

Curriculum Vitae

PERSONAL INFORMATION

Name: Mahsa Baghban Salehi
Date of Birth: September 21, 1981
Place of birth: Tehran, Iran
Nationality: Iranian
Marital Status: Married

AFFILIATION

Petroleum Engineering Department, Chemistry & Chemical Engineering Research Center of Iran, 14335-186 Tehran, Iran.

Tel: +98 21 4478 7967

Email: m.bsalehi@ccerci.ac.ir & mahsa.bsalehi@gmail.com

ACADEMIC APPOINTMENTS

Assistant Professor in Petroleum Engineering (Since 2016)

EDUCATION

- **PhD.**, Chemical Engineering Research, (2009-2013)
Tarbiat Modares University (TMU), Tehran, Iran
- **M.Sc.**, Chemical Engineering Research, (2004-2006)
Tarbiat Modares University (TMU), Tehran, Iran
- **B.Sc.**, Chemical Engineering, (1999-2004)
Iran University of Science and Technology, Tehran, Iran

HONORS AND AWARDS

- Member of Special Talent in Tarbiat Modares University (TMU) (2013).
- Top dissertation (leading researcher), Tarbiat Modares University (TMU) (2013).
- Ranked 1st in PhD. chemical Engineering graduates, Tarbiat Modares University (TMU) (2013).
- Ranked 1st in M.Sc. chemical Engineering graduates, Tarbiat Modares University (TMU) (2006).
- Ranked 1st among 140 students as a top student in B.Sc. Chemical Engineering graduates, Iran University of Science and Technology (2004).

RESEARCH INTERESTS

- Enhanced Oil Recovery
- Water shut-off in hydrocarbon reservoirs
- Hydrogels, Nanogels, Microgels, Superabsorbents

- Rheology
- Experimental Design

RESEARCH PROJECTS

- Project Title: Effect of Hydrogels Rheological Behavior on Performed Particle Gel (PPG) Performance in Oil Reservoirs
Executive: Petroleum Engineering Department, Chemistry & Chemical Engineering Research Center of IRAN, (CCERCI)
Sponsored by: Iran National Science Foundation (INSF) & CCERCI
Duration: since 2017
- Project Title: Design and Production of Preformed Particle Gel (PPG) and Investigation of its Rheological behavior.
Executive: Petroleum Engineering Department, Chemistry & Chemical Engineering Research Center of IRAN, (CCERCI)
Sponsored by: Petroleum Engineering Department, Chemistry & Chemical Engineering Research Center of IRAN, (CCERCI)
Duration: 2015-1016
- Project Title: Design, Producing & Injection of Optimum Gel Polymer to the Production Zone in Order to Reducing & Control of Producing Water (Excess Information Water) in Oil & Gas Sandstone and Carbonate Reservoirs of NISOC Fields
Executive: Tarbiat Modares University, Tehran, Iran
Sponsored by: National Iranian South Oil Company (NISOC - Subsidiary)
Duration: since 2010
- Project Title: Preparation of Suitable Gel Polymer System for Reducing of Unwanted Water in one of the Iranian Reservoirs Conditions (Soroosh Field)
Executive: Tarbiat Modares University, Tehran, Iran
Sponsored by: Iranian Offshore Oil Company (IOOC - Subsidiary)
Duration: 2008-2010
- Project Title: Study on the polymer gel as water shut-off system for reducing water cut in oil producing wells
Executive: Tarbiat Modares University, Tehran, Iran
Sponsored by: Arvandan Oil & Gas Company (NIOC - Subsidiary)
Duration: 2008
- Project Title: Study on the rheological properties of (Polyacrylamide/ Chromium acetate) Gels in one of the Iranian oil reservoir conditions
Sponsored by: Tarbiat Modares University, Tehran, Iran
Duration: 2007

RESEARCH ACTIVITIES

- Receiving certificate of participating in workshop on speech science and polymer engineering by the title of "Rheological and scattering techniques in the study of specially designed aqueous polymer systems ", Sharif University of Technology, Tehran, Iran, University of Oslo, Norway, 2013.
- Receiving certificate of participating in workshop of "The First Iranian Workshop on Rheology", Isfahan, 2011.

SUPERVISED THESES AND DISSERTATIONS

- Project Title: Experimental Analysis of Effective Parameters on Temporary Gel Preparation for Well Blocking in Specific Conditions.
Student: Kameliya Zareie (PhD Student)
Institute: TMU & CCERCI
Duration:2017
Other Supervisors: Dr.Mohsen Vafaie Sefti, Dr. Bahramian
- Project Title: Design and Production of Mineral-based Hydrogel for Agricultural Applications
Student: Delara Ehsani
Institute: CCERCI & Azad University
Duration:2017
Other Supervisors: Dr.Mohsen Vafaie Sefti, Dr. Sadeghnezhad
- Project Title: Designing and Synthesis of Nanocomposite Hydrogel as Temporary Well Plugging Agent
Student: Zahra Azimi
Institute: TMU & CCERCI
Duration:2017
Other Supervisors: Dr.Mohsen Vafaie Sefti, Dr. Sadeghnezhad
- Project Title: Improving The Properties of Hydrogel-Based Biopolymers in Water Shut Off Process and Comparison with Hydrogels Based on Polyacrylamide.
Student: Razie Farahani
Institute: TMU & CCERCI
Duration:2017
Other Supervisors: Dr.Mohsen Vafaie Sefti, Dr. Arezo Jafari
- Project Title: Experimental Investigation of mechanism in the process of injecting gelant/paramagnetic nanoparticles in porous media in precense of magnetic field and system simulation using Computational Fluid Dynamics Technique
Student: Behnam Sabzi (PhD Student)
Institute: TMU & CCERCI
Duration:2017
Other Supervisors: Dr.Mohsen Vafaie Sefti, Dr. Arezo Jafari

- Project Title: Investigation of performance of polyacrylamide crosslinked with Al (NO₃)₃ . 9H₂O for water shut off treatment and temporary well plugging in enhance oil recovery
Student: Majid Abedi Lenji (PhD Student)
Institute: Isfahan University of Technology & CCERCI
Duration:2017
Other Supervisors: Dr. Masoud Haghshenasfard, Dr.Mohsen Vafaie Sefti

JOURNAL PUBLICATIONS

1. Samira Zargari Marandi, Mohsen Vafaie Sefti, Mahsa Baghban Salehi, Asefe Mousavi Moghadam, Ahmad Dadvand Koochi, "***Sand Control: Applying Hydrogels as New Method in Oil Reservoirs***", Iranian Journal of Chemistry and Chemical Engineering, 2016.
2. Shabnam Mohammadi, Mohsen Vafaie Sefti, Mahsa Baghban Salehi, Asefe Mousavi Moghadam, Samira Rajaei, Hasan Naderi, "***Hydrogel Swelling Properties: Comparison Between Conventional and Nanocomposite Hydrogels for Water Shutoff Treatment***", Asia-Pacific Journal of Chemical Engineering, DOI: 10.1002/apj.1912, 2015.
3. Samira Rajaei, Mohsen Vafaie Sefti, Asefe Mousavi Moghadam, Mahsa Baghban Salehi, Shabnam Mohammadi, Hasan Naderi, "***Adsorption of Polyacrylamide Nanocomposite Hydrogels on Sandstone***", Journal of Oil, Gas and Petrochemical Technology 2 (1): 1-13, 2015.
4. Asefe Mousavi Moghadam, Mohsen Vafaie Sefti, Mahsa Baghban Salehi, Ahmad Dadvand Koochi, Hasan Naderi, "***Modeling the gelation time of sulfonated polyacrylamide/chromium triacetate hydrogel based on screening of the effective parameters***", Journal of Modeling in Engineering, 13(41): 2015.
5. Asefe Mousavi Moghadam, Mohsen Vafaie Sefti, Mahsa Baghban Salehi, Hasan Naderi, "***Bulk and Rheological Properties of Hydrogels used for Water Shutoff Treatment***", Korean Journal of Chemical Engineering, 31(3): 532-539, 2014.
6. Mahsa Baghban Salehi, Mohsen Vafaie Sefti, Ebrahim Vasheghani-Farahani, Asefe Mousavi Moghadam, "***Rheological and Transport Properties of Sulfonated Polyacrylamide Hydrogels for Water Shutoff in Porous Media***", Polymers for Advanced Technologies, 25 (4): 396-405, 2014.
7. Mahsa Baghban Salehi, Mohsen Vafaie Sefti, Ebrahim Vasheghani-Farahani, Asefe Mousavi Moghadam, "***Effect of Process Variable on the Gelation Time of Sulfonated Polyacrylamide Nanocomposite Hydrogel***", Journal of Dispersion Science and Technology, 35:663–671, 2014.

8. Asefe Mousavi Moghadam, Mohsen Vafaie Sefti, Mahsa Baghban Salehi, Ahmad Dadvand Koochi, Mehdi Sheykhani, "***Effect of Nanoclay along with other Effective Parameters on Gelation Time of Hydro Polymer Gels***", Journal of Macromolecular Science, Part B: Physics, 51(10): 2015-2025, 2012.
9. Majid Abedi Lenji, Mohsen Vafaie Sefti, Mahsa Baghban Salehi, Asefe Mousavi Moghadam, Hasan Naderi, "***Gelation Time of Hexamethylenetetramine Polymer Gels Used in Water Shutoff Treatment***", Journal of Petroleum Science and Technology, 2(2): 3-11, 2012.
10. Asefe Mousavi Moghadam, Mohsen Vafaie Sefti, Mahsa Baghban Salehi, Ahmad Dadvand Koochi, "***Preformed Particle Gel: Effects of Salinity and pH on Equilibrium Swelling Ratio***", Journal of Petroleum Exploration and Production Technology, 2: 85-91, 2012.
11. Mahsa Baghban Salehi, Mohsen Vafaie Sefti, Asefe Mousavi Moghadam, Ahmad Dadvand Koochi, "***Study of Salinity and pH Effect on Gelation Time of Polymer Gel Using in Water Shut-off with Central Composite Design Method***", Journal of Macromolecular Science, Part B: Physics, 51(3): 438-451, 2012.
12. Mohsen Vafaie Sefti, Mahsa Baghban Salehi, Hasan Naderi, Seyed Reza Hasheminasab Zavare, "***Modeling and investigation of The Effects of Gel Polymer Injection to an Iranian oil reservoir***", Iranian Journal of Chemistry & Chemical Engineering, 26(4), 2008.
13. Mohsen Vafaie Sefti, Hasan Naderi, Mahsa Baghban Salehi, Seyed Reza Hasheminasab Zavare, "***Experimental Study of the Polymer Gel in order to Prevent Water from Oil Production Wells***", Iranian Journal of Chemistry & Chemical Engineering, 27(2), 2008.
14. Mohsen Vafaie Sefti, Mahsa Baghban Salehi, Hasan Naderi, Mohammad Simjoo, "***Modeling and investigation of The Performance of Gel Polymer in Porous Media***", Journal of Modeling in Engineering, 7(16), 55-70, 2009.

CONFERENCES AND SEMINARS

1. Mahsa Baghban Salehi, Asefe Mousavi Moghadam, "***Rheological Study of Polyacrylamide Hydrogels in Harsh Reservoir Condition for Water Shutoff***", 4th International Conference on Recent Innovations in Chemistry & Chemical Engineering, Tehran, Iran, June 2017.
2. Mahsa Baghban Salehi, Asefe Mousavi Moghadam, "***Effect of Rheological Characteristics on Hydrogel Swelling for Preformed Particle Gel***", 2nd National Conference on the Role of Rheology in Related Technology, Tehran, Iran, May 2017.
3. Mahsa Baghban Salehi, Asefe Mousavi Moghadam, "***Effect of Solvent in Hydrogels Component in Water Shutoff on Reaction Parameters and Structural Strength***", 3rd

International Conference in New Research on Chemistry & Chemical Engineering, Tehran, Iran, May 2016.

4. Kamelia Zarei, Mohsen Vafaie Sefti, Mahsa Baghban Salehi, Ahmadreza Bahramian, Hasan Naderi, "***Controlling the Gelation Time in Injection Process to the Well during Well Servicing***", 3rd International Conference in New Research on Chemistry & Chemical Engineering, Tehran, Iran, May 2016.
5. Arvin Hajipour, Mohsen Vafaie Sefti, Aghdas Heidari, Mahsa Baghban Salehi, Amin Mohajeri, "***Producing Temporary Gel for Close-in Well Operation***", Conference on Chemicals and Materials Engineering, Tehran, Iran, Shahid Beheshti University 2016.
6. Arvin Hajipour, Mohsen Vafaie Sefti, Mahsa Baghban Salehi, Aghdas Heidari, Mohammad Abedini, "***Degelation of Temporary Gel in Close-in Well Operation***", Conference on Chemicals and Materials Engineering, Tehran, Iran, Shahid Beheshti University 2016.
7. Shabnam Mohammadi, Mohsen Vafaie Sefti, Asefe Mousavi Moghadam, Mahsa Baghban Salehi, Samira Rajaei, "***Comparison between Swelling Properties of Conventional and Nanocomposite Hydrogels for Water Shutoff Treatment***", The 6th International Conference on the Nanostructures (ICNS6), Kish, Iran, March 2016.
8. Samira Rajaei, Mohsen Vafaie Sefti, Asefe Mousavi Moghadam, Mahsa Baghban Salehi, Shabnam Mohammadi, Hasan Naderi, "***Adsorption Behavior of Polyacrylamide Nanocomposite Hydrogels on Carbonate Reservoir Rock***", The 5th International Conference on the Nanostructures (ICNS5), Kish, Iran, March 2014.
9. Mahsa Baghban Salehi, Mohsen Vafaie Sefti, Ebrahim Vasheghani-Farahani, Asefe Mousavi Moghadam, Hasan Naderi, "***Swelling and Rheological Relationships of Polyacrylamide Hydrogels***", The 8th International Chemical Engineering Congress & Exhibition (IChEC), Kish, Iran, February 2014.
10. Samira Rajaei, Mohsen Vafaie Sefti, Asefe Mousavi Moghadam, Mahsa Baghban Salehi, Shabnam Mohammadi, Hasan Naderi, "***Effect of Reservoir Pressure on Static Adsorption of Hydrogels on Carbonate Reservoir Rock***", The 8th International Chemical Engineering Congress & Exhibition (IChEC), Kish, Iran, February 2014.
11. Shabnam Mohammadi, Mohsen Vafaie Sefti, Mahsa Baghban Salehi, Asefe Mousavi Moghadam, Samira Rajaei, Hasan Naderi, "***The Relationship between Swelling and Salt Sensitivity Factor of Hydrogels and Improvement with Nanocomposite***", The 8th International Chemical Engineering Congress & Exhibition (IChEC), Kish, Iran, February 2014.
12. Asefe Mousavi Moghadam, Mohsen Vafaie Sefti, Mahsa Baghban Salehi, Hasan Naderi, "***Preparation an Optimal Hydrogel of Water Shutoff for Iranian Oil Field***",

2nd Iraq Oil and Gas Conference, IOGC, Iraq, Baghdad, Oct 2013.

13. Mahsa Baghban Salehi, Mohsen Vafaie Sefti, Ebrahim Vasheghani-Farahani, Asefe Mousavi Moghadam, Zohreh Sarreshteh Dari, "***Dynamic Rheological Behavior Of A Hydrogel For Water Shutoff Treatments***", 29th International Conference of the Polymer Processing Society, Germany, July 2013.
14. Majid Abedi Lenji, Mohsen Vafaie Sefti, Asefe Mousavi Moghadam, Mahsa Baghban Salehi, Hasan Naderi, "***Study The Effect of Sodium Montmorillonite Nanoclay on the Swelling of Polyacrylamide Hydrogel***", 1st National Congress and Workshop on Nanoscience and Nanotechnology, Tehran, Iran, May 2013.
15. Samira Rajaei, Mohsen Vafaie Sefti, Mahsa Baghban Salehi, Asefe Mousavi Moghadam, Shabnam Mohammadi, "***Polymer Gel Adsorption Effect on Relative Permeability Modification for Water Shutoff Treatment***", 1st National Conference of New technologies in Chemical and Chemical Engineering, Tehran, Iran, May 2013.
16. Majid Abedi Lenji, Mohsen Vafaie Sefti, Asefe Mousavi Moghadam, Mahsa Baghban Salehi, Hasan Naderi, Zohreh Sarreshteh Dari, "***Evaluation and Optimization of Various Applicable Crosslinkers on Gelation Time of Polyacrylamide Gel***", 4th EuCheMS Chemistry Congress, Prague, August 2012.
17. Mahsa Baghban Salehi, Mohsen Vafaie Sefti, Ebrahim Vasheghani-Farahani, Asefe Mousavi Moghadam, Zohreh Sarreshteh Dari, "***Estimation of Kinetics Parameters for Ionic Gelation of Polyacrylamide in Different Media***", 4th EuCheMS Chemistry Congress, Prague, August 2012.
18. Asefe Mousavi Moghadam, Mahsa Baghban Salehi, Mohsen Vafaie Sefti, Ahmad Dadvand Koochi, Hasan Naderi, "***Screening of Effective Factors on Gelation Time of Hydrogels***", The 1st International Conference of Oil, Gas, Petrochemical and Power Plant, Tehran, Iran, June 2012.
19. Majid Abedi Lenji, Mohsen Vafaie Sefti, Asefe Mousavi Moghadam, Mahsa Baghban Salehi, Hasan Naderi, "***Effect of Hexamethylenetetramine on Gelation Time of Polymer Gels by Response Surface Methodology***", The 3rd National Congress of Iranian Oil Engineering, Tehran, Iran, 2012.
20. Asefe Mousavi Moghadam, Mahsa Baghban Salehi, Mohsen Vafaie Sefti, Ahmad Dadvand Koochi, Hasan Naderi, "***Preformed Particle Gel: Effects of Calcium Chloride and pH on Equilibrium Swelling Ratio by Using Response Surface Methodology***", 7th International Chemical Engineering Congress & Exhibition, Kish, Iran, 21-24 November, 2011.
21. Mahsa Baghban Salehi, Mohsen Vafaie Sefti, Ebrahim Vasheghani-Farahani, Asefe Mousavi Moghadam, "***The Effect of Process Variable on The Gelation Time of Sulfonated Polyacrylamide Gel***", 7th International Chemical Engineering Congress &

Exhibition, Kish, Iran, 21-24 November, 2011.

22. Ahmad Dadvand Koohi, Mohsen Vafaie Sefti, Abdolsamad Zarrin Ghalam, Asefe Mousavi Moghadam, Hasan Naderi, "***Disproportional Permeability Reduction behavior of Hydrogels***", 7th International Chemical Engineering Congress & Exhibition, Kish, Iran, 21-24 November, 2011.
23. Majid Abedi Lenji, Mohsen Vafaie Sefti, Asefe Mousavi Moghadam, Mahsa Baghban Salehi, Hasan Naderi, "***Investigation of Hexamethylenetetramine on Polymer Gels Used in Water Shutoff Treatment by Central Composite Design***", 7th International Chemical Engineering Congress & Exhibition, Kish, Iran, 21-24 November, 2011.
24. Mahsa Baghban Salehi, Mohsen Vafaie Sefti, Asefe Mousavi Moghadam, Ahmad Dadvand Koohi, Khosrow Jarrahan, "***The Effect of Salinity and pH on Gelation Time of Polymer Gels Using Central Composite Design Method***", International Symposium of the Society of Core Analysts, Austin, Texas, 18-21 September, 2011.
25. Mahsa Baghban Salehi, Mohsen Vafaie Sefti, Asefe Mousavi Moghadam, Ahmad Dadvand Koohi, Hasan Naderi, "***Using Central Composite Design Method to Optimizing Gelation Time of Polymer Gels for Water Shut-off Operation in Oil Wells***", The 1st National Conference for Technology Development in Oil, Gas and Petrochemical Industries, Ahvaz, Iran, 19-20 May, 2011.
26. Mohsen Vafaie Sefti, Mahsa Baghban Salehi, Hasan Naderi, Seyed Reza Hasheminasab Zavare, "***Modeling and Study of the Gel and its Effectiveness***", 1st Congress of Iranian Petroleum Engineering, 2006.
27. Mohsen Vafaie Sefti, Hasan Naderi, Mahsa Baghban Salehi, Seyed Reza Hasheminasab Zavare, "***Polymer Gel and Disproportionate Permeability Reduction***", 11th Congress of Chemical Engineering of Iran, 2006.