

## Curriculum Vitae

### Personal Information

**First Name:** MOHAMMADREZA  
**Last Name:** OMIDKHAH NASRIN  
**Date of birth:** 10/01/1958  
**Place of birth:** Tehran, I.R. Iran  
**Nationality:** Iranian  
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### Education



#### Ph.D.

Chemical Engineering, UMIST, Manchester, UK.

**Dissertation topic:** Optimizing Reaction - Separation Systems Through Improved Understanding of Their Interactions

**Date:** 1986 - 1990



#### M.Sc.

Chemical Engineering, Wayne State Univ. Michigan, USA

**Date:** 1983 - 1985



#### B.Sc.

Chemical Engineering, Amir Kabir Univ. Tehran, Iran.

**Date:** 1975 - 1982

### Publications

#### Journal papers

- 1) Ebadi Amooghin, A.; **Omidkhah, M.R.**; 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.
- 2) Loloee, M.; **Omidkhah, M.R.**; 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.
- 3) Dorosti, F.; **Omidkhah, M.R.**; 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.
- 4) Loloee, M.; Moghadassi, A.; **Omidkhah, M.R.**; 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*, In Press, 2015, doi: 10.1002/ghg.1496.
- 5) Najari, S.; Hosseini, S.S.; **Omidkhah, M.R.**; Tan, N.R., "Phenomenological modeling and analysis of gas transport in polyimide membranes for propylene/propane separation", *RSC Advances*, 5, (58), 2015, 47199-47215.
- 6) Khosravi T.; **Omidkhah, M.R.**, "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.
- 7) Ebadi Amooghin A.; **Omidkhah, M.R.**; 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.
- 8) Akbari, A.; **Omidkhah, M.R.**; 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.

- 9) Ranjbaran F.; **Omidkhah, M.R.**; 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.
- 10) Vaez, M.; **Omidkhah, M.R.**; 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.
- 11) Sadeghi, Z.; **Omidkhah, M.R.**; Masoumi, M.E., "New Permeation Model for Mixed Matrix Membrane with Porous Particles", *International Journal of Chemical Engineering and Applications*, 6, (5), 2015, 325-330.
- 12) Abedini R.; **Omidkhah, M.R.**; Dorosti F., "CO<sub>2</sub>/CH<sub>4</sub> Separation by a Mixed Matrix Membrane of Polymethylpentylene/MIL-53 Particles", *Iranian Journal of Polymer Science and Technology*, 27, (4), 2014, 337-351.
- 13) Abedini, R.; **Omidkhah, M.R.**; Dorosti, F., "Effect of Amine-Functionalized MIL-53 Metal Organic Frameworks on the Performance of Poly(4-methyl-1-pentyne) Membrane in CO<sub>2</sub>/CH<sub>4</sub> Separation", *Iranian Journal of Polymer Science and Technology*, 28, (2), 2015, 139-155.
- 14) Dorosti, F.; **Omidkhah, M.R.**; 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*, 7, (1), 2015, 83–92.
- 15) Tavassolirizi Z.; Shams K.; **Omidkhah, M.R.**, "Platinum recovery from model media and a Pt-Sn/alumina spent catalyst extract using corn husk-based adsorbent", *Journal of Industrial and Engineering Chemistry*, 2014, In Press.
- 16) Abedini R.; **Omidkhah, M.R.**; 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.
- 17) Dorosti F.; **Omidkhah, M.R.**; 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.
- 18) Abedini R.; **Omidkhah, M.R.**; 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.
- 19) Zamani Pedram, M.; **Omidkhah, M.R.**; 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.
- 20) Akbari, A.; **Omidkhah, M.R.**; 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.
- 21) Zamani Pedram, M.; **Omidkhah, M.R.**; 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.
- 22) Hosseini, S.S.; **Omidkhah, M.R.**; Zarringhalam Moghaddam, A.; Pirouzfard, V.; Krantz, W.B.; Tan N.R., "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.
- 23) Pirouzfard, V.; Hosseini, S.S.; **Omidkhah, M.R.**; Moghaddam A.Z., "Modeling and optimization of gas transport characteristics of carbon molecular sieve membranes through statistical analysis", *Polymer Engineering & Science*, 54, (1), 2014, 147–157.
- 24) Pirouzfard, V.; Zarringhalam Moghaddam A.; **Omidkhah, M.R.**; Hosseini, S.S., "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.
- 25) Akbari, A.; **Omidkhah, M.R.**; 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.
- 26) Ebadi Amooghin, A.; Zamani Pedram, M.; **Omidkhah, M.R.**; Yaghani, 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.
- 27) Zamani Pedram, M.; **Omidkhah, M.R.**; Ebadi Amooghin, A.; Yaghani, 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.
- 28) Pakizeh, M.; Neghad Moghadam, A.; **Omidkhah, M.R.**; 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.
- 29) Gilani, N.; Towfighi, J.; Rashidi, A.; Mohammadi, T.; **Omidkhah, M. R.**; 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.
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- 35) Shamsi, S.; Omidkhah, M.R., "Optimization of steam pressure levels in a total site using a thermoeconomic method", Energies, 5, 2012, 702-717.
- 36) Tarighaleslami, A.H.; ***Omidkhah, M.R.***; 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 Techn. Environ. Policy, 14, 2012, 381-387.
- 37) Godini, H.R.; Jaso, S.; X., Shengnan; Arellano-Garcia, H.; ***Omidkhah, M.R.***; Wozny, G., "Methane Oxidative Coupling: Synthesis of Membrane Reactor Networks", Industrial and Engineering Chemistry Research, 51, 2012, 7747-7761.
- 38) Salehi, G.R.; Amidpour M.; Hassanzadeh K.; ***Omidkhah M.R.***, "Controllability analysis of heat integrated distillation systems for a multicomponent stream", Computers and Chemical Engineering, 36, 2012, 282-293.
- 39) Eltejaei, H.; Bozorgzadeh, H.R.; Towfighi, J.; ***Omidkhah, M.R.***; Rezaei, M.; Zanganeh, R.; Zamaniyan, A.; Zarrin ghalam 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", Internal Journal of Hydrogen Energy, 37, 2012, 4107-4118.
- 40) Shariati, A.; ***Omidkhah, M.R.***; Pedram, M.Z., "New permeation models for nanocomposite polymeric membranes filled with nonporous particles", Chemical Engineering Research and Design, 90, 2012, 563-575.
- 41) Shamkhali, A.; ***Omidkhah, M.R.***; Towfighi, J.; Jafarinasr, M., "Production of synthesis gas by combination of steam and dry reforming using GHR", Petroleum science and technology, 30, 2012, 594-604.
- 42) Abdollahi-Demneh, F.; Moosavian, M.A.; ***Omidkhah, M.R.***; Bahmaniar, H., "Calculating exergy in flowsheeting simulators: A HYSYS implementation", Energy, 36, 2011, 5320-5327.
- 43) Eltejaei, H.; Towfighi, J.; Bozorgzadeh, H.R.; ***Omidkhah, M.R.***; 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.
- 44) Dorosti, F.; ***Omidkhah, M.R.***; Pedram, M.Z.; Moghadam, F., "Fabrication and characterization of polysulfone/polyimide-zeolite mixed matrix membrane for gas separation", Chemical Engineering Journal, 171, 2011, 1469-1476.
- 45) Nikookar, M.; ***Omidkhah, M.R.***; Pazuki, G.R.; Sahranavard, L., "An Experimental Measurement and Modeling of Asphaltene Precipitation in Crude Oil", Energy Sources, Part A, 33, 2011, 1344-1353.
- 46) Hossainzadeh Hesas, R.; Tarigholeslami, A.H.; ***Omidkhah, M.R.***; Sharifzadeh Baei, M., "An Economical Comparative Study of Different Methods for Decreasing Cooling Water Makeup Cost in Oil Refineries", World Applied Science Journal, 12, 2011, 988-998.
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- 48) Moghadam, F.; ***Omidkhah, M.R.***; Vasheghani-Farahani, E.; Pedram, M.Z.; 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.
- 49) Godini, H.R.; Arellano-Garcia, H.; ***Omidkhah, M.R.***; Karimzadeh, R.; Wozny, G., "Model-Based Analysis of Reactor Feeding Policies for Methane Oxidative Coupling", Industrial and Engineering Chemistry Research, 49, 2010, 3544-3552.
- 50) Jaso, S.; Godini, H.; Arellano-Garcia, H.; ***Omidkhah, M.R.***; Wozny, G., "Analysis of Attainable Reactor Performance for the Oxidative Methane Coupling Process", Chemical Engineering Science, 65, 2010, 6341-6352.
- 51) Zangouei, M.; Moghadam, A.Z.; Razeghi, A.; ***Omidkhah, M.R.***, "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.
- 52) Abdollahi-Demneh, F.; Moosavian, M.A.; Montazer-Rahmati, M.M.; ***Omidkhah, M.R.***; 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, 2010, 67-82.
- 53) Abdollahi-Demneh, F.; Moosavian, M.A.; Montazer-Rahmati, M.M.; ***Omidkhah, M.R.***; Bahmaniar, H., "Comparison of the prediction power of 23 generalized equations of state: Part II. parametric evaluation", Fluid Phase Equilibria, 291, 2010, 48-58.
- 54) Godini, H.R.; Arellano-Garcia, H.; ***Omidkhah, M.R.***; G. Wozny, "Analysis of oxidative coupling of methane in membrane reactors", Computer Aided Chemical Engineering, 26, 2009, 123-128.

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- 56) Akbari, A.; **Omidkhah, M.R.**; Hojjati, M.R., "Heat Exchanger Network Area Targeting Considering Stream Allocation to Shell or Tubes", Computers and Chemical Engineering, 32, 2008, 3143-3152.
- 57) Abghari, S.Z.; Towfighi, J.; Karimzadeh, R.; **Omidkhah, M.R.**, "Determination of yield distribution of olefine production by thermal cracking of atmospheric gasoil", Korean Journal of Chemical Engineering, 25, 2008, 681-692.
- 58) Abghari, S.Z.; Towfighi, J.; Karimzadeh, R.; **Omidkhah, M.R.**, "Application of response surface methodology in study of the product yield distribution of thermal cracking of atmospheric gasoil", Scientia Iranica, 15, 2008, 457-468.
- 59) Nikookar, M.; **Omidkhah, M.R.**; Pazuki, G.R, "Prediction of density and solubility parameter of heavy oils and SARA fractions using cubic equation of state", Petroleum Science and Technology, 26, 2008, 1904-1912.
- 60) Nikookar, M.; **Omidkhah, M.R.**; Pazuki, G.R, "Modification of a thermodynamic model and an equation of state for accurate calculation of asphaltene precipitation phase behavior", Fuel, 87, 2008, 85-91.
- 61) Pazuki, G.R; Nikookar, M.; **Omidkhah, M.R.**, "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.
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- 63) Ganji, H.; Manteghian, M.; Sadaghianzadeh, K.; **Omidkhah, M.R.**; Rahimi Mofrad, H., "Effect of different surfactants on methane hydrate formation rate, stability and storage capacity", Fuel, 86, 2007, 434-441.
- 64) Pakizeh, M.; **Omidkhah, M.R.**; Zarringhalam, A., "Study of mass transfer through new templated silica membranes prepared by sol-gel method", International Journal of Hydrogen Energy, 32, , 2007, 2032-2042.
- 65) Pakizeh, M.; **Omidkhah, M.R.**; Zarringhalam, A., "Synthesis and characterization of new silica membranes using template-sol-gel technology", International Journal of Hydrogen Energy, 32, 2007, 1825-1836.
- 66) Smith, R.; **Omidkhah, M.R.**, "Trade-offs and Interactions in Reaction and Separation Systems -II: Reactions With No Selectivity Losses", Trans. I. Chem. E., 71, 1993, 474-478.
- 67) Smith, R.; **Omidkhah, M.R.**, "Trade-offs and Interactions in Reaction and Separation Systems - I: Reactions With Selectivity Losses", Trans. I. Chem. E., 71, 1993, 467-473.

#### ICI papers

- 68) Yarahmadi, R.; Mortazavi, B.; **Omidkhah, M.R.**; Asilian, H.; Moridi, P., "Examination of the optimized conditions for the conversion of Nox pollution in a DBD-plasma reactor", 29, Iranian Journal of Chemistry & Chemical Engineering, 29, 2010, 133-140.
- 69) Nosratinia, F.; **Omidkhah, M.R.**; Bastani, D.; Seifkordi, A.A.; "Investigation of mass transfer coefficient under jetting conditions in a liquid-liquid extraction system", Iranian Journal of Chemistry & Chemical Engineering, 29, 2010, 1-12.
- 70) Yarahmadi, R.; Mortazavi, S.B.; **Omidkhah, M.R.**; 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).
- 71) Yarahmadi, R.; Mortazavi, S.B.; **Omidkhah, M.R.**; Asilian, H.; Khavanin, A.; Moridi, P., "Nox reduction from air using modified ZSM-5", Journal of Environmental Science & Technology, 11, 2009, 61-75.
- 72) Pirozfar, V.; Moghadam, A.Z.; Ommi, F.; **Omidkhah, M.R.**, "Investigation of oxygenate and nitrate component additive on physico-chemical properties and exhaust emission of diesel fuel", Journal of Fuel and Combustion, 1, 2009, 17-25.
- 73) **Omidkhah, M.R.**; Zeraatkar, A.R.; Hojjati, M.R., "Optimization of steam pressure level in utility system considering variable physical and thermodynamic properties", Iranian Journal of Chemistry & Chemical Engineering, 28, 2009, 11-25.
- 74) Asgharpour, B.; Karimzadeh, R.; **Omidkhah, M.R.**, "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, 2008, 41-60.
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- 76) Biglari, M.; Zarringhalam, A.; **Omidkhah, M.R.**, "Gas permeation through non-porous silica membrane prepared with and without template by Sol-Gel method", Journal of Engineering Faculty of Tehran University, 42, 2008, 145-155.
- 77) Pourabdollah, K.; **Omidkhah, M.R.**; Manteghian, M., "Study on the Content and Diffusion Model of MTBE in Underground Water in Tehran District", Iranian Journal of Chemistry & Chemical Engineering, 26, 2007, 35-42.
- 78) Pakizeh, M.; **Omidkhah, M.R.**; Karimzadeh, R.; Zarringhalam, A., "Study of Catalyst, Aging Time and Surfactant Template Effects on Silica Inorganic Polymer Characteristics", Iranian Journal Of Polymer Science And Technology, 2, 2007, 147-153.



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- 80) Nadaf, A.; **Omidkhah, M.R.**, "Modeling of CO<sub>x</sub>, NO<sub>x</sub> and SO<sub>x</sub> reduction in industrial furnaces", Iranian Journal of Chemistry & Chemical Engineering, 25, 2006, 1-15.
- 81) Hosseini, S.H.; Seifi, H.; Parsa, M.; **Omidkhah, M.R.**; Farmand, M.; Ghaznavi, M., "A New Generation Allocation and Expansion Planning Algorithm Including Transmission System Effects", Esteghlal Journal, 24, 2005, 1-15.
- 82) Towfighi, J.; Modarres, J.; **Omidkhah, M.R.**; Niaei, A., "Estimation of Kinetic Parameters of Coking Reaction in Pyrolysis of Naphtha", International Journal of Engineering, 17, 2004, 311-324.
- 83) Hojjati, M.R.; **Omidkhah, M.R.**; Panjehshahi, M.H.; "Cost Effective Heat Exchanger Network Design with Mixed Materials of Construction", Iranian Journal of Chemistry & Chemical Engineering, 23, 2004, 89-100.
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- 87) **Omidkhah, M.R.**; Navid Famili, M.H.; Keshtiban, J.E., "Numerical Solution of Compressible Flow Equations Inside an Ejector", Iranian Journal of Chemistry & Chemical Engineering, 21, 2002, 11-21.
- 88) Zarringhalam, A., **Omidkhah, M.R.**, Gholipour, N. "Predicting Fire Critical Conditions Using Fire Parameters of Materials", Journal of Engineering Faculty of Tehran University, 35, 2001, 399-407.
- 89) Zarringhalam, M.A.; **Omidkhah, M.R.**, "Combustion Studies Via Heat Release Rate Method", Iranian Journal of Energy, 5, 2001, 1-15.
- 90) Tehranifar, M.; **Omidkhah, M.R.**; 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, 1999, (in Farsi).
- 91) **Omidkhah, M.R.**; Seyyed Shabestari, S.A., "Synthesis and Optimization of Separation Section of MTBE Process", Iranian Journal of Chemistry & Chemical Engineering, 13, 1994, 115-122.

#### Conference papers

- Mohammadi, A.; **Omidkhah, M.R.** and 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.
- Mohammadi, A.; **Omidkhah, M.R.** and 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.
- Mohammadi Rad, R.; Karimzadeh, R.; **Omidkhah, M.R.**, "Optimal operation of thermal cracking reactor based on fundamental models", 11<sup>th</sup> National Congress on Chemical Engineering, Tehran, Nov. 2006, (in Farsi).
- Gholami, H.; Zarringhalam, A.; **Omidkhah, M.R.**, "Desulphurization of Mazino coal via floatation and leaching with Nitric acid", 11<sup>th</sup> National Congress on Chemical Engineering, Tehran, Nov. 2006, (in Farsi).
- Pakizeh, M.; **Omidkhah, M.R.**; Zarringhalam, A., Shariati, M., "Gas transport mechanisms through new templated silica membranes prepared by sol-gel method", 11<sup>th</sup> National Congress on Chemical Engineering, Tehran, Nov. 2006, (in Farsi).
- Pakizeh, M.; **Omidkhah, M.R.**; Zarringhalam, A., Karimzadeh, R., "Gas permeation characteristics of new silica membranes derived from template-sol-gel technology", 11<sup>th</sup> National Congress on Chemical Engineering, Tehran, Nov. 2006, (in Farsi).
- Ganji, H.; Manteghian, M.; Sadaghiani, K.; **Omidkhah, M.R.**, "Promotion effect of anionic, cationic and non-ionic surfactants on methane hydrate", 11<sup>th</sup> National Congress on Chemical Engineering, Tehran, Nov. 2006, (in Farsi).
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- Omidkhah, M.R.**; Hojjati, M.R.; Safavi, F., "The effect of variable heat capacity on energy an area targeting of a heat exchanger network", 11<sup>th</sup> National Congress on Chemical Engineering, Tehran, Nov. 2006, (in Farsi).
- Hojjati, M.R.; **Omidkhah, M.R.**, "Heat exchanger network design of Formaline unit of Sina chemical company", 11<sup>th</sup> National Congress on Chemical Engineering, Tehran, Nov. 2006, (in Farsi).
- Tarigholeslami, A.H.; **Omidkhah, M.R.**, "Energy conservation of atmospheric distillation column of Tabriz refinery through exergitic analysis", 11<sup>th</sup> National Congress on Chemical Engineering, Tehran, Nov. 2006, (in Farsi).
- Abghari Zahedi, S.; Towfighi, J., Karimzadeh, R.; **Omidkhah, M.R.**, "Study on thermal cracking of atmospheric gasoil for producing olefines", 11<sup>th</sup> National Congress on Chemical Engineering, Tehran, Nov. 2006, (in Farsi).
- Jazayeri, M.; Karimzadeh, R.; **Omidkhah, M.R.**, "Optimization of a thermal cracking reactor based on statistical models", 11<sup>th</sup> National Congress on Chemical Engineering, Tehran, Nov. 2006, (in Farsi).

- 14) Dadkhah, M.; **Omidkhah, M.R.**; Farrokhi, F., "Converting Methane into Sythesis gas in a positive corona plasma reractor", 11<sup>th</sup> National Congress on Chemical Engineering, Tehran, Nov. 2006, (in Farsi).
- 15) Dadkhah, M.; **Omidkhah, M.R.**; Farrokhi, F., "Converting Hydrogen Sulfide into hydrogen in a positive corona plasma reractor", 11<sup>th</sup> National Congress on Chemical Engineering, Tehran, Nov. 2006, (in Farsi).
- 16) Sattari Oskouee, A.; Shahraki, F.; **Omidkhah, M.R.**, "Heat exchanger network retrofit of a distillation unit", 10<sup>th</sup> National Congress on Chemical Engineering, Zahedan, Iran, Nov. 2005, (in Farsi).
- 17) **Omidkhah, M.R.**; Nemati Shahab, S., "A study on flare gas dumping system enhancement", 10<sup>th</sup> National Congress on Chemical Engineering, Zahedan, Iran, Nov. 2005, (in Farsi).
- 18) Hemmatian, A.; Karimzadeh, R.; **Omidkhah, M.R.**, "The effect of of pyrolysis coil configuration on the operation of thermal cracking reactors", 10<sup>th</sup> National Congress on Chemical Engineering, Zahedan, Iran, Nov. 2005, (in Farsi).
- 19) **Omidkhah, M.R.**; Younesi S.S., "Flare gas recovery of Tabriz refinery", 10<sup>th</sup> National Congress on Chemical Engineering, Zahedan, Iran, Nov.2005,(in Farsi).
- 20) **Omidkhah, M.R.**, "The Main Energy Challenges of Industry in a Competitive Market", a Keynote Speech delivered in 5<sup>th</sup> National Energy Congress, Tehran, 2005, (in Farsi).
- 21) **Omidkhah, M.R.**; Zareie, M., "Recovery of Styrene-Butadien Latex from Wastewater of Bandar Imam Petrochemical Complex", Paper presented at 9<sup>th</sup> National Congress on Chemical Engineering, Tehran, Dec. 2004, (in Farsi).
- 22) **Omidkhah, M.R.**; Rahimi, K., "Recovery of Styrene from the Feed of Pyrolysis Gasoline Unit", Paper presented at 9<sup>th</sup> National Congress on Chemical Engineering, Tehran, Dec. 2004, (in Farsi).
- 23) **Omidkhah, M.R.**, "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.
- 24) **Omidkhah, M.R.**, 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).
- 25) **Omidkhah, M.R.**, "Real Time Optimization of Refineries", Paper Presented at 27<sup>th</sup> Annual Meeting of International Association of Energy Economics, Tehran, May 2004.
- 26) **Omidkhah, M.R.**, "Promoting Energy Productivity in Industrial Sector", a Keynote Speech delivered in 4<sup>th</sup> National Energy Congress, Tehran, 2003, (in Farsi).
- 27) Tafvizi, A.; Manteghian, M. ; **Omidkhah, M.R.**, "The Effect of Adding Combined phosphor Based Gypsom on Properties of Cement", Paper presented at 8<sup>th</sup> National Congress on Chemical Engineering, Mashad, Oct. 2003, (in Farsi).
- 28) Tafvizi, A.; Manteghian, M. ; **Omidkhah, M.R.**, "The Effect of Adding TEA on Physical Properties of Portland Cement", Paper presented at 8<sup>th</sup> National Congress on Chemical Engineering, Mashad, Oct. 2003, (in Farsi).
- 29) Mirmomem, L.; **Omidkhah, M.R.**, "Run Time Optimization of Furnace of Olefin Plant", Paper presented at 7<sup>th</sup> National Congress on Chemical Engineering, Tehran, 28-31 Oct. 2002, (in Farsi).
- 30) Khorsand, K.; Zarrinpashneh, S. ; **Omidkhah, M.R.**, "Study on Parameter Changes of a Distillation Column During a Shock and Exit from Steady State", Paper presented at 7<sup>th</sup> National Congress on Chemical Engineering, Tehran, 28-31 Oct. 2002, (in Farsi).
- 31) Khorsand, K.; Zarrinpashneh, S. ; **Omidkhah, M.R.**, "Study on Operational Variables in Start Up of Distillation Column", Paper presented at 7<sup>th</sup> National Congress on Chemical Engineering, Tehran, 28-31 Oct. 2002, (in Farsi).
- 32) Ghodsipour, N.S.; Sadrameli M.; **Omidkhah, M.R.**, " Optimization of a Rotary Regenerator Parameters Using Experimental Design Method", Paper presented at 6<sup>th</sup> National Congress on Chemical Engineering, Isfahan, may 2001, (in Farsi).
- 33) Zarringhalam, M. A.; Gholipour, N.; **Omidkhah, M.R.**, " Study on the Effect of Magnesium Hydroxide on Decomposition of Polyethylene Using Thermal Analysis", Paper presented at 6<sup>th</sup> National Congress on Chemical Engineering, Isfahan, may 2001, (in Farsi).
- 34) **Omidkhah, M.R.**; Ghaderi, K., "Modeling and Optimization of Oil Quench Tower of Olefin Plant of Arak Petrochemical Complex", Paper presented at 6<sup>th</sup> National Congress on Chemical Engineering, Isfahan, may 2001, (in Farsi).
- 35) **Omidkhah, M.R.**; Kashtiban, E.J., "Behaviour of Compressible Flow in an Ejector", Paper presented at the 5<sup>th</sup> National and Second International Congress on Chemical Engineering, Shiraz, 2000, (in Farsi).
- 36) **Omidkhah, M.R.**; Nourbakhsh, F., " Modeling and Simulation of Catalytic Hydro Treating of C4 Cut", Paper presented at the 5<sup>th</sup> National and Second International Congress on Chemical Engineering, Shiraz, 2000, (in Farsi).
- 37) Ganjidoust,H., Gholian, R.N, Badkoobi, A., Mahmoodi, M.R., **Omidkhah, M.R.**, "Use of Rotating Biological Contactor (RBC) in the Treatment of Food Industries Wastewater", Paper presented at 6<sup>th</sup> IAWQ Asia-Pacific Regional Conference, Seoul, Korea, May 1997.
- 38) **Omidkhah, M.R.**; Maghsoudi, S. and 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).
- 39) **Omidkhah, M.R.**; Khorsand, K. and Zarrinpashneh, S., " Dynamic Simulation of a Multi-component Distillation Column", Paper presented at the Second National Congress on Chemical Engineering, Tehran, 1997, (in Farsi).
- 40) **Omidkhah, M.R.**, "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.
- 41) **Omidkhah, M.R.**, "World Oil and Gas Resources, Production and Prospects", Paper presented at the First National Congress on Energy Economics, Tehran, Jan., 1995.

- 42) **Omidkhah, M.R.**; 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).
- 43) **Omidkhah, M.R.**; 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).
- 44) **Omidkhah, M.R.**; 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).

#### **Patents**

#### **Previous Employment**

- 2010 - Present Professor, Tarbiat Modarres University, Tehran.
- 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 Industry, 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**

- 2010 - Present President of IChE (Iranian Association of Chemical Engineering).
- 2009 - Present Member of editorial board of Petroleum Research Journal.
- 2009 - Present Member of editorial board of Farayandno Journal.
- 2008 - Present Member of editorial board of Iranian Journal of Chemical Engineering.
- 1995 - Present Member of editorial board of Iranian Energy Economics Journal.
- 1995 - 1999 Member of editorial board of Iranian journal of Industry & Development.
- 1994 - 1996 Advisor to the minister of Industry.
- 1991 - 1996 Consultant to National Iranian Petrochemical Company (NIPC).
- 1990 - 1995 Consultant to National Iranian Oil Company (NIOC).

#### **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 IIES (Institute for International Energy Studies).
- Member of editorial board of Iranian journal of Industry & Development.
- Member of IAEE (Iran Association for Energy Economics).
- 1995 - 1997, 1999 - present Member of the board of IAEE.
- Member of the World Energy Council (WEC), National Energy Committee of Iran.
- 1997 - 1999 Chairman of the board of TPI, (Technology Park of Iran).
- 1994 - 1997 Member of the board of TPI, (Technology Park of Iran).

✚ **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

✚ **Fields and Activities**

- Process synthesis and optimization
- Modeling and simulation
- Process integration-Pinch Technology
- Process heat recovery systems
- Energy management
- Membrane Separation Processes (MF, UF, RO, PV, GS)
- Polymeric Membrane Preparation and Characterization (6FDA-DDA; PDMS; PVA)
- Membrane Processes in Oil, Gas and Petroleum Industry
- Modeling Membrane Process (CFD, ANN, Fuzzy Logic, Mathematical)
- Plasma technology

✚ **کتابهای منتشر شده**

- ۱- سیامک اسماعیل زاده خادم, محمد رضا امیدخواه, غلامحسین لیاقت, "مانیتورینگ وضعیت ماشین آلات", انتشارات دانشگاه گیلان, اسفند ۱۳۸۰.
- ۲- سیامک اسماعیل زاده خادم, محمد رضا امیدخواه, محمود درویزه, "تکنولوژی های نگهداری و تعمیرات و آنالیز ارتعاشی ماشین آلات", انتشارات دانشگاه گیلان, اسفند ۱۳۸۰.
- ۳- سیامک اسماعیل زاده خادم, محمد رضا امیدخواه, محمود درویزه, "بالانس فنهای گریز از مرکز و عیب یابی ماشین آلات", انتشارات دانشگاه گیلان, اسفند ۱۳۸۰.

***More Information is available upon request***