

TIANZHU QIN

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2512 Willett Dr #80
Laramie, Wyoming 82072

EDUCATION

Ph.D., Petroleum Engineering	2014-May 2019
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University of Wyoming, Petroleum Engineering GPA: 3.7
Advisor: Lamia Goual Co-advisor: Mohammad Piri

B.S., Petroleum Engineering	2010-2014
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China University of Petroleum (East China) GPA: 3.8

AREAS OF SPECIALIZATION

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- Nanoparticle Synthesis
 - Chemical Enhanced Oil Recovery
 - Digital Rock and Core Analysis
 - Microscopic Visualization (microscopes, microCT scanner, HRTEM and et al.)

PROFESSIONAL EXPERIENCE

Visiting Researcher, University of Leeds, Britain	2018
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- Initial collaboration with University of Leeds and visited the corresponding institutes for 3 weeks.
- Synthesize complex nanofluids and conduct multiple-scale investigation of oil displacement by complex nanofluids by using microCT coreflooding system.

Research Assistant, University of Wyoming	Sept 2014- Present
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High Bay Research Facility

Feb 2017-Present

- Performing extensive experimental studies on the effects of complex nanofluids on enhancing oil recovery.
- Integrated a FEI Heliscan microCT scanner into an innovative three-phase miniature core flooding apparatus.
- Supervised 1 undergraduates in an internship program funded by NSF.

Hess Digital Rock Physics Laboratory

Sept 2014- Feb 2017

- Performed extensive experimental studies on the effects of surfactants and microemulsions on enhancing oil recovery.
- Supervised 3 undergraduates in an internship program funded by NSF.

Teaching Assistant, University of Wyoming, Petroleum Engineering	Jan 2017 – May 2017
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Taught the undergraduate course, Rock and Fluids Lab and graded the homework.

OTHER EXPERIENCE

University of Wyoming

2017

Elaborated on the state-of-the-art apparatus in High Bay Research Facility for 37 high school students from Star Lane School in Casper.

Halliburton and University of Wyoming

2017

Cooperated with colleagues to lead a field trip to Halliburton in Fort Lupton for junior high school students.

PATENTS

- Goual, L. **Tianzhu Q**, Gina Javanbakht. (2016), Microemulsions and uses thereof to displace oil in heterogeneous porous media, Provisional Patent 15/367,478, University of Wyoming.

PUBLICATIONS

- **Tianzhu Qin**, Gina Javanbakht, Lamia Goual, Mohammad Piri and Brian Towler. "Microemulsion-enhanced displacement of oil in porous media containing carbonate cements." Colloids and Surfaces A: Physicochemical and Engineering Aspects 530 (2017): 60-71.
- Gina Javanbakht, Maziar Arshadi, **Tianzhu Qin**, and Lamia Goual. "Micro-scale displacement of NAPL by surfactant and microemulsion in heterogeneous porous media." Advances in Water Resources 105 (2017): 173-187.

CONFERENCES

- **Tianzhu Qin**, Goual Lamia.(2016) Impact of microemulsions on mobilization, emulsification, and solubilization of oil in heterogeneous rocks, 253rd ACS National Meeting & Exposition, April 2-6, San Francisco, USA, 2017

SKILLS AND EXPERTISE

- Interfacial tension, contact angle measurements, core-flooding, etc.
- FEI microCT-scanner coupled with a high temperature high pressure core-flooding apparatus.
- Optical microscopy and petrographic thin section analysis
- High resolution transmission electron microscopy (HRTEM)

HONORS AND AWARDS

- First Year Graduate Excellence
- Graduate Assistantship
- Honorable Mention in Mathematical Contest in Modeling
- National Aspiration scholarship

MEMBERSHIPS

- Society of Petroleum Engineers (SPE)
- American Chemical Society (ACS)