

姓名：吴晓莉

职称：直聘研究员，硕士生导师

院系：郑州大学河南先进技术研究院

邮箱：xiaoliwu@zzu.edu.cn



一、教育经历

2017.09-2021.07 郑州大学 化工学院 化学工艺专业 博士

二、工作经历

2021.12-今 郑州大学 河南先进技术研究院 直聘研究员

三、研究方向

主要研究方向为纳滤膜材料的设计制备及其应用基础研究，包含膜纳米通道 微结构调控与溶剂分子传递特性强化、限域纳米通道溶剂分子传递机理、膜表面 溶剂分子入孔行为规律、溶剂分子跨膜传递协同机制等。以第一及通讯作者（含 共同）在 *Angewandte Chemie International Edition*、*Journal of Membrane Science*、*Journal of Materials Chemistry A* 等期刊发表 SCI 论文 10 余篇。

四、代表性论文

1. **Xiaoli Wu**, Xulin Cui, Wenjia Wu, Jingtao Wang*, Yifan Li and Zhongyi Jiang*. Elucidating the ultrafast molecular permeation through well-defined 2D nanochannels of lamellar membranes. *Angewandte Chemie International Edition*, **2019**, 58, 18524.
2. **Xiaoli Wu**, Xulin Cui, Qi Wang, Jingtao Wang*, Wenjia Wu, Wenpeng Li and Zhongyi Jiang. Manipulating the cross-layer channels in g-C₃N₄ nanosheet membranes for enhanced molecular transport, *Journal of Materials Chemistry A*, **2021**, 9, 4193.
3. **Xiaoli Wu**, Guoli Zhou, Xulin Cui, Yifan Li, Jingtao Wang*, Xingzhong Cao, Peng Zhang. Nanoparticle-assembled thin film with amphipathic nanopores for organic solvent nanofiltration, *ACS Applied Materials & Interfaces*, **2019**, 11, 17804-17813.
4. **Xiaoli Wu**, Yifan Li, Xulin Cui, Jingtao Wang*, Xingzhong Cao, Peng Zhang, Lingyun Zheng.

Adsorption-assisted interfacial polymerization toward ultrathin active layers for ultrafast organic permeation, *ACS Applied Materials & Interfaces*, **2018**, 10, 10445-10453.

5. **Xiaoli Wu**, Lan Hao, Jiakui Zhang, Xiang Zhang, Jingtao Wang, Jindun Liu. Polymer-Ti₃C₂Tx composite membranes to overcome the trade-off in solvent resistant nanofiltration for alcohol-based system, *Journal of Membrane Science*, **2016**, 515, 175-188.

6. **Xiaoli Wu**, Shiyuan Liu, Xulin Cui, Jianlong Lin, Haoqin Zhang, Jie Zhang, Jingtao Wang*. Manipulating microenvironments of nanochannels in lamellar membranes by quantum dots for highly enhanced nanofiltration performance. *Chemical Engineering Science*, **2020**, 228, 116001.

7. **Xiaoli Wu**, Yihao Chen, Wenpeng Li*, Chongchong Chen, Jie Zhang, Jingtao Wang. Heterostructured membranes with selective solvent-capture coatings and lowresistance 2D nanochannels for efficient mixed solvent separation. *Separation and Purification Technology*, **2022**, 283, 120217.

8. Shiyuan Liu, Wenpeng Li*, Chongchong Chen, Jingjing Chen, **Xiaoli Wu***, Jingtao Wang. Ultrathin cyclodextrin nanofilm composite membranes for efficient separation of xylene isomers. *Journal of Membrane Science*. **2022**, 644, 120165.

9. Jingjing Chen, **Xiaoli Wu***, Chongchong Chen, Yihao Chen, Wenpeng Li*, Jingtao Wang. Secondary-assembled defect-free MOF membrane via triple-needle electrostatic atomization for highly stable and selective organics permeation. *Journal of Membrane Science*. **2022**, 648, 120382.

五、主持科研项目

1、中国博士后科学基金站前特别资助：高通量层状膜结构调控与分子溶解过程 规律研究，2022TQ0292, 主持

2、科技部重点研发-子课题：自具孔聚合物膜材料的长期应用稳定性研究, 主持

六、指导本科生学科、大创及论文获奖

1、河南省教育厅科技成果奖一等奖 1 项（排名第三）

2、“陶氏杯”全国“互联网+化学反应工程”课模设计大赛二等奖（指导老师）