

## 个人简介

倪天军，男，1980年10月出生，博士，教授，博士研究生导师、毕业于河南师范大学环境科学方向。主要从事纳米材料在医学和环境中的应用，方向为分子识别探针与化学生物传感，环境持久污染物的降解和评价。河南省杰出青年基金获得者、河南省教育厅学术带头人、河南省高校青年骨干教师、河南省康复医学会智能装备与产品转化分会副主任委员、新乡市生物催化与传感工程技术研究中心主任、新乡市优秀专家。主持国家自然科学基金项目4项，主持省级和市厅级科研课题3项；已在国内外发表研究论文50余篇；申请国家发明专利12项，已授权发明专利7项；获河南省科技进步二等2项；出版学术专著1部。



## 联系方式

新乡医学院北校区勤政楼505房间  
电话：0373-3831088  
E-mail: tjni@xxmu.edu.cn

## 研究方向

- ✓ 分子识别探针与化学生物传感
- ✓ 环境持久污染物的降解和评价

## 招生方向

- ✓ 学术学位硕士（学硕）：药物化学
- ✓ 专业学位硕士（专硕）：药物研发与转化

## 教育经历

- ✓ 2014/09 - 2021/06 河南师范大学，环境科学，博士研究生，工学博士
- ✓ 2007/09 - 2010/06 上海大学，无机化学，硕士研究生，理学硕士
- ✓ 1999/09 - 2003/06 河南大学，化学，本科，理学学士

## 工作经历

- ✓ 2003/07-2007/08 新乡医学院，基础医学院，助教
- ✓ 2010/07-2016/05 新乡医学院，基础医学院，讲师
- ✓ 2016/06-2023/11 新乡医学院，基础医学院，副教授
- ✓ 2023/12-至今 新乡医学院，基础医学院，教授

## 承担项目

- ✓ 国家自然科学基金面上项目, 52470199, 生物炭基持久性自由基对氧化-还原协同去除 EfOM 的强化作用及机制研究, 2025/01-2028/12, 48 万元, 在研, 主持;
- ✓ 国家自然科学基金面上项目, 22276159, 基于 3D-COFs/M 光-热-金属协同增效活化 PMS 体系的构建及其降解抗生素的效能与机理研究, 2023/01-2026/12, 54 万元, 在研, 主持;
- ✓ 国家自然科学基金专项项目, J2224005, 区域创新发展联合基金项目绩效评估及评估结果应用研究, 2023/01-2023/12, 28 万元, 已结题, 主持;
- ✓ 国家自然科学基金青年项目, 81401470, 以双核铜、锌配合物为靶向的多模式探针的设计合成及其对前列腺癌的成像检测研究, 2015/01-2017/12, 23 万元, 已结题, 主持;
- ✓ 河南省杰出青年科学基金项目, 252300421014, 光电协同介导多通道催化复合污染物深度净化及机理研究, 河南省科技厅, 2025/01-2027/12, 50 万元, 在研, 主持;
- ✓ 河南省自然科学基金面上项目, 202300410327, 新型双模式成像/协同治疗的纳米载体构建及其对胰腺癌诊疗一体化研究, 河南省科技厅, 2020/01-2021/12, 10 万元, 已结题, 主持;
- ✓ 河南省教育厅基础研究专项, 24ZX009, 新型气体传感器阵列的可控制备及其增敏检测肺癌呼出气体 VOCs 的研究, 2024-01 至 2026-12, 30 万, 在研, 主持;
- ✓ 国家级大学生创新创业项目, 202310472037, 基于纸基微流控芯片与智能检测系统快速检测水中喹诺酮类抗生素, 2023-06 至 2025-06, 1 万, 在研, 指导教师;
- ✓ 国家级大学生创新创业项目, 202410472042, 金属氧化物半导体气体传感器检测呼出气体丙酮在 I 型糖尿病中的应用, 2024.6.15-2025.6.15, 1 万, 在研, 指导教师。

## 代表性论文

- ✓ Dong Liu\*, Minghui Chen, Tianqi Niu, Roujie Ma, Congyue Zhao, Jianing Qian, Xiaozhou Xie, Likun Pan\*, Weidong Wu, **Tianjun Ni\***, Three-dimensional crosslinked structure assembled by novel elemental iodine doped Nb<sub>2</sub>O<sub>5</sub> ultrathin nanosheets for exceptional visible-light photocatalytic performance, *Chemical Engineering Journal*, 2024, 493, 152625.
- ✓ Dong Liu, Chunling Li, Jiayu Ge, Congyue Zhao, Likun Pan\*, Fengquan Zhang, **Tianjun Ni\***, Facile in situ synthesis of three-dimensional hollow porous carbon doped polymeric carbon nitride with highly efficient photocatalytic performance and mechanism insight, *Chemical Engineering Journal*, 2022, 438, 135623.
- ✓ Jingge Du, Na Zhang, Shuanglong Ma\*, Guansong Wang, Chang Ma, Guangyong Liu, Yan Wang\*, Jingzhen Wang, **Tianjun Ni\***, Zhen An, Weidong Wu, Visible light-driven C/O-g-C<sub>3</sub>N<sub>4</sub> activating peroxydisulfate to effectively inactivate antibiotic resistant bacteria and inhibit the transformation of antibiotic resistance genes: Insights on the mechanism, *Journal of Hazardous Materials*, 2024, 464, 132972.
- ✓ Keheng Zhu, Zhenhua Zhu, Shanshan Xu, Cheng Zhao\*, **Tianjun Ni\***, Controlled synthesis of  $\alpha$ -Fe<sub>2</sub>O<sub>3</sub> nanocubes for gas-sensing applications: Feasibility of assessing crucian carp (*Carassius auratus*) freshness via trimethylamine levels, *Food Chemistry*, 2024, 441, 138361.
- ✓ Xiangrong Li\*, Ruonan Xu, Li Shi, **Tianjun Ni\***, Design of flavonol-loaded cationic gold nanoparticles with enhanced antioxidant and antibacterial activities and their interaction with proteins, *International Journal of Biological Macromolecules*, 2023, 253, Part 4, 127074.
- ✓ Dong Liu\*, Congyue Zhao, Chunling Li, Jiaojiao Jia, Minghui Chen, Likun Pan\*, Yichun Bai, Weidong Wu, **Tianjun Ni\***, Facile fabrication of 3D hollow porous aminopyridine rings decorated polymeric carbon nitride for enhanced photocatalytic hydrogen evolution and dye elimination, *Journal of Colloid and Interface Science*, 2023, 649, 334-343.

- ✓ **Tianjun Ni\***, Zhibin Yang, Hui Zhang, Liping Zhou, Wei Guo, Likun Pan\*, Zhijun Yang, Kaiwen Chang, Chunpo Ge, Dong Liu\*, Peroxymonosulfate activation by  $\text{Co}_3\text{O}_4/\text{SnO}_2$  for efficient degradation of ofloxacin under visible light, *Journal of Colloid and Interface Science*, 2022, 615, 650-662.
- ✓ **Tianjun Ni**, Hui Zhang, Zhibin Yang, Liping Zhou, Likun Pan\*, Chunling Li, Zhijun Yang\*, Dong Liu\*, Enhanced adsorption and catalytic degradation of antibiotics by porous 0D/3D  $\text{Co}_3\text{O}_4/\text{g-C}_3\text{N}_4$  activated peroxydisulfate: An experimental and mechanistic study, *Journal of Colloid and Interface Science*, 2022, 625, 466-478.
- ✓ Hui Zhang, Liping Zhou, Zhonghu Dong, Yanyu Wang, Zhijun Yang, Kaiwen Chang, Chunpo Ge, Dong Liu\*, Haijin Liu, Likun Pan\*, **Tianjun Ni\***, Integrating bimetallic nanoclusters onto a porous  $\text{g-C}_3\text{N}_4$  support for efficient degradation of metronidazole: Performance and mechanism study, *Separation and Purification Technology*, 2024, 330, Part A, 125239.
- ✓ Congyue Zhao, Chunling Li, Minghui Chen, Tianqi Niu, Qian Zhao, **Tianjun Ni\***, Dong Yan, Weidong Wu, Dong Liu\*, Effective removal of antineoplastic doxorubicin by 0D  $\text{Nb}_2\text{O}_5$  quantum dots embed 3D porous C-doped  $\text{g-C}_3\text{N}_4$ : Degradation mechanism, pathway and toxicity assessment, *Applied Surface Science*, 2023, 612, 155861.
- ✓ Dong Liu, Chunling Li, Jiayu Ge, Congyue Zhao, Qian Zhao\*, Fengquan Zhang, **Tianjun Ni\***, Weidong Wu, 3D interconnected  $\text{g-C}_3\text{N}_4$  hybridized with 2D  $\text{Ti}_3\text{C}_2$  MXene nanosheets for enhancing visible light photocatalytic hydrogen evolution and dye contaminant elimination, *Applied Surface Science*, 2022, 579, 152180.
- ✓ **Tianjun Ni**, Zhibin Yang, Hui Zhang, Liping Zhou, Wei Guo, Dong Liu\*, Kaiwen Chang, Chunpo Ge, Zhijun Yang\*, Visible light assisted peroxydisulfate activation by  $\text{NiO}/\text{SnO}_2$  composite, *Applied Surface Science*, 2022, 604, 154537.
- ✓ **Tianjun Ni**, Zhonghu Dong, Kejie Xi, Yijia Lu, Kaiwen Chang, Chunpo Ge, Dong Liu, Zhijun Yang\*, Haijie Cai\*, Yongheng Zhu\*, Nitrogen-Doped Carbon Quantum Dots Activated Dandelion-Like Hierarchical  $\text{WO}_3$  for Highly Sensitive and Selective MEMS Sensors in Diabetes Detection, *ACS Sens.* 2025, 10, 699–708.
- ✓ Xun Liu, Jingting Han, Xiaopeng Qiao, Haijie Cai, Yong Zhao, Zhaohuan Zhang, Baiqiang Zhai, **Tianjun Ni\***, Cheng Zhao\*, Yongheng Zhu\*. Bimetallic Au and Pd Nanoparticles Modified  $\text{WO}_3$  Nanosheets for Enhancing the Sensitivity and Selectivity of Formaldehyde Assessment in Aquatic Products. *ACS Appl Mater Interfaces*.
- ✓ Zhibin Yang, Hui Zhang, Liping Zhou, Zhonghu Dong, Yanyu Wang, Dong Liu\*, **Tianjun Ni\***, Enhanced activation performance of peroxydisulfate by  $\text{NiCo}_2\text{O}_4/\text{SnO}_2$  composite for metronidazole degradation under visible light, *Journal of Alloys and Compounds*, 2023, 949, 169879.
- ✓ Xiangrong Li, Ruonan Xu, **Tianjun Ni\***, Effects of B-ring structures on binding behavior of flavonols with proteins: Experimental and molecular docking approaches, *Journal of Molecular Structure*, 2023, 1287, 135614.
- ✓ Yongheng Zhu, Xuhua Dong, Jinsheng Cheng, Lumin Wang, Cheng Zhao, Yonghui Deng, Siqi Xie, Yingjie Pan, Yong Zhao\*, Gengzhi Sun\*, **Tianjun Ni\***, Ultra-thin  $\text{CoAl}$  layered double hydroxide nanosheets for the construction of highly sensitive and selective QCM humidity sensor, *Chinese Chemical Letters*, 2022, 34, 107930.
- ✓ Xiangrong Li\*, Ruonan Xu, Zeqing Cheng, Zhizhi Song, Ziyang Wang, Hanxiao Duan, Xinzhe Wu, **Tianjun Ni\***. Comparative study on the interaction between flavonoids with different core structures and hyaluronidase, *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*, 2021, 262, 120079.

## 已授权发明专利

- ✓ **倪天军**, 李钱生, 刘冬, 齐巧芳, 常开文, 闫云辉, 杨志军, 汪应灵, 一种 N,Cu-CDs/m-WO<sub>3</sub> 介孔复合材料及其制备方法和应用, 中国知识产权局, 发明专利, ZL 2020 1 1248169.0
- ✓ **倪天军**, 李钱生, 齐巧芳, 闫瑞芳, 常开文, 闫云辉, 汪应灵, 杨志军, 一种超分子配合物及其制备方法和应用, 中国知识产权局, 发明专利, ZL 2020 1 1314770.5
- ✓ **倪天军**, 刘海津, 杨质斌, 彭建彪, 刘冬, 袁鹏, 闫云辉, 杜锦阁, 汪应灵, 一种钴酸镍/氧化锡复合催化剂及其制备方法和应用, 中国知识产权局, 发明专利, ZL 2023 1 0080146.0

## 成果奖励

- ✓ **倪天军**(2/9), 高等真菌次生代谢产物炭球菌素及类似物全合成方法的建立及活性, 河南省人民政府, 省科技进步二等奖, 2020-J-115-R02/09 (房立真; 倪天军; 武利强; 孙彭利; 户晓兢; 黄锋; 白素平; 梁会娟; 路趁娟);
- ✓ **倪天军**(3/10), 重组蛋白含 MAR 高效载体分子组装优化及其应用, 河南省人民政府, 省科技进步二等奖, 2019-J-108-R03/10 (王天云; 贾岩龙; 倪天军; 郭潇; 王小引; 林艳; 王芳; 潘若文; 马超援; 蒋涛华);
- ✓ 李钱生 (研究生), 获新乡医学院优秀硕士学位论文 (2021 年);
- ✓ 张慧 (研究生), 获国家奖学金 (2022 年);
- ✓ 武一帆等 (本科生), 获河南省大学生创新大赛暨中国国际大学生创新大赛河南赛区选拔赛一等奖 (2024 年);
- ✓ 武一帆等 (本科生), 获挑战杯河南省大学生创业计划竞赛金奖 (2024 年)。