YUZHOU ZHAO

zhaoyuzhou@utexas.edu | (737) 287-4580

Hildebrand Department of Petroleum and Geosystems Engineering
The University of Texas at Austin, Austin, TX 78712

EDUCATION

Ph.D. in Petroleum Engineering, The University of Texas at Austin, TX Expected Aug 2026
Relevant courses: Advanced Reservoir Engineering, Advanced Petrophysics, Digital Rocks Petrophysics, Transport Phenomena, Fundamental Enhanced Oil Recovery, Drilling Engineering
Dissertation Title: Application of Nanosilica Enhanced HPAM Solution in Chemical Enhanced Oil Recovery
GPA: 3.6/4.0

B.E. in Hydraulic Engineering, Tsinghua University, Beijing, China Jun 2020
GPA: 3.5/4.0

SKILLS AND EXPERTES

- **Research interests**: Chemical Enhanced Oil Recovery (Chemical EOR), Reservoir Engineering, Nanotechnology, Rheology
- **Equipment and tools**: Rheometer, DLS, TEM, FTIR, TOC
- **Software and programming**: MATLAB, Python, C++, Computer Modelling Group (CMG)

RESEARCH EXPERIENCES

Graduate Research Assistant, The University of Texas at Austin, TX Jan 2021 – Present
Hildebrand Department of Petroleum and Geosystems Engineering | Advisor: Matthew Balhoff

- Developed a procedure for preparing nanosilica-polymer hybrids in brine
- Analyzed rheological properties and phase stability of nanosilica-polymer hybrids using a rheometer
- Investigated the mechanism between nanosilica and polymer using DLS, TEM and FTIR

This work results in one first-author publication and one co-author publication (listed below).

PUBLICATIONS

1. **Zhao, Y.**, Dordzie, G., Chun, H., Balhoff, M., Lu, Y. (2024). Rheology, Phase Stability and Microstructure of Nanosilica Assisted Partially Hydrolyzed Polyacrylamide. (In review at *Energy & Fuels*)
2. Wang, N., **Zhao, Y.**, Prodanović, M., Balhoff, M. T., & Huh, C. (2022). Fundamental mechanisms behind nanotechnology applications in oil and gas: Emerging nano-EOR processes. *Frontiers in Nanotechnology*, *4*, 887715.

ACADEMIC EXPERIENCE

Teaching Assistant, The University of Texas at Austin, TX Jan 2023 – May 2023
Reservoir Engineering III: Numerical Reservoir Simulation Practice | Prof. Shameem Siddiqui
Hildebrand Department of Petroleum and Geosystems Engineering

- Designed and graded homework and exams
- Organized private tutoring and office hours for students regarding their coursework and projects

Teaching Assistant, The University of Texas at Austin, TX Sep 2021 – Dec 2021
Reservoir Engineering I: Primary Recovery | Prof. Matthew Balhoff
Hildebrand Department of Petroleum and Geosystems Engineering

- Designed and graded homework and exams
- Organized private tutoring and office hours for students regarding their coursework and projects

CONFERENCES AND PRESENTATIONS

1. **Zhao, Y.** (2024). Nanoparticles for Improving Rheology of EOR Polymers. Annual review meeting for the Chemical EOR Industrial Affiliates Program. Austin, TX.
2. **Zhao, Y.** (2023). Nanoparticles for Improving Rheology of EOR Polymers. Annual review meeting for the Chemical EOR Industrial Affiliates Program. Austin, TX.