

In the name of Allah

Curriculum Vitae

Mina Seidy-Esfahlan

Address: Faculty of Chemical & Petroleum Engineering,
University of Tabriz, Tabriz, East Azerbaijan Province, Iran

Position: Assistant professor

Phone: +9841- 33392532

E-mail: mina.seidy@gmail.com
mina.seidy@tabrizu.ac.ir



Marital Status: Married

EDUCATION

2021	Tabriz University of Technology <i>Ph.D. Petroleum Reservoir Engineering</i>	<i>Sahand, Iran</i>
2013	Sharif University of Technology <i>M.Sc. Petroleum Reservoir Engineering</i>	<i>Tehran, Iran</i>
2011	Sharif University of Technology <i>B.Sc. Petroleum Engineering</i>	<i>Tehran, Iran</i>

SCIENTIFIC EXPERINCES

2016 -2022	Investigating the Performance of Microgel for Conformance Control/IOR in Sandstone Reservoir (Ph. D Thesis)
Spring- Summer 2015	Characterization and Classification of Highly Permeable Heavy Oil Reservoirs in the World
2013	Numerical and Experimental Study of Surfactant Flooding in Carbonate Rocks in Order to Enhancing Oil Recovery Factor (M.Sc. Thesis)
Fall 2011- Spring 2012	Modeling of Fash Test, Solving PDE Equations for Water Fooding in a Core, A Numerical Simulation Study on Fluid Fooding in 3D Spherical Coordinate, Simulation of IT (interference test) Well Testing Using Eclipse, Pansys and Saphir softwares.
Spring - Summer 2011	Pore Scale Experimental Investigation of Increasing the Efficiency of Miscible Injection Methods in Heavy Oil Fractured Reservoirs Using Ultrasonic Wave Technology. (B.Sc.Thesis)

WORK & RESEARCH EXPERIENCE

Advisor of international students

2025-Present

University of Tabriz

Petroleum Engineer

2016-2021

Sahand Oil and Gas Research Institute+ Iranian Offshore Oil Company

Project of fluid data analysis of Soroosh oil field

Researcher

2011 -2012

Ultrasonic Research Group of Sharif University of Technology

This research group was working under supervision of Professor Ghotbi and was mainly working on Ultrasonic Stimulation Methods

Reservoir Engineer Internship

Summer-2011

MAPSA Company

Assistant in Project of History Matching, MAPSA Company

Reservoir Engineer Internship

Spring-2011

Ahvaz Technical Training Complex

Journalist

2008-2009

Sharif Newspaper

Writer

2007-2009

Naqsh Quranic magazine

TEACHING EXPERIENCE

- *Advanced mathematics*
- *Numerical calculations*
- *Reservoir engineering (II)*
- *Oil reservoir management and maintenance*
- *Laboratory of reservoir rock properties*
- *Laboratory of reservoir fluid properties*
- *English for the students of chemical engineering*
- *General chemistry*
- *General and structural geology*
- *Statics and strength of materials*
- *Computer programming*

RESEARCH INTERESTS

- Enhanced oil recovery
- Polymer flooding
- Nanoparticles in reservoir engineering
- Low Salinity water flooding
- Water shutoff
- Microgel treatment
- EOR simulation and modelling

Software and coding

- *Eclipse*
- *MATLAB*
- *Python*
- OFM

Reviewer of Journal

- *Geoenergy Science and Engineering*
- *Iranian Journal of Gas Engineering*

PUBLICATIONS

➤ *Patents*

1. **Fabrication Method of Preformed Particle Gel Containing Nanogel Particles for Using in Oil Reservoirs**

M. Seidy Esfahlan, SA Tabatabaei-Nezhad, E Khodapanah,, Patent number: 102880, 2020.

2. **Optimization of the Synthesis Process of the Nanocomposite Preformed Particle Gels**

M. Seidy Esfahlan, SA Tabatabaei-Nezhad, E Khodapanah, Patent number: 105214, 2021.

➤ *Journal Papers*

1. **Comprehensive Review on the Research and Field Application of Preformed Particle Gel Conformance Control Technology**

M. Seidy-Esfahlan, E Khodapanah, S AlirezaTabatabaei-Nezhad, Journal of Petroleum Science and Engineering, 2021, 108440, DOI: 10.1016/J.PETROL.2021.108440

2. **Fabrication, Optimization and Characterization of Preformed Particle Gel Containing Nanogel Particles for Conformance Control in Oil Reservoirs**
M. Seidy-Esfahlan, E Khodapanah, S AlirezaTabatabaei-Nezhad, M. Salami Kalajahi, Polymer Bulletin, 2021, DOI: 10.1007/s00289-021-03843-2
3. **Swelling and Rheological Behavior of Preformed Particle Gel Nanocomposite: Simultaneous Effect of Pressure, Temperature, and Salinity**
M. Seidy-Esfahlan, E Khodapanah, S AlirezaTabatabaei-Nezhad, M. Salami Kalajahi, Polymer Bulletin, 2022, DOI: 10.1007/s00289-022-04486-7
4. **Comprehensive review of enhanced oil recovery strategies for heavy oil and bitumen reservoirs in various countries: Global perspectives, challenges, and solutions**
M. Seidy-Esfahlan, S AlirezaTabatabaei-Nezhad, E Khodapanah, Heliyon, 2024, DOI: 10.1016/j.heliyon.2024.e37826
5. **Production improvement mechanisms in combined low salinity water flooding and preformed particle gel treatment**
M. Seidy-Esfahlan, S AlirezaTabatabaei-Nezhad, E Khodapanah, Results in Engineering, 2024, DOI: 10.1016/j.rineng.2024.102126
6. **Advancements in Enhanced Oil Recovery with Surface-Modified Silica Nanoparticles: Synthesis, Mechanisms, and Experimental Insights**
M. Seidy-Esfahlan, Molecular Liquids, 2025
7. **Experimental study of static adsorption of Triton-X100 on the surface of carbonate rock, Iran**
M. Seidy-Esfahlan, M. Arabloo, M.H. Ghazanfari, S. Jamshidi, Journal of Petroleum Research, Volume 26, Issue 1-95, Pages 182-192, 2016

➤ **Conference Papers**

1. **Characterizing Preformed Particle Gel for Enhancing Oil Recovery in High Water-Cut Wells**
M. Seidy Esfahlan, SA Tabatabaei-Nezhad, E Khodapanah, M Salami-Kalajahi, European Association of Geoscientists & Engineers, Saint Petersburg 2020, volume 2020, issue 1, pages 1-5
2. **Heavy Oil Reservoirs with Sandstone Rock Type, Properties and Recovery Methods** M. Seidy Esfahlan, E Khodapanah, SA Tabatabaei-Nezhad, European Association of Geoscientists & Engineers, Saint Petersburg 2020, volume 2020, issue 1, pages 1-5
3. **Upgrading of Heavy Oil Properties by Use of Nanometals** M. Seidy Esfahlan, S.A. Tabatabaei-Nezhad, E. Khodapanah, Presented at “ The 3rd International Conference on Nanotechnology” (ICN 2015), 27-28 August 2015, Istanbul, Turkey
4. **Polyacrylamide Microgel Nanospheres: Synthesis, Characterization and Application in EOR**
M. Seidy Esfahlan, S.A. Tabatabaei-Nezhad, E. Khodapanah, 2019/10/3-4, Presented at “The First Eurasian Conference on Nanotechnology”, Khazar University, Baku, Azerbaijan
5. **An Exact Study on Thermodynamic Aspects of Nanoparticle Effect on Enhanced Oil Recovery**
M. Seidy Esfahlan, S.A. Tabatabaei-Nezhad, 2015/1/28-29, Presented at “The First Oil and Gas Fields Development Conference”, Sharif University of Technology, Tehran, Iran

6. **Validity Check of Soroosh Oil Field API Data** M. Seidy Esfahlan, S.A. Tabatabaei-Nezhad, E. Khodapanah, 2016/2/1-2, Presented at “The Second Oil and Gas fields Development Conference, Tehran University, Tehran, Iran
7. **Review of the Process of Pb(II) Ion Removal From Aqueous Solutions by Adsorption Method Using Carbon Nanotubes**, M. Seidy Esfahlan, M. Sabouri-Fard, 2023/11/21, Presented at “The first international conference on chemistry, nanotechnology and petroleum”, Tehran, Iran
8. **Utilization Of Nanoparticles in Hydrocarbon Reservoirs in The Form of Emulsions, Foams, and Nanofluids to Enhance Oil Recovery**, M. Seidy Esfahlan, 2023/11/21, Presented at “The second international congress of chemical engineering and oil industry
9. **Laboratory Study of Water-Oil Interaction in The Combined Method of Low Salinity Water-Particle Gel**, M. Seidy Esfahlan, E. Khodapanah, S.A. Tabatabaei-Nezhad, 2023/11/21, Presented at “The first international conference on chemistry, nanotechnology and petroleum”, Tehran, Iran
10. **A Review on the Application of Biopolymers in Enhanced Oil Recovery**, M. Seidy Esfahlan, F. Mohammadpour, 2024/12/17, Presented at the 5th international Biennial Oil, Gas and Petrochemical Conference, Bushehr, Iran
11. **An Overview of Oil Recovery Methods Based on Increasing the Viscosity of Injected Fluid**, M. Seidy Esfahlan, A. Rezaei-Hagh, 2024/12/17, Presented at the 5th international Biennial Oil, Gas and Petrochemical Conference, Bus