

个人简历

姓名: 张扬
籍贯: 重庆万州
政治面貌: 中共党员
电话: 15696559551

民族: 汉族
出生年月: 1998.12
学历: 硕士
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教育背景

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|-----------------|--------|------|-----------------|
| 2018.09-2022.06 | 衡阳师范学院 | 化学 | 学士(班级排名:5, 10%) |
| 2022.09-2025.06 | 武汉工程大学 | 无机化学 | 硕士(年级排名:8, 5%) |

研究方向: 环境功能材料靶向设计与物质分离

主修课程: 高等无机化学、配位化学、结构化学、高分子材料设计与运用、有机化学、分析化学、物理化学等。



科研经历

学校项目经历

2022.09-2025.09 煤系战略性金属矿产协同分离回收理论与技术(2021YFC2902604) 国家自然科学基金

个人贡献: 采用离子印记技术制备多种高选择性功能吸附材料。采用多种表征手段的分析材料形貌结构及理化性质。探究吸附材料对复杂浸出液中锆及共存离子吸附亲和力规律。化学表征结合理论计算揭示锆的选择性吸附分离机制。

2024.06-2024.10 含铁冶金废水处理与有价值元素回收技术开发 北京神舟茂华环保科技有限公司

个人贡献: 针对含高浓度氯酸盐铁冶金废水, 使用成本低易获取的原料, 采用沉淀法分离回收废液中的战略金属。采用批量实验, 探究最佳沉淀条件。此外, 设计保留废液中其他可利用离子。最终达到成本低, 高效环保的目的。

科创项目经历:

2019.12-2020.12 壳聚糖-层状双金属氧化物基杂化复合材料的制备及其吸附性能研究(学术科技作品竞赛校重点) 负责人

2019.04-2021.04 合成不同比例阳离子的新型磁性功能黏土材料及其对水体中 PO_4^{3-} 的吸附性能研究(大创) 参与

2018.12-2019.12 钙镍铝水滑石对废水 Cr(VI) 的吸附性能研究(学术科技作品竞赛 校重点) 参与

发表论文

Wu Hanjun(导师), Zhang Yang, et al. Selective capture of germanium from water by a hydrotalcite-based ion-imprinted polymer:

Performance and mechanism. *ACS Applied Polymer Materials*, 2024. DOI: 10.1021/acsapm.4c01489 (中科院二区)

Zhang Yang, Wu Hanjun*, et al. Preparation and adsorption behavior for Mn(II) and naphthol green B by adipate modified Ca Al hydrotalcite. *Environmental Research*. (Under review, 中科院二区)

Zhang Yang, Wu Hanjun*, et al. Defect-rich MOFs-based ion-imprinted polymers for efficient and selective recovery of Ge(IV): Adsorption properties and DFT calculations. *Chemical Engineering Journal*. (Major revision, 中科院一区)



技能荣誉

技能证书: 普通话二级乙等、CET4、高级中学教师资格证(化学)、全国计算机等级考试二级合格证书。

专业能力: 熟练操作分析 SEM、FTIR、UV-Vis、Zeta、XPS、XRD 等化学分析仪器, 熟练掌握 Origin、Jade、Chemdraw、Avantage 等专业软件, 掌握 Materials Studio、3ds Max 等计算和绘图软件。

所获荣誉: 国家励志奖学金; 一等学业奖学金; 优秀共青团员(团干); 互联网+ 省级三等奖, 大创项目 “优” 等。



校园经历

学术会议: 2023.08.19-08.20 国家级 2023 年武汉矿冶与材料绿色低碳发展学术大会 (口头报告)

2023.10.27-10.29 省级 湖北省化学化工学会第四届应用化学年会 (会议论文)

学生工作: 2022.09-2025.06 团支部书记; 2022.11-2024.11 党支部纪检委员



自我评价

科研能力: 思路清晰, 逻辑能力强, 具有高效完成检索文献、整理文献的能力。具有丰富的撰写项目申请经历。能够独立设计课题, 开展实验, 整理分析实验数据。书写实验报告和完成论文写作。

专业能力: 具备自律和自信的品质, 具有良好的合作性和可调节性。愿意学习新事物, 自我激励能力强, 不断提升自己的知识和技能。可同时进行多个项目, 能够高效地管理时间和资源, 确保任务的顺利完成。

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Education

2018.09-2022.06

Hengyang Normal University

Chemistry

Bachelor Degree(**Class Rank:5, 10%**)

2022.09-2025.06

Wuhan Institute of Technology

Inorganic chemistry

Master's Degree(**Grade Rank:8, 5%**)

Research direction: Targeted design and material separation of environmental functional materials

Major courses: Advanced Inorganic Chemistry, Coordination Chemistry, Structural Chemistry, Polymer Material Design and Application, Organic Chemistry, Analytical Chemistry, Physical Chemistry, etc.



Research Experience

➤ School project experience

2022.09-2025.09: Participated in the project supported by the national natural science foundation of China " **Theory and Technology of Collaborative Separation and Recovery of Strategic Metal Minerals in Coal Measures**"

2024.06-2024.10: Participated in the horizontal project "**Development of Iron containing Metallurgical Wastewater Treatment and Valuable Element Recovery Technology**" of Beijing Shenzhou Maohua Environmental Protection Technology Co., Ltd

➤ Experience in Science and Technology Innovation Projects:

2019.12-2020.12: Responsible for the key project of academic and technological works competition, "**Preparation and Adsorption Properties of Chitosan Layered Bimetallic Oxide Hybrid Composite Materials**".

2019.04-2021.04: Participated in the College Student Innovation and Entrepreneurship Training Program project "**Synthesis of New Magnetic Functional Clay Materials with Different Proportions of Cations and Study on Their Adsorption Properties for PO₄³⁻ in Water**".

2018.12-2019.12: Participate in the academic and technological work competition project "**Study on the adsorption performance of calcium nickel aluminum hydrotalcite on Cr (VI) in wastewater**".

➤ Research results

Wu Hanjun(mentor), **Zhang Yang**, et al. Selective capture of germanium from water by a hydrotalcite-based ion-imprinted polymer: Performance and mechanism. **ACS Applied Polymer Materials**, 2024. DOI: 10.1021/acsapm.4c01489 (SCI 1st)

Zhang Yang, Wu Hanjun*, et al. Preparation and adsorption behavior for Mn(II) and naphthol green B by adipate modified Ca Al hydrotalcite. **Environmental Research**. (Under review, SCI 2st)

Zhang Yang, Wu Hanjun*, et al. Defect-rich MOFs-based ion-imprinted polymers for efficient and selective recovery of Ge(IV): Adsorption properties and DFT calculations. **Chemical Engineering Journal**. (Major revision, SCI 1st)



Skills and Certificates

Skills certificate: CET4, Senior High School Teacher Qualification Certificate (Chemistry), Computer Level 2.

Professional skills: SEM, FTIR, UV Vis, Zeta, XPS, XRD, Origin, Jade, Chemdraw, Avantage, MS and 3ds Max, etc.

Honors received: **National Inspirational Scholarship; First class academic scholarship; Excellent Communist Youth League member; The third prize** of Internet plus at the provincial level, the "**excellent**" innovation project, etc..



Campus Experience

Academic conferences: Wuhan Mining, Metallurgy and Materials Green and Low Carbon Development Academic Conference
The 4th Annual Conference of Applied Chemistry of Hubei Chemical Society

Students work: **Youth League Branch Secretary; Party Branch Discipline Inspection Committee**



Self Assessment

Research ability: Ability to efficiently search and organize literature. Capable of independently applying for projects, designing research topics and conducting experiments, writing experimental reports, and completing thesis writing.

Professional competence: Self-disciplined and self-confident; Co-operative and adjustable in nature; Willing to learn new things; Strongly self-motivated; Multiple projects at the same time;