

## CURRICULUM VITAE

**Surname:** OMIDKHAH NASRIN

**First Name:** MOHAMMADREZA

**Present Employment:** Professor,

Chemical Engineering Department

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**Date of Birth:** 10<sup>th</sup> Jan. 1958

**Place of Birth:** Tehran, Iran

**Marital Status:** Married with two children

### **Education:**

1986 - 1990, Ph.D. in Chemical Engineering, UMIST, Manchester, UK

1983 - 1985, M.Sc. in Chemical Engineering, Wayne State Univ. Michigan, USA

1975 - 1982, B.Sc. in Chemical Engineering, Amir Kabir Univ. Tehran

**Title of Ph.D. Thesis:** "Optimizing Reaction - Separation Systems Through  
Improved Understanding of Their Interactions"

### • **Employments:**

2010 - Present, Professor, Tarbiat Modarres University, Tehran

2013 - 2022, President of Chemistry and Chemical Engineering Research Center of Iran

2003 - 2010, Associate Professor, Tarbiat Modarres University, Tehran

1990 - 2003, Assistant Professor, Tarbiat Modarres University, Tehran

2007 - 2010, Director of Research & Technology Department, National Iranian Oil Refining and Distribution Company

1999 - 2007, General Manager of Technology Development Plan, Ministry of Industries and Mines, Tehran

1998 - 1999, Sabbatical leave, UMIST, Manchester, UK

1997 -1998, Director of international affairs of Institute for International Energy Studies (IIES), Tehran

1994 -1995, Director General of UNIDO office in Iran

1993 -1994, Deputy Minister of industry in research and training, Tehran

1992 -1993, Vice Chancellor in academic affairs, K.N. Toosi Univ. of Technology

1991 - 1992, Head of Technical Section of National Iranian Oil Company (NIOC) Management Information & Computer Center, Tehran

- **Honoree Engagements:**

President of IACChE (Iranian Association of Chemical Engineering), 2010 – Present

Member of editorial board of Petroleum Research Journal, 2009 – Present

Member of editorial board of Farayandno Journal, 2009 - 2011

Member of editorial board of Iranian Journal of Chemical Engineering, 2008 - Present

Member of editorial board of Iranian Energy Economics Journal, 1995 - Present

Member of editorial board of Iranian journal of Industry & Development, 1995 – 1999

Advisor to the minister of Industry, 1994 – 1996

Consultant to National Iranian Petrochemical Company (NIPC), 1991 -1996

Consultant to National Iranian Oil Company (NIOC), 1990 – 1995

- **Professional Memberships:**

Member of Iranian Academy of Science (Energy and Environment Branch)

Member of IChE (Iranian Association of Chemical Engineers)

Member of IPI (Iranian Petroleum Institute)

Member of Gas Engineering Association

Member of Energy Association

Member of IAEE (Iran Association for Energy Economics)

Member of the board of IAEE, 1995 - 1997, 1999 - 2001

Member of the World Energy Council (WEC), National Energy Committee of Iran

Chairman of the board of TPI, (Technology Park of Iran), 1997 - 1999

Member of the board of TPI, (Technology Park of Iran), 1994 – 1997

- **Research Area:**

Process synthesis and optimization, Process integration-Pinch Technology,

Modeling and simulation, Process heat recovery systems, Energy management,

Membrane synthesis and characterization, Plasma technology,

- **Courses Taught:**

Conceptual Design of Chemical Processes,

Process Integration,

Heat Transfer,

Advanced Optimization,

Plant Design & Economics,

Computer Aided Design,

Experimental Design & Statistical Analysis,

Advanced Distillation,

Unit Operations

• **Peer Reviewed Published Papers:**

1. Moharrami M, **Omidkhah MR**, Shojaei F, Akbari A, "Multifunctional visible-light photocatalytic ceramic membrane based on a magnetic Cu/Cu<sub>2</sub>O–In<sub>2</sub>O<sub>3</sub>–NiZnFe<sub>2</sub>O<sub>4</sub> double Z-scheme nanocomposite for efficient dye removal", *Journal of Water Process Engineering*, 90, 2026, 110415.
2. Yazd MS, **Omidkhah MR**, Moharrami M, Bazghaleh FS, Rahmani H, Akbari A, "Mechanistic insights into defect-mediated Cu-CrO<sub>2</sub> interfaces for selective CO<sub>2</sub> electroreduction to ethanol", *Journal of CO<sub>2</sub> Utilization* 108, 2026, 103469.
3. Khonveh Y, Song H, Godini HR, **Omidkhah MR**, Akbari A, "Mo-decorated Ti<sub>3</sub>C<sub>2</sub>T<sub>x</sub> MXene interface for a robust and efficient catalytic oxidation-adsorption deep desulfurization", *Surfaces and Interfaces*, 2026, 109183.
4. Yazd M S, **Omidkhah MR**, Moharrami M, Bazghaleh F S, Rahmani H, Akbari A, "Synergistic effects of ZnO in Cu-based catalysts for CO<sub>2</sub> reduction: mechanistic insights into enhanced C<sub>2</sub> product formation", *Energy Conversion and Management: X*, 2026, 101647.
5. Harchegani AB, Akbari A, **Omidkhah MR**, Kafshgari LA, "Spherical and Hierarchically Porous Mo@ ZSM-5/Kaolin composite catalyst Fabricated via solid grinding and Spray-Drying for efficient oxidative desulfurization", *Journal of Industrial and Engineering Chemistry*, 153, 2026, 488-499.
6. Moharrami M, Maleh MS, **Omidkhah MR**, "A review on catalytic ceramic membranes for pharmaceutical wastewater treatment: Integration with advanced oxidation processes", *Journal of Water Process Engineering* 78, 2025, 108726.
7. Morsali S, **Omidkhah MR**, Moharrami M, "Synthesis and characterization of modified alumina membrane with carbon nano-tubes for separation of ethanol from water using sweeping gas membrane distillation", *RSC advances*, 15 (30), 2025, 24102-24116.
8. Shokri Z, Mousavi SM, **Omidkhah MR**, "Advancing sustainable lithium recovery from spent laptop lithium-ion battery cathodes through high pulp density bioleaching followed by Li<sub>2</sub>CO<sub>3</sub> precipitation: process intensification and environmental insights", *Journal of Environmental Chemical Engineering*, 13, 2025, 117014.
9. Moharrami M, **Omidkhah MR**, Salehi Maleh M, "Optimization of extrusion parameters for low-cost alumina–kaolin ceramic membranes via CCD", *Journal of Materials Research and Technology*, 36, 2025, 6661–6678.
10. Beiranvand A, **Omidkhah MR**, Moharrami M, Davari S, Mahdavi HR, "Characterization and optimization of electrodialysis with bipolar membranes with improved alkaline stability for phenol recovery from petroleum wastewater", *Chemical Engineering Journal Advances*, 22, 2025, 100756.
11. Salehi AA, **Omidkhah MR**, Ebadi Amooghin A, Moftakhari Sharifzadeh MM, "Improved gas separation performance of PMMA/Matrimid@5218/graphene oxide (GO) mixed matrix membranes", *Journal of CO<sub>2</sub> Utilization*, 91, 2025, 103012.
12. Asadpoor M, Fakharzadeh M, Fazljoo SE, Ardjmand M, Farhadian M, **Omidkhah MR**, Zinatizadeh AA, "Photo-electrocatalytic degradation of azo dye and evaluation of the electricity generation by using a visible light active CNT-TiO<sub>2</sub>-BiOBr-Bi<sub>2</sub>S<sub>3</sub> electrode", *Chemical Papers*, 79, 2025, 3739–3752.

13. Haji Andevary H, Akbari A, Safari P, **Omidkhah MR**, Sharifi A, Mirzaei M, "Fabricated [Omim]FeCl<sub>4</sub>@Al<sub>2</sub>O<sub>3</sub> as an Efficient Fenton-like Catalyst for Solvent-Free and High Selective Oxidative Desulfurization", *Energy Fuels*, 39, 2025, 1042–1051.
14. Hosseinkhani A, Safari P, **Omidkhah MR**, Ebadi Amooghin A, Norouzi A M, "A high-efficiency Pebax® 1657-based mixed matrix membrane containing molybdenum oxide particles for enhanced CO<sub>2</sub>/N<sub>2</sub> separation", *International Journal of Environmental Science and Technology*, 22, 2025, 6847–6862.
15. Kamali J, Mahmoudi Heris S, **Omidkhah MR**, Hejazi T H, "Determining the Priority of Tank Overhaul by Combining Quantitative Risk Assessment Method and Multi-Criteria Decision- Making Techniques", *Nashrieh Shimi va Mohandesi Shimi Iran*, 43(4), 2025, 229-240. (In Farsi).
16. Hosseinkhani A, **Omidkhah MR**, Ebadi Amooghin A, "Fine-tuning CO<sub>2</sub> separation of mixed matrix membranes by constructing efficient transport pathways through the addition of hybrid porous 2D nanosheets", *Chemical Engineering Journal Advances*, 20, 2024, 100685.
17. Naseri M, **Omidkhah MR**, Mousavi SF, "Advanced electro-assisted filtration of crude oil/water using a conductive mullite whiskers membrane", *Journal of Environmental Chemical Engineering*, 12, 2024, 114060.
18. Naseri M, **Omidkhah MR**, Mousavi SF, "A study on the efficient separation of oily water using mullite whiskers membrane through combined filtration and electrofiltration", *RSC Advances*, 14, 2024, 30245.
19. Akbari A, Haji Andevary H, **Omidkhah MR**, "Boosted Regeneration of Coked SAPO-34 Catalyst in MTO Fluidized Bed Reactor by Diluted Air at Elevated Temperatures", *Chemical Engineering and Processing-Process Intensification*, 201, 2024, 109821.
20. Mohammadi A, **Omidkhah MR**, Karimzadeh R, Haghtalab A, "Experimental Investigation and Thermodynamic Modeling of Equilibria in the Quinary System Naphtha Cut, Sulfolane, and Water", *Journal of Separation Science and Engineering* 15 (2), 2024, 1-16.
21. Gharibshahi R, **Omidkhah MR**, Jafari A, "Sandpack flooding of microwave absorbent nanofluids under electromagnetic radiation: an experimental study", *Journal of Petroleum Exploration and Production Technology*, 14 (3), 2024, 853-865.
22. Shirinia M, Abdollahi M, **Omidkhah MR**, "Effect of vinyl acetate/dibutyl maleate copolymers on gas transport properties of poly (ethylene oxide-b-amide 6) membranes: a comprehensive study on permeability, diffusivity solubility, and permselectivity of carbon dioxide", *Iranian Polymer Journal*, 33 (6), 2024, 799-814.
23. Tohidi Z, Jafari A, **Omidkhah MR**, "Janus Silica Nanoparticles at Three-Phase Interface of Oil–Calcite–Electrolyte Water: Molecular Dynamics Simulation", *Korean Journal of Chemical Engineering* 41 (4), 2024, 1077-1092.
24. Mousavi YS, Akbari A, **Omidkhah MR**, Safari P, "Formulated Mn-promoted SAPO-34/kaolin/alumina sol micro-size catalyst with a superior performance for methanol to light olefins conversion in a fluidized bed reactor", *Journal of Industrial and Engineering Chemistry*, 129, 2024, 403-412.
25. Seifi MH, Sharifzadeh M, Ghorbani M, **Omidkhah MR**, "Study on synthesis of doped polyaniline with alumina and its anticorrosion properties as an additive in paint

- coating”, Iranian Journal of Chemistry and Chemical Engineering, 42 (10), 2023, 3257-3266.
26. Naseri M, **Omidkhah MR**, “Optimizing the fabrication conditions of monolithic mullite whisker membrane from kaolin and bauxite using the Taguchi method”, *Ceramics International* 49 (14), 2023, 23612-23626.
  27. Mohammadi A, **Omidkhah MR**, Karimzadeh R, Haghtalab A, “Optimization of Extractive Pretreatment of Naphtha Cracker Feedstock Using Response Surface Methodology”, *Journal of Separation Science and Engineering* 15 (1), 2023, 55-69.
  28. Mohammadi A, **Omidkhah MR**, Karimzadeh R, Haghtalab A, “Extractive Dearomatization of Naphtha Cut using 3-Methyl-N-Butylpyridinium Dicyanamide+ Sulfolane Mixed Solvent” *Journal of Separation Science and Engineering* 15 (1), 2023, 70-89.
  29. Rashidian SH, **Omidkhah MR**, Zamani Pedram M, Hoseinzadeh S, “Study of the physicochemical and transport performance of neat Matrimid 5218 membrane with nanoparticles: A molecular dynamics simulation”, *Engineering Analysis with Boundary Elements* 150, 2023, 642-661.
  30. Hosseini SR, **Omidkhah MR**, Lighvan ZM, Norouzbahari S, Ghadimi A, “Synthesis, characterization, and gas adsorption performance of an efficient hierarchical ZIF-11@ ZIF-8 core-shell metal-organic framework (MOF)”, *Separation and Purification Technology* 307, 2023, 122679.
  31. Varaee M, Honarvar M, Eikani MH, **Omidkhah MR**, Mooraki N, “Optimized Purification of Free Amino Acids from Molasses by Nanofiltration Membrane”, *Journal of Food Biosciences and Technology* 13 (1), 2023, 1-22.
  32. Hamed M, **Omidkhah MR**, Sadrameli SM, Khoshgoftar Manesh MH, “Exploring the improvement potentials in an existing industrial olefin plant through advanced exergy-based analyses”, *Journal of Cleaner Production* 380, 2022, 134927.
  33. Nikookar M, **Omidkhah MR**, Pazuki GR, Mohammadi AH, “An insight into molecular weight distributions of asphaltene and asphalt using Gel Permeation Chromatography”, *Journal of Molecular Liquids*, 362, 2022, 119736.
  34. Gharibshahi R, **Omidkhah MR**, Jafari A, Mehrooz N, “Parametric optimization of in-situ heavy oil upgrading using simultaneous microwave radiation and magnetic nanohybrids via Taguchi approach”, *Fuel*, 325, 2022, 124717.
  35. Gharibshahi R, **Omidkhah MR**, Jafari A, Fakhroueian Z, “Experimental investigation of nanofluid injection assisted microwave radiation for enhanced heavy oil recovery in a micromodel system”, *Korean Journal of Chemical Engineering*, 39 (3), 2022, 562-575.
  36. Sabet SA, **Omidkhah MR**, Jafari A, “Viscosity reduction of extra-heavy crude oil using nanocatalysts”, *Korean Journal of Chemical Engineering*, 39 (5), 2022, 1207–1214.
  37. Tohidi Z, Teimouri A, Jafari A, Gharibshahi R, **Omidkhah MR**, “Application of Janus nanoparticles in enhanced oil recovery processes: Current status and future opportunities”, *Journal of Petroleum Science and Engineering*, 208, 2022, 109602.
  38. Hamed M, **Omidkhah MR**, Sadrameli SM, K Manesh M H, “Exergetic, exergoeconomic, and exergoenvironmental analyses of an existing industrial olefin plant”, *Sustainable Energy Technologies and Assessments*, 52, 2022, 102175.

39. Asleshirin S, Mazaheri H, **Omidkhah MR**, Hassani Joshaghani A, "Investigation of Thermophysical Properties of Io Nanofluids Containing Multi-Walled Carbon Nanotubes and Graphene", *Iran. J. Chem. Chem. Eng.*, 2022, Vol 40 (2).
40. Bashiri N, **Omidkhah MR**, Godini H, "Direct conversion of CO<sub>2</sub> to light olefins over FeCo/XK-YAL<sub>2</sub>O<sub>3</sub> (X = La, Mn, Zn) catalyst via hydrogenation reaction", *Research on Chemical Intermediates*, 47, 2021, 5267–5289.
41. Ghasemi goudarzi P, Hojjati MR, **Omidkhah MR**, Tavallali MS, "Estimation of Kinetic Parameters and Simulation of Methylacetylene and Propadiene Liquid-Phase Selective Hydrogenation Reactor Considering the Catalyst Deactivation", *Industrial & Engineering Chemistry Research*, 2021, DOI 10.1021/acs.iecr.1c01593.
42. Sabet SA., **Omidkhah MR**, Jafari A, "Methods for Viscosity Reduction of Heavy Crude Oil with Focus on Nano Catalysts: A Review Study", *Iranian Chemical Engineering Journal*, 19(112), 2021, 74-85.
43. Davari S., **Omidkhah MR**, Salari S, "Role of polydopamine in the enhancement of binding stability of TiO<sub>2</sub> nanoparticles on polyethersulfone ultrafiltration membrane", *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 622, 2021, 126694.
44. Abdollahi M, **Omidkhah MR**, Ahmadi J, Keshtkar A, Akbari A, "Fabrication of an Efficient Structured Packing for Hard Vacuum Distillation Processes and Calibration by Carbon Tetrachloride-Benzene Mixture", *Chemical Engineering and Processing-Process Intensification*, 160, 2021, 108288.
45. Tohidi Z, Jafari A, **Omidkhah MR**, "Electrolyte Nanofluid Performance on Oil Detachment from an Oil-Wetted Carbonate Surface: Water Channel Formation Using Molecular Dynamics Simulation", *Journal of Petroleum Science and Engineering*, 196, 2021, 108006.
46. Asadpoor M, Arjmand M, Farhadian M, **Omidkhah MR**, Zinatizadeh AA, "Optimization and modeling of the photocatalytic activities of a novel visible driven cnt/tio<sub>2</sub> /biobr/bi<sub>2</sub> s<sub>3</sub> nanocomposite", *Desalination and Water Treatment*, 209, 2021, 219–229.
47. Gharedaghi M, **Omidkhah MR**, Abdollahi S, Ghadimi A, "An Investigation on Gas Transport Properties of Elvaloy4170/[Emim][Tf<sub>2</sub>N] Hybrid Membranes for Efficient CO<sub>2</sub>/CH<sub>4</sub> Separation" *Journal of Membrane Science and Research*, 7, 2021, 185-195.
48. Asadpoor M, Ardjmand M, Farhadian M, **Omidkhah MR**, Zinatizadeh AA, "Synthesis of a new visible driven photocatalyst TiO<sub>2</sub>/ a-CNT/b-BiOBr/c-Bi<sub>2</sub>S<sub>3</sub> and its application for RB19 removal: modeling and process optimization", *Chemical Papers*, 75(3), 2021, 1267–1278.
49. Asleshirin S, Mazaheri H, **Omidkhah MR**, Hassani Joshaghani A, "Experimental investigation of the efect of Al<sub>2</sub>O<sub>3</sub> nanoparticles with spherical and rod-shaped morphologies on the thermophysical properties of ionic nanouids", *Scientia Iranica C*, 28(3), 2021, 1452-1463.
50. Miri S, **Omidkhah MR**, Ebadi Amooghin A, Matsuura T, " Membrane-based gas separation accelerated by quaternary mixed matrix membranes", *Journal of Natural gas Science and Engineering*, 84, 2020, 103655.
51. Jafarinasab M, Akbari A, **Omidkhah MR**, Shakeri M, "An Efficient Co-Based Metal-Organic Framework Nanocrystal (Co-ZIF-67) for Adsorptive Desulfurization of

Dibenzothiophene: Impact of the Preparation Approach on Structure Tuning”, *Energy and Fuels*, 34, 2020, 12779-12791.

52. Nadeali A, Kalantari S, Yarmohammadi M, **Omidkhah MR**, Ebadi Amooghin A, Zamani Pedram M, “CO<sub>2</sub> Separation Properties of a Ternary Mixed-Matrix Membrane Using Ultrasensitive Synthesized Macrocyclic Organic Compounds”, *ACS Sustainable Chemistry and Engineering*, 8, 34, 2020, 12775-12787.
53. Izadmehr N, Mansourpanah Y, Ulbricht M, Rahimpour A, **Omidkhah MR**, “TETA-anchored graphene oxide enhanced polyamide thin film nanofiltration membrane for water purification; performance and antifouling properties”, *Journal of Environmental Management*, 276, 2020, 111299.
54. Gharibshahi R, **Omidkhah MR**, Jafari A, Fakhroueian Z, “Hybridization of superparamagnetic Fe<sub>3</sub>O<sub>4</sub> nanoparticles with MWCNTs and effect of surface modification on electromagnetic heating process efficiency: A microfluidics enhanced oil recovery study”, *Fuel*, 282, 2020, 118603.
55. Shirinia M, Abdollahi M, **Omidkhah MR**, “Simultaneous enhancement of CO<sub>2</sub> permeability and CO<sub>2</sub>/CH<sub>4</sub> and CO<sub>2</sub>/N<sub>2</sub> selectivity via incorporating dense, rubbery and CO<sub>2</sub>-philic vinyl acetate based copolymers into poly(ethylene oxide-b-amide 6) membranes”, *Reactive and Functional Polymers*, 154, 2020, **104673**.
56. Pourziad S, **Omidkhah MR**, “Improved antifouling and self-cleaning ability of PVDF ultrafiltration membrane grafted with polymer brushes for oily water treatment”, *Journal of Industrial and Engineering Chemistry*, 83, 2020, 401-408.
57. Akbari A, Chamack M, **Omidkhah MR**, “Reverse microemulsion synthesis of polyoxometalate based heterogeneous hybrid catalysts for oxidative desulfurization” *Journal of Materials Science*, 55 (15), 2020, 6513–6524.
58. Kalantari S, **Omidkhah MR**, Ebadi Amooghin A, “Preparation of Mixed-Matrix membranes containing Iron Nickel Zinc Oxide Nanoparticles for Separation of Carbon Dioxide, Nitrogen, and Methane”, *Applied Research in Chemical – Polymer Engineering*, 4 (1), 2020, 67-90.
59. Haji Andevary H, Akbari A, Rajabi Z, **Omidkhah MR**, “Towards a room temperature oxidative desulfurization of refractory 2 compounds over 1-octyl-3-methylimidazolium tetrachloroferrates/silica gel: the beneficial effects of immobilization”, *Process Safety and Environmental Protection*, 136, 2020, 343-352.
60. Kalantari S, **Omidkhah MR**, Ebadi Amooghin A, Matsuura T, “Superior interfacial design in ternary mixed matrix membranes to enhance the CO<sub>2</sub> separation performance”, *Applied Materials Today*, 18, 2020, 100491, 1-17.
61. Raouf M, Abedini R, **Omidkhah MR**, Nezhadmoghadam E, “A favored CO<sub>2</sub> separation over light gasses using mixed matrix membrane comprising Polysulfone/Polyethylene Glycol and Graphene Hydroxyl nanoparticles”, *Process Safety and Environmental Protection*, 133, 2020, 394-407.
62. Mokhtari B, Akbari A, **Omidkhah MR**, “Superior Deep Desulfurization of Real Diesel over MoO<sub>3</sub>/Silica Gel as an Efficient Catalyst for Oxidation of Refractory Compounds”, *Energy & Fuels* 33, 2019, 7276-7286.
63. Nadeali A, Zamani Pedram M, **Omidkhah MR**, Yarmohammadi M, “A Promising Performance for Efficient CO<sub>2</sub> Separation with the p-tert-Butylcalix[4]arene/Pebax-

- 1657 Mixed Matrix Membrane”, ACS Sustainable Chemistry and Engineering, 7, 23, 2019, 19015-19026.
64. Sanaeepur H, Ebadi Amooghin A, Kargari A, **Omidkhah MR**, Fauzi Ismail A, Ramakrishna S, “Interior Modification of Nano-Porous Fillers to Fabricate High Performance Mixed Matrix Membranes”, Iranian Journal of Chemical Engineering, 16 (2), 2019, 70-94.
  65. Rahmani S, Mortaheb HR, **Omidkhah MR**, Khodadadi Dizaji A, “Investigation on Performance of PDMS-Graphene/PES Hybrid Membrane for Pervaporative Separation of Phenol from Aqueous Streams”, Polymer – Plastics Technology and Engineering, 58 (3), 2019, 305-315.
  66. Haji Andevary H, Akbari A, **Omidkhah MR**, “High efficient and selective oxidative desulfurization of diesel fuel using dual-function [Omim]FeCl<sub>4</sub> as catalyst/extractant”, Fuel Processing Technology 185, 2019, 8–17.
  67. Heidari M, Hosseini SS, **Omidkhah MR**, Ghadimi A, “Synthesis and fabrication of adsorptive carbon nanoparticles (ACNs)/PDMS mixed matrix membranes for efficient CO<sub>2</sub>/CH<sub>4</sub> and C<sub>3</sub>H<sub>8</sub>/CH<sub>4</sub> separation”, Separation and Purification Technology 209, 2019, 503–515.
  68. Akbari A, **Omidkhah MR**, “Silica-zirconia membrane supported on modified alumina for hydrogen production in steam methane reforming unit”, International Journal of Hydrogen Energy, 44 (31), 2019, 16698-16706.
  69. Azami H, **Omidkhah MR**, “Modeling and optimization of characterization of nanostructure anodized aluminium oxide membranes”, Journal of the Iranian Chemical Society, 16 (5), 2019, 985–997.
  70. Pourziad S, **Omidkhah MR**, Abdollahi M, “Preparation of Fouling-Resistant and Self-Cleaning PVDF Membrane via Surface-Initiated Atom Transfer Radical Polymerization for Emulsified Oil/Water Separation”, The Canadian Journal of Chemical Engineering, 97, S1, 2019, 1581-1588.
  71. Varaeaa M, Honarvar M, Eikani MH, **Omidkhah MR**, Moraki N, “Supercritical fluid extraction of free amino acids from sugar beet and sugar cane molasses”, The Journal of Supercritical Fluids 144, 2019, 48–55.
  72. Varaeaa M, Honarvar M, Eikani MH, **Omidkhah MR**, Moraki N, “Effect of Storage Temperature and Light on the Freeze-Dried Amino Acids from Sugar Beet and Sugar Cane Molasses”, Journal of Food Biosciences and Technology, 9(2), 2019, 51-62.
  73. **Omidkhah MR**, Azami H, Ghaheri L, “Biofouling Behavior on Forward Osmosis Using Vertically Aligned CNT Membrane on Alumina”, Iranian Journal of Chemical Engineering, 16 (2), 2019, 1-13.
  74. Ghasemi Estahbanati E, **Omidkhah MR**, Ebadi Amooghin A, “Preparation of Mixed Matrix Membranes Containing Polyether Block Amide and Silver Nanoparticles to Evaluate the Permeability of CO<sub>2</sub>, N<sub>2</sub> and CH<sub>4</sub> Gases, Petroleum Research, 29 (104), 2019, 21-24.
  75. Mokhtari B, Akbari A, **Omidkhah MR**, “Investigation of catalytic oxidative desulfurization of diesel fuel using Mo catalyst supported on  $\gamma$ -Al<sub>2</sub>O<sub>3</sub>”, Petroleum Research, 29 (107), 2019, 22-36.

76. Ferdowsi M, Yazdani F, **Omidkhah MR**, Keshavarz MH, "A general relationship between electric spark and impact sensitivities of nitroaromatics and nitramines", *Journal of Inorganic and General Chemistry, ZAAC*, 644(23), 2018, 1623-1628.
77. Vaez M, Alijani S, **Omidkhah MR**, Zarringhalam Moghaddam A, "Synthesis, characterization and optimization of N-TiO<sub>2</sub>/PANI nanocomposite for photodegradation of acid dye under visible light", *Polymer Composites* 39(12), 2018, 4605-4616.
78. Sanaeepur H, Ebadi Amooghin A, Khademian E, Kargari A, **Omidkhah MR**, "Gas permeation modeling of mixed matrix membranes: Adsorption isotherms and permeability models", *Polymer Composites* 39(12), 2018, 4560-4568.
79. Davari S, **Omidkhah MR**, Abdollahi M, "Improved antifouling ability of thin film composite polyamide membrane modified by a pH-sensitive imidazole-based zwitterionic polyelectrolyte", *Journal of Membrane Science* 564, 2018, 788-799.
80. Ebadi Amooghin A, Sanaeepur H, **Omidkhah MR**, Kargari A, "Ship-in-a-bottle, a new synthesis strategy for preparing novel hybrid host-guest nanocomposites for highly selective membrane gas separation", *Journal of Materials Chemistry A*, 6 (4), 2018, 1751-1771.
81. Ferdowsi M, Yazdani F, **Omidkhah MR**, Keshavarz MH, "Reliable Prediction of Shock Sensitivity of Energetic Compounds based on Small-scale Gap Test through Their Electric Spark Sensitivity", *Journal of Inorganic and General Chemistry, ZAAC*, 644 (16), 2018, 888-892.
82. Barmala M, Behnood M, **Omidkhah MR**, "Photo oxidation of DBT using carbon nanotube titania composite as visible light active photo catalyst", *Journal of Central South University*, 25, 2018, 1642-1650.
83. Nezhadmoghadam E, Pourafshari Chenar M, **Omidkhah MR**, Nezhadmoghadam A, Abedini R, "Aminosilane grafted Matrimid 5218/nano-silica mixed matrix membrane for CO<sub>2</sub>/light gases separation", *Korean Journal of Chemical Engineering*, 35(2), 2018, 526-534.
84. Hazrati H, Rostamizadeh M, **Omidkhah MR**, Sadeghian Z, "Influence of synthesis and operating parameters on silicalite-1 membrane properties", *Comptes Rendus Chimie*, 21, 2018, 19-26.
85. Chitsaz H, **Omidkhah MR**, Ghobadian B, Ardjmand M, "Optimization of hydrodynamic cavitation process of biodiesel production by response surface methodology", *Journal of Environmental Chemical Engineering*, 6, 2018, 2262-2268.
86. Keshavarz MH, Ghaffarzadeh M, **Omidkhah MR**, Farhadi K, "Correlation between Shock Sensitivity of Nitramine Energetic Compounds based on Small-scale Gap Test and Their Electric Spark Sensitivity", *Journal of Inorganic and General Chemistry, ZAAC*, 643(24), 2017, 2158-2162.
87. Azami H, **Omidkhah MR**, "Preparation, Characterization, and Application of Vertically Aligned CNT Sheets through Template Assisted Pyrolysis of PBI-Kapton" *The Canadian Journal of Chemical Engineering*, 95, 2017, 307-318.
88. Chehrazi E, Sharif A, **Omidkhah MR**, Karimi M, "Correction to Modeling the Effects of Interfacial Characteristics on Gas Permeation Behavior of Nanotube-Mixed Matrix Membranes", *ACS Applied Materials and Interfaces*, 9 (42), 2017, 37321-37331.

89. Azimzadeh H, Akbari A, **Omidkhah MR**, "Catalytic oxidative desulfurization performance of immobilized NMP.FeCl<sub>3</sub> ionic liquid on  $\gamma$ -Al<sub>2</sub>O<sub>3</sub> support", *Chemical Engineering Journal*, 320, 2017, 189-200.
90. Ghasemi Estahbanati E, **Omidkhah MR**, Ebadi Amooghin A, "Preparation and characterization of novel Ionic liquid/Pebax membranes for efficient CO<sub>2</sub>/light gases separation", *Journal of Industrial and Engineering Chemistry*, 51, 2017, 77-89.
91. Ghasemi Estahbanati E, **Omidkhah MR**, Ebadi Amooghin A, "Interfacial Design of Ternary Mixed Matrix Membranes Containing Pebax 1657/Silver-Nanopowder / [BMIM][BF<sub>4</sub>] for Improved CO<sub>2</sub> Separation Performance", *ACS Applied Materials and Interfaces*, 9, 2017, 10094-10105.
92. Dorosti F, **Omidkhah MR**, "Fabrication Parameters of Assymmetric Mixed Matrix Matrimid-MIL-53/PMHS Membrane for CO<sub>2</sub>/CH<sub>4</sub> Separation", *Iranian Journal of Polymer Science and Technology (Persian)*, 30 (1), 2017, 63-73.
93. Khosravi T, **Omidkhah MR**, Kaliaguine S, Rodrigue D, "Amine-Functionalized CuBTC/Poly(Ether-b-Amide-6) (Pebax MH 1657) Mixed Matrix Membranes for CO<sub>2</sub>/CH<sub>4</sub> Separation", *The Canadian Journal of Chemical Engineering*, 95, 2017, 2024-2033.
94. Khosravi T, **Omidkhah MR**, "Preparation of CO<sub>2</sub> selective composite membranes using Pebax/CuBTC/PEG-ran-PPG ternary system", *Journal of Energy Chemistry*, 26, 2017, 530-539.
95. Sanaeepur H, Kargari A, Nasernejad B, Ebadi Amooghin A, **Omidkhah MR**, "A novel Co<sub>2</sub>+ exchanged zeoliteY/cellulose acetate mixed matrix membrane for CO<sub>2</sub>/N<sub>2</sub> separation", *Journal of the Taiwan Institute of Chemical Engineers*, 60, 2016, 403-413.
96. Ebadi Amooghin A, **Omidkhah MR**, Sanaeepur H, Kargari A, "Preparation and characterization of Ag + ion-exchanged zeolite-Matrimid<sup>®</sup>5218 mixed matrix membrane for CO<sub>2</sub>/CH<sub>4</sub> separation", *Journal of Energy Chemistry*, 25, 2016, 450-462.
97. Hosseinzadeh Beiragh H, **Omidkhah MR**, Abedini R, Khosravi T, Pakseresht S, "Synthesis and characterization of poly (ether-block-amide) mixed matrix membranes incorporated by nanoporous ZSM-5 particles for CO<sub>2</sub>/CH<sub>4</sub> separation", *Asia-Pacific Journal of Chemical Engineering*, 11, 2016, 522-532.
98. Pirouzfard V, **Omidkhah MR**, "Mathematical modeling and optimization of gas transport through carbon molecular sieve membrane and determining the model parameters using genetic algorithm", *Iran Polymer Journal*, 25, 2016, 203-212.
99. Karimi S, Ghobadian B, **Omidkhah MR**, Towfighi J, Tavakkoli Yarak M, "Experimental investigation of bioethanol liquid phase dehydration using natural clinoptilolite", *Journal of Advanced Research*, 7, 2016, 435-444.
100. Sadeghi Z, **Omidkhah MR**, Masoumi ME, Abedini R, "Modification of Existing Permeation Models of Mixed Matrix Membranes Filled with Porous Particles for Gas Separation", *The Canadian Journal of Chemical Engineering*, 94, 2016, 547-555.
101. Moftakhari Sharifzadeh MM, Ebadi Amooghin A, Zamani Pedram M, **Omidkhah MR**, "Time-dependent mathematical modeling of binary gas mixture in facilitated transport membranes (FTMs): A real condition for single-reaction mechanism", *Journal of Industrial and Engineering Chemistry*, 39, 2016, 48-65.

102. Ebadi Amooghin A, Sanaeepur H, Zamani Pedram M, **Omidkhah MR**, Kargari A., "New advances in polymeric membranes for CO<sub>2</sub> separation", A Book Chapter in Polymer science: research advances, practical applications and educational aspects (Méndez-Vilas, A.; Solano, A., Eds.), 2016.
103. Ebadi Amooghin A, **Omidkhah MR**, Kargari A, "The effects of aminosilane grafting on NaY zeolite–Matrimid®5218 mixed matrix membranes for CO<sub>2</sub>/CH<sub>4</sub> separation", Journal of Membrane Science, 490, 2015, 364–379.
104. Loloie M, **Omidkhah MR**, Moghadassi A, Ebadi Amooghin A, "Preparation and Characterization of Matrimid®5218 Based Binary and Ternary Mixed Matrix Membranes for CO<sub>2</sub> Separation", International Journal of Greenhouse Gas Control, 39, 2015, 225–235.
105. Dorosti F, **Omidkhah MR**, Abedini R, "Enhanced CO<sub>2</sub>/CH<sub>4</sub> separation properties of asymmetric mixed matrix membrane by incorporating nano-porous ZSM-5 and MIL-53 particles into Matrimid 5218", Journal of Natural Gas Science and Engineering, 25, 2015, 88–102.
106. Dorosti F, **Omidkhah MR**, Abedini R, "The evaluation of symmetric and asymmetric matrimid/MIL-53 mixed matrix membranes for CO<sub>2</sub>/CH<sub>4</sub> separation", Journal of Separation Science and Engineering (Persian), 7(1), 2015, 83-92.
107. Abedini R, **Omidkhah MR**, Dorosti F, "Effect of amine-functionalized MIL-53 metal organic frameworks on the performance of poly (4Methyl- 1- Pentane) membrane in CO<sub>2</sub>/CH<sub>4</sub> gas separation", Iranian Journal of Polymer Science and Technology (Persian), 28 (2), 2015, 131-147.
108. Loloie M, Moghadassi A, **Omidkhah MR**, Ebadi Amooghin A, "Improved CO<sub>2</sub> separation performance of matrimid 5218 membrane by addition of low molecular weight polyethylene glycol", Greenhouse Gas Science and Technology, 5 (5), 2015, 530-544.
109. Najari S, Hosseini SS, **Omidkhah MR**, Tan NR, "Phenomenological modeling and analysis of gas transport in polyimide membranes for propylene/propane separation", RSC Advances, 5 (58), 2015, 47199-47215.
110. Khosravi T, **Omidkhah MR**, "Preparation of CO<sub>2</sub>-philic polymeric membranes by blending poly(ether-b-amide-6) and PEG/PPG-containing copolymer", RSC Advances, 5 (17), 2015, 12849–12859.
111. Ebadi Amooghin A, **Omidkhah MR**, Kargari A, "Enhanced CO<sub>2</sub> transport properties of membranes by embedding nano-porous zeolite particles into Matrimid®5218 matrix", RSC Advances, 5 (12), 2015, 8552-8565.
112. Akbari A, **Omidkhah MR**, Towfighi Darian J, "Facilitated and selective oxidation of thiophenic sulfur compounds using MoO<sub>x</sub>/Al<sub>2</sub>O<sub>3</sub>–H<sub>2</sub>O<sub>2</sub> system under ultrasonic irradiation", Ultrasonics Sonochemistry, 23, 2015, 231–237.
113. Ranjbaran F, **Omidkhah MR**, Ebadi Amooghin A, "The novel Elvaloy4170/functionalized multi-walled carbon nanotubes mixed matrix membranes: Fabrication, characterization and gas separation study", Journal of the Taiwan Institute of Chemical Engineers, 49, 2015, 220–228.

114. Barmala M, Zarringhalam Moghadam A., **Omidkhah MR**, "Increased photo-catalytic removal of sulfur using titania/MWCNT composite", *Journal of Central South University*, 22, 2015, 1066–1070.
115. Vaez M, **Omidkhah MR**, Alijani S, Zarringhalam Moghaddam A, Sadrameli M, Gholipour Zanjani N, "Evaluation of photocatalytic activity of immobilized titania nanoparticles by support vector machine and artificial neural network", *The Canadian Journal of Chemical Engineering*, 93 (6), 2015, 1009–1016.
116. Sadeghi Z, **Omidkhah MR**, Masoumi ME, "New Permeation Model for Mixed Matrix Membrane with Porous Particles", *International Journal of Chemical Engineering and Applications*, 6 (5), 2015, 325-330.
117. Tavassolirizi Z, Shams K, **Omidkhah MR**, "Platinum recovery from model media and a Pt–Sn/alumina spent catalyst extract using corn husk-based adsorbent", *Journal of Industrial and Engineering Chemistry*, 23, 2015, 119-127.
118. Abedini R, **Omidkhah MR**, Dorosti F, "CO<sub>2</sub>/CH<sub>4</sub> Separation by a Mixed Matrix Membrane of Polymethylpentyne/MIL-53 Particles", *Iranian Journal of Polymer Science and Technology*, 27 (4), 2014, 337-351.
119. Abedini R, **Omidkhah MR**, Dorosti F, "Hydrogen separation and purification with poly (4-methyl-1-pentyne)/MIL 53 mixed matrix membrane based on reverse selectivity" *International Journal of Hydrogen Energy*, 39 (15), 2014, 7897–7909.
120. Dorosti F, **Omidkhah MR**, Abedini R, "Fabrication and characterization of Matrimid/MIL-53 mixed matrix membrane for CO<sub>2</sub>/CH<sub>4</sub> separation", *Chemical Engineering Research and Design*, 92 (11), 2014, 2439–2448.
121. Abedini R, **Omidkhah MR**, Dorosti F, "Highly permeable poly(4-methyl-1-pentyne)/NH<sub>2</sub>-MIL 53 (Al) mixed matrix membrane for CO<sub>2</sub>/CH<sub>4</sub> separation", *RSC Advances*, 4 (69), 2014, 36522-36537.
122. Zamani Pedram M, **Omidkhah MR**, Ebadi Amooghin A, Yaghani R, "Facilitated transport by amine-mediated poly(vinyl alcohol) membranes for CO<sub>2</sub> removal from natural gas", *Polymer Engineering & Science*, 54 (6), 2014, 1268–1279.
123. Akbari A, **Omidkhah MR**, Towfighi Darian J, "Optimization of operating conditions in oxidation of dibenzothiophene in the light hydrocarbon model" *Chemical Industry and Chemical Engineering Quarterly*, 20 (3), 2014, 315–323.
124. Zamani Pedram M, **Omidkhah MR**, Ebadi Amooghin A, "Synthesis and characterization of diethanolamine-impregnated cross-linked polyvinylalcohol/ glutaraldehyde membranes for CO<sub>2</sub>/CH<sub>4</sub> separation", *Journal of Industrial and Engineering Chemistry*, 20 (1), 2014, 74–82.
125. Hosseini SS, **Omidkhah MR**, Zarringhalam Moghaddam A, Pirouzfard V, Krantz WB, Tan NR, "Enhancing the properties and gas separation performance of PBI–polyimides blend carbon molecular sieve membranes via optimization of the pyrolysis process", *Separation and Purification Technology*, 122, 2014, 278-289.
126. Pirouzfard V, Hosseini SS., **Omidkhah MR**, Zarringhalam Moghaddam A, "Modeling and optimization of gas transport characteristics of carbon molecular sieve membranes through statistical analysis", *Polymer Engineering & Science*, 54 (1), 2014, 147–157.
127. Pirouzfard V, Zarringhalam Moghaddam A, **Omidkhah MR**, Hosseini SS, "Investigating the effect of dianhydride type and pyrolysis condition on the gas separation

- performance of membranes derived from blended polyimides through statistical analysis”, *Journal of Industrial and Engineering Chemistry*, 20 (3), 2014, 1061–1070.
128. Akbari A, **Omidkhah MR**, Towfighi Darian J, “Investigation of process variables and intensification effects of ultrasound applied in oxidative desulfurization of model diesel over MoO<sub>3</sub>/Al<sub>2</sub>O<sub>3</sub> catalyst”, *Ultrasonics Sonochemistry*, 21 (2), 2014, 692–705.
  129. Fattahi Monavar A, **Omidkhah MR**, Zarringhalam Moghaddam A, Akbari A, “Synthesis and characterization of new catalyst for oxidative desulfurization (ODS) of model diesel fuel Co-Mo/ $\gamma$ -Al<sub>2</sub>O<sub>3</sub>”, *Petroleum & Coal* 56(4), 2014, 442-447.
  130. Ebadi Amooghin A, Zamani Pedram M, **Omidkhah MR**, Yegani R, “A novel CO<sub>2</sub>-selective synthesized amine-impregnated cross-linked polyvinylalcohol/glutaraldehyde membrane: fabrication, characterization, and gas permeation study”, *Greenhouse Gases: Science and Technology*, 3 (5), 2013, 378–391.
  131. Zamani Pedram M, **Omidkhah MR**, Ebadi Amooghin A, Yegani R, Moghadam F, “DEA-Impregnated Cross-Linked Polyvinyl Alcohol/Glutaraldehyde Polymeric Systems as CO<sub>2</sub>/CH<sub>4</sub> Gas Separation Membranes”, *Iranian Journal of Polymer Science and Technology*, 25 (6), 2013, 477-489.
  132. Pakizeh M, Neghad Moghadam A, **Omidkhah MR**, Namvar-Mahboub M, “Preparation and characterization of dimethyldichlorosilane modified SiO<sub>2</sub>/PSf nanocomposite membrane”, *Korean Journal of Chemical Engineering*, 30 (3), 2013, 751-760.
  133. Gilani N, Towfighi J, Rashidi A, Mohammadi T, **Omidkhah MR**, Sadeghian A., “Investigation of H<sub>2</sub>S separation from H<sub>2</sub>S/CH<sub>4</sub> mixtures using functionalized and non-functionalized vertically aligned carbon nanotube membranes”, *Applied Surface Science*, 270, 2013, 115-123.
  134. **Omidkhah MR**, Zamani Pedram M, Ebadi Amooghin A, “Facilitated transport of CO<sub>2</sub> through DEA-mediated poly(Vinyl alcohol) membrane cross-linked by formaldehyde”, *Journal of Membrane Science & Technology*, 3 (1), 2013, 119.
  135. Mohammadi A, **Omidkhah MR**, Karimzadeh R, Haghtalab A, “Structural modeling of petroleum fractions based on mixture viscosity and Watson K factor”, *Korean Journal of Chemical Engineering*, 30 (2), 2013, 465-473.
  136. Abbaszaadeh A, Ghobadian B, **Omidkhah MR**; Najafi G, “Current biodiesel production technologies: A comparative review”, *Energy Conversion and Management*, 63, 2012, 138-148.
  137. Peyvandi K, Haghtalab A, **Omidkhah MR**, “Using an electrochemical technique to study the effective variables on morphology and deposition of CaCO<sub>3</sub> and BaSO<sub>4</sub> at the metal surface”, *Journal of Crystal Growth*, 354, 2012, 109-118.
  138. Akbari A, **Omidkhah MR**, Towfighi Darian J, “Preparation and characterization of MoO<sub>3</sub>/Al<sub>2</sub>O<sub>3</sub> catalyst for oxidative desulfurization of diesel using H<sub>2</sub>O<sub>2</sub>: effect of drying method and Mo loading”, *International Journal of Chemical, Molecular, Nuclear, Materials and Metallurgical Engineering*, 6(7), 2012, 328-331.
  139. Gilani N, Towfighi Daryan J, Rashidi A, **Omidkhah MR**, “Separation of methane–nitrogen mixtures using synthesis vertically aligned carbon nanotube membranes”, *Applied Surface Science*, 258, 2012, 4819–4825.
  140. Shamsi S, **Omidkhah MR**, “Optimization of steam pressure levels in a total site using a thermo-economic method”, *Energies*, 5 (3), 2012, 702-717.

141. Tarighaleslami AH, **Omidkhah MR**, Ghannadzadeh A, Hoseinzadeh Hesas R, "Thermodynamic evaluation of distillation columns using exergy loss profiles: a case study on the crude oil atmospheric distillation column", *Clean Technologies and Environmental Policy*, 14 (3), 2012, 381-387.
142. Godini HR, Jaso S, Xiao Shengnan, Arellano-Garcia H, **Omidkhah MR**, Wozny G, "Methane Oxidative Coupling: Synthesis of Membrane Reactor Networks", *Ind. Eng. Chem. Res.*, 51 (22) , 2012, 7747-7761.
143. Salehi GR, Amidpour M, Hassanzadeh K, **Omidkhah MR**, " Controllability analysis of heat integrated distillation systems for a multicomponent stream", *Computers and Chemical Engineering*, 36, 2012, 282-293.
144. Eltejaei H, Bozorgzadeh HR, Towfighi J, **Omidkhah MR**, Rezaei M, Zanganeh R, Zamaniyan A, Zarringhalam Moghaddam A, "Methane dry reforming on Ni/Ce<sub>0.75</sub>Zr<sub>0.25</sub>O<sub>2</sub>-MgAl<sub>2</sub>O<sub>4</sub> and Ni/Ce<sub>0.75</sub>Zr<sub>0.25</sub>O<sub>2</sub>- $\gamma$ -alumina: Effects of support composition and water addition", *International Journal of Hydrogen Energy*, 37 (5), 2012, 4107-4118.
145. Shariati A, **Omidkhah MR**, Pedram MZ, "New permeation models for nanocomposite polymeric membranes filled with nonporous particles", *Chemical Engineering Research and Design*, 90 (4), 2012, 563-575.
146. Shamkhali A, **Omidkhah MR**, Towfighi J, Jafarinasr M, "Production of synthesis gas by combination of steam and dry reforming using GHR", *Petroleum science and technology*, 30 (6), 2012, 594-604.
147. Abdollahi Demneh F, Moosavian MA, **Omidkhah MR**, Bahmaniar H, "Calculating exergy in flowsheeting simulators: A HYSYS implementation", *Energy*, 36, 2011, 5320-5327.
148. Eltejaei H, Towfighi J, Bozorgzadeh HR, **Omidkhah MR**, Zamaniyan A, " The influence of preparation conditions on ZrO<sub>2</sub> nanoparticles with different PEG-PPG-PEG surfactants by statistical experimental design", *Materials Letters*, 65, 2011, 2913-2916.
149. Dorosti F, **Omidkhah MR**, Pedram MZ, Moghadam F, "Fabrication and characterization of polysulfone/polyimide-zeolite mixed matrix membrane for gas separation", *Chemical Engineering Journal*, 171, 2011, 1469-1476.
150. Nikookar M, **Omidkhah MR**, Pazuki GR Sahranavard L, "An Experimental Measurement and Modeling of Asphaltene Precipitation in Crude Oil", *Energy Sources, Part A*, 33, 2011, 1344-1353.
151. Hossainzadeh Hesas R, Tarigholeslami AH, **Omidkhah MR**, Sharifzadeh Baei M, "An Economical Comparative Study of Different Methods for Decreasing Cooling Water Makeup Cost in Oil Refineries", *World Applied Science Journal*, 12 (7), 2011, 988-998.
152. Godini H, Ghadrddan M, **Omidkhah MR**, Madaeni SS, "Prediction of the dialysis process performance using Artificial Neural Network (ANN)-Part II", *Desalination*, 265 (1-3), 2011, 11-21.
153. Moghadam F, **Omidkhah MR**, Vasheghani Farahani E, Pedram MZ, Dorosti F, "The effect of TiO<sub>2</sub> nanoparticles on gas transport properties of Matrimid5218-based mixed matrix membranes", *Separation and Purification Technology*, 77, 2011, 128-136.

154. Godini HR, Arellano-Garcia H, **Omidkhah MR**, Karimzadeh R, Wozny G, "Model-Based Analysis of Reactor Feeding Policies for Methane Oxidative Coupling", *Industrial and Engineering Chemistry Research*, 49 (8), 2010, 3544-3552.
155. Jaso S, Godini H, Arellano-Garcia H, **Omidkhah MR**, Wozny G, "Analysis of Attainable Reactor Performance for the Oxidative Methane Coupling Process", *Chemical Engineering Science*, 65, (24), 2010, 6341-6352.
156. Zangouei M, Zarringhalam Moghadam AZ, Razeghi A, **Omidkhah MR**, "Production of Syngas by Combination of CO<sub>2</sub> Reforming and Partial Oxidation of CH<sub>4</sub> over Ni/Al<sub>2</sub>O<sub>3</sub> Catalysts in Fixed-bed Reactor", *International Journal of Chemical Reactor Engineering*, 8, 2010, 1-15.
157. Yarahmadi R, Mortazavi B, **Omidkhah MR**, Asilian H, Moridi P, "Examination of the optimized conditions for the conversion of Nox pollution in a DBD-plasma reactor", *Iranian Journal of Chemistry & Chemical Engineering*, 29 (1), 2010, 133-140.
158. Abdollahi Demneh F, Moosavian MA, Montazer Rahmati MM, **Omidkhah MR**, Bahmaniar H, "Comparison of the prediction power of 23 generalized equations of state: Part I - Saturated thermodynamic properties of 102 pure substances", *Fluid Phase Equilibria*, 288 (1-2), 2010, 67-82.
159. Abdollahi Demneh F, Moosavian MA, Montazer Rahmati MM, **Omidkhah MR**, Bahmaniar H, "Comparison of the prediction power of 23 generalized equations of state: Part II. Parametric evaluation", *Fluid Phase Equilibria*, 291, (1), 2010, 48-58.
160. Nosratinia F, **Omidkhah MR**, Bastani D, Seifkordi AA, "Investigation of mass transfer coefficient under jetting conditions in a liquid-liquid extraction system", *Iranian Journal of Chemistry & Chemical Engineering*, 29 (1), 2010, 1-12.
161. Yarahmadi R, Mortazavi SB, **Omidkhah MR**, Asilian H, Khavanin A, "An investigation on the effective parameters of Nox reduction process in a cold plasma reactor", *Journal of Environmental Science & Technology*, 11 (4), 2010, (in Farsi).
162. Yarahmadi R, Mortazavi SB, **Omidkhah MR**, Asilian H, Khavanin A, Moridi P, "Nox reduction from air using modified ZSM-5", *Journal of Environmental Science & Technology*, 11 (3), 2009, (in Farsi).
163. Pirozfar V, Zarringhalam Moghadam A, Ommi F, **Omidkhah MR**, "Investigation of oxygenate and nitrate component additive on physico-chemical properties and exhaust emission of diesel fuel", *Journal of Fuel and Combustion*, 1 (2), 2008- 2009.
164. Godini HR, Arellano-Garcia H, **Omidkhah MR**, Wozny G, "Analysis of oxidative coupling of methane in membrane reactors", *Computer Aided Chemical Engineering*, 26, 2009, 123-128.
165. Alam HG, Zarringhalam Moghaddam A, **Omidkhah MR**, "The influence of process parameters on desulfurization of Mezino coal by HNO<sub>3</sub>/HCl leaching", *Fuel Processing Technology*, 90, 2009, 1-7.
166. **Omidkhah MR**, Zeraatkar AR, Hojjati MR, "Pressure Level Optimization in Utility System Considering Variation of Physical and Thermodynamic Properties", *Iranian Journal of Chemistry & Chemical Engineering*, 28 (1), 2009, (in Farsi).
167. Akbari A, **Omidkhah MR**, Hojjati MR, "Heat Exchanger Network Area Targeting Considering Stream Allocation to Shell or Tubes", *Computers and Chemical Engineering*, 32, 2008, 3143-3152.

168. Asgharpour B, Karimzadeh R, **Omidkhah MR**, "Data reconciliation and data error detection on parameters of olefine reactor using least square, Cauchy and M-estimator objective functions", *Iranian Journal of Chemistry & Chemical Engineering*, 27 (3), 2008, (in Farsi).
169. Pahlavanzadeh H, Zamzamian AH, **Omidkhah MR**, "Analysis of effective parameters on a rotary desiccant wheel performance", *Sharif Journal of Science & Technology*, 40, 2008, 155-162, (in Farsi).
170. Biglari M, Zarringhalam Moghaddam A, **Omidkhah MR**, "Gas permeation through non-porous silica membrane prepared with and without template by Sol-Gel method", *Journal of Engineering Faculty of Tehran University*, 42, 2, 2008, (in Farsi).
171. Abghari Zahedi S, Towfighi J, Karimzadeh R, **Omidkhah MR**, "Determination of yield distribution of olefine production by thermal cracking of atmospheric gasoil", *Korean Journal of Chemical Engineering*, 25 (4), 2008, 681-692.
172. Abghari Zahedi S, Towfighi J, Karimzadeh R, **Omidkhah MR**, "Application of response surface methodology in study of the product yield distribution of thermal cracking of atmospheric gasoil", *Scientia Iranica*, 15, 4, 2008.
173. Nikookar M, **Omidkhah MR**, Pazuki GR "Prediction of density and solubility parameter of heavy oils and SARA fractions using cubic equation of state", *Petroleum Science and Technology*, 26 (16), 2008.
174. Nikookar M, **Omidkhah MR**, Pazuki GR, "Modification of a thermodynamic model and an equation of state for accurate calculation of asphaltene precipitation phase behavior", *Fuel*, 87 (1), 2008, 85-91.
175. Pazuki GR, Nikookar M, **Omidkhah MR**, "Application of a new cubic equation of state to computation of phase behavior of fluids and asphaltene precipitation in crude oil", *Fluid Phase Equilibria* 254, 2007, 42-48.
176. Pourabdollah K, **Omidkhah MR**, Manteghian M, "Study on the content and diffusion model of MTBE in underground water in Tehran district", *Iranian Journal of Chemistry & Chemical Engineering (Persian)*, 26 (2), 2007.
177. Karimzadeh R, Hemmatian A, **Omidkhah MR**, "The effect of coil configuration on run length of thermal cracking reactors", *The International Journal of Chemical Reactor Engineering*, 5 (1), 2007, 12-24.
178. Ganji H, Manteghian M, Sadaghianizadeh K, **Omidkhah MR**, Rahimi Mofrad H, "Effect of different surfactants on methane hydrate formation rate, stability and storage capacity", *Fuel*, 86 (3), 2007, 434-441.
179. Pakizeh M, **Omidkhah MR**; Karimzadeh R, Zarringhalam Moghaddam A, "Study of Catalyst, Aging Time and Surfactant Template Effects on Silica Inorganic Polymer Characteristics", *Iranian Polymer Journal*, 2, 2007, 147-153, (in Farsi).
180. Pakizeh M, **Omidkhah MR**, Zarringhalam Moghaddam A, "Study of mass transfer through new templated silica membranes prepared by sol-gel method", *International Journal of Hydrogen Energy*, 32, 2007, 2032-2042.
181. Pakizeh M, **Omidkhah MR**, Zarringhalam Moghaddam A, "Synthesis and characterization of new silica membranes using template-sol-gel technology", *International Journal of Hydrogen Energy*, 32, 2007, 1825-1836.

182. Hojjati MR, **Omidkhah MR**, Panjehshahi MH, "Heat Exchanger Network Design with Pressure Drop Consideration Using Mathematical Programming", Iranian Journal of Chemistry & Chemical Engineering, 25, 2006, (in Farsi).
183. Naddaf A, **Omidkhah MR**, "Reduction of NO<sub>x</sub>, CO<sub>x</sub> and SO<sub>x</sub> in Industrial Furnaces", Iranian Journal of Chemistry & Chemical Engineering, 25 (1), 2006 (in Farsi).
184. Hosseini SH, Seifi H, Parsa M, **Omidkhah MR**, Farmand M, Ghaznavi M, "A New Generation Allocation and Expansion Planning Algorithm Including Transmission System Effects", Esteghlal Journal, 24 (1), 2004, (in Farsi).
185. Towfighi J, Modarres J, **Omidkhah MR**, Niaei A, "Estimation of Kinetic Parameters of Coking Reaction in Pyrolysis of Naphtha", International Journal of Engineering, 17 (4), 2004, 313-339.
186. Hojjati MR, **Omidkhah MR**, Panjehshahi MH, "Cost Effective Heat Exchanger Network Design with Mixed Materials of Construction", Iranian Journal of Chemistry & Chemical Engineering, 23 (2), 2004, 89-100.
187. Bani R, **Omidkhah MR**, "Synthesis of Tomoxifen Citrate with Low E Isomer", Iranian Journal of Chemistry & Chemical Engineering, 23 (1), 2004, (in Farsi).
188. Hojjati MR, **Omidkhah MR**, "A New Approach for Area Targeting in Heat Exchanger Network Design", Modarres Technical & Engineering Journal, 10, winter, 2003, (in Farsi).
189. Ghodsipour N, Sadrameli SM, **Omidkhah MR**, "Performance Optimization of a Rotary Regenerator Using Experimental Design Analysis", Journal of Engineering Faculty of Tehran University, 36 (4), 2003, (in Farsi).
190. **Omidkhah MR**, Navid Famili MH, Keshtiban JE, "Numerical Solution of Compressible Flow Equations Inside an Ejector", 21 (1&2), 2002, (in Farsi).
191. Zarringhalam Moghaddam A., **Omidkhah MR**, Gholipour N., "Predicting Fire Critical Conditions Using Fire Parameters of Materials", Journal of Engineering Faculty of Tehran University, 35 (3), 2001, (in Farsi).
192. Zarringhalam Moghaddam MA, **Omidkhah MR**, "Combustion Studies Via Heat Release Rate Method", Iranian Journal of Energy, 5 (9), 2001, (in Farsi).
193. Tehranifar M, **Omidkhah MR**, Sadrameli M, "Design of Heat Exchanger Network and Simulation of the Quench Section of Olefin Plant of Bandar Imam Petrochemical Complex", Iranian Journal of Energy, 3 (5), 1999, (in Farsi).
194. **Omidkhah MR**, Seyyed Shabestari SA, "Synthesis and Optimization of Separation Section of MTBE Process", Iranian Journal of Chemistry & Chemical Engineering, 13 (2), 1994.
195. Smith R, **Omidkhah MR**, "Trade-offs and interactions in reaction and separation systems -II: Reactions with no selectivity losses", Trans. I. Chem. E., 71, 1993, 474-478.
196. Smith R, **Omidkhah MR**, "Trade-offs and interactions in reaction and separation systems - I: Reactions with selectivity losses", Trans. I. Chem. E., 71, 1993, 467-473.

- **Part of Reviewed Papers presented in Conferences:**

- 1- Ebadi Amooghin A., Omidkhah MR, Kargari A., "Preparation of AgY zeolite through the silver ion exchange of NaY zeolite and incorporating it into the Matrimid to form a novel mixed matrix Membrane", NCWNN1394, May, 2015, Karaj, Tehran.
- 2- Mohammadi A., Omidkhah MR, Ghobadian B., "Optimization of Biodiesel Production from High Free Fatty Acid Feedstocks (Part I: Continuous Process)", the International Congress on Biodiesel: The Science and the Technology, November, 5-8, 2007, Vienna, Austria.
- 3- Mohammadi A., Omidkhah MR, Ghobadian B., "Optimization of Biodiesel Production from High Free Fatty Acid Feedstocks (Part II: Batch/ Semi-continuous Process)", the International Congress on Biodiesel: The Science and the Technology. November, 5-8, 2007, Vienna, Austria.
- 4- Mohammadi Rad R., Karimzadeh R., Omidkhah MR, "Optimal operation of thermal cracking reactor based on fundamental models", 11th National Congress on Chemical Engineering, Tehran, Nov. 2006, (in Farsi).
- 5- Gholami H., Zarringhalam A., Omidkhah M.R., "Desulphurization of Mazino coal via floatation and leaching with Nitric acid", 11th National Congress on Chemical Engineering, Tehran, Nov. 2006, (in Farsi).
- 6- Pakizeh M., Omidkhah MR, Zarringhalam A., Shariati M., "Gas transport mechanisms through new templated silica membranes prepared by sol-gel method", 11th National Congress on Chemical Engineering, Tehran, Nov. 2006, (in Farsi).
- 7- Pakizeh M., Omidkhah MR, Zarringhalam A., Karimzadeh R., "Gas permeation characteristics of new silica membranes derived from template-sol-gel technology", 11th National Congress on Chemical Engineering, Tehran, Nov. 2006, (in Farsi).
- 8- Ganji H., Manteghian M., Sadaghiani, K.; Omidkhah MR, "Promotion effect of anionic, cationic and non-ionic surfactants on methane hydrate", 11th National Congress on Chemical Engineering, Tehran, Nov. 2006, (in Farsi).
- 9- Mohammadi A., Omidkhah MR, Ghobadian B., "Conceptual design of biodiesel process using high free fatty acids as feedstock", 11th National Congress on Chemical Engineering, Tehran, Nov. 2006, (in Farsi).
- 10- Omidkhah MR, Hojjati M.R., Safavi F., "The effect of variable heat capacity on energy an area targeting of a heat exchanger network", 11th National Congress on Chemical Engineering, Tehran, Nov. 2006, (in Farsi).
- 11- Hojjati M.R., Omidkhah MR, "Heat exchanger network design of Formaline unit of Sina chemical company", 11th National Congress on Chemical Engineering, Tehran, Nov. 2006, (in Farsi).
- 12- Tarigholeslami A.H., Omidkhah MR, "Energy conservation of atmospheric distillation column of Tabriz refinery through exergitic analysis", 11th National Congress on Chemical Engineering, Tehran, Nov. 2006, (in Farsi).
- 13- Abghari Zahedi S., Towfighi J., Karimzadeh R., Omidkhah MR, "Study on thermal cracking of atmospheric gasoil for producing olefines", 11th National Congress on Chemical Engineering, Tehran, Nov. 2006, (in Farsi).
- 14- Jazayeri M., Karimzadeh R., Omidkhah MR, "Optimization of a thermal cracking reactor based on statistical models", 11th National Congress on Chemical Engineering, Tehran, Nov. 2006, (in Farsi).
- 15- Dadkhah M., Omidkhah MR, Farrokhi F., "Converting Methane into Sythesis gas in a positive corona plasma reractor", 11th National Congress on Chemical Engineering, Tehran, Nov. 2006, (in Farsi).

- 16- Dadkhah M., Omidkhah MR, Farrokhi F., "Converting Hydrogen Sulfide into hydrogen in a positive corona plasma reactor", 11th National Congress on Chemical Engineering, Tehran, Nov. 2006, (in Farsi).
- 17- Sattari Oskouee A., Shahraki, F., Omidkhah MR, "Heat exchanger network retrofit of a distillation unit", 10th National Congress on Chemical Engineering, Zahedan, Iran, Nov. 2005, (in Farsi).
- 18- Omidkhah MR, Nemati Shahab S., "A study on flare gas dumping system enhancement", 10th National Congress on Chemical Engineering, Zahedan, Iran, Nov. 2005, (in Farsi).
- 19- Hemmatian A., Karimzadeh R., Omidkhah MR, "The effect of of pyrolysis coil configuration on the operation of thermal cracking reactors", 10th National Congress on Chemical Engineering, Zahedan, Iran, Nov. 2005, (in Farsi).
- 20- Omidkhah MR, Younesi S.S., "Flare gas recovery of Tabriz refinery", 10th National Congress on Chemical Engineering, Zahedan, Iran, Nov.2005, (in Farsi).
- 21- Omidkhah MR, "The Main Energy Challenges of Industry in a Competitive Market", a Keynote Speech delivered in 5th National Energy Congress, Tehran, 2005, (in Farsi).
- 22- Omidkhah MR, Zareie M., "Recovery of Styrene-Butadien Latex from Wastewater of Bandar Imam Petrochemical Complex", Paper presented at 9th National Congress on Chemical Engineering, Tehran, Dec. 2004, (in Farsi).
- 23- Omidkhah MR, Rahimi K., "Recovery of Styrene from the Feed of Pyrolysis Gasoline Unit", Paper presented at 9th National Congress on Chemical Engineering, Tehran, Dec. 2004, (in Farsi).
- 24- Omidkhah MR, "Support Program for Industrial Innovation", Paper presented at Study Meeting on Enterprise Innovation and Value Creation for Higher Growth, Asian Productivity Organization, Singapore, 26 -28 Oct., 2004.
- 25- Omidkhah MR, Moslehi Milani M., "Hydrogen Management in Refineries", Paper Presented at the First National Seminar on Recycling and Waste Management, Tehran, 20-21 September 2004, (in Farsi).
- 26- Omidkhah MR, "Real Time Optimization of Refineries", Paper Presented at 27th Annual Meeting of International Association of Energy Economics, Tehran, May 2004.
- 27- Omidkhah MR, "Promoting Energy Productivity in Industrial Sector", a Keynote Speech delivered in 4th National Energy Congress, Tehran, 2003, (in Farsi).
- 28- Tafvizi A., Manteghian M., Omidkhah MR, "The Effect of Adding Combined phosphor Based Gypsum on Properties of Cement", Paper presented at 8th National Congress on Chemical Engineering, Mashad, Oct. 2003, (in Farsi).
- 29- Tafvizi A., Manteghian M., Omidkhah MR, "The Effect of Adding TEA on Physical Properties of Portland Cement", Paper presented at 8th National Congress on Chemical Engineering, Mashad, Oct. 2003, (in Farsi).
- 30- Mirmomem L., Omidkhah MR, "Run Time Optimization of Furnace of Olefin Plant", Paper presented at 7th National Congress on Chemical Engineering, Tehran, 28-31 Oct. 2002, (in Farsi).
- 31- Khorsand K., Zarrinpashneh S., Omidkhah MR, "Study on Parameter Changes of a Distillation Column During a Shock and Exit from Steady State", Paper presented at 7th National Congress on Chemical Engineering, Tehran, 28-31 Oct. 2002, (in Farsi).
- 32- Khorsand K., Zarrinpashneh S., Omidkhah MR, "Study on Operational Variables in Start Up of Distillation Column", Paper presented at 7th National Congress on Chemical Engineering, Tehran, 28-31 Oct. 2002, (in Farsi).

- 33- Ghodsipour N.S., Sadrameli M., Omidkhah MR, " Optimization of a Rotary Regenerator Parameters Using Experimental Design Method", Paper presented at 6th National Congress on Chemical Engineering, Isfahan, may 2001, (in Farsi).
- 34- Zarringhalam M. A., Gholipour N., Omidkhah MR, " Study on the Effect of Magnesium Hydroxide on Decomposition of Polyethylene Using Thermal Analysis", Paper presented at 6th National Congress on Chemical Engineering, Isfahan, may 2001, (in Farsi).
- 35- Omidkhah MR, Ghaderi K., "Modeling and Optimization of Oil Quench Tower of Olefin Plant of Arak Petrochemical Complex", Paper presented at 6th National Congress on Chemical Engineering, Isfahan, may 2001, (in Farsi).
- 36- Omidkhah MR, Kashtiban E.J., "Behaviour of Compressible Flow in an Ejector", Paper presented at the 5th National and Second International Congress on Chemical Engineering, Shiraz, 2000, (in Farsi).
- 37- Omidkhah MR, Nourbakhsh F., " Modeling and Simulation of Catalytic Hydro Treating of C4 Cut", Paper presented at the 5th National and Second International Congress on Chemical Engineering, Shiraz, 2000, (in Farsi).
- 38- Ganjidoust H., Gholian R.N, Badkoobi A., Mahmoodi M.R., Omidkhah MR, "Use of Rotating Biological Contactor (RBC) in the Treatment of Food Industries Wastewater", Paper presented at 6th IAWQ Asia-Pacific Regional Conference, Seoul, Korea, May 1997.
- 39- Omidkhah MR, Maghsoudi S., Ghaedian M., "Phase Behavior Study and Thermodynamic Modeling of Oil De-waxing Process", Paper presented at the Second National Congress on Chemical Engineering, Tehran, 1997, (in Farsi).
- 40- Omidkhah MR, Khorsand K., Zarrinpashneh S., " Dynamic Simulation of a Multi-component Distillation Column", Paper presented at the Second National Congress on Chemical Engineering, Tehran, 1997, (in Farsi).
- 41- Omidkhah MR, "Pinch Technology a Powerful Tool for Better Energy Utilization", Proceedings of 1993 COMSTECH's Workshop on Possible Strategy of Energy Mixes in the Muslim World, held at UAE university, published in Islamabad, Pakistan, 1995.
- 42- Omidkhah MR, "World Oil and Gas Resources, Production and Prospects", Paper presented at the First National Congress on Energy Economics, Tehran, Jan., 1995.
- 43- Omidkhah MR, Rahimpour F., "Heat Integration of Hot-end Section of Arak Olefin Plant", Paper presented at the First National Congress on Chemical Engineering, Tehran, Nov., 1994, (in Farsi).
- 44- Omidkhah MR, Masoumi M.E., "Retrofitting Heat Exchanger Network Using Pinch Technology, the Effect of Plant Capacity on Retrofit Design", Paper presented at the First National Congress on Chemical Engineering, Tehran, Nov., 1994, (in Farsi).
- 45- Omidkhah MR, Masoumi M.E., "Modification of Heat Exchanger Networks of Isfahan Refinery Distillation Unit", Paper presented at the First International Oil, Gas and Petrochemicals Congress, Isfahan, Iran, 11-13 Sept., 1993, (in Farsi).

#### Published books:

- 1- Esmailzadeh Khadem S, **Omidkhah MR**, Liaghat GH, "Monitoring the condition of machinery", University of Guilan Press, March 2001. (In Farsi)

- 2- Esmailzadeh Khadem S, **Omidkhah MR**, Darvezeh M, "Maintenance and repair technologies and vibration analysis of machinery", University of Guilan Press, March 2001. (In Farsi)
- 3- Esmailzadeh Khadem S, **Omidkhah MR**, Darvezeh M, "Balancing of centrifugal fans and fault finding of machinery", University of Guilan Press, March 2001. (In Farsi)
- 4- **Omidkhah MR**, Moslehi Milani SM, "Computational methods for process simulation", Tarbiat Modares University Press, 2006. (Translation to Farsi)

**Book Chapter:**

"New advances in polymeric membranes for CO<sub>2</sub> separation", Ebadi Amooghin A, Sanaeepur HR, Zamani Pedram M, **Omidkhah MR**, Kargari A,

Polymer science research advances, practical applications and educational aspects, A Mendez-Vilas; A. Solano Martin, Eds., June 2016, First Edition, PP. 354-368.