葛亮 教授

<https://membrane.ustc.edu.cn/2022/0117/c30196a544209/page.htm>

中国科大化学与材料科学学院应用化学系

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简要介绍

葛亮，国家优秀青年科学基金获得者，国家重点研发计划项目首席科学家。2008年于安徽大学获学士学位，2011年于福州大学获硕士学位，2014年于中国科学技术大学获博士学位，2017年博士后出站后留校工作至今。目前为中国科学技术大学应用化学系教授，博士生导师。研究方向为离子选择性分离膜，相关研究成果在J Am Chem Soc、Adv Mater、Adv Funct Mater、J Membrane Sci、Chem Eng J、Ind Eng Chem Res等期刊发表SCI论文90余篇，SCI他引3800次，H-因子36；获授权发明专利15件；先后承担国家重点研发计划、基金委优青/面上/青年、安徽省重点研发计划等10余项科研项目。担任Membranes期刊编委、Result in Engineering期刊青年编辑。

教育经历

2011年9月-2014年6月, 中国科学技术大学，化学系，博士

2008年9月-2011年6月，福州大学，高分子化学与物理，硕士

2004年9月-2008年6月，安徽大学，高分子材料与工程，本科

研究经历

2023年1月-至今，中国科学技术大学，特任教授

2017年6月-2022年12月，中国科学技术大学，特任副研究员

2014年6月-2017年5月，中国科学技术大学，博士后

获奖及荣誉

2022年获国家自然科学基金优青

2020年获中国石油与化学工业联合会创新团队奖（核心成员）

研究方向

聚合物基离子选择性分离膜的结构设计与调控；多孔有机聚合物分离膜的精密构筑；（亚）纳米尺度限域空间内的传质行为与分离机制；膜过程应用研究。包括：

（1） 离子选择性分离膜

（2） 特种分离膜（同位素分离、稀土元素分离、海水提铀等）

（3） 限域传质与分离机制（计算模拟）

（4） 膜过程应用研究（不限应用领域）

代表性工作

(1) Yanran Zhu, Qian Chen, Yue Zhou, Xinya Li\*, Liang Ge\*, Tongwen Xu\*, Cation Exchange Membranes with Bi-Functional Sites Induced Synergistic Hydrophilic Networks for Selective Proton Transport. Adv. Funct. Mater., 2023, 2215109.

(2) Hongxin Yang#, Noor Ul Afsar#, Qian Chen, Xiaolin Ge, Xingya Li, Liang Ge\*, Tongwen Xu\*, Poly(alkyl-biphenyl pyridinium) anion exchange membranes with a hydrophobic side chain for mono-/divalent anion separation, Ind. Chem. Mater., 2023, 1, 129-139.

(3) Tingting Xu#, Bin Wu#, Linxiao Hou#, Yanran Zhu, Fangmeng Sheng,Zhang Zhao, Yun Dong, Jiandang Liu, Bangjiao Ye, Xingya Li\*, Liang Ge\*, Huanting Wang, Tongwen Xu\*, Highly ion-permselective porous organic cage membranes with hierarchical channels. J. Am. Chem. Soc.,2022, 144, 23, 10220-10229.

(4) Zhang Zhao, Xingya Li, Hao Zhang, Fangmeng Sheng, Tingting Xu, Yanran Zhu, Huacheng Zhang, Liang Ge\*, Tongwen Xu\*, Polyamide-based electronanofiltration membranes for efficient anion separation, Ind. Eng. Chem. Res.,2022, 61, 27, 9869-9878.

(5) Fangmeng Sheng, Xingya Li\*, Yuanyuan Li, Noor Ul Afsar, Zhang Zhao, Liang Ge\*, Tongwen Xu\*, Cationic covalent organic framework membranes for efficient dye/salt separation, J. Membrane Sci., 2022, 644, 120118.

Ge Liang

Professor

Affiliation: Department of Applied Chemistry of the School of Chemistry and Materials Science of the University of Science and Technology of China

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Brief Introduction

Ge Liang is a recipient of the National Excellent Young Scientists Fund Project and a chief scientist of the National Key Research and Development Program of China. He obtained a bachelor's degree from Anhui University in 2008, a master's degree from Fuzhou University in 2011, and a Ph.D. from the University of Science and Technology of China (USTC) in 2014. After completing his postdoctoral research in 2017, he continued to work at USTC, where he is currently a professor in the Department of Applied Chemistry and a doctoral supervisor. His research focuses on ion-selective separation membranes. He has published over 90 SCI papers about his significant research findings in journals such as J Am Chem Soc, Adv Mater, Adv Funct Mater, J Membrane Sci, Chem Eng J, and Ind Eng Chem Res, with 3,800 SCI citations and an H-index of 36. He holds 15 authorized invention patents. He has undertaken more than 10 scientific research projects, including those from the National Key Research and Development Program of China, the Excellent Young Scientists Fund Project, General Project, and Youth Science Fund Project of the National Natural Science Foundation of China, and the Anhui Provincial Key Research and Development Program. He serves as an editorial board member for Membranes and a youth editor for Result in Engineering.

Educational Background

2011.09-2014.06: Ph.D. from the Department of Chemistry of the University of Science and Technology of China

2008.09-2011.06: Master's Degree in Polymer Chemistry and Physics of Fuzhou University

2004.09-2008.06: Bachelor's Degree in Polymer Materials and Engineering of Anhui University

Research Experience:

January 2023 - Present: Special-term Professor of the University of Science and Technology of China

June 2017 - December 2022: Special-term Associate Research Fellow of the University of Science and Technology of China

June 2014 - May 2017: Postdoctoral Researcher of the University of Science and Technology of China

Awards and Honors:

In 2022: Excellent Young Scientists Fund Project of the National Natural Science Foundation of China

In 2020: Innovation Team Award of China Petroleum and Chemical Industry Federation (as a core member)

Research Directions:

Structural design and regulation of polymer-based ion-selective separation membranes

Precision construction of porous organic polymer separation membranes

Mass transfer behavior and separation mechanisms in (sub)nanometer-scale confined spaces

Application research on membrane processes, including:

(1) Ion-selective separation membranes

(2) Special separation membranes (isotope separation, rare earth element separation, uranium extraction from seawater, etc.)

(3) Confined mass transfer and separation mechanisms (computational simulation)

(4) Application research on membrane processes (across various fields)

Representative Works:

(1) Yanran Zhu, Qian Chen, Yue Zhou, Xinya Li\*, Liang Ge\*, Tongwen Xu\*, Cation Exchange Membranes with Bi-Functional Sites Induced Synergistic Hydrophilic Networks for Selective Proton Transport. Adv. Funct. Mater., 2023, 2215109.

(2) Hongxin Yang#, Noor Ul Afsar#, Qian Chen, Xiaolin Ge, Xingya Li, Liang Ge\*, Tongwen Xu\*, Poly(alkyl-biphenyl pyridinium) anion exchange membranes with a hydrophobic side chain for mono-/divalent anion separation, Ind. Chem. Mater., 2023, 1, 129-139.

(3) Tingting Xu#, Bin Wu#, Linxiao Hou#, Yanran Zhu, Fangmeng Sheng, Zhang Zhao, Yun Dong, Jiandang Liu, Bangjiao Ye, Xingya Li\*, Liang Ge\*, Huanting Wang, Tongwen Xu\*, Highly ion-permselective porous organic cage membranes with hierarchical channels. J. Am. Chem. Soc.,2022, 144, 23, 10220-10229.

(4) Zhang Zhao, Xingya Li, Hao Zhang, Fangmeng Sheng, Tingting Xu, Yanran Zhu, Huacheng Zhang, Liang Ge\*, Tongwen Xu\*, Polyamide-based electronanofiltration membranes for efficient anion separation, Ind. Eng. Chem. Res.,2022, 61, 27, 9869-9878.

(5) Fangmeng Sheng, Xingya Li\*, Yuanyuan Li, Noor Ul Afsar, Zhang Zhao, Liang Ge\*, Tongwen Xu\*, Cationic covalent organic framework membranes for efficient dye/salt separation, J. Membrane Sci., 2022, 644, 120118.