

# Mingshuo (Mia) Wang

Tel: (+1) 2135959270 | Email: mswang32@outlook.com | LinkedIn: www.linkedin.com/in/mingshuo-wang-83a80125b

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## EDUCATION

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### University of Southern California

M.S. Petroleum Engineering & M.S. Engineering Management

May 2025

### Hunan University of Science and Technology

B.S. Chemical Engineering

July 2022

## PROJECT EXPERIENCE

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### USC GEM-Lab, Funded by ARPA-E Dr. Birendra Jha

Graduate Research Assistant

Sep – Dec 2024

- Involved in Advanced Research Projects Agency-Energy (ARPA-E) conducting multiscale characterization, transport, and mechanics for enhanced H<sub>2</sub> recovery and reservoir management.
- Established a 2D cylindrical porous model in COMSOL to simulate olivine serpentinization reactions under varying pressures and porosity, analyzing reaction kinetics and permeability changes.

### Simulation and Optimization of CO<sub>2</sub> Injection in Porous Media

Research Assistant

Jan – May 2023

- Developed and implemented a MATLAB-based simulation framework for geologic CO<sub>2</sub> storage, incorporating uncertainty-aware risk assessment, history-matching for model calibration, and optimization of injection strategies.
- Evaluated and mitigated leakage with R and fracturing risks through data-driven adjustments to well placement and injection rates, ensuring efficient long-term CO<sub>2</sub> sequestration (leakage rate <0.1%).

### National Undergraduate Chemical Engineering Design Competition

CAD Designer

Apr - Aug 2020

- Participated in the national competition focused on the design of a C5 alkane-based chemical plant.
- Designed pipeline workshop and plant layout drawings using AutoCAD, supporting layout optimization and safety.
- Project awarded National Second Prize for technical excellence and practical feasibility.

## WORK EXPERIENCE

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### KEM Power LLC, KEM Energy Inc.

Houston, TX, US

Solar Project Manager

Jun 2024 – May 2025

- Assisted in managing technical projects for client Sungrow, coordinating cross-functional teams (~50 members) and ensuring timely delivery.
- Acted as the key liaison to align project execution with client expectations.

Oil & Gas Sales & Marketing Intern

Jun – Sep 2023

- Liaised and consulted with oil companies, analyzing the value of oilfields to assess alignment with bidding requirements.
- Managed oil production technology, supporting KEM's cost-efficient development across 1,000+ wells in the U.S.

### Champion Asia Group

Ganzhou, China

Chemical Engineering Intern

Jun – Aug 2021

- Worked on designing new sewage treatment plans for the company to increase efficiency and reduce overall costs.
- Submitted a final design that resulted in a monthly cost reduction of approximately 50,000 RMB on sewage treatment.

### Hunan Lichen Industry Co., Ltd.

Changsha, China

Chemical Engineering Intern

Oct – Dec 2020

- Gained expertise in the surfactant workshop, mastering the complete laundry detergent powder production process, including solution preparation, spray drying, heat aging, refinement, and packaging.
- Operated various equipment to perform product quantification and quality control tests; analyzed abnormal data and submitted daily reports to the supervisor.

### SINOPEC, China Petroleum & Chemical Corporation

Yueyang, China

Chemical Engineering Intern

Oct – Dec 2019

- Completed thorough examination of an end-to-end production process in the caustic soda production workshop, including monitoring data changes in the ion-exchange membrane and diaphragm caustic soda workshops.

## SKILLS

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- Software: proficient in COMSOL, autoCAD, MATLAB, Python, R studio, Geolog, MS Office and Aspen Plus
- Technical Skill: Conceptual understanding of grading and water quality; strong multitasking, time management, and communication skills in client-facing and team collaboration contexts