

Zeyu Wang

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EDUCATION

Columbia University	New York, NY
M.S. in Chemical Engineering	Sept 2022 - Expected Dec 2023
Fudan University	Shanghai, CN
B.S. in Chemistry	Aug 2018 - Jul 2022

RESEARCH EXPERIENCE

Research into Battery Recycling January. 2023- Now

Advisor: Professor Dan Steingart, Columbia University

- Selectively leached lithium from NMC811 and LFP with efficiency higher than 85%.
- Recycled and separated different metals from NMC811 through piranha digestion and solvent extraction at different pH.
- Analyzed the composition of the residues after NMC811 powder bromine leaching with SEM and XRD.

Research into Lithium Ion Battery Sept 2022 – Dec. 2022

Advisor: Professor Yuan Yang, Columbia University

- Designed and modified solid polymer electrolyte based on PVDF-HFP and PEGDA
- Applied different polymer formulation and increased the mechanical strength to a large extent.
- Explored different electrolyte composition to soak the solid polymer electrolyte film to improve conductivity.

Research into the photo induced living radical polymerization Feb 2020 - Jul 2022

Advisor: Professor Mao Chen, Fudan University

- Synthesized a variety of monomers, chain transfer agents and photocatalysts to synthesize polymers with outstanding electric performance with productivity more than 60%.
- Optimized reaction conditions of photo induced polymerization including temperature and adding rate and improved postprocessing with productivity rising from 30% to 70%.

PUBLICATION

Wang, Z.; Zhou, Y.; Chen, M., Computer-Aided Living Polymerization Conducted under Continuous-Flow Conditions. *Chinese Journal of Chemistry* **2021**.

ACTIVITIES

Leader of the Organization and Investigation Department of the Student Union in Chemistry Sept 2019 – Sept 2020

- Investigated students' and teachers' opinions and suggestions on situations regarding teaching buildings and laboratories.
- Rated as best departments reflecting students' suggestions.

Volunteering in the Academic Forum of Chemistry Nov 2019

- Took charge of the whole activity and worked on the communication with professors to give speeches.
- Organized students to share academic research experience and results.

SKILLS

- Experimental skills: Nuclear Magnetic Resonance; High Performance Liquid Chromatography; Gel Permeation Chromatography; Inductive Coupled Plasma Emission Spectrometer, Scanning electron microscope and Energy Dispersive Spectrometer; X-Ray diffraction.