|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 序号 | 论文或专著名称 | 作者 | 刊物、出版社名称 | 卷、期（或章节）、页 | 类型 | 类别 |
|  | Degradation of nitrobenzene by high-gravity intensified heterogeneous catalytic ozonation with Mn-FeZSM-5 catalysts | 刘有智 | Chemical Engineering & Processing: Process Intensification | 2021, 169(12)：108642. | SCI三区 | 第五 |
|  | Structure design of CuO/Cu2O@C heterostructure polyhedron accumulated by hollow microspheres for high-performance lithium | 酒红芳 |  Journal of Alloys and Compounds | 2021, 887:161417 | SCI一区 | 第二 |
|  | Solubility and thermodynamics properties of FOX-7 in binary (N-methyl pyrrolidone + acetone,ethanol, water) mixed solvents | 王建龙 | Journal of Energetic Materials | 2021, 322(15)：114876 | SCI一区 | 第五 |
|  | Degradation of nitrobenzene-containing wastewater by sequential nanoscale zero valent iron-persulfate process | 焦纬洲 | Green Energy & Environment | 2021, 6(6)：910-919 | SCI一区 | 第二 |
|  | Preparation of epoxypropyl functionalized graphene oxide and its anticorrosion properties complexed with epoxy resin | 杨晓峰 | Korean Journal of Chemical Engineering | 2020, 12(37)：2340-2350 | SCI三区 | 第一 |
|  | Controlled synthesis of Co9S8@NiCo2O4 nanorod arrays as binder-free electrodes for water splitting with impressive performance | 杜晓强 | Journal of Alloys and Compounds | 2021, 885(10)：160972 | SCI一区 | 第一 |
|  | Hierarchically constructed Ag nanowires shelled with ultrathin Co-LDH nanosheets for advanced oxygen evolution reaction | 弓亚琼 | Applied Catalysis B-Environmental | 2022, 298(5)：120601 | SCI一区 | 第四 |
|  | 4,5-Dinitro-1-methylimidazole (4,5-MDNI), a low melting point explosive: synthesis and studies on thermal behavior | 王建龙 | Journal of Energetic Material | 2021, 12：1-3 | SCI三区 | 第五 |
|  | 基于环糊精超分子聚轮烷的制备及其应用研究进展 | 谢龙 | 高分子通报 | 2021, 272(12)：31-39 | 中文核心 | 第四 |
|  | Optimization of complex enzyme-ultrasonic synergistic | 张志军 | Journal of Food Processing and Preservation | 2021, 46(1)：16201 | SCI四区 | 第五 |
|  | The crystal structure of 3-methyl-2,6-dinitrophenol, C7H6N2O5 | 王建龙 | Zeitschrift für Kristallographie. New crystal structures | 2021, 236(6)：1151-1153 | 其它 | 第五 |
|  | 紫苏精油微囊粉的生物活性及结构表征 | 李会珍 | 现代食品科技 | 2021,37(11):281-287 | 北大核心 | 第一 |
|  | Preparation, characterization of spherical 1,1- diamino-2,2-dinitroethene (FOX-7), and study of its thermal decomposition characteristics | 陈丽珍 | RSC Advances | 2021,**11**：33522-33530 | SCI三区 | 第六 |
|  | CFD simulation of dry pressure drop in a cross-flow rotating packed bed | 张超 | Applied Sciences-Basel | 2021, 11(21): 10099 | SCI四区 | 第一 |
|  | Preparation of Al2O3-Supported Nanoscale FeS Based on High-Gravity Technology and Its Application for Removing Chromium (Ⅵ) in Wastewater | 栗秀萍 | Journal of Environmental Science and Engineering B | 2021, 10：17265 | 其它 | 第一 |
|  | Kinetics and mechanism of nitrobenzene degradation by hydroxyl radicals-based ozonation process enhanced by high gravity technology | 焦纬洲 | Frontiers of Chemical Science and Eenineering | 2021, 5（15）:1197-1205 | SCI二区 | 第一 |
|  | Ru doping induces the construction of a unique core-shell microflower self-supporting electrocatalyst for highly efficient overall water splitting | 曹端林 | Dalton Transactions | 2021,**50：** 13951-13960 | SCI二区 | 第四 |
|  | Controllable synthesis of Ni3S2@MOOH/NF (M = Fe, Ni, Cu, Mn and Co) hybrid structure for the efficient hydrogen evolution reaction | 杜晓强 | Dalton Transactions | 2021,**50：** 14001-14008 | SCI二区 | 第一 |
|  | NiSe2@NixSy nanorod on nickel foam as efficient bifunctional electrocatalyst for overall water splitting | 杜晓强 | International Journal of Hydrogen Energy | 2021, 46（70）:34713-34726 | SCI二区 | 第二 |
|  | Selectively Se-doped Co3O4@CeO2 nanoparticle-dotted nanoneedle arrays for high-efficiency overall water splitting | 杜晓强 | Applied Surface Science | 2021, 562: 150227.  | SCI一区 | 第一 |
|  | Measurement and correlation of solubilities of 3-Nitro-1,2,4-triazol-5-one (NTO) in 10 pure solvents and 3 binary solvents from 278.15 to 328.15 K | 王建龙 | Journal of Chemical and Engineering Data | 2021, 66(10): 3897-3910. | SCI三区 | 第六 |
|  | Pilot scale test of wet dust removal by high gravity intensification | 祁贵 | Journal of Environmental Chemical Engineering | 2021, 9(6): 106424. | SCI二区 | 第一 |
|  | Promoting urea oxidation and water oxidation through interface construction on a CeO2@CoFe2O4 heterostructure | 杜晓强 | Dalton Transactions | 2021, 50(35): 12301-12307. | SCI二区 | 第一 |
|  | Sensory evaluation, chemical structures, and threshold concentrations of bitter-tasting compounds in common foodstuffs derived from plants and maillard reaction: A review | 张志军 | Critical Reviews in Food Science and Nutrition | 2023, 63(14): 2277-2317. | SCI 一区 | 第二 |
|  | 紫苏籽营养及产品加工研究进展 | 李会珍 | 中国油脂 | 2021,46(09):120-124. | 核心论文 | 第一 |
|  | An ingeniously assembled metal-organic framework on the surface of FeMn co-doped Ni(OH)2 as a high-efficiency electrocatalyst for the oxygen evolution reaction | 弓亚琼 | Dalton Transactions | 2021, 50(34): 11775-11782. | SCI二区 | 第四 |
|  | Effects of ethanol, activated carbon, and activated kaolin on perilla seed oil: Volatile organic compounds, physicochemical characteristics, and fatty acid composition | 张志军 | Journal of Food Science | 2021, 86(10): 4393-4404. | SCI三区 | 第二 |
|  | Crystallization thermodynamics of 2,4(5)-dinitroimidazole in eleven pure solvents | 王建龙 | Chinese Journal of Chemical Engineering | 2022, 48: 236-243. | SCI二区 | 第八 |
|  | Controlled synthesis of P-Co3O4@NiCo-LDH/NF nanoarrays as binder-free electrodes for water splitting | 杜晓强 | Dalton Transactions | 2021, 50(31): 10880-10887. | SCI二区 | 第一 |
|  | Preparation of FeOOH nanoparticles using an impinging stream-rotating packed bed and their catalytic activity for ozonation of nitrobenzene | 焦纬洲 | Journal of the Taiwan Institute of Chemical Engineers | 2021, 127: 102-108. | SCI三区 | 第六 |
|  | A self-supporting electrode with in-situ partial transformation of Fe-MOF into amorphous NiFe-LDH for efficient oxygen evolution reaction | 弓亚琼 | Applied Surface Science | 2021, 556: 149781. | SCI 一区 | 第五 |
|  | Ultrathin semi-interpenetrating network membranes based on perfluorinated sulfonic acid resin and polydivinylbenzene with declined hydrogen crossover for proton exchange membrane fuel cell | 何振峰 | Journal of the Electrochemical Society | 2021, 168(8): 084508. | SCI四区 | 第一 |
|  | Crystal structure of poly[μ2-2-amino-4,5-dicyano-κ2 N:N′-imidazol-1-ide)sodium(I)],C5H6N5O2Na | 王建龙 | Zeitschrift fur Kristallographie-New Crystal Structures | 2020，235(4):943-944. | SCI四区 | 第二 |
|  | Facile synthesis of three kinds triazole salts of 2,4,5-trinitroimidazole and their thermal decomposition properties | 陈丽珍 | Journal of Energetic Materials | 2023, 41(2): 221-235. | SCI三区 | 第二 |
|  | Facile synthesis of Ni doped CoWO4 nanoarrays grown on nickel foam substrates for efficient urea oxidation | 杜晓强 | International Journal of Hydrogen Energy | 2021,46(49):25114-25120. | SCI二区 | 第三 |
|  | Recent advances in essential oils-based metal nanoparticles: A review on recent developments and biopharmaceutical applications | 张志军 | Journal of Molecular Liquids | 2021,333:115951. | SCI二区 | 第三 |
|  | 氮硫硅协效阻燃剂的合成及在聚碳酸酯中的应用 | 朱海林 | 高分子材料科学与工程 | 2021,37(07):87-94. | EI | 第五 |
|  | Cobalt and nitrogen co-doped Ni3S2 nanoflowers on nickel foam as high-efficiency electrocatalysts for overall water splitting in alkaline media | 杜晓强 | Dalton Transactions | 2021,50(25):8955-8962. | SCI二区 | 第一 |
|  | Multilevel cross flow rotating packed bed to enhance gas film control mass transfer | 袁志国 | Chemical Engineering and Processing - Process Intensification | 2021,161:108321. | SCI三区 | 第二 |
|  | Sliver nanoparticles decorated Co-Mo nitride for efficient water splitting | 弓亚琼 | Applied Surface Science | 2021,553:149440. | SCI一区 | 第五 |
|  | The crystal structure of 5-chloro-4,6-dimethoxypyrimidin-2-amine,C6H8ClN3O2 | 王建龙 | Zeitschrift für Kristallographie - New Crystal Structures | 2020,235(4) | 其它 | 第五 |
|  | Synthesis,Characterization and Decomposition of 4-Diazo- 2,6-dinitrophenol | 王建龙 | Propellants Explosives Pyrotechnics | 2021,46(9):1388-1396. | SCI三区 | 第一 |
|  | Recent advances in essential oils-based metal nanoparticles: A review on recent developments and biopharmaceutical applications | 张志军 | Journal of Molecular Liquids | 2021,333:115951. | SCI二区 | 第三 |
|  | Preparation of poly(sodium 4-styrene sulfonate) grafted magnetic chitosan microspheres for adsorption of cationic dyes | 门吉英 |  International Journal of Biological Macromolecules | 2021,181:810-823. | SCI一区 | 第一 |
|  | Mesoporous g-C3N4 decorated by Ni2P nanoparticles and CdS nanorods together for enhancing photocatalytic hydrogen evolution | 王蕊欣 | International Journal of Hydrogen Energy | 2021,46(41):21442-21453. | SCI二区 | 第四 |
|  | TiO2@C@MoS2 Spheres as Efficient Sulfur Host for Lithium-Sulfur Batteries | 张立新 | International Journal of Electrochemical Science | 2021,16(6):21067 | SCI四区 | 第一 |
|  | Numerical simulation and experimental study of the characteristics of packing feature size on liquid flow in a rotating packed bed | 袁志国 | Chinese Journal of Chemical Engineering | 2021,34:22-31 | SCI二区 | 第二 |
|  | 碳纸负载Co(OH)2－Co纳米片的制备及其催化NaBH4电氧化行为研究 | 刘有智 | 现代化工 | 2021,41(06):95-100. | 北大核心 | 第四 |
|  | Assembly of ZIF-67 nanoparticles and in situ grown Cu(OH)2 nanowires serves as an effective electrocatalyst for oxygen evolution | 弓亚琼 | Dalton Transactions | 2021,50(21):7256-7264 | SCI二区 | 第五 |
|  | Facile fabrication of flower-like CuS/MnCO3 microspheres clusters on nickel foam as an efficient bifunctional catalyst for overall water splitting | 杜晓强 | National Journal of Hydrogen Energy | 2021,46(38):19948-19961 | SCI二区 | 第三 |
|  | 3种酰氯与硝化纤维素反应的对比 | 张丽华 | 化学工程 | 2021,49(06):63-66 | 一级论文 | 第二 |
|  | Hierarchical sulfide nanoarrays as an efficient bifunctional electrocatalyst for overall water splitting | 杜晓强 | Ionics | 2021 ,27(6):2591-2602 | SCI四区 | 第三 |
|  | Ruthenium-doped NiFe-based metal-organic framework nanoparticles as highly efficient catalysts for the oxygen evolution reaction | 弓亚琼 | Dalton Transactions | 2021,50(12): 4280-4287 | SCI二区 | 第三 |
|  | 错流旋转填料床的质、热同传性能及传热机理研究 | 祁贵生 | 化工学报 | 2021,72(11):5543-5551 | EI | 第二 |
|  | Selective sulfuration, phosphorization and selenylation: A universal strategy toward Co-Ni-M@CeO2/NF (M = O, S, P and Se) interface engineering for efficient water splitting electrocatalysis | 杜晓强 | Journal of Alloys and Compounds | 2021,864: 158486 | SCI一区 | 第二 |
|  | Coupling Co2P/CoSe2 heterostructure nanoarrays for boosting overall water splitting | 杜晓强 | Dalton Transactions | 2021,50(19):6650-6658 | SCI二区 | 第一 |
|  | Comment on “1-methyl-2,4,5-trinitroimidazole(MTNI), a meltcast explosive: synthesis and studies on thermal behavior in presence of explosiveingredients” | 陈丽珍 | Journal of Energetic Materials | 2023,41(1):1-3 | SCI四区 | 第二 |
|  | Heterostructured CoP/MoO2 as high efficient electrocatalysts for hydrogen evolution reaction over all pH values | 弓亚琼 | National Journal of Hydrogen Energy | 2021,46(35):18353-18363 | SCI二区 | 第五 |
|  | Optimization of sunflower head pectin extraction by ammonium oxalate and the effect of drying conditions on properties | 胡志勇 | Scientific Reports | 2021,11(1):10616 | SCI三区 | 第五 |
|  | 对变燃速发射药密闭爆发器实验曲线的模拟计算 | 张丽华 | 中北大学学报 (自然科学版) | 2021,42(03):246-251 | 核心论文 | 第一 |
|  | Measurement,correlation of solubility and thermos dynamic properties analysis of 2,4,6-trinitroresorcinolhydrateinpureandbinarysolvents | 陈丽珍 | Journal of Molecular Liquids | 2021,330: 115639 | SCI二区 | 第四 |
|  | 磷酸锆复合介孔蜜胺树脂用于广谱性气体吸附研究 | 宗鹏飞 | 化工新型材料 | 2022,50(2):5 | 核心论文 | 第七 |
|  | Synthesis of potential Ca–Mg–Al layered double hydroxides coated graphene oxide composites for simultaneous uptake of europium and fulvic acid from wastewater systems | 宗鹏飞 | Environmental Research | 2021,196:110375 | SCI二区 | 第一 |
|  | 磺酸盐表面活性剂的合成及其对碳钢的缓蚀性能 | 朱海林 | 日用化学工业 | 2021,51(05):375-382+412 | 核心论文 | 第一 |
|  | 撞击流－旋转填料床一步法制备氮掺杂二氧化钛的研究 | 张巧玲 | 现代化工 | 2021,41(04):103-106+111 | 一级论文 | 第一 |
|  | A spherical FOX-7 crystal: Preparation,characterization, solubility and thermodynamic study | 陈丽珍 | Journal of Energetic Materials | 2023,41(1): 63-85 | SCI三区 | 第二 |
|  | Ionic liquid-derived core–shell gold@palladium nanoparticles with tiny Ionic liquid-derived core–shell gold@palladium nanoparticles with tiny sizes for highly efficient electrooxidation of ethanol | 罗莹 | Green Energy & Environment | 2021,6(02):229-235 | SCI一区 | 第一 |
|  | Intra-/inter-molecular synergistic inhibition effect of sulfonate surfactant and 2-benzothiazolethiol on carbon steel corrosion in 3.5% NaCl solution | 朱海林 | Corrosion Science | 2021,182: 109291 | SCI一区 | 第一 |
|  | 撞击流-旋转填料床（IS-RPB）制备纳米硫化亚铁的研究 | 栗秀萍 | 现代化工 | 2021,41(04):167-171. | 一级论文 | 第二 |
|  | 纸基PANI@Pt电极的制备及催化H2O2电还原行为研究 | 刘有智 | 现代化工 | 2021,41(04):92-97. | 一级论文 | 第三 |
|  | 8 种不同植物油的脂肪酸组成 | 李会珍 | 中国油脂 | 2021,46(04):68-71+75. | 核心论文 | 第二 |
|  | Cu-doped Ni3S2 Interlaced Nanosheet Arrays as High-efficiency Electrocatalyst Boosting the Alkaline Hydrogen Evolution | 杜晓强 | ChemCatChem | 2021,13(7):1824-1833. | SCI三区 | 第二 |
|  | Octane compositions in sulfuric acid catalyzed isobutane/butene alkylation products:experimental and quantum chemistry studies | 刘有智 | Fronties of Chemical Science and Engineering | 2021,15(5):1229-1242. | SCI二区 | 第一 |
|  | In situ assembly of bimetallic MOF composites on IF as efficient electrocatalysts for the oxygen evolution reaction | 弓亚琼 | Dalton Transactions | 2021,50(13):4720-4726. | SCI二区 | 第五 |
|  | Phytosynthesis of Silver Nanoparticles Using Perilla frutescens Leaf Extract: Characterization and Evaluation of Antibacterial, Antioxidant, and Anticancer Activities | 李会珍 | International Journal of Nanomedicine | 2021,16:15-29. | SCI二区 | 第二 |
|  | 天然物质改性聚乳酸研究进展 | 高莉 | 功能材料 | 2021,52(03):3075-3080. | EI | 第三 |
|  | Controlled synthesis and high performance of Zn-Ni-Co-M (M = O, S, P and Se) nanoneedle arrays as an advanced electrode for overall water splitting | 杜晓强 | Applied SurfaceScience | 2021,543. | SCI一区 | 第二 |
|  | Efficiency of Gemini surfactant containing semi-rigid spacer as microbial corrosion inhibitor for carbon steel in simulated seawater | 朱海林 | Bioelectrochemistry | 2021,140. | SCI二区 | 第一 |
|  | Preparation of Fe and Co co-doped TiO2 by precipitation method in an impinging stream rotating packed bed for photodegradation of phenol wastewater | 张巧玲 | Advances in Applied Ceramics | 2022,120(3):134-143 | SCI四区 | 第二 |
|  | Flower-like Fe-Co-M (M=S, O, P and Se) Nanosheet Arrays Grown on Nickel Foam as High-efficiency Bifunctional Electrocatalysts | 杜晓强 | Chemistry-An Asian Journal | 2021,16(8):959-965. | SCI三区 | 第二 |
|  | Thermal decomposition mechanism study of 3-nitro-1,2,4-triazol-5-one | 曹端林 | Fuel | 2021,295. | SCI一区 | 第六 |
|  | The bimetal synergistic bifunctional electrocatalysts for hydrogen evolution and oxygen evolution reactions | 杜晓强 | Ionics | 2021,27(5):2139-2150. | SCI四区 | 第四 |
|  | High-gravity intensified preparation of D201 resin-hydrated iron oxide nanocomposites for Cr(VI) removal | 焦纬洲 | Advanced Powder Technology | 2021,32(5):1584-1593. | SCI三区 | 第四 |
|  | Controllable synthesis of Cu-Ni-M (M = S, P and Se) hybrid nanoarrays for efficient water splitting reaction | 杜晓强 | Dalton Transactions | 2021,50(8):2964-2972. | SCI二区 | 第三 |
|  | Evaluation of thermal hazards based on thermokinetic parameters of 2,4-dinitroanisole | 王建龙 | Journal of Energetic Materials | 2021,40(4):471-485. | SCI三区 | 第三 |
|  | Tuning the electronic structure of NiCoP arrays through V doping for pH-universal hydrogen evolution reaction electrocatalyst | 曹端林 | Frontiers of Chemical Science and Engineering | 2021, 15：1134–1146 | 其它/SCI二区 | 第三 |
|  | Ultralow ruthenium loading Cobalt-molybdenum binary alloy as highly efficient and super-stable electrocatalyst for water splitting | 弓亚琼 | Applied Surface Science | 2021, 541：148518 | SCI二区/SCI一区 | 第三 |
|  | Ultrafine CoRu alloy nanoparticles in situ embedded in Co4N porous nanosheets as high-efficient hydrogen evolution electrocatalysts | 弓亚琼 | Dalton Trans. | 2021, 50(08)：2973-2980 | 其它/SCI二区 | 第四 |
|  | Cu-MnOX/γ-Al2O3 Catalyzed Ozonation of Nitrobenzene in a High-Gravity Rotating Packed Bed | 刘有智 | Industrial & Engineering Chemistry Research | 2021, 60：2123-2135 | SCI三区 | 第四 |
|  | Molecularly imprinted polymers by the surface imprinting techni | 王蕊欣 | European Polymer Journal | 2021, 145：110231 | 其它/SCI二区 | 第四 |
|  | The crystal structure and thermal decomposition kinetics of cis-hexanitrostilbene | 陈丽珍 | Acta Crystallographica Section B-StructuralScience Crystal Engineering and Materials | 2021, 77(01)：150-157 | SCI三区 | 第二 |
|  | The recent progress of synergistic supramolecular polymers: preparation, properties and applications | 何振峰 | Chemical Communication | 2021, 57(12)：1413-1429 | SCI二区 | 第一 |
|  | Optimization of ultrasound-assisted extraction of polysaccharides from perilla seed meal by response surface methodology: Characterization and in vitro antioxidant activities | 李会珍 | Journal of Food Science | 2021, 86(2):306-318 | SCI三区 | 第二 |
|  | Enhancement degradation of formaldehyde by MgO/gamma-Al2O3 catalyzed O3/H2O2 in a rotating packed be | 焦纬洲 | Journal of the Taiwan Institute of Chemical Engineers | 2021, 118:29-37 | SCI三区 | 第五 |
|  | Overview of Anion Exchange Membranes Based on Ring Opening Metathesis Polymerization (ROMP) | 何振峰 | Polymer Reviews | 2021, 61(4):689-713 | SCI一区 | 第一 |
|  | Solubility and thermodynamic properties of FOX-7 in four binary mixed solvents from T = 298.15 to 333.15 K | 陈丽珍 | Journal of Molecular Liquids | 2021, 322: 114876 | SCI二区 | 第四 |
|  | Ru doped bimetallic phosphide derived from 2D metal organic framework as active and robust electrocatalyst for water splitting | 曹端林 | Applied Surface Science | 2021, 536: 147952  | SCI一区 | 第五 |
|  | Three-Dimensional Graphene Oxide Covalently Functionalized with Dawson-Type Polyoxotungstates for Oxidative Desulfurization of Model Fuels | 王蕊欣 | Industrial & Engineering Chemistry Research | 2021, 60(01): 114-127 | SCI三区 | 第四 |
|  | Enhancement degradation of formaldehyde by MgO/γ-Al2O3 catalyzed O3/H2O2 in a rotating packed bed | 刘有智 | Journal of the Taiwan Institute of Chemical Engineers | 2021, 118: 29-37 | SCI三区 | 第四 |
|  | Cu–MnOXγ-Al2O3 Catalyzed Ozonation of Nitrobenzene in a High-Gravity Rotating Packed Bed | 刘有智 | Industrial & Engineering Chemistry Research | 2021, 60: 2123-2135 | SCI三区 | 第四 |
|  | 内循环气升式环流反应器生物降解苯酚废水过程的计算传质学模拟研究 | 张超 | 化工学报 | 2021, 72(02): 965-974 | EI期刊 | 第一 |
|  | 不同品种紫苏叶迷迭香酸的提取及其生物活性 | 李会珍 | 现代食品科技 | 2021, 37(01): 92-100 | 中文核心 | 第二 |
|  | Efficient elimination of uranium by carboxymethyl-β-cyclodextrin nanoparticles decorated iron oxides: Water chemistry influences and mechanism researches. | 宗鹏飞 | International Journal of Hydrogen Energy | 2021, 46(01): 1370-1384 | SCI二区 | 第一 |
|  | Detonation response mechanism of shocked LLM-105 using ReaxFF-lg and MSST | 张树海 | Molecular Simulation | 2021, 47(08): 678-687 | SCI四区 | 第一 |
|  | Theoretical Study on the Effect of Solvent Behavior on Ammonium Dinitramide (ADN)/1,4,7,10,13,16-Hexaoxacyclooctadecane (18-Crown-6) Cocrystal Growth Morphology at Different Temperatures | 苟瑞君 | Crystal Research and Technology | 2021, 56(04): 2000203 | SCI四区 | 第一 |