

C.V.

First Name: TORAJ

Family Name: MOHAMMADI

Date of Birth: 05/09/1965

Place of Birth: Esfahan-IRAN

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Qualifications:

BSc: Abadan Institute of Technology-Ahwaz-Iran (1988)

MSc: Tehran University-Tehran-Iran (1991)

PhD: University of New South Wales (UNSW)-Sydney-Australia (1995)

Employment:

Head of Center of Excellency for Membrane Science and Technology, 2019

Iran University of Science and Technology, Distinguished Professor, 2017

Iran University of Science and Technology, Professor, 2005—2017

Iran University of Science and Technology, Associate Professor, 2001—2005

Iran University of Science and Technology, Assistant Professor, 1996—2001

Lectures:

1. Fluid Mechanics
2. Two Phase Flow
3. Heat Transfer (I)
4. Heat Transfer (II) [Applied]
5. Advanced Fluid Mechanics
6. Rheology
7. Advanced Separation Processes
8. Membrane Separation Processes

Research Interests:

- 1- Fabrication and characterization of polymeric and ceramic membranes
- 2- Fouling and fouling control of FO, RO, NF, UF and MF membranes
- 3- Membrane applications in desalination, dewatering, biotechnology and waste treatment (ED and MD)

- 4- Gas separation technology
- 5- Pervaporation technology
- 6- Liquid Membrane Processes
- 7- Membrane Processes Modeling and Simulation

Post-Graduated Students:

- ❖ MSc: over 250
- ❖ PhD: over 20
- ❖ Postdoc: over 5

Awards

1. Selection of PhD dissertation as Top Thesis in Iran - 1996
2. Selected as Top Graduated Student and awarded by the Iranian President - 1998
3. Selected as Top Supervisor in Iran - 2012
4. Selected as Top National Researcher in Iran – 2013
5. Selected as Distinguished Professor in Iran University of Science and Technology – 2017
6. Obtaining Research Chair Award of “Application of Membrane Technologies (Water and Wastewater Treatment)”, founded by Iran National Science Foundation – 2017
7. Selected as Distinguished Scientist by Iran National Science Foundation – 2021
8. Selected as Top National Academic Fellow in Iran – 2021
9. Selected as Distinguished Scientist by Iran National Science Foundation – 2022
10. Selected as Distinguished Professor by Academy of sciences of Iran – 2023
11. Selected as Distinguished Professor by Iranian Association of Chemical Engineering – 2023
12. Obtaining Research Chair Award of “Development of Membrane Technologies (Water and Wastewater Treatment)”, founded by Iran National Science Foundation – 2024

Identifiers:

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PUBLISHED BOOK and BOOK CHAPTERS

1. Toraj Mohammadi, Maryam Ahmadzadeh Tofighy, Carbon nanotubes membranes, Nanomaterials and Nanotechnology, One Central Press, 2016.

2. Toraj Mohammadi, Maryam Tavakolmoghadam, Applications of Membrane Processes in Wastewater Treatment, Environmental Science and Engineering, One Central Press, 2016.
3. Toraj Mohammadi, Mashallah Reza kazemi, Mohtada Sadrzadeh, Takeshi Matsuura, Methods for the Preparation of Organic–Inorganic Nanocomposite Polymer Electrolyte Membranes for Fuel Cells, Organic–Inorganic Composite Polymer Electrolyte Membranes, Springer International Publishing, 2017.
4. Toraj Mohammadi, Mashallah Reza kazemi, Mohtada Sadrzadeh, Fundamentals and measurement techniques for gas transport in polymers, Transport Properties of Polymeric Membranes, Elsevier, 2018.
5. Toraj Mohammadi, Mashallah Reza kazemi, Mohtada Sadrzadeh, Separation via pervaporation techniques through polymer membranes, Transport Properties of Polymeric Membranes, Elsevier, 2018.
6. Toraj Mohammadi, Maryam Ahmadzadeh Tofighy, Antifouling properties of polyethersulfone membranes containing graphene oxide, Membrane Bioreactors and fouling: A Review and Directions for Research, Nova Science Publishers, 2018.
7. Toraj Mohammadi, Maryam Ahmadzadeh Tofighy, Barrier, Diffusion, and Transport Properties of Rubber Nanocomposites Containing Carbon Nanofillers, Carbon-Based Nanofillers and their Rubber Nanocomposites: Fundamentals and Applications, Elsevier, 2019.
8. Toraj Mohammadi, Mohtada Sadrzadeh, **Editors, Nanocomposite Membranes for Water and Gas Separation, Elsevier, 2019.**
9. Toraj Mohammadi, Samaneh Khanlari, Maryam Ahmadzadeh Tofighy, Nanocomposite Membranes for Water and Gas Separation, Transport phenomena through nanocomposite membranes, Elsevier, 2019.
10. Toraj Mohammadi, Maryam Ahmadzadeh Tofighy, Samaneh Khanlari, Nanocomposite Membranes for Water and Gas Separation, Development of advanced nanocomposite membranes by carbon-based nanomaterials (GO, CNT, and CNC), Elsevier, 2019.
11. Toraj Mohammadi, Maryam Ahmadzadeh Tofighy, Polymer Nanocomposite Membranes for Pervaporation, Carbon nanotubes-polymer nanocomposite membranes for pervaporation, Elsevier, 2019.
12. Toraj Mohammadi, Zahra Shabani, Soheil Zarghami, Nanotechnology in the Beverage Industry: Fundamentals and Applications, Nanomaterials for fouling-resistant RO membranes, Elsevier, 2020.
13. Toraj Mohammadi, Rozita M Moattari, Nanotechnology in the Beverage Industry: Fundamentals and Applications, Nanostructured membranes for water treatments, Elsevier, 2020.
14. Toraj Mohammadi, Maryam Ahmadzadeh Tofighy, Modeling in Membranes and Membrane-Based Processes, Application of Molecular Dynamics Simulation to Study the Transport Properties of Carbon Nanotubes-Based Membranes, Wiley-Scrivener press, 2020.
15. Toraj Mohammadi, Rozita M Moattari, Green Adsorbents to Remove Metals, Dyes and Boron from Polluted Water, Hybrid adsorbents for dye removal from wastewater, Springer, 2020.
16. Toraj Mohammadi, Maryam Ahmadzadeh Tofighy, Sustainable Materials and System for Water Desalination, Membrane fouling in desalination, Springer, 2020.
17. Toraj Mohammadi, Maryam Ahmadzadeh Tofighy, Advanced carbon nanomaterials as adsorbents, Advanced nanomaterials, Advances in Material Research and Technology, Springer, 2020.

18. Toraj Mohammadi, Maryam Ahmadzadeh Tofighy, Soha Habibi, Polymer Matrix Composites Containing Carbon Nanomaterials for Medical Applications: Encyclopedia of Materials: Composites, Volume 1, Elsevier, 2021.
19. Toraj Mohammadi, Maryam Ahmadzadeh Tofighy, Polymer Matrix Composites Materials for Water and Wastewater Treatment Applications: Encyclopedia of Materials: Composites, Volume 1, Elsevier, 2021.
20. Toraj Mohammadi, Saeed Seraj, Mohammad Sheikhi, Maryam Ahmadzadeh Tofighy, Membrane materials for forward osmosis and membrane distillation in oily wastewater treatment: Materials for Oil/Water Separation: Principles and Design, ACS Books, 2022.
21. Toraj Mohammadi, Soheil Zarghami, Mohtada Sadrzadeh, Superhydrophobic/superhydrophilic polymeric membranes for oil/water separation: Materials for Oil/Water Separation: Principles and Design, ACS Books, 2022.
22. Toraj Mohammadi, Saeed Seraj, Maryam Ahmadzadeh Tofighy, Polymer nanocomposite films and coatings for antifouling applications: Polymer Nanocomposite Films & Coatings, Elsevier, 2023.
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24. Toraj Mohammadi, Maryam Ahmadzadeh Tofighy, Helium removal from natural gas by membrane technologies: Adv. in Nat. Gas Vol. 5 - Natural Gas Impurities and Condensate Removal, Elsevier, 2023.
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26. Toraj Mohammadi, Mohammad Sadegh Nabavi, Fariba Sadat Kamelian, Zeolite membranes for pervaporation, Low cost ceramic membranes: Materials and Fabrication Processes, Materials Horizons: From Nature to Nanomaterials, Springer, 2023.
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28. Toraj Mohammadi, Sara Pirayandeh, Mohammad Sadegh Fattahi, Mohsen Akbarzade, Maryam Ahmadzadeh Tofighy, Nanofillers in Membrane Industry: Handbook of Nanofillers, Springer, 2023.
29. Toraj Mohammadi, Fatemeh Gholamzadeh Moghadam, Sara Pirayandeh, Maryam Ahmadzadeh Tofighy, Nanocomposite of PVC with CNT: Poly(vinyl chloride) based composites and nanocomposites, Springer, 2024.
30. Toraj Mohammadi, Faez Roshanzamir, Naser Babajani, Polymeric membranes in membrane bioreactors for wastewater reclamation: Comprehensive Polymer Science 2nd Edition, Elsevier, 2024.
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32. Toraj Mohammadi, Milad Ein Marjani, Romina HMT Shirazi, Polymer based electrospun materials for environmental remediation: Comprehensive Polymer Science 2nd Edition, Elsevier, 2024.
33. Toraj Mohammadi, Mostafa Mahinroosta, Rozita M Moattari, Fabrication and application of superabsorbent hydrogels (SAHs) for wastewater treatment: Comprehensive Polymer Science 2nd Edition, Elsevier, 2024.

INTERNATIONAL JOURNALS

- 1- T. Mohammadi, M. Skyllas Kazacos, Characterization of a novel composite membrane for redox flow battery applications, Journal of Membrane Science, 98, 77, 1995.
- 2- T. Mohammadi, M. Skyllas Kazacos, Preparation of sulfonated composite membranes for vanadium redox flow battery applications, Journal of Membrane Science, 107, 35, 1995.
- 3- T. Mohammadi, M. Skyllas Kazacos, Use of polyelectrolytes for incorporation of ion exchange groups in composite membranes for vanadium redox flow battery applications, Journal Power Source, 56, 91, 1995.
- 4- T. Mohammadi, V. Haddadi- Asl, Effect of processing methods and conditions on properties of conductive carbon- polyolefins composites, Iranian Journal of Polymer Science and Technology, 5, 153, 1996.
- 5- T. Mohammadi, M. Skyllas Kazacos, Evaluation of chemical stability of some membranes in the vanadium solution, Journal Applied Electrochemistry, Vol. 27, No. 2, 153, 1997.
- 6- T. Mohammadi, V. Haddadi- Asl, Modification of a composite membrane for redox flow battery applications, Iranian Journal of Polymer Science and Technology, 6, 43, 1997.
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- 9- T. Mohammadi, S. S. Madaeni, M. Kazemimoghadam, Chemical cleaning of reverse osmosis membranes, Desalination, 134, 77, 2001.
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- 16- T. Mohammadi, M. A. Alaei, M. Kazemimoghadam, Pervaporation separation of water - acetic acid mixtures, International Journal of Engineering Science, Vol. 13, No. 5, 151, 2002.

- 17- T. Mohammadi, A. Pak, Effect of calcination temperature of kaolin as a support for zeolite membranes, *Separation and Purification Science*, 30, 241, 2003.
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- 20- T. Mohammadi, M. Kazemimoghadam, S. S. Madaeni, Cleaning of RO membranes, *International Journal of Engineering Science*, Vol. 14, No. 4, 175, 2003.
- 21- T. Mohammadi, S. S. Madaeni, M. Mahdyarfar, M. Kazemimoghadam, Effect of operating conditions and chemicals on ultrafiltration membrane fouling, *Iranian Journal of Science and Technology, Transaction B*, Vol. 27, No. B2, 2003.
- 22- T. Mohammadi, Desalination is being essential for many Arab countries, *AWWM*, May/June, 48, 2003.
- 23- T. Mohammadi, M. Kazemimoghadam, A. Pak, Dehydration of water/1-1-dimethylhydrazine mixtures by zeolite membranes, *Microporous and Mesoporous Materials*, 70, 127, 2004.
- 24- T. Mohammadi, A. Esmaeilifar, Wastewater treatment of a vegetable oil factory by ultrafiltration, *Desalination*, 166, 329, 2004.
- 25- T. Mohammadi, A. Razmi, M. Sadrzadeh, Effect of operating parameters on Pb^{2+} separation from wastewater using electrodialysis, *Desalination*, 167, 379, 2004.
- 26- T. Mohammadi, A. Pak, Mehrdad Karbassian and Masoud Golshan, Effect of operating conditions on microfiltration of oil-water emulsion by a kaolin membrane, *Desalination*, 168, 201, 2004.
- 27- T. Mohammadi, A. Moheb, M. Sadrzadeh, A. Razmi, Separation of copper ions by electrodialysis using Taguchi experimental design, *Desalination*, 169, 21, 2004.
- 28- T. Mohammadi, A. Moheb, M. Sadrzadeh, A. Razmi, Modeling of metal ion removal from wastewater by electrodialysis, *Separation and Purification Technology*, Vol. 41, No. 1, 73, 2005.
- 29- T. Mohammadi, A. Aroujalian, A. Bakhshi, Pervaporation of dilute alcoholic mixtures using PDMS membrane, *Chemical Engineering Science*, 60, 1875, 2005.
- 30- T. Mohammadi, M. Akbarabadi, Separation of ethylene glycol solution by vacuum membrane distillation (VMD), *Desalination*, 181, 35, 2005.
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- 34- T. Mohammadi, A. Pak, Z. Nourian, M. Taherkhani, Experimental design in Mullite microfilter preparation, *Desalination*, 184, 57, 2005.
- 35- T. Mohammadi, A. Ezzati, E. Gorouhi, Separation of water in oil emulsions using microfiltration, *Desalination*, 185, 371, 2005.
- 36- T. Mohammadi, A. Aroujalian, A. Bakhshi, Pervaporation of dilute alcoholic mixtures using PDMS membrane, *Chemical Engineering Science*, 60, 1875, 2005.
- 37- T. Mohammadi, O. Ghaffari Nik, A. Bakhshi, Effect of Operating Conditions on Pervaporation of Methanol-Water Mixtures, *Membrane Technology*, Part 1, November, 2006.

- 38- T. Mohammadi, O. Ghaffari Nik, A. Bakhshi, Effect of Operating Conditions on Pervaporation of Methanol-Water Mixtures, *Membrane Technology*, Part 2, December, 2006.
- 39- T. Mohammadi, M. Kazemimoghadam, Preparation of NaA zeolite membranes for separation of water/UDMH mixtures, *Separation and Purification Technology*, Vol. 47, No. 3, 173, 2006.
- 40- T. Mohammadi, A. Pak, Zeolite NaA membrane synthesis, *Desalination*, 200, 68, 2006.
- 41- T. Mohammadi, E. Gorouhi, M. Sadrzadeh, Microfiltration of oily wastewater using PP hydrophobic membrane, *Desalination*, 200, 319, 2006.
- 42- T. Mohammadi, O. Bakhteyari, Concentration of L-Lysine Monohydrochloride (L-Lysine-HCl) Syrup Using Vacuum Membrane Distillation (VMD), *Desalination*, 200, 591, 2006.
- 43- T. Mohammadi, A. Madandar, Effect of permeate pressure on pervaporation of methyl tert-butyl ether/methanol mixtures, *Desalination*, 200, 390, 2006.
- 44- T. Mohammadi, S. M. Mirfendereski, Synthesis and characterization of T-type zeolite membrane, *Desalination*, 200, 77, 2006.
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- 46- T. Mohammadi, M. Kazemimoghadam, Synthesis of MFI zeolite membranes for water Desalination, *Desalination*, 206, 547, 2007.
- 47- T. Mohammadi, M. Kazemimoghadam, Chemical Cleaning of Ultrafiltration Membranes in Milk Industries, *Desalination*, 204, 213, 2007.
- 48- T. Mohammadi, M. Sadrzadeh, A. Kaviani, Mathematical Modeling of Desalination by Electrodialysis, *Desalination*, 206, 538, 2007.
- 49- T. Mohammadi, M. Sadrzadeh, A. Razmi, Separation of monovalent, divalent and trivalent ions from wastewater at various operating conditions using electrodialysis, *Desalination*, 205, 53, 2007.
- 50- T. Mohammadi, A. Mosadeghkhah, M. A. Alaei, Effect of sintering temperature and dwell time and pressing pressure on $\text{Ba}_{0.5}\text{Sr}_{0.5}\text{Co}_{0.8}\text{Fe}_{0.2}\text{O}_{3-\delta}$ perovskite-type membranes, *Materials and Design*, 206, 538, 2007.
- 51- T. Mohammadi, M. Sadrzadeh, A. Razmi, Separation of different ions from wastewater at various operating conditions using electrodialysis, *Separation and Purification Technology*, 54, 147, 2007.
- 52- T. Mohammadi, M. Sadrzadeh, R. Nikbakht, Effect of operating parameters on concentration of citric acid using electrodialysis, *Journal of Food Engineering*, 83, 596, 2007.
- 53- T. Mohammadi, M. Peer, M. Mahdyarfar, S. M. Kamali, Separation of Hydrogen from Carbon Monoxide Using a Hollow Fiber Polyimide Membrane: Experimental and Simulation, *Chemical Engineering and Technology*, 30, 1418, 2007.
- 54- T. Mohammadi, M. Asghari, R. F. Alamdari, F. Agand, Preparation and Characterization of a Thin Continuous Faujasite Membrane on Tubular Porous Mullite Support, *Desalination*, 220, 65, 2008.
- 55- T. Mohammadi, M. Sadrzadeh, Sea Water Desalination Using Electrodialysis, *Desalination*, 221, 440, 2008.
- 56- T. Mohammadi, A. Pak, Wastewater Treatment of Desalting Units, *Desalination*, 222, 249, 2008.
- 57- T. Mohammadi, A. Pak, S. M. Hosseinalipour, V. Allahdini, CFD Modeling of Porous Membranes, *Desalination*, 222, 482, 2008.

- 58- T. Mohammadi, A. Aroujalian, A. Bakhshi, Pervaporation Separation of Binary and Ternary Mixtures with Polydimethylsiloxane Membranes, *Journal of Applied Polymer Science*, 107, 1777, 2008.
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- 60- T. Mohammadi, T. Kikhavandi, M. R. Moghbeli, Synthesis and Characterization of Poly(ether-block-amide) Membranes, *Macromolecular Symposia*, 264, 127, 2008.
- 61- T. Mohammadi, M. Sadrzadeh, S. M. Mirfendereski, T. Mazaheri, CO₂ and CH₄ permeation through T-type zeolite membranes: effect of synthesis parameters and feed pressure, *Separation and Purification Technology*, 61, 317, 2008.
- 62- T. Mohammadi, M. Peivasti Rezaeian, A. Maadandar, Effect of operating conditions on pervaporation of methanol/methyl tert-butyl ether mixtures, *Chemical Engineering and Processing*, 47, 1069, 2008.
- 63- T. Mohammadi, M. Asghari, R. F. Alamdari, F. Agand, Thin-layer Template-free Polycrystalline Layer of Mordenite Membranes on Cylindrical Mullite Supports, *Microporous and Mesoporous Materials*, 114, 148, 2008.
- 64- T. Mohammadi, M. Asghari, A. Samimi, M. Fouladi, R. F. Alamdari, F. Agand, Ion-Exchanged Zeolite X Membranes: Synthesis and Characterization, *Membrane Technology*, March, 2008.
- 65- T. Mohammadi, M. Sadrzadeh, J. Ivakpour, N. Kasiri, Separation of lead ions from wastewater using electrodialysis: Comparing mathematical and neural network modeling, *Chemical Engineering Journal*, 144, 431, 2008.
- 66- T. Mohammadi, S. M. Mirfendereski, M. Sadrzadeh, Effect of synthesis parameters on single gas permeation through T-type zeolite membranes, *International Journal of Greenhouse Gas Control*, Vol. 2, No. 4, 531, 2008.
- 67- T. Mohammadi, M. Peer, M. Mahdyarfar, Evaluation of a mathematical model using experimental data and Artificial Neural Network for prediction of gas separation, *Journal of Natural Gas Chemistry*, 17, 135, 2008.
- 68- T. Mohammadi, M. Tavakol Moghadam, M. Saeidi, M. Mahdyarfar, Acid Gas Permeation Behavior Through Poly (ester urethane urea) Membrane, *Industrial and Engineering Chemistry Research*, 47 (19), 7361, 2008.
- 69- T. Mohammadi, O. Bakhteyari, L-Lysine monohydrochloride (L-Lysine-HCl) syrup concentration using a membrane hybrid process of ultrafiltration and vacuum membrane distillation, *Chemical Engineering and Technology*, 31, 1569, 2008.
- 70- T. Mohammadi, E. Saljoughi, M. Amirilargani, Effect of Poly (vinyl pyrrolidone) concentration and coagulation bath temperature on the morphology, permeability and thermal stability of asymmetric cellulose acetate membranes, *Journal of Applied Polymer Science*, 111, 2537, 2009.
- 71- T. Mohammadi, M. Peer, M. Mahdyarfar, Investigation of syngas ratio adjustment using a polyimide membrane, *Chemical Engineering and Processing*, 48, 755, 2009.
- 72- T. Mohammadi, M. Sadrzadeh, E. Saljoughi, Effect of synthesis parameters on morphology and pure water permeation flux through asymmetric cellulose acetate membranes, *Journal of Membrane Science*, 326, 627, 2009.
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- 75- T. Mohammadi, M. A. Alaei, Preparation and Characterization of $\text{Ba}_{1-x}\text{Sr}_x\text{Co}_{0.8}\text{Fe}_{0.2}\text{O}_{3-\delta}$ perovskite-type membranes, *Membrane Technology*, Part 2, March, 2009.
- 76- T. Mohammadi, M. Sadrzadeh, Treatment of sea water using electrodialysis: current efficiency evaluation, *Desalination*, 249, 279, 2009.
- 77- T. Mohammadi, S. M. A. Safavi, High salinity water desalination using membrane distillation, *Chemical Engineering Journal*, 149, 191, 2009.
- 78- T. Mohammadi, E. Saljoughi, Cellulose acetate (CA)/Polyvinylpyrrolidone (PVP) blend asymmetric membranes: Preparation, morphology and performance, *Desalination*, 249, 850, 2009.
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- 80- T. Mohammadi, M. Amirilargani, Preparation and characterization of asymmetric polyethersulfone (PES) membranes, *Polymers for Advanced Technologies*, 20, 993, 2009.
- 81- T. Mohammadi, M. Amirilargani, E. Saljoughi, Effects of Tween 80 concentration as a surfactant additive on morphology and permeability of flat sheet polyethersulfone (PES) membranes, *Desalination*, 249, 837, 2009.
- 82- T. Mohammadi, S. M. A. Safavi, Application of Taguchi method in optimization of desalination by vacuum membrane distillation, *Desalination*, 249, 83, 2009.
- 83- T. Mohammadi, A. Salahi, A. Rahmat Pour, F. Rejabdar, Oily wastewater treatment using ultrafiltration, *Desalination and Water Treatment*, 6, 289, 2012.
- 84- T. Mohammadi, M. Sadrzadeh, M. Amirilargani, K. Shahidi, Gas permeation through a synthesized composite PDMS/PES membrane, *Journal of Membrane Science*, 342, 236, 2009.
- 85- T. Mohammadi, M. Sadrzadeh, J. Ivakpour, N. Kasiri, Neural network modeling of Pb^{2+} removal from wastewater using electrodialysis, *Chemical Engineering and Processing*, 48, 1371, 2009.
- 86- T. Mohammadi, M. Sadrzadeh, K. Shahidi, Effect of operating parameters on pure and mixed gas permeation properties of a synthesized composite PDMS/PA membrane, *Journal of Membrane Science*, 342, 327, 2009.
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- 88- T. Mohammadi, M. A. Alaei, M. M. Movahednia, Effect of Ba content on oxygen permeation performance of $\text{Ba}_{1-x}\text{Sr}_x\text{Co}_{0.8}\text{Fe}_{0.2}\text{O}_{3-\delta}$ ($x=0.2, 0.5$ and 0.8) perovskite-type membrane, *Journal of Chemical and Engineering Data*, 54, 3082, 2009.
- 89- T. Mohammadi, M. Ahmadzadeh Tofighy, A. Pak, Synthesis of carbon nanotubes on macroporous kaolin substrate via a new simple CVD method, *International Journal of Chemical Reactor Engineering*, 7, A79, 2009.
- 90- T. Mohammadi, M. Amirilargani, Effects of PEG on morphology and permeation properties of polyethersulfone membranes, *Separation Science and Technology*, 44, 16, 3854, 2009.
- 91- T. Mohammadi, M. Amirilargani, E. Saljoughi, Improvement of permeation performance of polyethersulfone (PES) ultrafiltration membranes via addition of Tween-20, *Journal of Applied Polymer Science*, 115, 504, 2009.

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- 93- T. Mohammadi, M. Tavakol Moghadam, M. Saeidi, M. Mahdyarfar, Gas permeation properties of Seragel membrane, *Asia Pacific Journal of Chemical Engineering*, 2009.
- 94- T. Mohammadi, M. Sadrzadeh, E. Saljoughi, K. Shahidi, Preparation and characterization of a composite PDMS membrane on CA support, *Polymers for Advanced Technologies*, 2009.
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- 98- T. Mohammadi, M. Amirilargani, Synthesis and characterization of asymmetric polyethersulfone membranes: effects of concentration and polarity of nonsolvent additives on morphology and performance of the membranes, *Polymers for Advanced Technologies*, 2009.
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Research Projects

- 1- Polymerization occurring in caustic washing tower in olefin plant – Arak Petrochemical Complex
- 2- Investigation of fouling prevention ways in RO membranes - Razi Petrochemical Complex
- 3- Studying of fouling in Ultrafiltration membranes and offering the best cleaning strategy - Iran Dairy Industries
- 4- Employing of photocatalysis in contaminants removal - Research assistant center of Iran University of Science and Technology
- 5- Investigation of different ways of industrial membranes cleaning - Research assistant center of Iran University of Science and Technology
- 6- Investigation of different molecular sieves used in petrochemical industries - Research and Development (R&D) of Iranian Petrochemical Industries.
- 7- Laboratory scale preparation of molecular sieves - Industrial Ministry
- 8- Introduction to Electrodialysis - Research assistant center of Iran University of Science and Technology
- 9- Applications of Electrodialysis - Research assistant center of Iran University of Science and Technology
- 10- Laboratory scale preparation of zeolite membranes - Research assistant center of Iran University of Science and Technology

- 11- Application of Electrodialysis in water desalination - Different universities coworking plan
- 12- Microfiltration ceramic membranes preparation - Research assistant center of Iran University of Science and Technology
- 13- Membrane application feasibility study in petroleum industries – Development Engineering in Petroleum industries.
- 14- Membrane application feasibility study in separation of different mixtures - Research assistant center of Iran University of Science and Technology
- 15- Zeolite membrane preparation - Industrial Development and renovation organization of Iran
- 16- Laboratory scale L-Lysine Hydrochloride Concentration using Ultrafiltration - Industrial Development and renovation organization of Iran
- 17- Membrane employing feasibility study in order to recovering of LPG in Shiraz Refinery - Shiraz Refinery
- 18- Investigation of membrane separation processes applications in gas industries and membrane preparation - Iranian National Gas Company
- 19- Laboratory scale membrane hydrogen separation and comparison of membrane process with PSA and Cryogenic process -Research Institute of Petroleum Industry
- 20- Evaluation of a membrane reactor in dimethyl amine selectivity enhancement in laboratory scale - Iran defense organization.
- 21- Preparation and evaluation of polymeric membrane in LPG separation from gas flows in laboratory scale - Shiraz Refinery
- 22- Preparation and evaluation of a membrane reactor in order to produce syngas in laboratory scale - Research and Development (R&D) of Iranian Petrochemical Industries
- 23- Rubbery membrane preparation for heavy hydrocarbon separation from light gases - Iran supporting cash of researchers.
- 24- Preparation and evaluation of a ceramic membrane for natural gas sweetening - Iran natural gas company
- 25- Application of hybrid membrane and amine processes in natural gas sweetening – South Pars oil and Gas Company.
- 26- Construction the membrane technology knowledge to recovery of aromatics from wastes in aromatic removal units using pervaporation process with 1000 lit/day in a pilot plant - Industrial Development and renovation organization of Iran
- 27- Preparation of a ceramic membrane for purification of SF₆ - Bakhtar regional electric company
- 28- Design and execution of multistage pervaporation membrane pilot plan for organic solvent purification with 500 lit/day - Industrial Development and renovation organization of Iran
- 29- Construction the membrane technology knowledge and preparation of ionic–electronic conducting ceramic-based membranes for oxygen separation from air - New industrial designs
- 30- Preparation and evaluation of X and Y zeolite membranes- Research and technology vice-chancellor of Islamic Azad University (South Tehran Branch)
- 31- Preparation of mixed matrix membranes for carbon dioxide / methane separation - Iran National science Foundation
- 32- Investigating the treatment of wastewater from pollutants of the ecosystem with the membrane distillation process X and Y - Research and technology vice-presidency of Islamic Azad University (South Tehran Branch)
- 33- Ceramic membranes coating for dewatering of ethanol with pervaporation process- Iran National science Foundation

- 34- design of ethanol purification membrane pilot - Secretariat of Article 17 of the fifth national development plan
- 35- Developing technical knowledge on the production of modulus and monolithic ceramic microfilter membranes with length 30 cm for wastewater treatment - New industrial designs
- 36- Developing technical knowledge on the production and evaluation of hollow fiber nanofiltration membranes for water desalination - New industrial designs
- 37- Production of hollow fiber membranes for use in water and wastewater treatment units - Investment Foundation for Research and Technology in Science and Industry
- 38- Establishment of economical desalination units for irrigation water production using nanofiltration technology - Investment Foundation for Research and Technology in Science and Industry

Patents:

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7. Non-porous single layer polydimethylsiloxane (PDMS), Head office of registration of companies and industrial ownership, 2008.
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11. Isopropanol alcohol/water separation using composite membranes of polyether block amide, Head office of registration of companies and industrial ownership, 2008.
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20. Synthesis of aligned carbon nanotubes on large pore size α -alumina support, Head office of registration of companies and industrial ownership, 2009.
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22. Design and Construction of membrane bio-reactor for wastewater treatment, Head office of registration of companies and industrial ownership, 2010.
23. Increasing the size of microfilter membranes in industrial sizes (50 cm), Head office of registration of companies and industrial ownership, 2010.
24. Synthesis of W type Zeolite for purification of SF₆, Head office of registration of companies and industrial ownership, 2012.
25. Synthesis of polyvinyl alcohol (PVA) composite membrane on a polypropylene base, Head office of registration of companies and industrial ownership, 2012.
26. Preparation of PDMS/zeolite 4A mixed matrix membrane, Head office of registration of companies and industrial ownership, 2012.
27. Synthesis of nano-zeolite Rho with control of operating conditions, Head office of registration of companies and industrial ownership, 2012.
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29. Synthesis of zeolite NaA nanocrystals membranes for Separation of isopropyl alcohol–water mixtures, Head office of registration of companies and industrial ownership, 2012.
30. Synthesis of nano-zeolite NaA using tetramethylamine ammonium hydroxide (used in petroleum industry), Head office of registration of companies and industrial ownership, 2012.
31. Synthesis of chabazite zeolite, Head office of registration of companies and industrial ownership, 2012.
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33. Preparation of ethylene glycol dehydration through (PVA–4A)/polypropylene mixed matrix composite membranes, Head office of registration of companies and industrial ownership, 2012.
34. Preparation of polyurethane / polyethylene glycol composite membranes in two type, single-layer and ceramic base, Head office of registration of companies and industrial ownership, 2014.
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