalized ranking for product recommendation	郑州大学	吴宾, 叶阳东	壹等
Scheduling with or without precedence relations on a serial-batch machine to minimize makespan and maximum cost (继列批机器上有无加工顺序限制的最小化最大完工时间和最小加工成本的排序问题)	郑州大学	耿志超, 原晋江	壹等
A novel scalable test problem suite for multimodal multiobjective optimization	郑州大学	岳彩通, 梁静, 瞿博阳, 于坤杰, 李晓东	壹等
Adaptive neural impedance control for electrically driven robotic systems based on a neuro-adaptive observer	郑州大学	彭金柱, 丁帅, 杨泽琦, 辛健斌	壹等
Efficient multiscale algorithms for simulating nonlocal optical response of metallic nanostructure arrays	郑州大学	张永威, 马楚鹏, 曹礼群, 石东洋	壹等
Stability of mode-dependent linear switched singular systems with stable and unstable subsystems	郑州大学	魏菊梅, 支慧敏, 刘凯, 慕小武	壹等
On graphs whose third largest distance eigenvalue dose not exceed -1	郑州大学	薛杰, 刘瑞芳, 束金龙	壹等
Dissipation-preserving Galerkin-Legendre spectral methods for two-dimensional fractional nonlinear wave equations	郑州大学	王楠, 费明发, 黄乘明, 张国宇	壹等
Fast kernel k-means clustering using incomplete Cholesky factorization	郑州大学	陈丽, 周水生, 马家军, 徐明亮	壹等
Second-order two-scale analysis for heating effect of periodical composite structure	郑州大学	万建军, 董文, 赵永成, 宋士仓	壹等
A multi-objective hyper-heuristic algorithm based on adaptive epsilon-greedy selection	郑州大学	张淑艳, 李翠霞	壹等
Mean escape time for randomly switching narrow gates in a steady flow	郑州大学	王慧, 耿献国, 晁颖	壹等
Submanifolds with Parallel Moebius Second Fundamental Form in the Unit Sphere	郑州大学	胡泽军, 翟书杰	壹等
Diamond-Based All-Carbon Photodetectors for Solar-Blind Imaging	郑州大学	林超男	壹等

项目名称	主要完成单位	主要完成人	奖励等级
Liquid-Metal-Based Dynamic Thermoregulating and Self-Powered Electronic Skin	郑州大学	毛彦超	壹等
Robust Designs of Beamforming and Power Splitting for Distributed Antenna Systems With Wireless Energy Harvesting	郑州大学	朱政宇, 黄赛, 楚征, 周福辉, 张油	壹等
Fast Rydberg antiblockade regime and its applications in quantum logic gates	郑州大学	苏石磊, 郜雅, 梁二军, 张寿	壹等
Pressure-Induced Structural Evolution and Bandgap Optimization of Lead-Free Halide Double Perovskite (NH4)2SeBr6	郑州大学	王玲瑞, 王飞, 郭海中	壹等
Joint Channel-Estimation and Equalization of Single-Carrier Systems via Bilinear AMP	郑州大学	孙鹏, 王忠勇	壹等
Moisture-Induced Reversible Phase Conversion of Cesium Copper Iodine Nanocrystals Enables Advanced Anti-Counterfeiting	郑州大学	陈旭	壹等
Price-Based Resource Allocation in Massive MIMO H-CRANs With Limited Fronthaul Capacity	郑州大学	郝万明	壹等
SUSY breaking constraints on modular flavor S3 invariant SU(5) GUT model	郑州大学	王飞	壹等
The investigation of an LSPR refractive index sensor based on periodic gold nanorings array	郑州大学	王帅, 孙晓红, 丁明杰, 彭纲定, 齐重乐, 王毅乐, 任木	壹等
Noncoherent Massive Space-Time Block Codes for Uplink Network Communications	郑州大学	李双志	壹等
从脱贫攻坚走向共同富裕: 中国相对贫困的动态识别与贫困变化的量化分解	郑州大学	樊增增	壹等
混合所有制、非效率投资抑制与国有企业价值	郑州大学	任广乾, 冯瑞瑞, 田野	壹等
FDI、OFDI与中国绿色全要素生产率——基于空间计量模型的分析	郑州大学	冯严超	壹等
Experimental study on the axial compression behavior of columns confined by BFRP ties	郑州大学, 四川大学	张普, 陈博文, 刘烨, 涂雅箐, 赵军, Shamim Ahmed Sheikh	壹等
Acupuncture-Related Therapies for Parkinson' s Disease: A Meta-Analysis and Qualitative Review	郑州大学, 郑州大学附属郑州中心医院	温小鹏, 李坤彬, 陆丽明, 文豪, 王乾, 吴志远, 姚先丽, 焦冰, 孙平皓, 葛淑琦, 温琰洋	壹等
Mind-Body Exercises for Non-motor Symptoms of Patients With Parkinson' s Disease: A Systematic Review and Meta-Analysis	郑州大学, 郑州大学附属郑州中心医院	王凯, 张培明, 吕培培	壹等
Multi-scale modeling of liquid-metal cooling directional solidification and solidification behavior of nickel-based superalloy casting	郑州航空工业管理学院	闫学伟	壹等
Second order fully decoupled and unconditionally energy-stable finite element algorithm for the incompressible MHD equations	郑州航空工业管理学院	杨津瑾	壹等
Superconvergence error estimate of a linearized energy-stable Galerkin scheme for semilinear wave equation	郑州航空工业管理学院	杨怀君	壹等
科技金融政策促进了地区创新水平提升吗?——基于“促进科技和金融结合试点”的准自然实验	郑州航空工业管理学院	马凌远	壹等
Ecological well-being performance growth in China (1994-2014): From perspectives of industrial structure green adjustment and green total factor productivity	郑州航空工业管理学院	冯英杰	壹等

项目名称	主要完成单位	主要完成人	奖励等级
The Provision of Patron Services in Chinese Academic Libraries Responding to the COVID-19 Pandemic	郑州航空工业管理学院	郭亚军, 杨紫楠, 杨志顺, 刘燕权, Arlene Rialefield, Gregory Thern	壹等
Which emission reduction mode is the best under the carbon cap-and-trade mechanism?	郑州航空工业管理学院	刘昊, 寇晓菲	壹等
Digital humanities research: interdisciplinary collaborations, themes and implications to library and information science	郑州航空工业管理学院	苏芳荔	壹等
大数据质量测度模型构建	郑州航空工业管理学院	莫祖英	壹等
Synergistic effect of persulfate and g-C3N4 under simulated solar light irradiation: Implication for the degradation of sulfamethoxazole	郑州轻工业大学	宋亚丽, 王兰, 张欢	壹等
Effects of biochar on the microbial activity and community structure during sewage sludge composting	郑州轻工业大学	杜京京, 张玉燕, 屈明祥, 尹玉婷, 范康, 扈斌, 魏明宝, 马闯	壹等
Acute and persistent toxicity of Cd(II) to the microbial community of Anammox process	郑州轻工业大学	张肖静, 陈召, 赵建国, 陈涛, 傅浩强	壹等
Tannic acid enhanced the physical and oxidative stability of chitin particles stabilized oil in water emulsion	郑州轻工业大学	望运滔, 杨纺	壹等
Metagenomic analysis of gut microbiota modulatory effects of jujube (Ziziphus jujuba Mill.) polysaccharides in a colorectal cancer mouse model	郑州轻工业大学	冀晓龙, 侯春彦, 高永刚, 薛玉强, 闫溢哲, 国旭丹	壹等
Influence of primary air cone length on combustion characteristics and Nox emissions of a swirl burner from a 0.5 MW pulverized coal-fired furnace with air staging	郑州轻工业大学	遄曙光	壹等
Polylaminate TaN/Ta coating modified ferritic stainless steel bipolar plate for high temperature proton exchange membrane fuel cell	郑州轻工业大学	王利霞, 王诗文, 方华, 高海丽, 高可政, 张勇, 闫继	壹等
Fiber orientations effect on process performance for wire cut electrical discharge machining (WEDM) of 2D C/SiC composite	郑州轻工业大学	何文斌, 贺绍台	壹等
A two-stage solution method based on NSGA-II for Green Multi-Objective integrated process planning and scheduling in a battery packaging machinery workshop	郑州轻工业大学	文笑雨	壹等
Thermodynamic analysis of an open type isothermal compressed air energy storage system based on hydraulic pump/turbine and spray cooling	郑州轻工业大学	陈华, 彭钰航, 王燕令, 张军	壹等
A Model Predictive Control Method for Grid-Connected Power Converters Without AC Voltage Sensors	郑州轻工业大学	郭磊磊, 金楠	壹等
A comprehensive review of electric discharge machining of advanced ceramics	郑州轻工业大学	明五一, 贾豪杰, 张红梅	壹等
Unified modeling for digital twin of a knowledge-based system design	郑州轻工业大学	王昊琪	壹等
Influence of manufacturing errors on dynamic floating characteristics for herringbone planetary gears	郑州轻工业大学	任菲	壹等
Effective thermal conductivity modeling of hollow nanosphere packing structures	郑州轻工业大学	刘鹤, 扈梦尧, 焦俊华, 吴学红	壹等
Micro-cracks detection of solar cells surface via combining short-term and long-term deep features	郑州轻工业大学	钱晓亮, 栗靖, 毋媛媛, 王慰	壹等
Higher-order interactional solutions and rogue wave pairs for the coupled Lakshmanan-Porsezian-Daniel equations	郑州轻工业大学	徐涛	壹等

项目名称	主要完成单位	主要完成人	奖励等级
On the box-counting dimension of the potential singular set for suitable weak solutions to the 3D Navier-Stokes equations	郑州轻工业大学	王艳青	壹等
Meshless methods for solving Dirichlet boundary optimal control problems governed by elliptic PDEs	郑州轻工业大学	关宏波	壹等
End-of-life Vehicle (ELV) Recycling Management: Improving Performance using an ISM Approach	郑州轻工业大学	周福礼	壹等
Effects of Al2O3 crystal types on morphologies, formation mechanisms of mullite and properties of porous mullite ceramics based on kyanite	郑州轻工业大学, 河南工业大学	郭会师, 李文凤	壹等
New insights into the enhancement of biochemical degradation potential from waste activated sludge with low organic content by Potassium Monopersulfate treatment	郑州轻工业大学, 河南恒安环保科技有限公司	金宝丹, 钮劲涛, 代菁雯, 李诺楠, 周萍, 牛佳慧, 张局, 陶泓旭, 马志刚, 张钟云	壹等
Nitrogen and Boron coordinated single-atom catalysts for Low-temperature CO/NO oxidations	郑州师范学院	唐亚楠	壹等
射频磁控溅射制备非晶WO3薄膜的结构及其光电性质研究	郑州铁路职业技术学院	裴慧霞, 王玉梅, 高艳平, 陈彬	壹等
铁路旅客出行时段与乘车方式的联合选择行为研究	郑州铁路职业技术学院	李亚	壹等
嘉兴平湖进口城承载进博会溢出效应的优势、挑战及发展建议	郑州铁路职业技术学院	杨媛媛	壹等
加味温胆汤辅助治疗高血压疗效及对VEGF、Hcy、心肌重构的影响	郑州铁路职业技术学院, 河南中医药大学第一附属医院	韩芬, 杨晓, 王运登, 任红杰	壹等
Ion exchange collaborating coordination substitution: More efficient Cr(VI) removal performance of a water-stable CuII-MOF material	中原工学院	邵志超	壹等
Weavable and stretchable piezoresistive carbon nanotubes-embedded nanofiber sensing yarns for highly sensitive and multimodal wearable textile sensor	中原工学院	齐琨, 周玉嫚, 欧康康, 代云玲, 佑晓露, 何建新	壹等
Conjugated Covalent Organic Frameworks as Platinum Nanoparticle Supports for Catalyzing the Oxygen Reduction Reaction	中原工学院	翟黎鹏	壹等
Effects of structural parameters on fluid flow and heat transfer in a serpentine microchannel with fan-shaped reentrant cavities	中原工学院	刘献飞, 朱彩霞, 王方, 李志强	壹等
ADRC-Based Current Control for Grid-Tied Inverters: Design, Analysis, and Verification	中原工学院	赵强松, 叶永强	壹等
Nanotube assembled coral-like ZnS@N, S co-doped carbon: A sodium-ion batteries anode material with outstanding stability and rate performance	中原工学院	陈思如, 熊加斌	壹等
Cream rolls-inspired advanced MnS/C composite for sodium-ion batteries: Encapsulating MnS creams into hollow N, S co-doped carbon rolls	中原工学院	陈孔耀, 王艳杰, 王卓, 崔思文	壹等
Darboux transformation and nonautonomous solitons for a modified Kadomtsev-Petviashvili equation with variable coefficients	中原工学院	王鑫, 王雷	壹等
Semi-decoupling hybrid asymptotic and augmented finite volume method for nonlinear singular interface problems	中原工学院	赵腾进, Kazufumi Ito, 张志跃	壹等
Synergetic effects of Bi5+ and oxygen vacancies in Bismuth(V)-rich Bi4O7 nanosheets for enhanced near-infrared light driven photocatalysis	周口师范学院	刘进	壹等
Integrative analysis of the wheat PHT1 gene family reveals a novel member involved in arbuscular mycorrhizal phosphate transport and immunity	周口师范学院	张怡	壹等

项目名称	主要完成单位	主要完成人	奖励等级
Exogenous melatonin alleviated chilling injury in harvested plum fruit via affecting the levels of polyamines conjugated to plasma membrane	周口师范学院	杜红阳, 刘骨挺, 华聪敏, 刘东晓	壹等
Energy-efficient scheme based on user task characteristic in virtual cloud platform	周口师范学院	董仕, Raj Jain	壹等
Data Monitoring Platform for Submarine Cable Tunnel Operation Based on Data Mining	周口师范学院	秦东霞	壹等
A local contrast method combined with adaptive background estimation for infrared small target detection	周口师范学院	韩金辉, 刘思邦, 秦钢, 赵骞, 张鸿辉	壹等
Monte Carlo Method-Based Behavioral Reliability Analysis of Fully-Mechanized Coal	安阳工学院	王远声, 景国勋, 郭绍帅	贰等
Environmentally Friendly Extraction and Recovery of Cobalt from Simulated Solution of Spent Ternary Lithium Batteries Using the Novel Ionic Liquids of [C8H17NH2][Cyanex 272]	安阳师范学院	景晓华, 吴志能, 赵丹丹, 李朔, 孔斐怡, 褚乙洁	贰等
Spatial and temporal analysis of water quality from 1991 to 2011 in Miyun Reservoir	安阳师范学院	郭超凡, 董志, 郭道宇	贰等
Newton-based matrix splitting method for generalized absolute value equation	安阳师范学院	周宏宇, 吴世良, 李翠霞	贰等
Integrative analysis for identifying co-modules of microbe-disease data by matrix tri-factorization with phylogenetic information	安阳师范学院	马园园, 刘国英	贰等
Janus 2D titanium nitride halide TiNX0.5Y0.5 (X, Y = F, Cl, or Br, and $X \neq Y$) monolayers with giant out-of-plane piezoelectricity and high carrier mobility	河南财政金融学院	史小波, 蒋淑娟, 陈维真, 郑广平, 任凤竹, 王冰, 赵高峰, 刘波	贰等
Uniformly Convergent Nonconforming Tetrahedral Element for Darcy-Stokes Problem	河南财政金融学院	董李娜, 陈绍春	贰等
A quantum algorithm for testing and learning resiliency of a Boolean function	河南财政金融学院	李红伟	贰等
Operator characterizations and constructions of continuous g-frames in Hilbert spaces	河南财政金融学院	付艳玲, 张伟	贰等
In-situ growth of Bi_2S_3 nanocrystals on $\text{Bi}_4\text{O}_5\text{I}_2$ nanostructure with excellent photocatalytic performance under visible light	河南城建学院	延旭, 毛艳丽, 刘彪	贰等
Study on hydration and mechanical property of quicklime blended recycled plaster materials	河南城建学院	李志新, 徐开东	贰等
钢管混凝土边框钢纤维混凝土中高剪力墙受弯承载力计算方法	河南城建学院	尤培波, 高丹盈, 张丽娟, 宋帅奇, 王仪	贰等
温度影响下膨胀土强度的试验研究	河南城建学院	翟聚云, 卫国祥, 郝 晓, 马明江, 言志信	贰等
Global stabilization of a class of cascaded systems with upper-triangular structures	河南城建学院	兰奇逊, 丁世宏, 李世华	贰等
Stochastic P-bifurcation in a bistable Van der Pol oscillator with fractional time-delay feedback under Gaussian white noise excitation	河南城建学院	李亚杰	贰等
Carbon-based all-inorganic perovskite solar cells: Progress, challenges and strategies toward 20% efficiency	河南大学	董琛	贰等
Selective S/Li ₂ S Conversion via in-Built Crystal Facet Self-Mediation: Toward High Volumetric Energy Density Lithium-Sulfur Batteries	河南大学	吴天利, 齐静, 徐梦瑶, 周丹, 肖助兵	贰等

项目名称	主要完成单位	主要完成人	奖励等级
Influence of the S:Ni ratio in raw materials on the NixSy electrocatalysts	河南大学	郝召民, 董青松	贰等
gamma-GeSe: A two-dimensional ferroelectric material with doping-induced ferromagnetism	河南大学	刘畅, 阴化冰	贰等
A novel maize biochar-based compound fertilizer for immobilizing cadmium and improving soil quality and maize growth	河南大学	陈志凡, 魏张东, 阮心玲	贰等
Effects of Li, B and H elements on corrosion property of oxide films on ZIRLO alloy in 300 ° C/14 MPa lithium borate buffer solutions	河南大学	魏克俭	贰等
Insight into the role of weak interaction played in the fixation of CO2 catalyzed by the amino-functionalized imidazolium-based ionic liquids	河南大学	王丽	贰等
Recent advances in nano-carrier immobilized enzymes and their applications	河南大学	刘冬梅	贰等
Enhanced photovoltaic performance of perovskite solar cells based on Er-Yb co-doped TiO2 nanorod arrays	河南大学	毛艳丽	贰等
Enhancement of perovskite solar cells efficiency using N-doped TiO2 nanorod arrays as electron transfer layer	河南大学	张振龙	贰等
enhanced biosorption of nickel ions on immobilized surfaced-engineered yeast using nickel-binding peptides	河南大学	张海燕	贰等
Plant trait-environment trends and their conservation implications for riparian wetlands in the Yellow River	河南大学	丁圣彦	贰等
Impacts of water-sediment regulation on spatial-temporal variations of heavy metals in riparian sediments along the middle and lower reaches of the Yellow River	河南大学	赵清贺	贰等
The integration of ACS2-generated ACC with GH3- mediated IAA homeostasis in NaCl stressed primary root elongation of Arabidopsis seedlings	河南大学	韩栓, 杨菁芳	贰等
Identification of a Transcriptionally Forward a Gene and Two y Genes within the Pigeon (Columba livia) IgH Gene Locus	河南大学	黄甜, 曹更生	贰等
Semantic Segmentation of Remote Sensing Imagery Using Object-based Markov Random Field Model with Auxiliary Label Fields	河南大学	郑晨	贰等
基于蚁群优化算法的城市生态用地空间规划模型	河南大学	王海鹰, 秦奋	贰等
A novel hydrogen sulfide-releasing donor, HA-ADT, suppresses the growth of human breast cancer cells through inhibiting the PI3K/AKT/mTOR and Ras/Raf/MEK/ERK signaling pathways	河南大学	段少峰	贰等
Luteoloside attenuates neuroinflammation in focal cerebral ischemia in rats via regulation of the PPAR γ /Nrf2/NF- κ B signaling pathway	河南大学	李巧玲, 谢欣梅, 庞晓斌	贰等
Interplay of miRNAs and Canonical Wnt Signaling Pathway in Hepatocellular Carcinoma	河南大学	聂小博	贰等
Hantaviruses use the endogenous host factor P58IPK to combat the PKR antiviral response	河南大学	王泽坤, 李启明	贰等
Intrathecally administered apelin-13 alleviated complete freund' s adjuvant-induced inflammatory pain in mice	河南大学	吕双瑜, 张晓梅, 周雨辰	贰等
Inhibition of hepatocyte nuclear factor 1 β contributes to cisplatin nephrotoxicity via regulation of nf- κ b pathway	河南大学	娄强, 张燕	贰等

项目名称	主要完成单位	主要完成人	奖励等级
Micro-ribonucleic acid-23a-3p prevents the onset of type 2 diabetes mellitus by suppressing the activation of nucleotide-binding oligomerization-like receptor family pyrin domain containing 3 inflammatory bodies-caused pyroptosis through negatively regulating NIMA-related kinase 7	河南大学	常红叶, Garrick D. Lee, 陈小平, 齐昆青	贰等
JNK Signaling Pathway Mediates Fluoride-Induced Upregulation of CK1 α during Enamel Formation	河南大学	杨中锐, 郭靖, 贾杰	贰等
Soy isoflavone genistein inhibits hsa_circ_0031250/miR-873-5p/FOXO1 axis to suppress non-small-cell lung cancer progression	河南大学	余亚英, 邢彦伟, 张倩, 张倩倩, 黄双见, 李新新, 高超	贰等
Prognostic values of GPNMB identified by mining TCGA database and STAD microenvironment	河南大学	姚坤厚	贰等
Does Exposure to General Anesthesia Increase Risk of ADHD for Children Before Age of Three?	河南大学	宋俊杰, 王莹, 牛晨光	贰等
A chimeric protein PTEN-L-p53 enters U251 cells to repress proliferation and invasion	河南大学	房娜	贰等
转移相关蛋白1在甲状腺癌组织的表达及其与上皮-间充质转化的关系	河南大学	赵爱国	贰等
颅内静脉窦血栓形成预后不良的临床与影像学分析	河南大学	李晓晖	贰等
木犀草素调控Nrf2/HO-1通路保护视网膜色素上皮细胞氧化损伤	河南大学	洪萌, 洪道先, 石荣先, 李权达	贰等
过表达ADAM10通过调控Notch信号通路对牙周膜干细胞成骨分化的影响	河南大学	朱永翠	贰等
Bisindole compound 4ae ameliorated cognitive impairment in rats with vascular dementia by anti-inflammation effect via microglia cells	河南大学	张峰, 赵克清	贰等
Analysis of proper position of extraction roadway on roof in high-strength gas emission workplace: A case study of Zhaozhuang coal mine in southern Qinshui Basin	河南大学	王伟	贰等
Classification of a Class of Bounded Anti-Circular Domains	河南大学	李鸿军	贰等
Positive energy theorem for asymptotically anti-de Sitter spacetimes with distributional curvature	河南大学	王耀华	贰等
Nodal bubble-tower solutions for a semilinear elliptic problem with competing powers	河南大学	刘忠原	贰等
Numerical analysis of finite element method for time-fractional Cahn-Hilliard-Cook equation	河南大学	王波	贰等
多模态视域下中小学信息技术翻转课堂教学模式研究	河南大学	王淳	贰等
Social Media and Health: Emerging Trends and Future Directions for Research on Young Adults	河南大学	武澎, 冯冉	贰等
环境保护、地方官员晋升与企业融资	河南大学	冯志华	贰等
噪声交易、动量效应与动量策略	河南大学	姚远	贰等
《后疫情时期网络直播教学的理性审思》	河南大学	张炳林, 付瑞, 李丁丁	贰等
Reference-dependent preferences in the on-demand service newsvendor with self-scheduling capacity	河南大学	陈铭洋	贰等
Inclusion of membrane-anchored LTB or flagellin protein in H5N1 virus-like particles enhances protective responses following intramuscular and oral immunization of mice	河南大学, 军事科学院军事医学研究院军事兽医研究所	任志广, 赵永坤, 刘静, 王铁成, 孙伟洋, 冯娜, 杨争艳, 高玉伟, 夏成柱	贰等

项目名称	主要完成单位	主要完成人	奖励等级
Comparison of chrysanthemum flowers grown under hydroponic and soil-based systems: yield and transcriptome analysis	河南大学, 郑州阿波罗肥业有限公司	艾鹏慧, 刘小奇, 李忠爱, 康冬茹, 李吟, 史梵康, 王子成	贰等
A novel routing algorithm for IoT cloud based on hash offset tree	河南大学, 中原银行股份有限公司	韩志杰, 李亚琼	贰等
Ag/Nanodiamond/g-C3N4 heterostructures with enhanced visible-light photocatalytic performance	河南工程学院	苏丽霞	贰等
Poly(vinylidene fluoride) nanocomposites with a small loading of core-shell structured BaTiO3 @Al2O3 nanofibers exhibiting high discharged energy density and efficiency	河南工程学院	刘少辉, 王娇, 沈波, 翟继卫, 郝好山, 赵利敏	贰等
Flexible and Pressure-Responsive Sensors from Cellulose Fibers Coated with Multiwalled Carbon Nanotubes	河南工程学院	张浩, 孙霄航	贰等
Distance signless Laplacian spectrum of a graph (图的距离无符号拉普拉斯谱)	河南工程学院	贾会才	贰等
Broadband transmission properties of graphene-dielectric interfaces	河南工程学院	熊锡成, 姜淳, 谢泉	贰等
Application of HFACS and grounded theory for identifying risk factors of air traffic controllers' unsafe acts	河南工程学院	徐瑞华	贰等
一种具有噪声干扰的MIMO非线性时变系统自适应控制	河南工学院	张超, 孙启鸣, 姜红	贰等
Microstructural, mechanical and tribological performances of carbon fiber reinforced copper/carbon composites	河南工业大学	王培, 康克家	贰等
Superconductivity in efficient thermoelectric material Cu3Sb0.98Al0.02Se4	河南工业大学	赵小苗	贰等
Preparation and properties of lignocellulosic fiber/CaCO3/thermoplastic	河南工业大学	程文喜	贰等
Adsorption and catalytic degradation of sulfamethazine by mesoporous carbon loaded nano zero valent iron	河南工业大学	张良波, 申思远	贰等
Effect of Boronizing treatment on the oxidation resistance of Zr2(AlSi)4C5/SiC composite	河南工业大学	卢新坡, 韩平	贰等
Ultrasmall Ru Nanoparticles Highly Dispersed on Sulfur-Doped Graphene for HER with High Electrocatalytic Performance	河南工业大学	孙旭镏	贰等
Molecular interaction balanced one- and two-dimensional hybrid nanoarchitectures for high-performance supercapacitors	河南工业大学	卢明霞, 王刚, 李波, 陈静, 张景超, 李折, 侯博	贰等
Single and binary adsorption of dyes from aqueous solutions using functionalized microcrystalline cellulose from cotton fiber	河南工业大学	白红娟, 陈军航	贰等
Study of the Structure and Properties of ZnS Utilized in a Fluorescence Biosensor	河南工业大学	任瑛, 周恒	贰等
Antifungal efficacy of paeonol on Aspergillus flavus and its mode of action on cell walls and cell membranes	河南工业大学	李倩, 赵颖, 朱晓嫚	贰等
Antimicrobial, plant growth-promoting and genomic properties of the peanut endophyte Bacillus velezensis LD02	河南工业大学	陈亮, 石皓, 衡军影, 王殿轩, 卞科	贰等
The root transcriptome of Achyrantes bidentata, and the identification of the genes involved in the replanting benefit	河南工业大学	杨艳会	贰等
Primary research on sampling scheme for analyzing mycotoxin distribution in wheat and rice fields	河南工业大学	伊艳杰	贰等
High-Resolution Microscopy to Learn the Nuclear Organization of the Living Yeast Cells	河南工业大学	王仁杰, 朱贺, 陈倩倩	贰等

项目名称	主要完成单位	主要完成人	奖励等级
Nanoliposomes as Vehicles for Astaxanthin: Characterization, In Vitro Release Evaluation and Structure	河南工业大学	潘丽, 王宏雁, 谷克仁	贰等
Discrete element method modeling of granular flow characteristics transition in mixed flow	河南工业大学	冯永, 原子然	贰等
Variability in Polar Sea Ice (1989-2018)	河南工业大学	王星东, 吴展开	贰等
Effect of crack and damaged zone on chloride penetration in recycled aggregate concrete: A seven-phase mesoscale numerical method	河南工业大学	金立兵, 余化龙, 樊太	贰等
“二八灰土”回填地下粮仓浮力预警试验研究	河南工业大学	刘海燕, 孟伟新, 王振清, 田栋木, 徐向楠, 刘旭	贰等
基于粮堆有效摩擦系数分布规律的平底筒仓储料静态压力场计算方法	河南工业大学	陈家豪, 陈桂香	贰等
Non-Contact Experiment Investigation of the Interaction between the Soil and Underground Granary Subjected to Water Buoyancy	河南工业大学	徐志军, 余汉华	贰等
Image understanding via learning weakly-supervised cross-modal semantic translation	河南工业大学	沈国荣	贰等
The existence, general decay and blow-up for a plate equation with nonlinear damping and a logarithmic source term	河南工业大学	刘功伟	贰等
On the Structural Stability of Values for Cooperative Games	河南工业大学	李向辉, 李扬	贰等
All-optical logic gates based on metallic waveguide arrays	河南工业大学	杨武, 石晓燕, 邢怀中, 陈效双	贰等
Sliding mode observer for speed sensorless linear induction motor drives	河南工业大学	张磊, 董哲, 赵亮	贰等
Detection of foreign bodies in grain with terahertz reflection imaging	河南工业大学	蒋玉英, 葛宏义, 张元	贰等
Study of the K1(1270)-K1(1400) mixing in the decays $B \rightarrow J/\Psi K1(1270), J/\Psi K1(1400)$	河南工业大学	张志清, 郭红霞, 王思洋	贰等
Research on the Mechanism of Occurrence and Governance System of Environmental Collective Actions	河南工业大学	贾留战	贰等
战略导向的企业绩效管理体系构建策略—基于H公司绩效管理的创新变革实践	河南经贸职业学院	尹效国	贰等
A note on character sums over flat numbers	河南开封科技传媒学院	李俊	贰等
C2N monolayer as NH3 and NO sensors: A DFT study	河南科技大学	雍永亮, 崔红玲, 苏向英, 李小红	贰等
Saccharification of cellulose in the ionic liquids and glucose recovery	河南科技大学	刘振, 李龙飞, 刘程	贰等
Molecular cloning, expression and antibacterial activity of goose-type lysozyme gene in <i>Micropterus salmoides</i>	河南科技大学	张春暖, 张纪亮, 刘敏, 黄茂贤	贰等
Molecular cloning and expression analysis of hydrogen peroxide sensors under H2O2 and ROS inhibitor treatment in ‘Kyoho’ grape berry	河南科技大学	刘海楠	贰等
Development and Application of a Water Temperature Related Physiologically Based Pharmacokinetic Model for Enrofloxacin and Its Metabolite Ciprofloxacin in Rainbow Trout	河南科技大学	杨帆, 杨芳, 张超硕, 王涵, 宋哲文, 邵昊天, 张美, 余梦丽	贰等
The LuxS/AI-2 system of <i>Streptococcus suis</i>	河南科技大学	汪洋, 王瑜欣, 孙理云	贰等
Protective effects of L-arginine against testosterone synthesis decreased by T-2 toxin in mouse Leydig cells	河南科技大学	杨建英, 张勇法, 聂娜, 冯文坡, 鲍建峰, 孟祥平, 乔晓岗	贰等
Spring precipitation effects on formation of first row of earlywood vessels in <i>Quercus variabilis</i> at Qinling Mountain (China)	河南科技大学	章异平, 徐军亮, 苏维, 许晓利	贰等

项目名称	主要完成单位	主要完成人	奖励等级
Strontium uptake and antioxidant capacity comparisons of low accumulator and high accumulator oat <i>Avena sativa</i> L. genotypes	河南科技大学	乔琳, 赵威	贰等
Identification of optimal and novel reference genes for quantitative real-time polymerase chain reaction analysis in grapevine	河南科技大学	韦同路	贰等
Detection and characterization of genome-wide genetic variation associated with the early-ripening phenotype of grape mutants	河南科技大学	裴茂松	贰等
PLC γ 2 promotes apoptosis while inhibits proliferation in rat hepatocytes through PKCD/JNK MAPK and PKCD/p38 MAPK signalling	河南科技大学	陈晓光, 吕琼霞, 马钧, 刘玉梅	贰等
不同光周期环境对谷子农艺性状的影响	河南科技大学	贾小平, 袁玺垒, 张博, 李剑峰	贰等
Simvastatin Protects Dopaminergic Neurons Against MPP+-Induced Oxidative Stress and Regulates the Endogenous Anti-Oxidant System Through ERK	河南科技大学	闫俊强, 乔靓, 吴剑男, 范华, 张育德	贰等
Exogenous NO induces apoptosis of hepatocellular carcinoma cells via positive p38/JNK signaling pathway and negative ERK signaling pathways	河南科技大学	刘玲, 邢一浩, 曹梦瑶, 徐静蕾, 陈晶晶	贰等
Response surface methodology optimised solvothermal system enables an efficient extraction of echinacoside and oleuropein from <i>Syringa pubescens</i> Turcz	河南科技大学	吴艳芳, 杨秦予, 刘坤, 王新胜	贰等
燕麦籽粒揉搓式除杂装置设计	河南科技大学	耿令新, 孙成龙, 左杰文, 金鑫, 孔令举, 姬江涛	贰等
饱和多孔黏弹地基热-水-力耦合动力响应分析	河南科技大学	郭颖, 李文杰, 梁斌, 熊春宝	贰等
The Homogenized Transformation Method for the Calculation of Stress Intensity Factor in Cracked FGM Structure	河南科技大学	李戎, 杨萌	贰等
Bibliometric Analysis on Research Trend of Accidental Falls in Older Adults by Using Citespace-Focused on Web of Science Core Collection (2010-2020)	河南科技大学, University of Ulsan	陈勃源, Shin Sohee	贰等
Fluorescent characteristics of dissolved organic matter released from biochar and paddy soil incorporated with biochar	河南科技大学, 西北农林科技大学	高佳凯, 石兆勇, 吴海明, 吕家珑	贰等
Carbon storage and carbon sequestration potential under the Grain for Green Program in Henan Province, China	河南科技大学, 西北农林科技大学	王艳芳, 刘领, 上官周平	贰等
Raddeanin A promotes apoptosis and ameliorates 5-fluorouracil resistance in cholangiocarcinoma cells	河南科技大学, 中国医学科学院深圳肿瘤医院, 郑州大学	郭双双, 王颖, 樊青霞	贰等
The surface carboxyl group of carbonaceous microspheres effects on the synthesis and structure of SiOC ceramics	河南科技学院	夏克东, 于硕硕, 李芸玲, 韩会娟, 段凌瑶, 侯振雨, 刘晓	贰等
The roles of cadmium on growth of seedlings by analysing the composition of metabolites in pumpkin tissues	河南科技学院	韩涛	贰等
Preparation and catalytic property of Pb-Zr mixed oxides for methyl phenyl carbonate disproportionation to synthesize diphenyl carbonate	河南科技学院	王松林, 牛红英, 王键吉, 陈彤, 王公应	贰等
Comparative mitogenomic analysis of species in the subfamily Amphinemurinae (Plecoptera: Nemouridae) reveal conserved mitochondrial genome organization	河南科技学院	曹进军, 王颖, 李卫海	贰等
Growth and cardiovascular development are repressed by florfenicol exposure in early chicken embryos	河南科技学院	胡东方, 崔云丽, 银梅, 宁红梅, 尹志红, 陈玲丽, 葛亚明	贰等

项目名称	主要完成单位	主要完成人	奖励等级
Characterization of a novel antifungal protein produced by <i>Paenibacillus polymyxa</i> isolated from the wheat rhizosphere	河南科技学院	冉军舰, 焦凌霞, 赵瑞香	贰等
Exploring the biological and molecular characteristics of resistance to fludioxonil in <i>Sclerotinia sclerotiorum</i> from soybean in China	河南科技学院	周锋, 胡海燕, 李成伟, 李东霄	贰等
Fluctuated low temperature combined with high-humidity thawing to retain the physicochemical properties and structure of myofibrillar proteins from porcine <i>longissimus dorsi</i>	河南科技学院	朱明明, 张娟, 彭泽宇	贰等
基于STM32F401的温室害虫物理防控物联网系统	河南科技学院	张平川, 白巧灵, 曲培新, 白林峰, 赵明富, 张利伟, 许睿	贰等
Lightweight design of gears in the wheel-side reducer based on Shanghai road driving cycle	河南科技学院, 上海理工大学	宁欣, 郑松林, 王雅慧, 冯金芝	贰等
Enhanced photocatalytic activity and characterization of magnetic Ag/BiOI/ZnFe2O4 composites for Hg0 removal under fluorescent light irradiation	河南理工大学	李成伟, 张安超, 张立享, 宋军, 孙志君	贰等
一种具有二维层状结构荧光材料K5Y(P207)2: Tb3+/Eu3+的无浓度猝灭效应、高热稳定性与高量子效率	河南理工大学	赵丹	贰等
Experience in the transformation process of “Coal City” to “Beautiful City”: Taking Jiaozuo City as an example	河南理工大学	赵彦琦	贰等
A low-cost polymerized hole-transporting material for high performance planar perovskite solar cells	河南理工大学	王彬彬, 李瑶, 王诗琦	贰等
Effects of structural fracture and in situ stress combination characteristics on the production of coalbed methane wells: A case in the Mabidong block, China	河南理工大学	张洲, 周敏, 杨瑾, 周澎勃, 赵利芳, 鲜保安	贰等
The hysteretic behavior of recycled aggregate concrete-filled square steel tube columns	河南理工大学	张向冈, 高翔	贰等
Global strong solutions to the Cauchy problem of 1D compressible MHD equations with no resistivity	河南理工大学	李自来, 王华桥, 叶嵎林	贰等
绿色消费情境下如何提高意向与行为的一致性?——基于调节效应的实证检验	河南理工大学	李创	贰等
Synthesis of Sulfamate-Fused 2-Aminopyrroles via an Isocyanide-Based Three Component [1+2+2] Annulation	河南牧业经济学院	王川川, 马志伟, 刘志景, 陈晓垠	贰等
微酸性电解水猪场消毒效果研究	河南牧业经济学院	石志芳, 席磊, 程璞, 彭峰, 章四新	贰等
Growth, Physiological, and Photosynthetic Responses of <i>Xanthoceras sorbifolium</i> Bunge Seedlings Under Various Degrees of Salinity	河南牧业经济学院	宗建伟, 杨雨华	贰等
One-step synthesis of 2D vertically-aligned hybrid CuSe@NiSe nanosheets for high performance flexible supercapacitors	河南农业大学	邓亚峰, 陈永, 张秀丽, 张倩, 魏子键, 王栋	贰等
Porcine ISG15 modulates the antiviral response during pseudorabies virus replication	河南农业大学	刘慧敏, 李双双, 杨霞, 王新卫, 李永涛, 王川庆, 陈陆, 常洪涛	贰等
Scale-dependent effects of urban greenspace on particulate matter air pollution	河南农业大学	雷雅凯, 田国行	贰等
The 206 kbp mitochondrial genome of <i>Phanerochaete carnosae</i> reveals dynamics of introns, accumulation of repeat sequences and plasmid-derived genes	河南农业大学	王旭	贰等

项目名称	主要完成单位	主要完成人	奖励等级
Molecular identification and biological characterization of <i>Cryptosporidium muris</i> from camels (<i>Camelus bactrianus</i>) in China	河南农业大学	王璐阳, 常艳凯, 张凯慧, 张素梅, 张龙现	贰等
T-2 toxin causes dysfunction of Sertoli cells by inducing oxidative stress	河南农业大学	杨旭	贰等
Chimeric virus-like particles of universal antigen epitopes of coronavirus and phage Q β coat protein trigger the production of neutralizing antibodies	河南农业大学	郭玉堃, 郭瑞珍, 马英先, 常雯茹, 明胜利, 杨国宇, 郭豫杰	贰等
Porcine Deltacoronavirus Utilizes Sialic Acid as an Attachment Receptor and Trypsin Can Influence the Binding Activity	河南农业大学	祖少坡, 靳晓慧, 胡慧	贰等
A new adenylyl cyclase, putative disease-resistance RPP13-like protein 3, participates in abscisic acid-mediated resistance to heat stress in maize	河南农业大学	杨浩, 赵玉龙, 陈宁, 刘燕培, 杨少玉, 杜晗蔚, 王伟, 吴建宇, 胡秀丽 (通讯)	贰等
Rhodanine derivative LJ001 inhibits TGEV and PDCoV replication in vitro	河南农业大学	夏璐, 李倩倩, 韩丽	贰等
Genome-Wide Identification and Analysis of the AP2 Transcription Factor Gene Family in Wheat (<i>Triticum aestivum</i> L.)	河南农业大学	毕惠惠	贰等
Transcriptome-wide N6-methyladenosine modification profiling of long non-coding RNAs during growth of Marek' s disease virus in vitro	河南农业大学	孙爱军, 朱潇静, 王芮, 杨帅康, 张改平	贰等
Commonly and Specifically Activated Defense Responses in Maize Disease Lesion Mimic Mutants Revealed by Integrated Transcriptomics and Metabolomics Analysis	河南农业大学	母小焕, 李见坤, 徐莉萍, 苟明月	贰等
Analysis of four complete linkage sequence variants within a novel lncRNA located in a growth QTL on chromosome 1 related to growth traits in chickens	河南农业大学	李文雅, 王香南, 韩瑞丽, 李国喜, 孙桂荣, 田亚东, 刘小军, 康相涛, 李钰贝	贰等
Transgenic <i>Nicotiana benthamiana</i> plants expressing a hairpin RNAi construct of a nematode Rs-cps gene exhibit enhanced resistance to <i>Radopholus similis</i>	河南农业大学	李宇, 王珂, 逯麒麟, 杜鹃, 王振跃, 王德森, 孙炳剑, 李洪连	贰等
Virus-encoded microRNA-M7 restricts early cytolytic replication and pathogenesis of Marek' s disease virus	河南农业大学	庄国庆	贰等
Characterization of blaCMY-2-carrying IncC and rmtB-carrying IncII/ST136 plasmids in an avian <i>Escherichia coli</i> ST224 strain	河南农业大学	贺丹丹, 崔孟梅, 潘玉善	贰等
Evolution of the SPX gene family in plants and its role in the response mechanism to phosphorus stress	河南农业大学	刘娜, 商文艳, 李闯, 贾利华, 王鑫, 邢国珍, 郑文明	贰等
Porcine deltacoronavirus causes diarrhea in various ages of field-infected pigs in China	河南农业大学	郑兰兰, 魏战勇	贰等
Multi-objective optimization and exergoeconomic analysis of geothermal-based electricity and cooling system using zeotropic mixtures as the working fluid	河南农业大学	商俊娟	贰等
Multi-attribute Grey Target Decision-making Based on " Kernel " and Double Degree of Greyness	河南农业大学	郭三党, 董奋义	贰等
Pinyin-to-Chinese conversion on sentence-level for domain-specific applications using self-attention model	河南农业大学	熊蜀峰, 程铭, 王丙坤	贰等
Railway and trade in modern China: Evidence from the 1930s	河南农业大学	郭益蓓	贰等

项目名称	主要完成单位	主要完成人	奖励等级
Economic, environmental, social, and health benefits of urban traffic emission reduction management strategies: Case study of Beijing, China	河南农业大学	贾书伟	贰等
经济政策不确定性与农产品价格波动	河南农业大学	花俊国, 唐华仓	贰等
地方财政分权、劳动力选择性转移与农村基础教育投入	河南农业大学	邓蒙芝	贰等
科技创新助推乡村振兴的有效供给与对接	河南农业大学	宋保胜, 刘保国	贰等
Do farmers care about climate change? Evidence from five major grain producing areas of China	河南农业大学	宋春晓	贰等
社会责任、社会资本与农民合作社绩效	河南农业大学, 西北农林科技大学	张颖, 赵翠萍, 王礼力	贰等
Promoted bioethanol production through fed-batch semisimultaneous saccharification and fermentation at a high biomass load of sodium carbonate-pretreated rice straw	河南农业大学, 中南林业科技大学	金显春, 马江山, 宋嘉宁, 刘高强	贰等
Synthesis of polycyclic spiro-fused indolines via IBX-mediated cascade	河南师范大学	张志国, 宋晓庆, 李国峰, 李祥, 郑丹, 赵旭娜, 苗焕然, 张贵生, 刘澜涛	贰等
Organic Alkali Metal Salt Derived Three-Dimensional N-Doped Porous Carbon/Carbon Nanotubes Composites with Superior Li-S Battery Performance	河南师范大学	师振璞	贰等
A fluorescence method for determination of glucose transport by intestinal BBMV of common carp	河南师范大学	杨丽萍	贰等
Diagnosis of co-infection with white spot syndrome virus and Aeromonas veronii in red swamp crayfish Procambarus clarkii	河南师范大学	朱雷, 孔祥会, 袁高亮, 蒋昕曦, 张杰, 裴超, 赵贤亮, 李莉	贰等
Chinese yam peel enhances the immunity of the common carp (Cyprinus carpio L.) by improving the gut defence barrier and modulating the intestinal microflora	河南师范大学	孟晓林, 胡文攀, 吴胜奎, 朱振祥, 卢荣华, 杨国坤, 秦超彬, 聂国兴	贰等
Effective and efficient collection of control messages for opportunistic routing algorithms	河南师范大学	赵晓焱	贰等
Dynamics of the Nonlinear Timoshenko System with Variable Delay	河南师范大学	杨新光, 卢永进	贰等
Nonadiabatic redshifts in high-order harmonic generation from solids	河南师范大学	贾光瑞	贰等
Fissisternoids A and B, two 2',5'-quinodihydrochalcone-based meroterpenoid enantiomers with unusual carbon skeletons from Fissistigma bracteolatum	河南中医药大学	薛贵民, 赵晨光, 薛金凤	贰等
Visible-light-promoted sulfonylmethylation of imidazopyridines	河南中医药大学	密霞, 孔媛芳, 张京玉	贰等
Novel phenanthridin-6(5H)-one derivatives as potent and selective BET bromodomain inhibitors: Rational design, synthesis and biological evaluation	河南中医药大学	支燕乐	贰等
基于MS2 噬菌体病毒样颗粒的RT-PCR 检测新型冠状病毒(SARS-CoV-2) 质控品制备	河南中医药大学	王国强, 尚立芝	贰等
Mitophagy is activated in brain damage induced by cerebral ischemia and reperfusion via the PINK1/Parkin/p62 signalling pathway	河南中医药大学	兰瑞, 武继涛, 吴涛, 王保奇, 郑海忠, 李亚娜, 王燕, 古春青	贰等
中成药上市后安全性综合评价研究探讨	河南中医药大学	李春晓, 凌霄, 李学林, 唐进法, 邢冬梅, 陈玉欢, 张辉	贰等

项目名称	主要完成单位	主要完成人	奖励等级
黄芪多糖的脱蛋白工艺考察	河南中医药大学	吕瑞红, 纪永升, 褚意新	贰等
Prevalence of liver injury among patients with acquired immunodeficiency syndrome treated with highly active antiretroviral therapy in China	河南中医药大学	袁君, 陈秀敏, 李青雅, 孟祥乐, 金艳涛	贰等
Mechanism of oxymatrine-induced human esophageal cancer cell apoptosis by the endoplasmic reticulum stress pathway	河南中医药大学	王白燕, 周慧茹, 朱艳琴	贰等
血虚风燥型特应性皮炎患者血清差异表达miRNA生物信息学筛选	河南中医药大学	刘学伟, 许孟月, 王建茹, 王海燕, 王子雪	贰等
Unusual constituents from the medicinal mushroom Ganoderma lingzhi	河南中医药大学	赵珍珠, 梁旭博, 吴亚	贰等
枕寰枢复合关节微调手法治疗颈性失眠临床研究	河南中医药大学	吴毅明, 范雅丽, 杨云涛, 乔敏, 陈新旺	贰等
在正常中老年人群开展肝主疏泄与认知衰老试验的可行性分析	河南中医药大学	关徐涛, 徐江雁	贰等
Sixteen new prenylated flavonoids from the fruit of Sinopodophyllum hexandrum	河南中医药大学	孙彦君, 陈豪杰, 王俊敏, 高美玲, 赵晨, 韩瑞木, 陈辉	贰等
ERp44 depletion exacerbates ER stress and aggravates diabetic nephropathy in db/db mice	河南中医药大学	庞欣欣, 李东洋	贰等
Ginkgo Biloba Extract EGB761 Ameliorates the Extracellular Matrix Accumulation and Mesenchymal Transformation of Renal Tubules in Diabetic Kidney Disease by Inhibiting Endoplasmic Reticulum Stress	河南中医药大学	韩佳瑞, 彭紫凝, 邢玉凤	贰等
枸橘药材的本草考证及质量分析	河南中医药大学	裴莉昕, 纪宝玉, 陈随清, 薛淑娟	贰等
VR全景视频制作软件目标可视化三维虚拟仿真	河南中医药大学	任靖娟, 王玖炜, 曹莉	贰等
中医药健康旅游消费认知调查研究-以河南为例	河南中医药大学	司建平, 王先菊	贰等
公立医院运营信息化平台建设研究——基于大数据技术与管理会计工具融合	河南中医药大学	高婷	贰等
Recent progress in the development of white spot syndrome virus vaccines for protecting shrimp against viral infection	河南中医药大学, 河南科技大学	冯书营, 胡澍, 武琼雅, 李爱芳	贰等
基于数据挖掘中医古籍中肺热病症状及证型分布规律分析	河南中医药大学, 南阳市中医院, 南阳理工学院	张瑞, 李建生, 李轲, 陈丽平, 张宛秋	贰等
Metallic VO2 monolayer as an anode material for Li, Na, K, Mg or Ca ion storage: a first-principle study	华北水利水电大学	王玉生, 宋纳红, 宋晓燕, 张巧丽, 张天木	贰等
Pilot Tests on the Treatment of Bath Wastewater by a Membrane Bioreactor	华北水利水电大学	石岩, 钟松涛	贰等
Thermoelectric Properties of Monolayer Sb2Te3	华北水利水电大学	徐斌, 张静, 马珊珊	贰等
Levels and distributions of organochlorine pesticides in the soil-groundwater system of vegetable planting area in Tianjin City, Northern China	华北水利水电大学	潘红卫, 雷宏军, 何小松, 席北斗, 韩宇平, 许其功	贰等
Optimal design of hydro-wind-PV multi-energy complementary systems considering smooth power output	华北水利水电大学	任岩, 姚先河, 刘冬, 乔若宇, 张琳琳, 张锴, 靳坤永, 李华伟, 冉云龙, 李锋	贰等
Enhanced performance of simultaneous carbon, nitrogen and phosphorus removal from municipal wastewater in an anaerobic-aerobic-anoxic sequencing batch reactor (AOA-SBR) system by alternating the cycle times	华北水利水电大学	刘淑丽, Glen T. Daigger, 刘秉涛, 赵维妍, 刘京	贰等

项目名称	主要完成单位	主要完成人	奖励等级
MIMO下视阵列SAR倾角误差补偿算法	华北水利水电大学	刘辉, 李葛爽, 徐青, 楼良盛	贰等
考虑洞室岩体应力型破坏特征的局部地应力反演方法及应用	华北水利水电大学	裴书锋, 赵金帅, 于怀昌, 刘国锋, 夏跃林, 张嶙, 徐进鹏	贰等
Investigations on ablation for highly-intensified diesel engine piston material	华北水利水电大学	秦朝举	贰等
Multi-criteria decision making for identification of unbalanced bidding	华北水利水电大学	苏丽敏, 曹永超	贰等
Dynamic Reputation Incentive Mechanism for Urban Water Environment Treatment PPP Projects	华北水利水电大学	李慧敏	贰等
一种横观各向同性岩体蠕变模型	华北水利水电大学	李列列	贰等
A-Transformer-Fault-Diagnosis-Method-Based-on-Parameters-Optimization-of-Hybrid-Kernel Extreme Learning Machine	华北水利水电大学	李继方, 海晨, 冯桢, 李根旭	贰等
Dynamic Damage Mechanism and Seismic Fragility Analysis of an Aqueduct Structure	华北水利水电大学	许新勇, 刘旭辉, 蒋莉, Mohd Yawar Ali Khan	贰等
基于分形理论与聚类分析的小电阻接地系统高阻接地保护方法	华北水利水电大学	曹文思, 吴擎, 徐铭铭, 牛荣泽	贰等
Failure risk Assessment of Discharge System of the Hanjiang-to-Weihe River Water Transfer Project	华北水利水电大学	雷冠军, 王文川, 梁云, 殷峻暹, 王浩	贰等
Effect of Pore Structure on Thermal Conductivity and Mechanical Properties of Autoclaved Aerated Concrete	华北水利水电大学	陈贡联	贰等
Sulfate Ions Immobilization of Calcined Layered Double Hydroxides in Hardened Cement Paste and Concrete	华北水利水电大学	马军涛, 王大广, 段平, 石艳柯	贰等
基于水下摄影的床面泥沙运动特性试验研究	华北水利水电大学	刘明潇	贰等
The existence of solutions for quasilinear elliptic problems with multiple Hardy terms	华北水利水电大学	李园园	贰等
A new Hermite-Hadamard type inequality for coordinate convex function	华北水利水电大学	曹海松	贰等
Fourier coefficients of real analytic Eisenstein series at various cusps (II)	华北水利水电大学	刘华珂, 王天芹	贰等
The values of binary linear forms at prime arguments	华北水利水电大学	戈文旭	贰等
Flag-transitive 2-(v, k, λ) symmetric designs with $\lambda \geq (k, \lambda)^2$ and alternating socle	华北水利水电大学	王亚杰	贰等
Generic theory of the dynamic magnetic response of ferrofluids	华北水利水电大学	方昂波	贰等
The impact of computer-mediated contexts on interaction pattern of ESL learners in collaborative writing	华北水利水电大学	王林南	贰等
Metal-free g-C3N4 nanosheets as a highly visible-light-active photocatalyst for thiol-ene reactions	黄河科技学院	张守仁	贰等
Copper ions-assisted inorganic dynamic porogen of graphene-like multiscale microporous carbon nanosheets for effective carbon dioxide capture	黄河科技学院	石微微	贰等
Antioxidant and α -glucosidase inhibitory activity of Cercis chinensis flowers	黄河科技学院	张娟娟	贰等
Two Novel Polysaccharides in Psoralea corylifolia L and anti-A549 Lung Cancer Cells Activity In Vitro	黄河科技学院	尹震花, 刘会利	贰等
定形PEG/SiO2/石墨复合相变蓄热混凝土制备及性能研究	黄河科技学院	王永伟, 李文丽	贰等

项目名称	主要完成单位	主要完成人	奖励等级
基于二阶摄动的水电机组振动传导研究	黄河水利职业技术学院	职保平, 王宇, 秦净净, 于洋, 张宏战	贰等
The Prototype of Marine Data Intergration System Based on J2EE	黄河水利职业技术学院	高欣	贰等
Contrasting patterns of accumulation, partitioning, and remobilization of biomass and phosphorus in a maize cultivar	黄淮学院	张伟娜	贰等
Light Trapping in Single Elliptical Silicon Nanowires	黄淮学院	刘文富, 王银玲, 郭晓雷, 宋俊	贰等
浸水环境下重载铁路改良土路基动力特性研究	黄淮学院	商拥辉	贰等
Identification of cutting chatter through deep learning and classification	黄淮学院	高海宁, 沈红丹, 于磊	贰等
Homogeneous q-difference equations and generating functions for the generlized 2D-Hermite polynomials	黄淮学院	贾泽亚	贰等
农业采摘机械手路径规划----基于云平台 and Q学习算法	焦作大学	司国斌, 王春霞	贰等
Facile synthesis of mesoporous Fe-based MOFs loading bismuth with high speed adsorption of iodide from solution	焦作师范高等专科学校	许文静, 张文生, 康建勋	贰等
A new moss species from northwestern China: Bryum glacierum (Bryaceae) (产自中国西北部的藓类新种-冰川直藓)	焦作师范高等专科学校	刘永英, 权玉萍, 吴玉环	贰等
Secure and Efficient Attribute-Based Access Control for Multiauthority Cloud Storage	解放军战略支援部队信息工程大学	魏江宏, 刘文芬, 胡学先	贰等
Image domain dual material decomposition for dual-energy CT using butterfly network	解放军战略支援部队信息工程大学, 浙江大学医学院附属邵逸夫医院	张文昆, 张瀚铭, 王林元, 胡秀华, 蔡爱龙, 李磊, 牛田野, 闫镔	贰等
新冠肺炎疫情中公众风险认知和无意/有意传谣行为的关系: 负性情绪的中介作用	解放军战略支援部队信息工程大学 郑州大学	胡伟, 王琼, 陈慧玲, 蒋一鹤	贰等
基于快速识别的大蒜播种机的总体设计	开封大学	林吉靓, 刘明显	贰等
Atomic Co/Ni active sites assisted MOF-derived rich nitrogen-doped carbon hollow nanocages for enhanced lithium storage	洛阳理工学院	王芳, 冯婷, 金秀娟, 周玉林, 许艳木, 高亚辉, 李海生, 雷建飞	贰等
气液脉冲两相流耦合激振数值模拟与试验	洛阳理工学院	张慧贤, 寇子明, 布占伟, 杨海军	贰等
Investigating the Effect of Ultraviolet Aging on the Healing Capacity of Bitumen Containing Taconite Tailings	洛阳理工学院	李明霞	贰等
Thermal Reversal Surface with “Sticky Tentacle” for Modulating Initial Cell Adhesion and Detachment	洛阳理工学院, 郑州大学第一附属医院	李娜, 王永刚, 范夏莲	贰等
Cobalt-Catalyzed Deprotection of Allyl Carboxylic Esters Induced by Hydrogen Atom Transfer	洛阳师范学院	李楠, 邓萌	贰等
Performance Limit of Monolayer WSe2 Transistors; Significantly Outperform Their MoS2 Counterpart	洛阳师范学院	孙晓甜, 张愚, 王伟周	贰等
Single-Crystalline Particles: An Effective Way to Ameliorate the Intragranular Cracking, Thermal Stability, and Capacity Fading of the LiNi0.6Co0.2Mn0.2O2 Electrodes	洛阳师范学院	刘贵龙	贰等
Research progress of bacterial quorum sensing receptors: Classification structure function and characteristics	洛阳师范学院	易力	贰等

项目名称	主要完成单位	主要完成人	奖励等级
Lineage-specific plastid degradation in subtribe Gentianinae	洛阳师范学院	付鹏程	贰等
Intra-individual heteroplasmy in the Gentiana tongolensis plastid genome (Gentianaceae)	洛阳师范学院	孙姗姗, 周晓君	贰等
Some identities of the generalized Fibonacci and Lucas sequences	洛阳师范学院	杨继真, 张之正	贰等
Infinitely many periodic solutions for a semilinear Euler-Bernoulli beam equation with variable coefficients	洛阳师范学院	魏辉	贰等
Some new representations of Hikami' s second-order mock theta function D-5(q)	洛阳师范学院	胡秋霞	贰等
Optimal control of stochastic system with Fractional Brownian Motion	洛阳师范学院	赵朝锋, 翟志波, 杜庆辉	贰等
Quantum thermal transistor: a unified method from weak to strong internal coupling	洛阳师范学院	杨海峰, 谭勇刚	贰等
Single-atom Fe triggers superb CO ₂ photoreduction on a bismuth-rich catalyst	南阳师范学院	金晓丽, 谢海泉	贰等
Strain-tunable electronic structure, optical response, and high electron mobility of Bi ₂ O ₂ Se crystals	南阳师范学院	黄晓玉	贰等
lncRNA C2dat2 facilitates autophagy and apoptosis via the miR-30d-5p/DDIT4/ mTOR axis in cerebral ischemia-reperfusion injury	南阳师范学院	徐茜, 马国辉, 李丹丹, 白方会, 方金涛	贰等
A novel strategy to analyse the form drag on pressure ridges and the air-ice drag coefficient in the north-western Weddell Sea	南阳师范学院	谭冰	贰等
Global solutions to The Vlasov-Poisson-Boltzmann system with weak angular singularity	南阳师范学院	樊迎哲	贰等
An adaptive unscented Kalman filter-based controller for simultaneous obstacle avoidance and tracking of wheeled mobile robots with unknown slipping parameters	南阳师范学院	崔明月, 刘红钊, 刘伟, 秦怡	贰等
The X-Ray Light Curve in GRB 170714A: Evidence for a Quark Star?	南阳师范学院	侯书进	贰等
Synthesis of Polycyclic Spiro Pyrrolidone Derivatives via DBU-Catalyzed Diastereoselective Vinylogous Aldol-Michael	平顶山学院	刘丹丹, 王健胜, 刘文勤, 张方林, 周宜荣	贰等
Protective Role of Leaf Variegation in Pittosporum tobira under Low Temperature: Insights into the Physio-Biochemical and Molecular Mechanisms	平顶山学院	张志录, 刘中华, 宋海娜, 陈明辉, 程世平	贰等
Forecasting electricity consumption using a novel hybrid model	平顶山学院	范国锋, 洪维强	贰等
Superconvergence analysis of nonconforming EQ1rot element for nonlinear parabolic integro-differential equation	平顶山学院	梁聪刚	贰等
Forbidden pairs for the matching extendability of graphs with connectivity at least 2 or 3	平顶山学院	惠志昊, 杜俊峰, 王世鹏, 熊黎明, 杨晓静	贰等
The roles played by order of starlikeness and the Bloch condition in the Roper-Suffridge extension operator	平顶山学院	张晓飞, 谢永红	贰等
Deep Learning Assisted Predict of Lung Cancer on Computed Tomography Images Using the Adaptive Hierarchical Heuristic Mathematical Model	平顶山学院	喻恒, 周志青	贰等
Superconvergence analysis of a linearized three-step backward differential formula finite element method for nonlinear Sobolev equation	平顶山学院	王俊俊, 李庆富	贰等

项目名称	主要完成单位	主要完成人	奖励等级
Survivability-aware routing restoration mechanism for smart grid communication network in large-scale failures	平顶山学院	刘保菊, Peng Yu	贰等
Electrochemical Immunosensors with PQQ-Decorated Carbon Nanotubes as Signal Labels for Electrocatalytic Oxidation of Tris(2-carboxyethyl)phosphine	商丘师范学院	马啸华, 邓德华, 郝远强	贰等
Tensile mechanical properties and fracture behavior of monolayer InSe under axial tension	商丘师范学院	常旭	贰等
Age, phosphorus, and 25-hydroxycholecalciferol regulate mRNA expression of vitamin D receptor and sodium-phosphate cotransporter in the small intestine of broiler chickens	商丘师范学院	韩进诚	贰等
Distribution and enrichment of Al-Li-Ga-REEs in the High-Alumina coal of the Datong Coalfield, Shanxi Province, China	商丘师范学院	邵培, 侯红件, 王文龙, 秦可敏, 王文峰	贰等
Surface modification of polyethylene terephthalate films by direct fluorination	商丘师范学院	刘亚强, 陈青清	贰等
Study on the mechanism of a new fully mechanical mining method for extremely thick coal seam	商丘师范学院	吕华永	贰等
《Synthesis of benzimidazole sweat fingerprint fluorescent developer and fluorescent effect》	铁道警察学院	梁帅	贰等
Microscopic phase-segregated quaternary ammonia polysulfone membrane for vanadium redox flow batteries	新乡学院	司江菊	贰等
Multipath Routing and MPTCP-Based Data Delivery over MANETs	新乡学院	张同光	贰等
基于探索性数据分析法的城市人地异速分异研究	新乡学院	张永芳	贰等
Searches for anomalous tqZ couplings from the trilepton signal of tZ associated production at the 14 TeV LHC	新乡医学院	申杰奋, 李玉琦, 刘要北	贰等
Single production of the top partner in the T→tZ channel at the LHeC	新乡医学院	张艳菊	贰等
Recent advances of 1,2,3,5-tetrakis(carbazol-9-yl)-4,6-dicyanobenzene (4CzIPN) in photocatalytic transformations	信阳农林学院	商天奕	贰等
Effects of Coupling Agents on the Properties of Cotton Stalk-Polypropylene Film Boards	信阳农林学院	夏南	贰等
Microstructural, spectroscopic and mechanical properties of hot-pressed Er:SrF2 transparent ceramics	信阳师范学院	刘作冬	贰等
Selective O-Cyclization of N-Methoxy Aryl Amides with CH2Br2 or 1,2-DCE via Palladium-Catalyzed C-H Activation	信阳师范学院	饶伟浩, 蒋莉莉	贰等
Paper-based upconversion fluorescence aptasensor for the quantitative detection of immunoglobulin E in human serum	信阳师范学院	何梦媛	贰等
Interconnected MoS2 on 2D Graphdiyne for Reversible Sodium Storage	信阳师范学院	许婧	贰等
Efficient and fast adsorption of methylene blue dye onto a nanosheet MFI zeolite	信阳师范学院	姬亚军, 许飞亚, 魏巍, 郜慧, 张凯	贰等
Supramolecular self-assembly system based on naphthalimide boric acid ester derivative for detection of organic amine	信阳师范学院	曹新华	贰等
Inverted planar perovskite solar cells with efficient and stability via optimized cathode=interfacial layer	信阳师范学院	赵志强	贰等

项目名称	主要完成单位	主要完成人	奖励等级
Superior adsorption capability and excellent photocatalytic activity derived from the ferroelectric external screening effect in Bi3TiNbO9 single-crystal nanosheets	信阳师范学院	殷小丰	贰等
Influence of europium-doping on various electrical properties of low temperature sintered 0.5Ba0.90Ca0.10TiO3-0.5BaTiO.88Zr0.12O3-0.1%CuO-xEu lead-free ceramics	信阳师范学院	田永尚	贰等
Bulkyl diphenylamine functionalized spiro[fluorene-9,9' -xanthene] based solution-processible small molecule host in red PhOLEDs for investigating structure-property relationship	信阳师范学院	赵祥华	贰等
Influence of Gd2O3 substitution on thermal and mechanical properties of ZrO2-Ta2O5-Y2O3	信阳师范学院	王进双	贰等
Turning waste into treasure: chicken eggshell membrane derived fluorescent carbon nanodots for the rapid and sensitive detection of Hg2+ and glutathione	信阳师范学院	张红定	贰等
The nanoscale control of disorder-to-order layer-stacking boosts multiferroic responses in an Aurivillius-type layered oxide	信阳师范学院	孙书杰	贰等
Causation and mechanism of magnetic susceptibility trend in Upper Miocene-Pliocene red clay deposits of the eastern Chinese Loess Plateau	信阳师范学院	赵国永, 韩艳	贰等
From tea leaves to factories: a review of research progress in L-theanine biosynthesis and production	信阳师范学院	陈震	贰等
Identification and functional prediction of long intergenic noncoding RNAs in fetal porcine longissimus dorsi muscle	信阳师范学院	李岑岑	贰等
Inhibitory Effect of Volatiles Emitted From Alcaligenes faecalis N1-4 on Aspergillus flavus and Aflatoxins in Storage	信阳师范学院	宫安东	贰等
The higher grain production, the more social deprivation? A case study of Henan province in traditional agricultural areas of China	信阳师范学院	高军波	贰等
Comparative catalytic and bacteriostatic properties of silver nanoparticles biosynthesized using three kinds of polysaccharide	信阳师范学院	张伟	贰等
Aging behavior and degradation of different backsheets used in the field under various climates in China	信阳师范学院	韩会丽	贰等
多围压脆岩压缩破坏特征及裂纹扩展规律	信阳师范学院	马文强	贰等
Study on vertical vibration of partially exposed friction pipe pile groups based on fictitious soil pipe pile model	信阳师范学院	闫启方, 刘林超	贰等
Ultralight supercapacitors utilizing waste cotton pads for wearable energy storage	信阳师范学院	陆阳	贰等
A Survey on Data Storage and Information Discovery in the WSAWs-Based Edge Computing Systems	信阳师范学院	马行坡	贰等
Stability and backward bifurcation on a cholera epidemic model with saturated recovery rate	信阳师范学院	周学勇	贰等
一种动态分群带熵权的粒子群优化方法	信阳师范学院	刘道华, 赵岩松	贰等
A variant nonmonotone smoothing algorithm with improved numerical results for large-scale LWCPs	信阳师范学院	汤京永	贰等
The Riemann problem for the Eulerian droplet model with buoyancy and gravity forces	信阳师范学院	张艳艳, 张宇	贰等

项目名称	主要完成单位	主要完成人	奖励等级
Tree Recognition on the Plantation Using UAV Images with Ultrahigh Spatial Resolution in a Complex Environment	信阳师范学院	郭旭展	贰等
Cost-Sensitive Classification for Evolving Data Streams with Concept Drift and Class Imbalance	信阳师范学院	孙艳歌	贰等
Estimates for the Product Weighted Hardy-Littlewood Average and Its Commutator on Product Central Morrey Spaces	信阳师范学院	魏明权	贰等
q-Ferguson curves	信阳师范学院	孙兰银	贰等
MRCI study of the spectroscopic parameters and transition properties of the 36 low-lying electronic states of the B2 molecule	信阳师范学院	邢伟	贰等
Generation of elliptically polarized attosecond pulses in mixed gases	信阳师范学院	翟春洋	贰等
Dual-band terahertz perfect metasurface absorber based on bi-layered all-dielectric resonator structure	信阳师范学院	罗浩	贰等
Accurate potential energy curves and spectroscopic properties of the Λ -S states and Ω states of the PO radical	信阳师范学院	刘慧	贰等
Graphene Plasmonic Tamm States with Ultracompact Footprint	信阳师范学院	王垒	贰等
A TBE control chart-based maintenance policy for a service facility	信阳师范学院	万强	贰等
The Dragon awakens: Innovation, competition, and transition in the energy strategy of the People's Republic of China, 1949-2017	信阳师范学院	张龙	贰等
Enhanced energy storage performance of advanced hybrid supercapacitors derived from ultrafine Ni-P@Ni nanotubes with novel three-dimensional porous network synthesized via reaction temperatures regulation	许昌学院	李伟, 岳红伟, 董振伟	贰等
Predicting the variation of stacking fault energy for binary Cu alloys by first-principles calculations	许昌学院	蔡拓	贰等
Galvanic replacement mediated 3D porous PtCu nano-frames for enhanced ethylene glycol oxidation	许昌学院	李婷婷	贰等
Facile synthesis of mesoporous one-dimensional Fe ₂ O ₃ nanowires as anode for lithium ion batteries	许昌学院	李浩, 张胜果	贰等
Generating microwave photon Fock states in a circuit QED via invariant-based shortcuts to adiabaticity	许昌学院	闫润瑛, 冯志波	贰等
Green synthesis and characterization of crystalline zinc phthalocyanine and cobalt phthalocyanine prisms by a simple solvothermal route	许昌学院	李大鹏	贰等
How to inverse the chemoselectivity of nucleophilic addition by using a Lewis acid/Bronsted base pair catalyst: A theoretical view	许昌学院	刘春辉	贰等
Lotus seedpod-like molecularly imprinted polymers fabricated by MOF-808 stabilized Pickering emulsion and their specific recognition of hemoglobin	许昌学院	孙燕华, 姚川, 张艳鸽	贰等
Study on surface modification of diamond particles and thermal conductivity properties of their reinforced metal-based (Cu or Mg) composites	许昌学院	朱聪旭, 崔灿, 武玺旺	贰等
Fabrication of Pt/CeO ₂ /NCNFs with embedded structure as high-efficiency nanozyme for electrochemical sensing of hydrogen peroxide	许昌学院	关会娟, 程景惠, 杨启	贰等
Dual Control of Surface Oxygen Vacancies and Exposed facets onto BiOCl _{1.95} Br _{0.05} Sheets for Enhancing Photocatalytic Degradation of Sodium Pentachlorophenate	许昌学院	葛素香	贰等

项目名称	主要完成单位	主要完成人	奖励等级
Nonlinear metamaterial composite structure with tunable tunneling frequency	许昌学院	冯团辉, 韩红培, 王利敏, 杨飞	贰等
Study on the effect of liquid nitrogen cold-quenching on electrochemical characteristic of TiO2 complex flakes with edged-curved derived from MAX as anode for lithium ion batteries	许昌学院	吴利军, 谢贤明, 柴珂珂, 张超, 杨长春	贰等
The Studies on Structure and Stability of CaBn Clusters	许昌学院	韩培林, 柴凤丽	贰等
Development of a fast method for the determination of pesticide multiresidues in tomatoes using QuEChERS and GC-MS/MS	许昌学院	魏泉增, 吴明明	贰等
Occurrence and Multi-Locus Analysis of Giardia duodenalis in Coypus (Myocastor coypus) in China	许昌学院	崔朝辉	贰等
Ladder-shape melting temperature isothermal amplification of nucleic acids	许昌学院	王德国, 王永真, 张萌	贰等
Bacillus velezensis Identification and Recombinant Expression, Purification, and Characterization of Its Alpha-Amylase	许昌学院	张晓东, 李彩霞	贰等
Formation and gastrointestinal digestion of β -carotene emulsion stabilized by milk fat globule membrane	许昌学院	何胜华	贰等
顾及多积分时间特性的GF-4卫星PMS传感器交叉辐射定标	许昌学院	韩杰	贰等
A Novel Position and Orientation Sensor for Indoor Navigation Based on Linear CCDs	许昌学院	王闯, 邢丽	贰等
考虑水分迁移影响的浅层膨胀土抗剪强度冻融劣化特征	许昌学院	李彦龙, 汪自力	贰等
Kriging-based unconstrained global optimization through multi-point sampling	许昌学院	李耀辉	贰等
预期损伤部位采用 FRC 梁柱组合件层间剪力-变形计算模型研究	许昌学院	王英俊, 梁兴文	贰等
The influence of the track parameters on vibration characteristics of subway tunnel	许昌学院	石文博, 缪林昌	贰等
A fast satellite selection algorithm for multi-GNSS marine positioning based on improved particle swarm optimisation	许昌学院	关小果	贰等
Turing instability induced by random network in FitzHugh-Nagumo model	许昌学院	郑前前, 申建伟	贰等
A sequential Kriging method assisted by trust region strategy for proxy cache size optimization of the streaming media video data due to fragment popularity distribution	许昌学院	张全友	贰等
Pinning outer synchronization of partially coupled dynamical networks with complex inner coupling inner coupling matrices	许昌学院	李雪臣, 王楠, 卢剑权	贰等
多粒度决策系统属性约简的最优粒度选择	许昌学院	史进玲, 张倩倩	贰等
Study of the nanoscale electrical performance of NiO thin films by C-AFM and KPFM techniques: The effect of grain boundary barrier	许昌学院	张翼东	贰等
Intelligent analysis system for signal processing tasks based on LSTM recurrent neural network algorithm	许昌学院	周雅, 焦晓波	贰等
国家行政型审计体制运行效果的实证研究——基于国家审计功能绩效变化趋势视角的分析	许昌学院	靳思昌	贰等
从经济特区到先行示范区：中国发展道路的“特区”范式	许昌学院	姬超, 袁易明	贰等
气候变化视角下我国粮食生产率增长及其影响因素分析	许昌学院	刘战伟	贰等

项目名称	主要完成单位	主要完成人	奖励等级
Digital parenting during the COVID-19 lockdowns: how Chinese parents viewed and mediated young children' s digital use (新冠肺炎(COVID-19)疫情期间的数码育儿:中国父母对幼儿使用数码产品的态度及调控策略)	许昌学院	曹思敏	贰等
我国农业绿色发展的转型升级研究	许昌学院	赵丹桂	贰等
生产要素是农业供给侧结构性改革的基点——内涵、变迁与构成	许昌学院	漆彦忠	贰等
我国农业供给侧改革与农业发展对策	许昌学院	杨枝茂	贰等
Transient liquid phase diffusion process for porous mullite ceramics with excellent mechanical properties	郑州大学	赵飞, 葛铁柱, 高金星, 陈留刚, 刘新红	贰等
Recent Advances in Catalytic Transfer Hydrogenation with Formic Acid over Heterogeneous Transition Metal Catalysts	郑州大学	聂仁峰, 陶跃雯, 聂云青, 王建设, 张永胜, 吕委阳, 徐春保	贰等
Recent Advances in Theoretical Studies on Transition-Metal-Catalyzed Carbene Transformations	郑州大学	戚孝天, 蓝宇	贰等
Rapid, high-efficient and selective removal of cationic dyes from wastewater using hollow polydopamine microcapsules: Isotherm, kinetics, thermodynamics and mechanism	郑州大学	付建伟	贰等
Three-dimensional (3D) hierarchical Mn2O3 catalysts with the highly efficient purification of benzene combustion	郑州大学	黄真真, 高镜清	贰等
Hierarchical three-dimensional MoS2/GO hybrid nanostructures for triethylamine-sensing applications with high sensitivity and selectivity	郑州大学	侯星慧	贰等
Unraveling the Dynamic Evolution of Pd Species on Pd-Loaded ZnO Nanorods for Different Hydrogen Sensing Behaviors	郑州大学	高健, 吴保松, 曹晨璐, 詹自力, 马炜	贰等
Morphology/phase-dependent MoS2 nanostructures for high-efficiency electrochemical activity	郑州大学	周亮, 夏田雨	贰等
Dual-confined sulfur cathodes based on SnO2-decorated MoS2 microboxes for long-life lithium-sulfur batteries	郑州大学	胡国勤, 李帆, 李松杰, 侯翠红	贰等
Visible-light-driven photocatalytic inactivation of S. aureus in aqueous environment by hydrophilic zinc oxide (ZnO) nanoparticles based on the interfacial electron transfer in S. aureus/ZnO composites	郑州大学	杜梦茹, 焦湔	贰等
Sustainable recycling of titanium from TiO2 in spent SCR denitration catalyst via molten salt electrolysis	郑州大学	白旭阳, 尚晓佳, 车玉思, 杨斌, 何季麟, 宋建勳	贰等
Spheroidization of a granulated molybdenum powder by radio frequency inductively coupled plasma	郑州大学	郝振华, 付振华, 舒永春	贰等
Fabrication of highly interconnected porous poly(ϵ -caprolactone) scaffolds with supercritical CO2 foaming and polymer leaching	郑州大学	蒋晶, 王小峰, 侯建华	贰等
An assembly of carbon dots and carbon sheets from plant biomass for excellent oxygen reduction reaction	郑州大学	武现丽, 刘艳艳	贰等
Enhancing biocompatibility and corrosion resistance of biodegradable Mg-Zn-Y-Nd alloy by preparing PDA/HA coating for potential application of cardiovascular biomaterials	郑州大学	李敬安, 陈莉, 张雪琪, 关绍康	贰等
On-road tailpipe emission characteristics and ozone formation potentials of VOCs from gasoline, diesel and liquefied petroleum gas fueled vehicles	郑州大学	朱仁成, 王梦雷, 李顺义, 张瑞芹	贰等
Comparison of protein extraction methods from excess activated sludge	郑州大学	闫怡新, 高健磊	贰等

项目名称	主要完成单位	主要完成人	奖励等级
Microwave sintering and fracture behavior of zirconia ceramics	郑州大学	陈勇强	贰等
Radioprotection of EGCG based on immunoregulatory effect and antioxidant activity against 60Co γ radiation-induced injury in mice	郑州大学	伊娟娟, 陈晨, 刘鑫, 康巧珍, 郝利民, 黄讲勇, 鲁吉珂	贰等
Research on particle swarm optimization in LSTM neural networks for rainfall-runoff simulation	郑州大学	徐源浩, 胡彩虹, 鄢强, 荐圣洪, 李志超, 陈游倩, 张国栋, 张照尔, 王淑丽	贰等
Higher Activity of Alcohol Dehydrogenase Is Correlated with Hepatic Fibrogenesis	郑州大学	郜娜, 李静, 李明睿, 王钊, 高洁, 乔海灵	贰等
The Urban-Rural Disparity in the Status and Risk Factors of Health Literacy: A Cross-Sectional Survey in Central China	郑州大学	张振香	贰等
Bone marrow mesenchymal stem cells-derived exosomes improve injury of hippocampal neurons in rats with depression by upregulating microRNA-26a expression	郑州大学	郭慧荣, 黄百灵, 王亚丽, 张延妍, 马全刚, 任玉明	贰等
Histone demethylase KDM4A plays an oncogenic role in nasopharyngeal carcinoma by promoting cell migration and invasion	郑州大学	赵静宜	贰等
Long noncoding RNA: an emerging player in diabetes and diabetic kidney disease	郑州大学	郭佳, 刘章锁	贰等
Prenatal ambient air pollution exposure and SOD2 promoter methylation in maternal and cord blood	郑州大学	周郭育, 贺同坤, 刘小雪	贰等
“互联网+护理服务”平台的构建及应用研究	郑州大学	田雨同, 张艳, 侯小花, 任海燕, 张艳丽, 牛淑芹, 邱晓慧, 谭荷楠	贰等
CDK12 and PAK2 as novel therapeutic targets for human gastric cancer	郑州大学	刘慧, 刘婷婷, 胡亚美, 刘方方, 张成娟, 刘康栋, 董子钢	贰等
Identifying Corneal Infections in Formalin-Fixed Specimens Using Next Generation Sequencing	郑州大学	李志刚	贰等
The overexpression of Fral disorders the inflammatory cytokine secretion by mTEC of myasthenia gravis thymus	郑州大学	李倩如, 倪文鹏, 雷宁静, 轩小燕, 刘萍萍, 龚光明, 闫飞, 冯煜钰, 赵瑞, 杜苗	贰等
Cranial Irradiation Induces Hypothalamic Injury and Late-Onset Metabolic Disturbances in Juvenile Female Rats	郑州大学	许毅然, 孙琰琰, 朱长连	贰等
TRAF4, a new substrate of SIAH1, participates in chemotherapy resistance of breast cancer cell by counteracting SIAH1 mediated downregulation of β -catenin	郑州大学	任华艳, 黄会粉, 刘宇琼, 李惠翔	贰等
Effects of nebulized N-acetylcystein on the expression of HMGB1 and RAGE in rats with hyperoxia-induced lung injury	郑州大学	乔俊英, 陈丽霞, 黄先杰, 郭菲菲	贰等
Wilms tumor-suppressing peptide inhibits proliferation and induces apoptosis of Wilms tumor cells in vitro and in vivo	郑州大学	赵伟, 李娟, 张大, 王家祥	贰等
The KATP channel opener, nicorandil, ameliorates brain damage by modulating synaptogenesis after ischemic stroke	郑州大学	赵源征, 杨卓滢, 何远宏, 孙若楠, 苑和平	贰等

项目名称	主要完成单位	主要完成人	奖励等级
Association of serum testosterone with different classes of glucose metabolism and the mediation effect of obesity: The Henan Rural Cohort Study	郑州大学	魏丹丹, 毛振兴	贰等
Overview of distinct 5-methylcytosine profiles of messenger RNA in human hepatocellular carcinoma and paired adjacent non-tumor tissues	郑州大学	张起尧, 郑清元, 于潇, 何玉婷, 郭文治	贰等
Nanocarriers of Fe3O4 as a Novel Method for Delivery of the Antineoplastic Agent Doxorubicin Into HeLa Cells in vitro	郑州大学	夏坤锬, 吕勇, 袁维堂, 王贵宪, 张水军	贰等
A Novel Plant Leaf Patch Absorbed With IL-33 Antibody Decreases Venous Neointimal hyperplasia	郑州大学	白华龙, 谢博澳, 白溪澈, 孙鹏, 张立伟, 魏顺波	贰等
基于FloTrac/Vigileo监测不同PEEP值对患者心指数、每搏变异度及氧输送指数的影响	郑州大学	孙振涛, 王宁	贰等
Identification of 14-3-3 ζ as a potential biomarker in gastric cancer by proteomics based analysis	郑州大学	刘欣欣	贰等
Analysis of clinical features and early warning signs in patients with severe COVID-19: A retrospective cohort study	郑州大学	刘新奎, 岳馨培, 刘福荣, 初云天, 鲍红红, 董一超, 程文杰, 杨林朋	贰等
Validity and reliability of Chinese version of Adult Carer Quality of Life questionnaire (AC-QoL) in family caregivers of stroke survivors	郑州大学	梅永霞	贰等
Analysis of collapse resistance of offshore rigid frame - Continuous girder bridge based on time-varying fragility	郑州大学	梁岩, 闫佳磊, 钱玮昕, 程站起, 陈淮	贰等
New insight into surface adsorption thermodynamic, kinetic properties and adsorption mechanisms of sodium oleate on ilmenite and titanomagnetite	郑州大学	范桂侠, 曹亦俊, 周国莉, 李鹏	贰等
Multidisciplinary Lightweight Optimization for Front Impact Structure of Body Frame Based on Active and Passive Safety	郑州大学	王婷婷, 王孟建, 李霞, 秦东晨	贰等
Experimental and numerical study on heat transfer of gas cooler under the optimal discharge pressure	郑州大学	秦翔, 张东伟, 张帆, 高召, 魏新利	贰等
Methodology for establishing risk criteria for dams in developing countries, case study of China	郑州大学	葛巍, 李宗坤, 李巍	贰等
Lateral performance of a semi-rigid timber frame structure: theoretical analysis and experimental study	郑州大学	刘应扬, 熊海贝	贰等
2-Dimension Linguistic Bonferroni Mean Aggregation Operators and Their Application to Multiple Attribute Group Decision Making	郑州大学	赵建彬, 朱华	贰等
Nonlaboratory-based risk assessment model for type 2 diabetes mellitus screening in Chinese rural population: a joint bagging-boosting model	郑州大学	张利莹, 王艺康, 牛苗苗, 王重建	贰等
A new approach of superconvergence analysis of nonconforming Wilson finite element for semi-linear parabolic problem	郑州大学	石翔宇, 卢琳璋	贰等
Energy balancing RPL protocol with multipath for wireless sensor networks	郑州大学	王振飞, 郑志蕴, 王军锋	贰等
An Effective LSTM Recurrent Network to Detect Arrhythmia on Imbalanced ECG Dataset	郑州大学	高俊丽, 张宏坡, 逯鹏, 王宗敏	贰等
Estimation in Partial Functional Linear Spatial Autoregressive Model	郑州大学	胡玉萍, 武思雨, 冯三营, 金俊良	贰等
Spin and pseudospin symmetries in the single-Lambda spectrum	郑州大学	孙亭亭, 吕万里	贰等

项目名称	主要完成单位	主要完成人	奖励等级
Bandgap engineering of Gallium oxides by crystalline disorder	郑州大学	陈彦成, 杨珣	贰等
考虑多级设施中断的供应链选址—库存决策模型及优化算法	郑州大学	狄卫民, 王然	贰等
新时代民间体育赛事的现实困境与重塑路径解析	郑州大学	周丽	贰等
Synthesis, Structural Diversity, and Properties of Cd Metal–Organic Frameworks Based on 2–(5–Bromo–pyridin–3–yl)–1H–imidazole–4,5–dicarboxylate and N–Heterocyclic Ancillary Ligands	郑州大学, 河南应用技术职业学院	王睿颖, 刘利娜, 吕路路, 王星, 陈瑞, 吴本来	贰等
Long non-coding RNA ESCCAL-1 promotes esophageal squamous cell carcinoma by down regulating the negative regulator of APOBEC3G	郑州大学, 郑州大学附属郑州中心医院	刘嘉, 闫明, 关红亚, 崔渊博	贰等
长链非编码RNA HOXA11-AS 在食管鳞癌中的表达及意义	郑州大学, 郑州大学附属郑州中心医院	孙晓燕, 王晓飞, 曹新广, 赵瑞华, 魏海英	贰等
基于虚拟调速器的虚拟同步机功频控制策略研究	郑州电力高等专科学校	喻宙	贰等
On simulating one-trial learning using morphological neural networks	郑州工业应用技术学院	冯乃勤, 孙滨	贰等
Oscillating pressure sintering of W–Ni–Fe refractory alloy	郑州航空工业管理学院	高卡	贰等
A New Metallic In304 Sheet as an Anode Material for Sodium-Ion Batteries	郑州航空工业管理学院	邵立	贰等
Hot oscillating pressed FGH4096 nickel-based alloy with enhanced ductility and strength	郑州航空工业管理学院	孙德建	贰等
Study on the properties of Ca9Co12O28 under high pressure	郑州航空工业管理学院	赵志辉, 潘政牛, 魏方凰, 许阳, 丁军, 梁凯, 黄维真, 郭艳峰, 陈雷明	贰等
Ultrathin, Porous and Oxygen Vacancies–Enriched Ag/WO3–x Heterostructures for Electrocatalytic Hydrogen Evolution	郑州航空工业管理学院	任玉美	贰等
AZO透明导电膜电磁散射光电参数影响试验	郑州航空工业管理学院	刘战合	贰等
Coupling analysis of contra-rotating fan interstage pressure pulsation and blade vibration based on wavelet reconstruction	郑州航空工业管理学院	张昕喆	贰等
Experimental and numerical investigation on the flexural behavior of concrete-filled elliptical steel tube (CFET)	郑州航空工业管理学院	张涛	贰等
小分子燃料对RP-3航空煤油燃烧作用的数值研究	郑州航空工业管理学院	李树豪, 席双惠, 张丽娜, 王毅, 赵辉, 侯军兴	贰等
飞机抛物线飞行试验中的液体行为仿真	郑州航空工业管理学院	苗楠	贰等
An improved macro-micro-two-scale model to predict high-cycle fatigue life under variable amplitude loading	郑州航空工业管理学院	刘潇然	贰等
Buckling and postbuckling of rotationally-restrained laminated composite plates under shear	郑州航空工业管理学院	陈庆远	贰等
Two-parameter bifurcation analysis of an aircraft nose landing gear model	郑州航空工业管理学院	程利芳	贰等
Near-Optimal Pilot Signal Design for FDD Massive MIMO System: An Energy-Efficient Perspective	郑州航空工业管理学院	王毅, 马鹏阁	贰等
差序治理、政府介入与农地经营权流转合约选择——理论框架与经验证据	郑州航空工业管理学院	王岩	贰等
新兴市场企业跨国并购后组织内部合法性的动态演化机制 ——基于社会心理学视角	郑州航空工业管理学院	周常宝, 王洪梁, 林润辉, 冯志红, 李康安	贰等

项目名称	主要完成单位	主要完成人	奖励等级
Re-Innovation from Failure, Institutional Environmental Differences, and Firm Performance: Evidence from China	郑州航空工业管理学院	熊壮	贰等
分布式组织学习的仿真研究——信息粉饰、反馈延迟和决策失误视角	郑州航空工业管理学院	刘海斌,程玉芳	贰等
Design Of Economic Profit and Loss Evaluation Model of Environmental Treatment Project Based on Fuzzy Entropy Weight	郑州航空工业管理学院	马天明,崔锐洁,周晓博,杨波,千果	贰等
制度脆弱性与企业风险承担水平：损失规避还是机遇寻求	郑州航空工业管理学院	李新丽,程俊	贰等
数字创新研究综述与展望	郑州航空工业管理学院	闫俊周,姬婉莹	贰等
Environmental Regulation, Resource Misallocation and Industrial Total Factor Productivity: A Spatial Empirical Study Based on China' s Provincial Panel Data	郑州航空工业管理学院	董旭,杨亚丽,赵晓梦,刘晨光	贰等
Does entrepreneurial experience always promote novelty-centered business model design in new venture?	郑州航空工业管理学院	王玲玲,赵文红,魏泽龙	贰等
Composite stocky box girders of variable thickness in high-support expressways: Constrained torsional analysis	郑州科技学院	罗亚南,路晓明	贰等
CuS Microspheres with Tunable Interlayer Space and Micropore as a High-Rate and Long-Life Anode for Sodium-Ion Batteries	郑州轻工业大学	肖元化,苏当成,王雪兆,吴诗德,周立明	贰等
Design of MnO2/CeO2-MnO2 hierarchical binary oxides for elemental mercury removal from coal-fired flue gas	郑州轻工业大学	马永鹏,母佰龙,袁东丽,张宏忠,徐浩淼	贰等
Template-directed synthesis of a luminescent Tb-MOF material for highly selective Fe3+ and Al3+ ion detection and VOC vapor sensing	郑州轻工业大学	陈迪明,张楠楠,刘春森,杜淼	贰等
Insights into the hierarchical structure and digestibility of starch in heat moisture treated adlay seeds	郑州轻工业大学	王宏伟,刘兴丽,张艳艳,张华	贰等
电压源逆变器混合多矢量预测共模电压抑制方法	郑州轻工业大学	李琰琰	贰等
Effect of adding ceramic powder on the microstructure, wear and corrosion resistance of NiCrBSi/WC coating	郑州轻工业大学	王新生	贰等
基于继承拉丁超立方采样与局部Kriging近似的可靠性设计优化研究	郑州轻工业大学	李晓科	贰等
A review on machining of carbon fiber reinforced ceramic matrix composites	郑州轻工业大学	都金光	贰等
Study on static performance of gas-lubricated thrust bearing based on multi-microporous stainless steel plate	郑州轻工业大学	段留洋,许明明	贰等
Reliability-based EDM process parameter optimization using Kriging model and sequential sampling	郑州轻工业大学	马军	贰等
Corrosion resistance and thermal shock resistance of ScxTa0.5-xYSZ at high temperatures	郑州轻工业大学	陈宇慧,张若琳,姜鹏洋,宋俊	贰等
永磁游标直线电机磁场解析计算	郑州轻工业大学	王明杰,李彦彦,杨存祥,李从盖	贰等
Robot posture generation method for laser melting deposition	郑州轻工业大学	郑华栋,王才东,费致根,陈鹿民,程岩	贰等
A real-time classification model based on joint sparse-collaborative representation	郑州轻工业大学	李艳婷	贰等
Pinning synchronization of coupled fractional-order time-varying delayed neural networks with arbitrary fixed topology	郑州轻工业大学	刘鹏,刘娜	贰等

项目名称	主要完成单位	主要完成人	奖励等级
Oil Seal Surface Defects Detection using Superpixel Segmentation and Circumferential Difference	郑州轻工业大学	贺振东, 刘洁, 姜利英, 赵素娜, 张雷, 崔良建	贰等
积极领导与员工敬业度的关系研究: 基于自我决定视角	郑州轻工业大学	闫艳玲	贰等
A density functional investigation on the structures, electronic, spectral and fluxional properties of VB20- cluster	郑州师范学院	李成刚	贰等
Upconversion luminescence co-enhanced by Li+ ions doping and localized surface plasmon resonance for perovskite solar cells	郑州师范学院	丁艳丽	贰等
Graphene-Coated Nanowire Waveguides and Their Applications	郑州师范学院	滕达	贰等
Pressure-induced reconstructive phase transitions, polarization with metallicity, and enhanced hardness in antiperovskite MeCNi_3	郑州师范学院	崔颖琦	贰等
Solid solution Na (Gd/La) (MoO4) 2: Yb3+/Er3+ upconversion nanocrystals with simultaneously enhanced photothermal conversion efficiency and luminescence intensity	郑州师范学院	李安明, 徐德康	贰等
Economic Transformation of Scientific and Technological Enterprises from the Perspective of Ecological Environment Protection	郑州师范学院	仝玲玲	贰等
Major educational factors associated with nursing adverse events by nursing students undergoing clinical practice: A descriptive study	郑州卫生健康职业学院, 首都医科大学附属北京朝阳医院, 中华护理学会, 河南省直第三人民医院, 河南大学	李慧, 孔祥萍, 孙路路, 朱媛媛, 李博	贰等
Bifunctionalized polyacrylonitrile fibers as highly efficient and selective heterogeneous catalysts for cycloaddition of CO2 with epichlorohydrin under mild conditions	中原工学院	李鹏宇, 刘园园	贰等
Crystalline structure and remarkably enhanced tensile property of β -isotactic polypropylene via overflow microinjection molding	中原工学院	刘忠柱, 秦琦	贰等
Effects of microencapsulated phase change materials on the thermal behavior of multilayer thermal protective clothing	中原工学院	张慧, 宋国文	贰等
Red dye extracted sappan wood waste derived activated carbons characterization and dye adsorption properties	中原工学院	杜海娟, 程聚, 王明环	贰等
Core-shell $\text{Fe}_3\text{O}_4@\text{SiO}_2@\text{PANI}$ composite: Preparation, characterization, and applications in microwave absorption	中原工学院	丁娟	贰等
Amino-functionalized graphene oxide for the capture and photothermal inhibition of bacteria	中原工学院	梅林, 蔺春蕾, 贾旭	贰等
Construction of Ti_3C_2 supported hybrid $\text{Co}_3\text{O}_4/\text{NCNTs}$ composite as an efficient oxygen reduction electrocatalyst	中原工学院	刘静	贰等
Advanced sodium-ion pseudocapacitor performance of oxygen-implanted hard carbon derived from carbon spheres	中原工学院	尹莉, 冯军兰, 张雪华, 李林	贰等
Ultra-flexibility, robust waterproof and breathability of polyvinylidene fluoride membrane blended silver nitrate for electronic skin substrate	中原工学院	刘淑萍, 刘让同, 刘静芳, 赵鑫, 廖喜林	贰等
Recent advances in the synthesis, properties, and biological applications of platinum nanoclusters	中原工学院	黄鑫, 李增贝, 于正果, 邓欣洁	贰等
PARAFAC和FRI解析ISI中DOM分布	中原工学院	吕晶晶, 窦艳艳	贰等
Well-posedness and attractor on the 2D Kirchhoff-Boussinesq models	中原工学院	冯娜, 杨志坚	贰等

项目名称	主要完成单位	主要完成人	奖励等级
Mutual information inspired feature selection using kernel canonical correlation analysis	中原工学院	王燕	贰等
A necessary and sufficient condition for sequences to be minimal completely monotonic	中原工学院	王曦峰	贰等
Minimizing maximum delivery completion time for order scheduling with rejection	中原工学院	陈仁霞, 李士生	贰等
基于插值和拟合技术的过热汽温非线性控制研究	中原工学院	王永林	贰等
Convergence rates in homogenization of p-Laplace equations	中原工学院	赵杰, 王娟	贰等
Dynamic power optimization of pilot and data for downlink OFDMA systems	中原工学院	刘勇, 刘菲, 朱光, 王晓雷, 焦岳超	贰等
Transparency, Stokes, and Anti-Stokes Processes in a Multimode Quadratic Coupling System with Parametric Amplifier	中原工学院	贺庆, 李利平	贰等
马克思主义理论对专利制度改革的启示	中原工学院	杜爱霞	贰等
Behavior of concrete-filled GFRP tube columns under cyclic axial compression	中原工学院, 中国地震局工程力学研究所	惠存, 李永刚, 周中一, 海然	贰等
Theoretical insight into the mechanism of photoreduction of CO ₂ to CO by graphitic carbon nitride	周口师范学院	巫洪章	贰等
Zinc-Catalysed N-Iodosuccinimide-Enabled Selective N ₂ -Olefination of Benzotriazoles with Alkenes	周口师范学院	朱莉莉, 田丽芳, 张辉, 肖利娜, 罗稳, 蔡斌, 王海峰, 王春杰, 裴朝玉, 王亚辉	贰等
A Physic Nut Stress-Responsive HD-Zip Transcription Factor, JcHDZ07, Confers Enhanced Sensitivity to Salinity Stress in Transgenic Arabidopsis	周口师范学院	唐跃辉	贰等
NADPH Oxidases: The Vital Performers and Center Hubs during Plant Growth and Signaling	周口师范学院	胡春红	贰等
Analysis of the affinity of influenza A virus protein epitopes for swine MHC I by a modified in vitro refolding method indicated cross-reactivity between swine and human MHC I specificities	周口师范学院	樊淑华, 王永立	贰等
Effect of Heat Treatment on the Properties of CoCrMo Alloy Manufactured by Selective Laser Melting	周口师范学院	张国庆, 李俊鑫, 周小宇, 李晋, 王安民	贰等
Data-driven robust day-ahead unit commitment model for hydro/thermal/wind/photovoltaic/nuclear power systems	周口师范学院	侯文庭	贰等
H [∞] Control of Markovian Jump Linear Singularly Perturbed Systems	周口师范学院	刘伟, 王岩岩	贰等
Efficient Multi-plane Extraction from Massive 3D Points for Modeling Large-scale Urban Scenes	周口师范学院	王伟	贰等
The Invariance of Subclasses of Biholomorphic Mappings on Bergman-Hartogs Domains	周口师范学院	崔艳艳, 刘浩	贰等
Geometric Mappings Under the Perturbed Extension Operators in Complex Systems Analysis	周口师范学院	王朝君	贰等
Weber' s law based multi-level convolution correlation features for image retrieval	周口师范学院	于来行	贰等
Summation Formulae Involving Multiple Harmonic Numbers	周口师范学院	郭东威, 初文昌	贰等
基于联盟链的物联网动态数据溯源机制	周口师范学院	乔蕊	贰等

项目名称	主要完成单位	主要完成人	奖励等级
IMAGE RECOGNITION OF TYPICAL POTATO DISEASES AND INSECT PESTS USING DEEP LEARNING	周口师范学院	陈立勇,殷秀叶	贰等
Mathematical modeling of security impact analysis of communication network based on Monte Carlo algorithm	周口师范学院	田冲	贰等
NSCT域分类预处理的改进非局部均值去噪算法	周口师范学院	王倩	贰等
An Emotion Analysis Method Using Multi-Channel Convolution Neural Network in Social Networks	周口师范学院	卢欣欣	贰等
Tanner (J,L) quasi-cyclic LDPC codes: Girth analysis and derived codes	周口师范学院	徐恒舟,李华安,白宝明,朱敏,张博	贰等
(L+1)D localized modes in the power-law nonlinear media with fourth order dispersion/diffraction under PT-symmetric potentials	周口师范学院	朱雨	贰等