

# Zhongren Jiao

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Room 422, 17 Hillhouse Ave., New Haven, CT 06511

Department of Chemical and Environmental Engineering, Yale University

## EDUCATION

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**Yale University, New Haven, CT** 08/2022 – present

Ph.D. Student in Chemical and Environmental Engineering

- GPA: 4.00/4.00

**University of Science and Technology of China, Hefei, China** 09/2018 – 07/2022

B.S. in Material Chemistry

- GPA: 3.77/4.30

## RESEARCH EXPERIENCE

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**Graduate Research Assistant**, Yale University 08/2022 – present

Department of Chemical and Environmental Engineering

*Advisors:* Prof. Mingjiang Zhong and Prof. Menachem Elimelech

- Synthesis of functional bottlebrush polymers for gypsum antiscaling
- Investigation of gypsum antiscaling mechanisms based on bottlebrush polymer antiscalants

**Visiting Undergraduate Researcher**, Edinburgh University 07/2021 – 11/2021

Department of Chemistry

*Advisor:* Prof. Neil McKeown

- Synthesis of rigid spiro monomers with bulky pendant groups for microporous polymers

**Undergraduate Researcher**, University of Science and Technology of China 03/2019 – 08/2022

College of Chemistry and Molecular Engineering

*Advisors:* Prof. Tongwen Xu and Prof. Zhengjin Yang

- Charged crosslinked framework membranes enabling fast charging flow battery
- Chiral resolution membranes based on chiral ligand exchange framework polymers

## AWARDS AND HONORS

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Lu Jiayi Merit Scholarship 07/2020

Silver, Excellent Undergraduate Scholarship 09/2019

Excellent Student Cadres 03/2019

## PUBLICATIONS (†equal contribution, \*corresponding author)

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1. Zuo, P.†; Ye, C.†; **Jiao, Z.**†; Luo, J.; Fang, J.; Schubert, U.; McKeown, N.; Liu, T.\*; Yang, Z.\*; Xu, T.\*, Near-frictionless ion transport from rigid nanoconfinement by triazine framework membranes. *Nature*, 2023, 617, 229-305.
2. Zhou, J.; **Jiao, Z.**; Zhu, Q.; Li, Y.; Ge, L.; Wu, L.; Yang, Z.\*; Xu, T.\*, Biselective microporous Tröger's base membrane for effective ion separation. *Journal of Membrane Science*, 2021, 627, 119246.