# 重庆大学环境与生态学院

# 科研简报

2024年第1期(总第25期)

行政办公室编 二〇二四年三月

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#### 一、学术获奖

| 序号 | 获奖名称                        | 单位排名 | 获奖人   | 获奖类别      | 获奖等级 |
|----|-----------------------------|------|-------|-----------|------|
| 1  | 村镇污水集约适配处理与资源化<br>利用关键技术及应用 | 4    | 晏鹏(5) | 华夏建设科学技术奖 | 一等奖  |

## 二、科研论文

2024年1-3月学院发表各类学术论文61篇,其中JCR一区论文47篇(自然指数期刊论文6篇),二、三区及四区论文6篇。。

| 序号 | 论文题目   | 期刊名称   | 出版时间       | 参与作者         | JCR 分区              |
|----|--|--|------------|--------------|---------------------|
| 1  | Repeated Exposure Enhanced Toxicity of Clarithromycin on Microcystis aeruginosa Versus Single Exposure through Photosynthesis, Oxidative Stress, and Energy Metabolism Shift | ENVIRONMENTAL<br>SCIENCE &<br>TECHNOLOGY   | 2024-03-13 | 何强,李宏*       | <u>-\</u> <u>X</u>  |
| 2  | Evidence for Nitrous Oxide Emissions by Nitrite-Dependent Anaerobic Methane Oxidizing Bacteria   | ENVIRONMENTAL<br>SCIENCE &<br>TECHNOLOGY   | 2024-03-24 | 聂文博          | <b>→</b> ⊠          |
| 3  | A Graph Neural Network Model<br>with a Transparent Decision-<br>Making Process Defines the<br>Applicability Domain for<br>Environmental Estrogen Screening                   | ENVIRONMENTAL<br>SCIENCE &<br>TECHNOLOGY   | 2024-02-24 | 于清淼,耿金菊*     | <u>一</u>   <u> </u> |
| 4  | Embedding electronic perpetual<br>motion into single- atom catalysts<br>for persistent Fenton- like<br>reactions   | PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA                | 2024-01-24 | 陈飞*,段丕俊      | <u> </u>            |
| 5  | Embedding electronic perpetual motion into single-atom catalysts for persistent Fenton-like reactions  | PROCEEDINGS OF<br>THE NATIONAL<br>ACADEMY OF<br>SCIENCES OF THE<br>UNITED STATES OF<br>AMERICA | 2024-01-28 | 陈飞*,段丕俊      | <u> </u>            |
| 6  | Neutralization of Anthropogenic<br>Acidic Particles by NH3 From<br>Wildfire Over Tropical Peatland   | JOURNAL OF<br>GEOPHYSICAL<br>RESEARCH-<br>ATMOSPHERES  | 2024-02-24 | 陈静           | 二区                  |
| 7  | Accelerating Fe(III)/Fe(II) redox cycling in heterogeneous electro-Fenton process via S/Cu-mediated electron donor-shuttle regime  | APPLIED CATALYSIS<br>B-ENVIRONMENT<br>AND ENERGY   | 2024-03-01 | 何强,叶志洪*      | 一区                  |
| 8  | Anaerobic co-digestion of corn<br>straw, sewage sludge and fresh<br>leachate: Focusing on<br>synergistic/antagonistic effects and<br>microbial mechanisms                    | BIORESOURCE<br>TECHNOLOGY  | 2024-03-01 | 黄川*          | <u>一区</u>           |
| 9  | Overlooked role in bacterial assembly of different-sized granules in same sequencing batch reactor: Insights into bacterial niche of nutrient removal                        | BIORESOURCE<br>TECHNOLOGY  | 2024-01-01 | 张智*,向平       | <u> </u>            |
| 10 | Indigenous mixotrophic aerobic denitrifiers stimulated by oxygen micro/ nanobubble-loaded microporous biochar  | BIORESOURCE<br>TECHNOLOGY  | 2024-01-01 | 智悦,李伟,何强,李宏* | 一区                  |
| 11 | Ozone meets peroxides: A   | CHEMICAL<br>ENGINEERING  | 2024-03-24 | 陈飞*          | 一区                  |

|    | symphony of hybrid techniques in  | JOURNAL   |            |                  |                     |
|----|---|---|------------|------------------|---------------------|
|    | wastewater treatment  | 000111712                                       |            |                  |                     |
| 12 | Confined MOF pyrolysis within mesoporous SiO2 core-shell nanoreactors for superior activity and stability of electro-Fenton catalysts   | CHEMICAL<br>ENGINEERING<br>JOURNAL              | 2024-03-24 | 陈曦,叶志洪*,何强       | <b>一</b> 図          |
| 13 | Unraveling the two-sided effect of nitrate on aerobic granulation   | CHEMICAL<br>ENGINEERING<br>JOURNAL              | 2024-01-01 | 赵彬*,安强           | 一区                  |
| 14 | The characteristics and flocculation mechanisms of SMP and B-EPS from a bioflocculant-producing bacterium Pseudomonas sp. XD-3 and the application for sludge dewatering      | CHEMICAL<br>ENGINEERING<br>JOURNAL              | 2024-01-01 | 赵彬*,安强           | 一区                  |
| 15 | Cobalt-loaded carbon nanotubes boosted aerobic ciprofloxacin transformation driven by sulfide: A comprehensive mechanism investigation  | CHINESE CHEMICAL<br>LETTERS                     | 2024-03-01 | 赵汉卿,卢培利*,陈飞      | 一区                  |
| 16 | Exploring the greenhouse gas emissions inventory and driving mechanisms of municipal solid waste in China   | ENVIRONMENTAL<br>IMPACT<br>ASSESSMENT<br>REVIEW | 2024-03-01 | 王小铭              | <b>→</b> <u>⊠</u>   |
| 17 | Revealing the environmental hazard posed by biodegradable microplastics in aquatic ecosystems: An investigation of polylactic acid's effects on <i>Microcystis aeruginosa</i> | ENVIRONMENTAL<br>POLLUTION                      | 2024-03-24 | 何强,杨永川,李<br>宏*   | <b>→</b> 区          |
| 18 | A comprehensive exploration of characteristics and source attribution of carbonaceous aerosols in PM2.5 in an East China megacity   | ENVIRONMENTAL POLLUTION                         | 2024-02-24 | 王锋文              | <u>-</u>   <u>X</u> |
| 19 | Changes in community structure<br>and microbiological risks in a small<br>stream after receiving treated<br>shale gas wastewater for two<br>years                             | ENVIRONMENTAL<br>POLLUTION                      | 2024-01-23 | 张代钧,卢培利,<br>周上博* | 一区                  |
| 20 | Removal of per- and polyfluoroalkyl substances by activated hydrochar derived from food waste: Sorption performance and desorption hysteresis                                 | ENVIRONMENTAL<br>POLLUTION                      | 2024-01-23 | 智悦,钱深华,李伟,王小铭*   | 一区                  |
| 21 | Synthesis of amorphous-<br>MnO2/Clinoptilolite and its<br>utilization for NH4t-N oxidation in<br>an anoxic environment  | ENVIRONMENTAL<br>RESEARCH                       | 2024-01-15 | 吉芳英*             | <u> </u>            |
| 22 | Molecular insight into the vertical migration and degradation of dissolved organic matter in riparian soil profiles   | ENVIRONMENTAL<br>RESEARCH                       | 2024-03-24 | 李麟*,智悦,何强        | <b>→</b> <u>X</u>   |
| 23 | PMS coupled Mn(II) mediated electrochemistry processes (E-Mn(II)-PMS) on the efficient RB19 wastewater treatment: Focus on the regulation and reinforcement of                | ENVIRONMENTAL<br>RESEARCH                       | 2024-01-23 | 郑怀礼              | 一区                  |

|    | Mn(III)/Mn(II)  |  |            |                      |                   |
|----|---|--|------------|----------------------|-------------------|
| 24 | Microbial metabolism and health risk assessment of kitchen waste odor VOCs  | ENVIRONMENTAL<br>SCIENCE AND<br>POLLUTION<br>RESEARCH      | 2024-02-24 | 黄川*                  | <b>→</b> <u>⊠</u> |
| 25 | Priority screening on emerging contaminants in sediments of the Yangtze River, China  | ENVIRONMENTAL<br>SCIENCES EUROPE                           | 2024-02-24 | 陈忠礼,邵迎*              |                   |
| 26 | Antimicrobial activity of thin-film composite membranes functionalized with cellulose nanocrystals and silver nanoparticles <i>via</i> one-pot deposition and layer-by-layer assembly | ENVIRONMENTAL<br>SCIENCE-WATER<br>RESEARCH &<br>TECHNOLOGY | 2024-03-01 | 刘彩虹                  | 一区                |
| 27 | Preparation and properties of double-template magnetic molecularly imprinted polymers for removal of nitrophenol from drinking water  | JOURNAL OF<br>CENTRAL SOUTH<br>UNIVERSITY                  | 2024-01-01 | 梁建军,高小峰*             | 一区                |
| 28 | Utilization of short-term high temperature pretreatment for food waste composting: Effects of end-products on soil properties and plant growth  | JOURNAL OF<br>CLEANER<br>PRODUCTION                        | 2024-01-24 | 李蕾*,彭绪亚              | 一区                |
| 29 | Recovery of iron phosphate from secondary sludge by ascorbic and citric acids   | JOURNAL OF ENVIRONMENTAL CHEMICAL ENGINEERING              | 2024-02-01 | 李金择,石德智,<br>古励*,许林季* | <u> </u>          |
| 30 | Effect of different feeding<br>strategies on performance of<br>aerobic granular sludge: From<br>perspective of extracellular<br>polymeric substances and<br>microorganisms            | JOURNAL OF<br>ENVIRONMENTAL<br>CHEMICAL<br>ENGINEERING     | 2024-02-01 | 晏鹏,陈猷鹏,方<br>芳*,郭劲松*  | <b>→</b> <u>⊠</u> |
| 31 | Enhanced activation of persulfate by modified red mud biochar for degradation of dye pollutant: Resource utilization and non-radical activation                                       | JOURNAL OF<br>ENVIRONMENTAL<br>MANAGEMENT                  | 2024-02-24 | 安强*,赵彬               | 一区                |
| 32 | Current status and prospects of algal bloom early warning technologies: A Review  | JOURNAL OF<br>ENVIRONMENTAL<br>MANAGEMENT                  | 2024-01-23 | 张智                   | 一区                |
| 33 | Cobalt(II) mediated calcium sulfite activation for efficient oxidative decontamination in waters: Performance, kinetics and mechanism   | JOURNAL OF<br>HAZARDOUS<br>MATERIALS                       | 2024-01-23 | 丁魏*,郑怀礼,李<br>宏*      | 一区                |
| 34 | Mechanisms for thallium(I)<br>adsorption by zinc sulfide minerals<br>under aerobic and anaerobic<br>conditions  | JOURNAL OF<br>HAZARDOUS<br>MATERIALS                       | 2024-01-23 | 刘鸿霞,皇甫小<br>留*        | <u>→⊠</u>         |
| 35 | Polystyrene microplastics accumulation in lab-scale vertical flow constructed wetlands: impacts and fate  | JOURNAL OF<br>HAZARDOUS<br>MATERIALS                       | 2024-01-23 | 刘文博,翟俊*              | <b>→</b> <u>⊠</u> |
| 36 | Mechanistic insight into the role of<br>typical microplastics in chlorination<br>disinfection: Precursors and<br>adsorbents of both MP-DOM and  | JOURNAL OF<br>HAZARDOUS<br>MATERIALS                       | 2024-01-23 | 姚娟娟*,张智              | <u>→</u> <u>X</u> |

|    | DBPs  |  |            |                            |                   |
|----|---|--|------------|----------------------------|-------------------|
| 37 | Investigating synergism and mechanism during sequential inactivation of Staphylococcus aureus with ultrasound followed by UV/peracetic acid   | JOURNAL OF<br>HAZARDOUS<br>MATERIALS         | 2024-01-23 | 张智*,姚娟娟*                   | 一区                |
| 38 | Novel vacuum UV/ozone/peroxymonosulfate process for efficient degradation of levofloxacin: Performance evaluation and mechanism insight   | JOURNAL OF<br>HAZARDOUS<br>MATERIALS         | 2024-02-23 | 赵志伟*                       | 一区                |
| 39 | Carbon feasibility of terminating plastic waste leakage by landfill mining: A case study based on practical projects in China   | SCIENCE OF THE<br>TOTAL<br>ENVIRONMENT       | 2024-01-01 | 高小峰*                       | <b>→</b> <u>⊠</u> |
| 40 | A comprehensive insight into the transformation pathways and products of fluoxetine and venlafaxine in wastewater based on molecular networking nontarget screening                           | SCIENCE OF THE<br>TOTAL<br>ENVIRONMENT       | 2024-01-23 | 耿金菊                        | 一区                |
| 41 | Combining large-scale investigation and quantum chemical calculation of pharmaceuticals: Spatiotemporal patterns of occurrence and structural insights into removal                           | SCIENCE OF THE<br>TOTAL<br>ENVIRONMENT       | 2024-01-23 | 耿金菊*,于清淼                   | <u>一区</u>         |
| 42 | Aerobic methane production by phytoplankton as an important methane source of aquatic ecosystems: Reconsidering the global methane budget   | SCIENCE OF THE<br>TOTAL<br>ENVIRONMENT       | 2024-01-23 | 何强*                        | 一区                |
| 43 | Ascorbic acid reduction pretreatment enhancing metal regulation to improve methane production from anaerobic digestion of waste activated sludge  | SCIENCE OF THE<br>TOTAL<br>ENVIRONMENT       | 2024-02-24 | 李金择,古励*,许<br>林季            | 一区                |
| 44 | Enhancement of catalytic detoxification of polycyclic aromatic hydrocarbons in fly ash from municipal solid waste incineration via magnetic hydroxyapatite-assisted hydrothermal treatment    | SCIENCE OF THE<br>TOTAL<br>ENVIRONMENT       | 2024-03-24 | 石德智*                       | 一区                |
| 45 | Motility behavior and physiological response mechanisms of aerobic denitrifier, <i> Enterobacter</i> cloacae strain HNR under high salt stress: Insights from individual cells to populations | SCIENCE OF THE<br>TOTAL<br>ENVIRONMENT       | 2024-03-24 | 晏鹏,许小伟,郭<br>劲松,方芳,陈猷<br>鹏* | 一区                |
| 46 | Diurnal-independent, visible-light-<br>storing of<br>Ag2O@SrAl2O4:Eu2+,Dy3+ for<br>the round-the-clock decomposition<br>of ciprofloxacin  | SEPARATION AND<br>PURIFICATION<br>TECHNOLOGY | 2024-02-23 | 付国楷*,张智*                   | 一区                |
| 47 | Review of ammonia recovery and removal from wastewater using hydrophobic membrane distillation and membrane contactor   | SEPARATION AND<br>PURIFICATION<br>TECHNOLOGY | 2024-01-23 | 刘彩虹                        | <b>→</b> <u>⊠</u> |

| 48 | Enhanced catalytic activities of natural iron ore in peroxymonosulfate activation assisted by WS2 for rapid degradation of pollutants                                | SEPARATION AND<br>PURIFICATION<br>TECHNOLOGY             | 2024-01-23 | 叶志洪*                                  | <b>→</b> ፳            |
|----|--|--|------------|---------------------------------------|-----------------------|
| 49 | The influence and risk assessment of multiple pollutants on the bacterial and archaeal communities in agricultural lands with different climates and soil properties | APPLIED SOIL<br>ECOLOGY                                  | 2024-01-01 | 王尘辰, 蒋艳雪, 邵迎, 陈忠礼, 梁嘉良, 高俊敏, 方芳, 郭劲松* | _ <u>\</u> \ <u>\</u> |
| 50 | Bioaccumulation Characteristics of<br>Typical Perfluoroalkyl Compounds<br>in Alfalfa Under Salt Stress   | BULLETIN OF ENVIRONMENTAL CONTAMINATION AND TOXICOLOGY   | 2024-01-01 | 智悦,李伟,钱深华*                            | 三区                    |
| 51 | Effect of publicity on public awareness and willingness for domestic waste management: a case study in a model village in China                                      | JOURNAL OF<br>MATERIAL CYCLES<br>AND WASTE<br>MANAGEMENT | 2024-01-24 | 石德智                                   | 三区                    |
| 52 | Effects of the nutrient inhibition on the yield of DBPFPs by Microcystis aeruginosa  | JOURNAL OF<br>WATER AND<br>HEALTH                        | 2024-03-24 | 崔福义                                   | 三区                    |
| 53 | Application of Activated Persulfate via Red Mud-Based Catalysts for Dye Removal in Wastewater: Kinetics and Mechanism  | ENVIRONMENTAL<br>ENGINEERING<br>SCIENCE                  | 2024-02-05 | 安强*,赵彬                                | 四区                    |

## 三、授权专利

| 序号 | 专利名称  | 专利类型 | 参与专利人        | 授权日期       |
|----|---|------|--------------|------------|
| 1  | Stormwater runoff treatment substrate<br>and stormwater bioretention system<br>constructed by using substrate | 发明   | 柴宏祥, 邵知宇     | 2024-01-23 |
| 2  | A METHOD FOR PREPARING AG20-BASED<br>COMPOSITE ENERGY STORAGE<br>PHOTOCATALYSTS AND ITS APPLICATION           | 发明   | 张智,阳春        | 2024-03-05 |
| 3  | 一种饮用水消毒副产物的处理方法及装置  | 发明   | 梁建军,蒋绍阶,刘鸿霞  | 2024-01-09 |
| 4  | 一种氮化碳溴氧化铋异质结材料催化过硫酸<br>盐去除水中有机污染物的方法  | 发明   | 陈飞,陈猷鹏       | 2024-01-05 |
| 5  | 一种河湖疏浚底泥资源化利用方法   | 发明   | 石德智          | 2024-03-15 |
| 6  | 一种适用于乡村饮用水的智能节能供水装置   | 实用新型 | 梁建军          | 2024-02-06 |
| 7  | 一种低碳氮比废水处理装置  | 实用新型 | 李蕾, 彭绪亚, 刘国涛 | 2024-01-02 |

#### 四、数据分析





