

CURRICULUM VITAE

Surname: OMIDKHAH NASRIN

First Name: MOHAMMADREZA

Present Employment: Professor,
Chemical Engineering Department
Tarbiat Modarres University

Address: Tarbiat Modarres University,
Chemical Engineering Department,
Jalal-Al-Ahmad Highway,
Tehran, IRAN
P.O.Box 14155-4838
Telex: 222862 TMU IR
E-mail: omidkhah@modares.ac.ir

Date of Birth: 10/01/58

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: " Optimising Reaction - Separation Systems Through
Improved Understanding of Their Interactions"

Employments:

2010 - Present, Professor, Tarbiat Modarres University, Tehran

2013 - Present, 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 IChE (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 IChE (Iranian Association of Chemical Engineering)
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. 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, 2023, In Press.
2. 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.
3. 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, 2023, In Press.
4. 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.
5. 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.
6. 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.
7. 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.
8. 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.
9. 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.
10. 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.
11. 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.
12. 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.
13. 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.

14. 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).
15. Bashiri N, **Omidkhah MR**, Godini H, “Direct conversion of CO₂ to light olefins over FeCo/XK-YAL₂O₃ (X = La, Mn, Zn) catalyst via hydrogenation reaction”, *Research on Chemical Intermediates*, 47, 2021, 5267–5289.
16. 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.
17. 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.
18. Davari S., **Omidkhah MR**, Salari S, “Role of polydopamine in the enhancement of binding stability of TiO₂ nanoparticles on polyethersulfone ultrafiltration membrane”, *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 622, 2021, 126694.
19. 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.
20. 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.
21. Asadpoor M, Arjmand M, Farhadian M, **Omidkhah MR**, Zinatizadeh AA, “Optimization and modeling of the photocatalytic activities of a novel visible driven cnt/tio₂ /biobr/bi₂ s₃ nanocomposite”, *Desalination and Water Treatment*, 209, 2021, 219–229.
22. Gharedaghi M, **Omidkhah MR**, Abdollahi S, Ghadimi A, “An Investigation on Gas Transport Properties of Elvaloy4170/[Emim][Tf₂N] Hybrid Membranes for Efficient CO₂/CH₄ Separation” *Journal of Membrane Science and Research*, 7, 2021, 185-195.
23. Asadpoor M, Ardjmand M, Farhadian M, **Omidkhah MR**, Zinatizadeh AA, “Synthesis of a new visible driven photocatalyst TiO₂/ a-CNT/b-BiOBr/c-Bi₂S₃ and its application for RB19 removal: modeling and process optimization”, *Chemical Papers*, 75(3), 2021, 1267–1278.
24. Asleshirin S, Mazaheri H, **Omidkhah MR**, Hassani Joshaghani A, “Experimental investigation of the effect of Al₂O₃ nanoparticles with spherical and rod-shaped morphologies on the thermophysical properties of ionic nanofluids”, *Scientia Iranica C*, 28(3), 2021, 1452-1463.
25. 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.
26. 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.

27. Nadeali A, kalantari S, Yarmohammadi M, **Omidkhah MR**, Ebadi Amooghin A, Zamani Pedram M, “CO₂ Separation Properties of a Ternary Mixed-Matrix Membrane Using Ultrasensitive Synthesized Macrocyclic Organic Compounds”, *ACS Sustainable Chemistry and Engineering*, 8, 34, 2020, 12775-12787.
28. 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.
29. Gharibshahi R, **Omidkhah MR**, Jafari A, Fakhroueian Z, “Hybridization of superparamagnetic Fe₃O₄ nanoparticles with MWCNTs and effect of surface modification on electromagnetic heating process efficiency: A microfluidics enhanced oil recovery study”, *Fuel*, 282, 2020, 118603.
30. Shirinia M, Abdollahi M, **Omidkhah MR**, “Simultaneous enhancement of CO₂ permeability and CO₂/CH₄ and CO₂/N₂ selectivity via incorporating dense, rubbery and CO₂-philic vinyl acetate based copolymers into poly(ethylene oxide-b-amide 6) membranes”, *Reactive and Functional Polymers*, 154, 2020, 104673.
31. 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.
32. Akbari A, Chamack M, **Omidkhah MR**, “Reverse microemulsion synthesis of polyoxometalatebased heterogeneous hybrid catalysts for oxidative desulfurization” *Journal of Materials Science*, 55 (15), 2020, 6513–6524.
33. 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.
34. 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.
35. Kalantari S, **Omidkhah MR**, Ebadi Amooghin A, Matsuura T, “ Superior interfacial design in ternary mixed matrix membranes to enhance the CO₂ separation performance”, *Applied Materials Today*, 18, 2020, 100491, 1-17.
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37. Mokhtari B, Akbari A, **Omidkhah MR**, “Superior Deep Desulfurization of Real Diesel over MoO₃/Silica Gel as an Efficient Catalyst for Oxidation of Refractory Compounds”, *Energy & Fuels* 33, 2019, 7276-7286.
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- Mixed Matrix Membrane”, ACS Sustainable Chemistry and Engineering, 7, 23, 2019, 19015-19026.
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 41. Haji Andevary H, Akbari A, **Omidkhah MR**, “High efficient and selective oxidative desulfurization of diesel fuel using dual-function [Omim]FeCl₄ as catalyst/extractant”, Fuel Processing Technology 185, 2019, 8–17.
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 43. 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.
 44. 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.
 45. 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.
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 49. 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 CO₂, N₂ and CH₄ Gases, Petroleum Research, 29 (104), 2019, 21-24.
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51. 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.
52. Vaez M, Alijani S, **Omidkhah MR**, Zarringhalam Moghaddam A, “Synthesis, characterization and optimization of N-TiO₂/PANI nanocomposite for photodegradation of acid dye under visible light”, *Polymer Composites* 39(12), 2018, 4605-4616.
53. 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.
54. 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.
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57. 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.
58. Nezhadmoghadam E, Pourafshari Chenar M, **Omidkhah MR**, Nezhadmoghadam A, Abedini R, “Aminosilane grafted Matrimid 5218/nano-silica mixed matrix membrane for CO₂/light gases separation”, *Korean Journal of Chemical Engineering*, 35(2), 2018, 526-534.
59. 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.
60. 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.
61. 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.
62. 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.
63. Chehrizi 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.
64. Azimzadeh H, Akbari A, **Omidkhah MR**, “Catalytic oxidative desulfurization performance of immobilized NMP.FeCl₃ ionic liquid on γ -Al₂O₃ support”, *Chemical Engineering Journal*, 320, 2017, 189-200.

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74. 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.
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کتابهای منتشر شده :

- 1- سیامک اسماعیل زاده خادم ، محمدرضا امیدخواه ، غلامحسین لیاقت " مانیتورینگ وضعیت ماشین آلات " ، انتشارات دانشگاه گیلان ، اسفند 1380
- 2- سیامک اسماعیل زاده خادم ، محمدرضا امیدخواه ، محمود درویزه " تکنولوژی های نگهداری و تعمیرات و آنالیز ارتعاشی ماشین آلات " ، انتشارات دانشگاه گیلان ، اسفند 1380
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- 4- محمدرضا امیدخواه ، سید محمد مصلحی میلانی، " روشهای محاسباتی برای شبیه سازی فرایند "، انتشارات دانشگاه تربیت مدرس، 1385. (ترجمه)

Book Chapter:

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