郑会珍 

民族：汉 籍贯：河南焦作 出生年月：1989.11

 联系方式：13478426213 hzzheng@suda.edu.cn 专业：生物医学工程

**教育背景**

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| --- | --- | --- | --- | --- |
| 2007.9—2011.7 | 郑州大学 | 制药工程 | 本科 |  |
| 2011.9—2017.1 | 中科院大连化学物理研究所 | 生物化工 | 博士 | 导师：马小军 |

**工作经历**

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| 2017.2—2020.7 | 苏州大学 | 放射医学与防护学院 | 助理研究员 |
| 2020.8—至今 | 苏州大学 | 放射医学与防护学院 | 副研究员 硕导 |

**研究方向及成果**

**● 纳米生物效应研究：**聚焦表界面生物效应，开发新型生物医用纳米材料

**● 调控肿瘤微环境：**聚焦生物催化系统，重塑肿瘤乏氧、免疫抑制、糖酵解等微环境

**科研项目**

1. 国家自然科学基金委员会, 青年科学基金项目, 21806116, 构建三维中空类肺泡模型用于环境金属基纳米粒肺滞留效应的研究, 2019-01-01 至 2021-12-31, **25万元**, 结题, 主持
2. 横向合作项目, 肝细胞毒性指标评价, 2019-11至 2020-5, **3万元**, 结题, 主持
3. 国家科技部重点研发计划政府间国际科技创新合作重点专项, 2018YFE0120400, 金属基纳米颗粒毒理学构效关系探索及其安全设计与合成的研究, 2020-01 至 2021-12, **103万元**, 结题, 参与
4. 国家科技部重点研发计划政府间国际科技创新合作重点专项, 2022YFE010830, 纳米颗粒引发肺纤维化的毒理学机制研究, 2023-01 至 2024-12, **100 万元**, 结题, 参与

**代表性学术论文 （**一作/通讯 SCI 论文 13篇**）**

1. Jie Jiang#, **Huizhen Zheng#**, Zhenzhen Wang, Xinlian Wang, Qianqian Xie, Xi Liu, Qing Yang, Xiaoming Cai, Xingfa Gao, Ruibin Li\*, Chunying Chen\*. Intracellular dehydrogenation catalysis leads to reductive stress and immunosuppression. **Nature Nanotechnology**, 2025, doi.org/10.1038/s41565-025-01870-y
2. Jie Jiang#, Yuhao Lu#, Xinyi Zheng#, Maomao Xie, Aleksandra Jaukovic, Meng Gao\*, **Huizhen Zheng\*.** Engineering probiotic biohydrogen micro-factories to initiate reductive stress for boosting tumor vulnerability. **Biomaterials****2025,** *314*, 122892.
3. Maomao Xie#, Meng Gao#, Yang Yun#, Martin Malmsten, Vincent M. Rotello, Radek Zboril, Omid Akhavan, Aliaksandr Kraskouski, John Amalraj, Xiaoming Cai, Jianmei Lu, **Huizhen Zheng\***, Ruibin Li\*. Antibacterial Nanomaterials: Preventing or Aggravating the Evolution of Antimicrobial Resistance? **Angewandte Chemie-International Edition**, 2023, e202217345.
4. Weili Wang#, **Huizhen Zheng#**, Jun Jiang, Zhi Li, Dongpeng Jiang, Xiangru Shi, Hui Wang, Jie Jiang, Qianqian Xie, Meng Gao, Jianhong Chu, Xiaoming Cai, Ruibin Li\*, Tian Xia. Engineering Micro Oxygen Factories to Slow Tumour Progression via Hyperoxic Microenvironments. **Nature Communications,** 2022, 13:4495
5. **Huizhen Zheng**, Yang Huang, Yanxia Pan, Jie Jiang, Wei Li, Hui Wang, Lihao Su, Xi Liu, Meng Gao, Weili Wang, Jia Li, Xuehua Li\*, Jingwen Chen, Ruibin Li\*. Lighting Nanoscale Insulator by Steric Restriction Induced Emissions. **Analytical Chemistry*,* 2022,** 94, 12060−12069
6. Yanxia Pan#, **Huizhen Zheng**#, Guanna Li#, Yanan Li#, Jie Chen, Qianqian Xie, Di Wu, Ronglin Ma, Xi Liu, Shujuan Xu, Jun Jiang, Xiaoming Cai, Meng Gao, Weili Wang, Han Zuilhof, Mingliang Ye\*, Ruibin Li\*. Antibiotic-like Activity of Atomic Layer Boron Nitride for Combating Resistant Bacteria. **ACS Nano**, **2022**, 16, 7674−7688.
7. **Huizhen Zheng**#, Zonglin Gu#, Yanxia Pan, Jie Chen, Qianqian Xie, Shujuan Xu, Meng Gao, Xiaoming Cai, Shengtang Liu, Weili Wang, Wei Li, Xi Liu, Zaixing Yang\*, Ruhong Zhou, Ruibin Li\*, Biotransformation of rare earth oxide nanoparticles eliciting microbiota imbalance. **Particle and Fibre Toxicology**, **2021,** 18:14.
8. **Huizhen Zheng**, Jun Jiang, Shujuan Xu, Wei Liu, Qianqian Xie, Xiaoming Cai, Jie Zhang, Sijin Liu, Ruibin Li\*, Nanoparticle-induced ferroptosis: detection methods, mechanisms and applications. **Nanoscale**, 2021, 13:2266-2285.
9. **Huizhen Zheng**#, Zhaoxia Ji#, Kevin R Roy, Meng Gao, Yanxia Pan, Xiaoming Cai, Liming Wang, Wei Li, Chong Hyun Chang, Chitrada Kaweeteerawat, Chunying Chen, Tian Xia, Yuliang Zhao, Ruibin Li \*, Engineered graphene oxide nanocomposite capable of preventing the evolution of antimicrobial resistance. **ACS Nano**, 2019, 3: 11488-11499.
10. Ronglin Ma#, **Huizhen Zheng**#, Qi Liu, Di Wu, Wei Li, Shujuan Xu, Xiaoming Cai, Ruibin Li\*. Exploring the interactions between engineered nanomaterials and immune cells at 3D nano-bio interfaces to discover potent nano-adjuvants. **Nanomedicine: Nanotechnology, Biology, and Medicine**, 2019, 21:102037
11. **Huizhen Zheng**, Ronglin Ma, Meng Gao, Xin Tian, Yong-Qiang Li, Lingwen Zeng\*, Ruibin Li\*, Antibacterial applications of graphene oxides: structure-activity relationships, molecular initiating events and biosafety. **Science Bulletin**, 2018, 63 (2): 133-142.
12. **Huizhen Zheng**#, Meng Gao#, Ying Ren, Ruyun Lou, Hongguo Xie, Weiting Yu\*, Xiudong Liu\*, Xiaojun Ma. An improved pH-responsive carrier based on EDTA-Ca-alginate for oral delivery of Lactobacillus rhamnosus ATCC 53103. **Carbohydrate Polymers**, 2017, 155: 329-335.
13. **Huizhen Zheng**, Meng Gao, Ying Ren, Ruyun Lou, Hongguo Xie, Weiting Yu\*, Xiudong Liu\*, Xiaojun Ma. Controlling gel structure to modulate cell adhesion and spreading on the surface of microcapsules. **ACS Applied Materials & Interface**. 2016, 8, 19333−19342.

**授权专利及成果转化**

1. 郑心怡; 郑会珍; 卢宇昊；一种持续产氢生物微球及其制备方法与应用，2022-11-25, 中国ZL 2022 1 1493036.9 (发明专利)
2. 李瑞宾; 陈骁; **郑会珍**; 生物组织活细胞分离器, 2019-12-13, 中国, ZL201920276309.1 (实用新型)
3. 马小军; **郑会珍**; 于炜婷; 谢红国; 王锋; 任英; 一种湿态原位表征水凝胶微球表面形貌的方法, 2015-07-24, 中国, ZL201510442600.8 (发明专利)
4. 马小军; **郑会珍;** 于炜婷; 王秀丽; 宋益哲; 高梦; 刘晓岑; 一种移植用水凝胶微球的体外筛选方法, 2015-7-24, 中国, ZL201510442762.1 (发明专利)
5. 生物组织活细胞分离器, 技术转让, 2021年9月实现第三代产品研发

**教育教学**

1. 培养4名研究生，3名硕士研究生（已毕业2名），1名博士研究生；
2. 参与本科生通识选修课，《3D打印——让梦想照进现实》，8-12课时/学期

**奖励荣誉**

* 2023年获得放射医学与辐射防护学院“Rad-X”优秀青年教师奖
* 2023年指导本科生“互联网+”大赛，获医学院一等奖、校三等奖
* 2023年指导本科生“挑战杯”，获医学院三等奖
* 2022年指导本科生研项目，获批大学生创新创业训练项目
* 2022年指导本科生科研项目，获批“莙政基金”项目