



Masoud Mofarahi

**Professor of Chemical Engineering
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PERSONAL:

- **First Name:** Masoud
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Department of Chemical Engineering
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Formal Education:

- 2004 PhD in Chemical Engineering, Tarbiat Modares University, Tehran, Iran
- 1993 MSc in Chemical Engineering, Tarbiat Modares University, Tehran, Iran
- 1986-1990, BSc in Chemical Engineering, Shiraz University, Shiraz, Iran
- 1982-1986, High School, Shiraz, Iran

Area of Expertise and Interest

- Adsorption Technology
- Pressure Swing Adsorption Process
- CO₂ Emissions Capture
- Thermodynamics, Phase Equilibria
- Heat Transfer and Fluid Mechanics
- Modeling and Simulation

Employment and Experience:

- Professor of Chemical Engineering, PGU
- Invited Associate Professor of Chemical Engineering, Tarbiat Modares University. TMU 2006-2011
- Reviewer for submitted articles for Industrial & Chemical Engineering Research Journal, Energy Journal, Fuel & Energy, International Journal of Greenhouse Gas Control
- Consultant for Fajr-Jam Gas Refinery Co., Iran 2004-2015
- Consultant for Parsian Gas Refinery Co., Iran 2014-2015
- Researcher as a PhD Student in Linde Co., Munich, Germany. 2001-2003
- Iranian Association of Chemical Engineering, Member
- American Chemical Society, Member

Journals:

- Journal of Oil, Gas and Petrochemical Technology, Editor-in Chief, <http://jogpt.pgu.ac.ir/>
- Journal of Environmental Studies of Persian Gulf, Editorial Board, <http://espg.pgu.ac.ir/>

Patent:

- Oxygen and Nitrogen Production from Air Simultaneously (2013)- National Patent-Certified by Iran's National Elites Foundation

Industrial Projects (10):

- Simulation Package for the Thermal Cracking Furnaces of Olefin Plant (1999)
- Basic Design of an Ethane Furnace (2001)
- Design and Setup of an Air Separator by PSA Process (2004)
- Evaluation of Saturation Conditions of Carbon Filter in Gas Sweating Plant (2005)
- Design and Setup of an Apparatus for Equilibrium Adsorption Isotherms (2005)
- Economic Evaluation of CO₂ Recovery from Flue Gas of Gas Turbine in Sarkhoon Gas Refinery (2006)
- Extension of PSA Technology for Gas Separation System (2007)
- SPGC Phase 2&3 Amine System Corrosion Study (2010) Certified as National Project
- CO₂ Separation from Flue Gas by Pressure Swing Adsorption (2011)
- Oxygen and Nitrogen Separation from Air Simultaneously (2013) Certified as National Project

Publications (thesis)

-
- [Mofarahi, M.](#) ,“NRTL-NRF development for VLE and LLE Multicomponent Phase Equilibrium System”, M.Sc. thesis, Tarbiat Modares University, Tehran, 1993.
 - [Mofarahi, M.](#) ,“Application of a PSA Process for Propylene/Propane Separation”, Ph.D. thesis, Tarbiat Modares University, Tehran, Iran, 2004.

Graduate Students(31)

Past Students(PhD)

■ Rahideh, Hoseein, Ph. D. Thesis “Application of inverse solution in the fundamental transport equations for gas adsorption systems”, Persian Gulf University, Bushehr, 2016

Past Students(MS)

■ Hajizadeh, Abdollah, M.Sc. Thesis “Investigating the Effect of Thermodynamic Models in Simultaneous Removal of CO₂ and H₂S by Amine Solutions in Absorption Column”, Persian Gulf University, Bushehr, 2017

■ Mohammadi, Najmeh, M.Sc. Thesis “Preparation of Sulfur Nanoparticles(S-NPs) for Use in Adsorption of Elemental Mercury”, Persian Gulf University, Bushehr, 2017

■ Ahosseini, Minoo, M.Sc. Thesis “Application of synthesis zeolite 13X for oxygen separation from nitrogen by pressure swing adsorption process”, Persian Gulf University, Bushehr, 2016

■ Amiri, Khatereh, M.Sc. Thesis “Synthesis of Zeolite 13X for Gas Adsorption Separation of CO₂ and N₂ mixture”, Persian Gulf University, Bushehr, 2016

■ Hassanli, Erfan, M.Sc. Thesis “CO₂ Recovery from N₂ and O₂ BY Pressure Vacuum Swing Adsorption”, Persian Gulf University, Bushehr, 2016

■ Tajik, Ali, M.Sc. Thesis “Parametric study on preparation and characterization of polyacrylonitrile nanofibers fabricated via centrifugal spinning method”, Persian Gulf University, Bushehr, 2016

■ Pakzad, Peyman, M.Sc. Thesis “Equilibrium solubility of carbon dioxide in physical solvents mixed with AMP: Experimental Measurement and Modeling”, Persian Gulf University, Bushehr, 2016

■ Frootan, Mohammad Reza, M.Sc. Thesis “Modeling and Simulation of CO₂ Absorption from Natural Gas by AMP- Piperazine Solution”, Persian Gulf University, Bushehr, 2015

■ Jamali, Sadegh, M.Sc. Thesis “Modeling and Simulation of Hydrogen Purification Process from Synthesis Gas by Pressure Swing Adsorption”, Persian Gulf University, Bushehr, 2015

■ Nooshiravani, Aioda, M.Sc. Thesis “Application of Wong-Sandler Equation in Thermodynamic Modeling and Prediction of Carbon Dioxide Solubility in Amine Solutions”, Persian Gulf University, Bushehr, 2015

■ Mator, Milad, M.Sc. Thesis “Effect of Adsorption Pressure on the Oxygen Separation by Pressure Swing Adsorption”, Persian Gulf University, Bushehr, 2014

■ Yousefi, Sahebeh, M.Sc. Thesis “Simulation of Natural Gas Adsorption in Adsorbed Natural Gas (ANG) Storage”, Persian Gulf University, Bushehr, 2014

■ Makarem, Mohammad Amin, M.Sc. Thesis “Simulation of Pressure Swing Adsorption for Oxygen Production from Air”, Persian Gulf University, Bushehr, 2014

■ Jafarian, Benyamin, M.Sc. Thesis “Effect of blowdown pressure on the oxygen separation by Pressure Swing Adsorption”, Persian Gulf University, Bushehr, 2014

- Zandavifard, Amir, M.Sc. Thesis “Modeling of Pressure Swing Adsorption for Nitrogen Separation from Air”, Persian Gulf University, Bushehr, 2013 .
- Bakhtiari, Ali, M.Sc. Thesis “Separation of Methane and Nitrogen Binary Mixtures by Adsorption”, Persian Gulf University, Bushehr, 2013.
- Gholipour, Fatemeh, M.Sc. Thesis “Adsorption Equilibrium Measurement for Binary Mixture of Methane and Carbon Dioxide”, Persian Gulf University, Bushehr, 2013.
- Mostamand, Ashkan, M.Sc. Thesis “Simulation of Nitrogen Separation from air Using Pressure Swing Adsorption”, Persian Gulf University, Bushehr, 2012.
- Javadi, Ehsan, M.Sc. Thesis “Application of Pressure Swing Adsorption in Nitrogen Separation”, Persian Gulf University, Bushehr, 2012.
- Abasi, Mehdi, M.Sc. Thesis “Kinetic Adsorption of Oxygen over Zeolite”, Persian Gulf University, Bushehr, 2011.
- Sayah, Masoud, M.Sc. Thesis “Thermodynamics Modeling of Pure and Binary Adsorption Isotherms Using Ideal Adsorbed Solution Theory”, Persian Gulf University, Bushehr, 2011.
- Salehi, Seyed Milad, M.Sc. Thesis “Thermodynamics Modeling of Pure and Binary Adsorption Isotherms Using Vacancy Solution Theory”, Persian Gulf University, Bushehr, 2010.
- Keyhanizadeh, Maryam, M.Sc. Thesis “Experimental study of CO₂/N₂ Mixture Separation by Pressure Swing Adsorption”, Tarbiat Modares University, Tehran, 2010.
- Mohajerani, Sara, M.Sc. Thesis “CO₂/N₂ Mixture Separation Using Pressure Swing Adsorption”, Tarbiat Modares University, Tehran, 2010.
- Sepehri, Sara, M.Sc. Thesis “Effect of Time Sequence on Separation of Nitrogen from Air by Pressure Swing Adsorption”, Tarbiat Modares University, Tehran, 2009.
- Moghadaszadeh, Zahra, M.Sc. Thesis “Effect of Separation Parameters on of Nitrogen Separation from Air by Pressure Swing Adsorption”, Tarbiat Modares University, Tehran, 2009.
- Majid, Seyedi, M.Sc. Thesis “Thermodynamic Modelling of Gas Adsorption Separation Using Equation of State”, Persian Gulf University, Bushehr, 2008.
- Moghadaszadeh, Zahra, M.Sc. Thesis “Separation of Oxygen from Air by Pressure Swing Adsorption using Zeolite 13X”, Tarbiat Modares University, Tehran, 2008.
- Hosseinzadeh, Narges, M.Sc. Thesis “Separation of Nitrogen from Air by Pressure Swing Adsorption using Carbon Molecular Sieve”, Tarbiat Modares University, Tehran, 2008.
- Karim Lu Sayah, Anita, M.Sc. Thesis “Modelling and Simulation of PSA Pilot Plant”, Tarbiat Modares University, Tehran, 2007.
- Dadashi Hania, M.Sc. Thesis “Separation of Oxygen from Air by Pressure Swing Adsorption” Tarbiat Modares University, Tehran, 2007
- Fathi Leila. , M.Sc. Thesis “Air Separation by Pressure Swing Adsorption”, Tarbiat Modares University, Tehran, 2005

Published Journal Papers (31):

- Rahideh, H.; Mofarahi, M.; Malekzadeh, P.; " Application of inverse method to predict the breakthrough curve in fixed-bed adsorption "*Inverse Probl. Sci. Eng., In press.*

- Dastanian, M. ; Izadpanah, A. A.; Mofarahi, M.;" Phase Equilibria of Carbon Dioxide Hydrates in the Presence of Methanol/Ethylene Glycol and KCl Aqueous Solutions " *J. Chem. Eng. Data, In press.*

- Mofarahi, M. ; Afkhamipour. M. " Review on the mass transfer performance of CO₂ absorption by amine-based solvents in low- and high-pressure absorption packed columns" *RSC Adv., 2017,7, 17857-17872*

- Rahideh, H.; Mofarahi, M.; Malekzadeh, P.; " An inverse method to estimate adsorption kinetics of light hydrocarbons on activated carbon" *Comput. Chem. Eng., 2016, 93 ,197–211., DOI: 10.1016/j.compchemeng.2016.06.014*

- Rostami, M. Mofarahi, M.; Karimzadeh, R. ; Abedi, D.; " Preparation and Characterization of Activated Carbon–Zeolite Composite for Gas Adsorption Separation of CO₂/N₂ System" *J. Chem. Eng. Data, 2016, 61 (7), 2638–2646*

- Mofarahi, M. ; Afkhamipour. M. ; Benhelal E.; " An indirect method to evaluate the performance of the activated carbon filters in the amine sweetening process " *Sep. Sci. Technol. , 2016, 51, 10, 1627–1635., DOI: 10.1080/01496395.2016.1176045*

- Afkhamipour. M.; Mofarahi, M. " Modeling and optimization of CO₂capture using 4-diethylamino-2-butanol (DEAB) solution" *Int. J. Green. Gas Cont., 2016,49, 24-33., DOI: 10.1016/j.ijggc. 2016.02.019*

- F. Gholipour .;Mofarahi, M. " Adsorption equilibrium of methane and carbon dioxide on zeolite13X: Experimental and thermodynamic modeling" *J. Supercrit. Fluids., 2016, 111, 47–54, DOI:10.1016/j.supflu.2016.01.008*

- Mofarahi, M.; Makarem, M. A.; Jafarian, B.; Jowkar, P. " Numerical Modeling of Fluid Flow and Thermal Behavior of Different Nanofluids on a Rotating Disk" *Heat Transfer - Asian Research., 2016, 45 (4), 358–378*

- Rahideh, H.; Mofarahi, M.; Malekzadeh, P.; Golbahar Haghighi, M.R."Application of Inverse Method to Estimation of Gas Adsorption Isotherms" *Transport in Porous Media, 2015, In press, DOI:10.1007/s11242-015-0576-8*

- [Mofarahi, M.](#); Bakhtyari, A. ; " Experimental Investigation and Thermodynamic Modeling of CH₄/N₂ Adsorption on Zeolite 13X". *J. Chem. Eng. Data*, **2015**, 60 (3), pp 683–696, DOI: 10.1021/je5008235
- Javadi S. E.; [Mofarahi, M.](#);" Pilot-scale experiments for nitrogen separation from air by pressure swing adsorption" *South African Journal of Chemical Engineering*, **2014**, 19 (2), 42-56
- [Mofarahi, M.](#); F. Gholipour . " Gas adsorption separation of CO₂/CH₄ system using zeolite 5A" *Microporous and Mesoporous Materials.*, **2014**, 200, 1-10., DOI:10.1016/j.micromeso.2014.08.022
- Afkhamipour. M.; [Mofarahi, M.](#). " Sensitivity analysis of the rate-based CO₂ absorber model using amine solutions (MEA, MDEA and AMP) in packed columns " *Int. J. Green. Gas Cont.*, **2014**,25, 9-22., DOI: 10.1016/j.ijggc.2014.03.005 **Ranked 10th on the Top 25 Hottest Articles June 2014**
- Bakhtyari, A. ; [Mofarahi, M.](#); " Pure and Binary Adsorption Equilibria of Methane and Nitrogen on Zeolite 5A". *J. Chem. Eng. Data*, **2014**, 59, 626–639
- Rezaie, Z ; Sadrameli, M.; Towfighi, J.; [Mofarahi, M.](#) "Carbon dioxide/ Nitrogen Separation Using Vacuum Pressure Swing Adsorption Process for Propylene/Propane Separation ", , *Iranian J. of Chemical Engineering*, **2013**; 32(3); 29-45
- [Mofarahi, M.](#); Javadi E. S.; " Comparison of Two Pressure Swing Adsorption Processes for Air Separation Using Zeolite 5A and Zeolite 13X" *Petroleum & Coal*, **2013**, 55(3), 216-225
- Kiani, B. M.;Safaei, H. R. ;Panahandeh, M; Kiani, A. R.; Kiani, M. ; [Mofarahi, M.](#); " Pure Oxidized single-walled carbon nanotubes (SWCNs-COOH) as a new catalyst for the protection of carbonyl groups as hydrazones" *S. Afr. J. Chem.*, **2013**, 66, 279-281
- Afkhamipour. M.; [Mofarahi, M.](#). " Comparison of rate-based and equilibrium-stage models of a packed column for post-combustion CO₂ capture using 2-amino-2-methyl-1-propanol (AMP) solution" *Int. J. Green. Gas Cont.*, **2013**,15 186–199., <http://dx.doi.org/10.1016/j.ijggc.2013.02.022>
- [Mofarahi, M.](#) ; Salehi S. M.; . "Pure and binary adsorption isotherms of ethylene and ethane on zeolite 5A" *Adsorption.*, DOI 10.1007/s10450-012-9423-1 . 2012
- Khojasteh, Y. S. ;[Mofarahi, M.](#) ; . "Reduction of CO₂ Capture Plant Energy Requirement by Selecting a Suitable Solvent and Analyzing the Operating Parameters"*Int. J. Egy. Res.*, **2012**, online release.
- Khojasteh, Y. S. ;[Mofarahi, M.](#) ; . " Comparison of MEA and DGA Performance for CO₂ Capture under Different Operational Conditions", *Int. J. Egy. Res.*, **2012**, 36, 2, 259–268
- [Mofarahi, M.](#); Hashemifard, S. A.; . "New Mixing Rule for Predicting Multi-component Gas Adsorption", *Adsorption.*, **2011**, 17, 311–323.
- [Mofarahi, M.](#); Towfighi, J.; Fathi L.;. "Oxygen Separation from Air by Four-Bed Pressure Swing Adsorption", *Ind. Eng. Chem. Res.*, **2009**, 48, 5439–5444
- Fathi L.; Towfighi, J.; [Mofarahi, M.](#) ; "Oxygen Separation from Air Using Pressure Swing Adsorption". *J. Sep. Sci. Eng.* , **2009**, 1,1
- [Mofarahi, M.](#); Seyyedi S. M.; " Pure and Binary Adsorption Isotherms of Nitrogen and Oxygen on Zeolite 5A". *J. Chem. Eng. Data*, **2009**, 54 (3), pp 916–921

- [Mofarahi, M.](#); Moghadaszadeh Z.; Towfighi J.; "Study of a Four-Bed Pressure Swing Adsorption for Oxygen Separation from Air *Int. J. Chem. Bio. Eng.*,**2008**,3;140
- [Mofarahi, M.](#); Khojasteh Y.; Khaledi H.; Farahnak A.; "Design of CO2 Absorption Plant for Recovery of CO2 from Flue Gas of Gas Turbine " *Energy*, **2008**, 33 ;1311–1319 **Ranked 5th on the Top 25 Hottest Articles December 2008**
- [Mofarahi, M.](#); Sadrameli, M.; Towfighi, J. " Four-Bed Vacuum Pressure Swing Adsorption Process for Propylene/Propane Separation ", *Ind. Eng. Chem. Res.*, **2005**; 44(5); 1557-1564
- Towfighi J., Karimzadeh R., Sadrameli M., [Mofarahi, M.](#), Niaei A., Saedi G., Hosseini S., Mokhtarani B., "SHAHAB-PC Based Simulator for Prediction of Furnace Run Length the Pyrolysis of Hydrocarbons (Ethane to Naphtha)", Iranian *J. of Chemical Engineering*, **2004**, 1, 55
- [Mofarahi, M.](#); Sadrameli, M.; Towfighi, J. Characterization of Activated Carbon by Propane and Propylene Adsorption, *J. Chem. Eng. Data*, **2003**, 48, 1256-1261

Selected Conference Papers (45):

- [Mofarahi, M.](#); M. Rostami ;R. Karimzadeh; M.Mahmoudi; D. Abedi Amoli, 'Synthesis of an Efficient Zeolite 13X in a Conventional Method and Characterization, *The International Conference on Chemical and Biochemical Engineering (ICCBE),Paris, France, 20-22 July 2015*
- [Mofarahi, M.](#);H. Eskandari ;A. Tajik, 'Polyacrylonitrile Nanofibers Production Using Rotary Jet Spinning Process' , *The International Conference on Chemical and Biochemical Engineering (ICCBE),Paris, France, 20-22 July 2015*
- B. Abbasi; A.A. Izadpanah; [Mofarahi, M.](#) 'Solid-Liquid Equilibria of Water + Glycol/alcohol systems, *The 15th Iranian National Congress of Chemical Engineering, Tehran, Iran,17-19 Feb. 2015*
- B. Abbasi; A.A. Izadpanah; [Mofarahi, M.](#) 'Prediction of Hydrate Formation Pressure of Natural Gas Components Using Fugacity-Based Approach , *The 15th Iranian National Congress of Chemical Engineering, Tehran, Iran,17-19 Feb. 2015*
- A. Noshiravani; [Mofarahi, M.](#) ; A.A. Izadpanah, ' Modeling of CO2 Solubility in Amine Solutions Using GE-EOS Mixing Rules' , *2nd International Conference of Oil, Gas and Petrochemicalm, Tehran, Iran, 18 Dec. 2014*
- A. Bakhtyari; [Mofarahi, M.](#) 'Prediction of Adsorption Selectivity of Propane/Propylene over Activated Carbon by Ideal Adsorbed Solution Theory' , *The 3rd Conference of Separation Science and Engineering, Zahedan, Iran, 2-4 May 2012*
- [Mofarahi, M.](#); Ehsan Javadi Shokroo 'Numerical of a Pressure Swing Adsorption for Air Separation , *The Seventh International Chemical Engineering congress and Exhibition,2011*
- Mostamand, A., [Mofarahi, M.](#); ' Simulation of a Single Bed Pressure Swing Adsorption for Producing Nitrogen, : Chemical, Biological and Environment Sciences (ICCEBS'2011), Bangkok, Thailand, 2011
- [Mofarahi, M.](#); " Gas Adsorption Modeling Using Two Dimension Equation of State with Temperature Independent Parameters" *Twelfth International Conference on Properties and Phase Equilibria for Product and Process Design PPEPPD 2010, Suzhou, Jiangsu, China, 2010*
- [Mofarahi, M.](#); Sayah S. M.; Salehi S. M. "Application of Ideal Adsorption Solution and Vacancy Solution Theory to Prediction Binary Adsorption Equilibrium of Nitrogen/Oxygen over Zeolite 5A" *Twelfth International Conference on Properties and Phase Equilibria for Product and Process Design PPEPPD 2010, Suzhou, Jiangsu, China, 2010*
- [Mofarahi, M.](#); "Propylene Separation by Vacuum Swing Adsorption. " *The First Conference of Separation Science and Engineering 2009, Kerman, IRAN, 2009*
- [Mofarahi, M.](#); " Modification of two dimensional equation of state for mixed gas adsorption isotherm " *Second Technical Conference of Thermodynamics 2009, Tehran, IRAN, 2009*

- [Mofarahi, M.](#); " Prediction of Binary Adsorption Equilibrium of Nitrogen/Oxygen over Zeolite 5A Using Ideal Adsorption Solution Theory " *Second Technical Conference of Thermodynamics 2009, Tehran, IRAN, 2009*
- [Mofarahi, M.](#); " Study of Cao Sorbent for CO2 Capture from Flue Gases " *9th International conference on Chemical and Process engineering, Chemical engineering Transactions Volume 17, 2009, Rome, ITALY, 2009*
- [Mofarahi, M.](#); Seyyedi S. M.; " Experimental and Theoretical Study of Oxygen and Nitrogen gas adsorption over Zeolite. *12th Iranian National Chemical Engineering congress, 2008,*
- [Mofarahi, M.](#); Rahmati N.; Towfighi J.; "Experimental Study of Nitrogen Separation from Air Using Pressure Swing Adsorption on Carbon Molecular Sieve. *12th Iranian National Chemical Engineering congress, 2008,*
- [Mofarahi, M.](#); Moghadaszadeh Z.; Towfighi J.; "Study of a Four-Bed Pressure Swing Adsorption for Oxygen Separation from Air" *Proceedings of the World Academy of Science and Technology, 2008, 30; 716-720*
- [Mofarahi, M.](#); Moghadaszadeh Z.; Towfighi J.; "Four-Bed Pressure Swing Adsorption for Oxygen Separation from Air with Zeolite 13X " *Iran International Zeolite Conference (IIZC'08) April 29 - May1, Tehran –Iran , 2008*
- [Mofarahi, M.](#); Seyedi M.; "Theoretical and Experimental Study of Adsorption Separation of O2/N2 on Zeolite 5 " *Iran International Zeolite Conference (IIZC'08) April 29 - May1, Tehran –Iran , 2008*
- [Mofarahi, M.](#); "Gas Adsorption Thermodynamic Modeling Using Equation of State" *First National Conference on Thermodynamic 2007, Isfahan, IRAN, 2007*
- [Mofarahi, M.](#); Hashemifard S. A.; "Predicting Gas Adsorption Using Covolume Dependent Mixing Rule" *Eleventh International Conference on Properties and Phase Equilibria for Product and Process Design PPEPPD 2007, Hersonisos, Crete, Greece, 2007*
- [Mofarahi, M.](#); Khojasteh Y.; Khaledi H.; Farahnak A.; "CO2 Recovery from Flue Gas of Gas Turbine Using Absorption Plant" *The Second International Conference on Modeling, Simulation and Applied Optimization, Abu Dhabi, UAE 2007*
- [Mofarahi, M.](#); "Dynamic Simulation of Vacuum Pressure Swing Adsorption Process" *The 15th IASTED International Conference Applied Simulation and Modeling , Rhodes, Greece 2006, 1, 33*
- [Mofarahi, M.](#); Rahideh H.; Sadrameli, M.; Towfighi, J. "Equilibrium Isotherms of Propane and Propylene over Activated carbon" *The 10th Iranian National Chemical Engineering congress, 2005, 1, 226*
- [Mofarahi, M.](#) ; Vafai Sefti, M., " Covolume-Dependent Mixing Rule with Heyen Equation of State for Predicting Solubility of Solids in Supercritical Fluids" *Proceeding of Thermodynamics 2005, 2005, 29, Sesimbra, Portugal*
- [Mofarahi, M.](#) ; Rahideh H.; Karimzadeh R., "Application of GM-isotherm model to study adsorption on activated carbon" , *Proceeding of Thermodynamics 2005, 2005, 26, Sesimbra, Portugal*

- [Mofarahi, M.](#); Sadrameli, M.; Towfighi, J. 'Equilibrium Gas Adsorption of Propane and Propylene on Zeolite 5A Using Magnetic Suspension Balance' *The Eight Iranian National Chemical Engineering congress*, **2002**, 1, 369
- Milani, M.M, Vafaie, M., [Mofarahi, M.](#) 'Development and Application an improved Heyen Equation of State with Volume Translation Term' *The Seventh Iranian National Chemical Engineering congress*, **2001**, 2, 80
- [Mofarahi, M.](#); Vafaie, M., J. 'A New Co-Volume Mixing Rule With Heyen Equation of State for Prediction of Solubility of Solid in Super Critical Fluid, *The Fifth Iranian National Chemical Engineering congress*, **1999**, 11, 17
- [Mofarahi, M.](#); Haghtalab, A., Prediction of VLE and LLE Multicomponent Phase Equilibrium System Using NRTL-NRF model. *The First Iranian National Chemical Engineering congress*, **1994**, 1, 26