Mohsen-Nia, Mohsen

Ph. D in Chemical Engineering, Professor

Department of Chemical Engineering,

Department of Chemisty,

Thermodynamic Research Lab.

University of Kashan, Kashan, Iran.

Education

1983 B.S. Chemical and Petrochemical Engineering, Amirkabir University of Technology, Tehran, Iran.

1985 M.S. Chemical Engineering, Amirkabir University of Technology, Tehran, Iran.

1992 Ph.D. Student (Scholarship), University of Illinois at Chicago, USA.

1993 Ph.D. Chemical Engineering, Amirkabir University of Technology, Tehran, Iran.

Awards

2005, University Excellence Award for Outstanding Performance in Research

2006, Ministry of Science, Research & Technology Excellence Award for Outstanding Performance in Research

2008, University Excellence Award for Outstanding Performance in Research

2011, University Excellence Award for Outstanding Performance in Research

Academic Experiances

Superviser of Chemical Engineering Opearations Laboratory

Teaching of : Statistical Thermodynamics

Advanced Thermodynamics

Advanced Applied Mathematics

Advanced Chemical Physics

Advanced Statistical Thermodynamics

Physical Chemistry

Kinetic and Reactor Design

Applied Chemistry

Industrial Experiances

Metal Finishing

Electroplating on Conductive and Non-conductive Surfaces

Production of poly(vinyl acetate) resin (PVAc)

Production of Sizing agent and Auxiliary Chemicals for Textile Industries.

Production of Industrial Adhesive (Wood, Paper, etc.)

Research interests

Nanothechnology (Nano-particles, Nanocomposites)

Thermodynamics (Experimental and theoretical approach)

Biothechnology (Protein Adsorption, Drug delivery)

Publications and Papers

Translation of the following book in Persian:

Pilot Plants and Scale-up of Chemical Processes, Edited by W. Hoyle, Scientific Resources Ltd. Stockport, UK,

Recent Papers:

1- M. Mohsen-Nia, H. Amir, Measurement and modelling of static dielectric constants of aqueous solutions of methanol, ethanol and acetic acid at T = 293.15 K and 91.3 kPa, *J. Chem. Thermodynamics 57, 2013, 67–70.*
2- F.S. Shariatmadar, M. Mohsen-Nia, PES/SiO_2 nanocomposite by in-situ polymerization: Synthesis, structure, properties and new application, Polymer composites, 33 (7), 2012, 1188–1196.
3- M. Mohsen-Nia, F. S. Mohammad Doulabi, Preparation and characterization of CoFe2O4/Poly vinyl acetate nanocomposite, *Polymer-Plastics Technology and Engineering*, 51, 2012, 1122–1126.
4- M. Mohsen-Nia, A.H. Ebrahimabadi, B. Niknahad, Partition coefficient n-octanol/water of propranolol and atenolol at different temperatures: Experimental and theoretical studies, J. Chem. Thermodynamics 54, 2012, 393–397.
5- M. Mohsen-Nia, F. S. Mohammad Doulabi, Preparation and characterization of exfoliated poly (vinyl acetate-co-methyl methacrylate)/Cloisite 30B nanocomposite, *Polymer Bulletin, 68, 2012, 1663-1675.*
6- M. Mohsen-Nia, M. Massah Bidgoli, M. Behrashi, A. Mohsen Nia, Human serum protein adsorption onto synthesis nano-hydroxyapatite, *Protein Journal, 31, 2012, 150-157.*
7- F. S. Mohammad Doulabi, M. Mohsen-Nia, Magnetic cobalt-zinc ferrite/PVAc nanocomposite: synthesis and characterization *Iran Polym J, inpress*. Sep. 2012 accepted.
8- Abbas Aleghafouri, Mohsen Mohsen-Nia, Ali Mohajeri, Mohammad

Mahdyarfar, Morteza Asghari, Micropore Size Analysis of Activated Carbons Using Nitrogen, Carbon dioxide and Methane Adsorption Isotherms: Experimental and Theoretical Studies, *Journal of Adsorption Science and Technology. 30 (4) 2012, 307-316.*

9- M. Mohsen-Nia, F. S. Mohammad Doulabi, Synthesis and characterization of polyvinyl acetate/montmorillonite nanocomposite by in situ emulsion polymerization technique, *Polymer Bulletin,66, 2011,1255-1265*.

10- M. Mohsen-Nia, F. S. Mohammad Doulabi PVAc Microspheres via Semicontinuous Emulsion Polymerization: Synthesis, Characterization, Kinetic, and Surface Morphology Studie, *The Journal of Adhesion, Volume 87, Issue 10, 2011.*

11- M. Mohsen-Nia, Measurement and modeling of surface tensions of systems containing n-hexadecane, n-heptane and n-pentane, *Physics and Chemistry of Liquids* inpress. Vol 49*, Issue 5, 2011.*

12- M. Mohsen-Nia, F.S. Mohammad Doulabi, Separation of aromatic hydrocarbons (toluene or benzene) from aliphatic hydrocarbon (n-heptane) by extraction with ethylene carbonate, *The Journal of Chemical Thermodynamics*, *Volume 42, Issue 10*, *2010*, *Pages 1281-1285*.

13- M. Mohsen-Nia, H. Amiri and B. Jazi, Dielectric constant of water, methanol, ethanol, butanol and acetone: Measurement and computational study, *Journal of Solution Chemistry*, 2010, 39: 701–708.

14- Rezaei, H., Modarress, H., Mohsen-Nia, M., Amiri, M. Application of M_4 cubic equation of state for refrigerants, *International Journal of Refrigeration*, *33, 2010, 1350-1355.*

15- M. Mohsen-Nia, M.R. Memarzadeh Isobaric Vapor-Liquid Equilibria of Heptane + 1-Butanol and Heptane + 1-Pentanol Systems at (53.3 and 91.3) kPa, *Journal of Chemical Engineering Data*, 55, 2010, 2140-2144.

16- M. Mohsen-Nia, M.R. Memarzadeh, Isobaric vapor-liquid equilibria for the 1-propanol + 1-butanol binary mixture at 53.3 and 91.3 kPa, *The Journal of Chemical Thermodynamics*, Volume 42, Issue 6, June 2010, 792-796.

17- H. Rezaei, H. Modarress and M. Mohsen-Nia, Extension of the new proposed association equation of state (AEOS) to associating fluid mixtures. *The Journal of Chemical Thermodynamics*, Volume 42, Issue 6, June 2010, 808-816.

18- H. Modarress, M. Mohsen-Nia, L. Allafkari, Adsorption of Bovine Serum Albumin onto Hydroxylapatite: Theoretical Modeling and Measurements Iran.

J. Chem. Chem. Eng., 29, 4, 2010, 125-133.

19- Mani Safamirzaei, Hamid Modarress, Mohsen Mohsen-Nia, Modeling the hydrogen solubility in methanol, ethanol, 1-propanol and 1-butanol, *Fluid Phase Equilibria*, Volume 289, Issue 1, 25 February 2010, 32-39.

20- M. Mohsen-Nia, H. Rasa, F. Naghibi, Experimental and theoretical study of surface tension of n-pentane, n-heptane and some of their mixtures at different temperatures, *The Journal of Chemical Thermodynamics*, Volume 42, Issue 1, January 2010,110-113.

21- M. Mohsen-Nia, H. Rasa, Measurments and calculations of hydrocarbon mixtures liquid density by simple cubic equations of state. Physics and Chemistry of Liquids, 47, 2, 2009, 140-147.

22- M. Mohsen-Nia, B. Jazi and H. Amiri, Binodal curve measurements for (water + propionic acid + dichloromethane) ternary system by cloud point method, *The Journal of Chemical Thermodynamics*, Volume 41, Issue 7, July 2009, Pages 859-863.

23- M. Mohsen-Nia, M.R. Memarzadeh, Isobaric vapour-liquid equilibria for the (1-pentanol + propionic acid) binary mixture at 53.3 kPa and 91.3 kPa, *The Journal of Chemical Thermodynamics*, *42, 11*, *November 2010*, *1311-1315.*

24- M.Tavassoli, M. Mohsen-nia, M. Asghari, Synthesis and Characterization of ZSM-5 nanozeolites, 3rd International Congress on Nanoscience and Nanotechnology, Shiraz, Iran, 2010.

25- M. Mohsen-Nia, H. Modarress, F. Alimohammady Densities and Viscosities of Binary Mixtures of Poly(vinylchloride) and Tetrahydrofuran at Temperatures (283.15 to 303.15) K, *J. Chem. Eng. Data* 2009, *54*, 1375–1377.

26- M. Mohsen-Nia, B. Jazi, H. Amiri , Effects of external electromagnetic field on binodal curve of (water + propionic acid + dichloromethane) ternary system *The Journal of Chemical Thermodynamics*, *41, 10*, *October 2009*, *1081-1085*.

27- M. Mohsen-Nia, F.S. Mohammad Doulabi and V.I. Manousiouthakis, (Liquid + liquid) equilibria for ternary mixtures of (ethylene glycol + toluene + *n*-octane*) The Journal of Chemical Thermodynamics*, *Volume 40, Issue 8*, *August 2008*, *Pages 1269-1273.*

28- Mohsen Mohsen-Nia Hamid Modarress, Hamid Reza Nabavi, Measuring and Modeling Liquid–Liquid Equilibria for a Soybean Oil, Oleic Acid, Ethanol, and Water System, J Am Oil Chem Soc, (2008) 85:973–978.

29- M. Mohsen-Nia and A. Khodayari, De-acidification of sunflower oil by solvent extraction: (Liquid + liquid) equilibrium data at *T* = (303.15 and 313.15) K *The*

Journal of Chemical Thermodynamics, *Volume 40, Issue 8*, *August 2008*, *Pages 1325-1329.*

30- Mani Safamirzaei, Hamid Modarress and Mohsen Mohsen-Nia, Modeling and predicting the Henry's law constants of methyl ketones in aqueous sodium sulfate solutions with artificial neural network *Fluid Phase Equilibria*, *Volume 266, Issues 1-2*, *25 April 2008*, *Pages 187-194.*

31- H. Rasa M. Mohsen-Nia and H. Modarress, Phase separation in aqueous two-phase systems containing poly(ethylene glycol) and magnesium sulphate at different temperatures, *The Journal of Chemical Thermodynamics*, *Volume 40, Issue 4*, *April 2008*, *Pages 573-579.*

32- A.H. Farrokh-Niae H. Moddarress and M. Mohsen-Nia, A three-parameter cubic equation of state for prediction of thermodynamic properties of fluids, *The Journal of Chemical Thermodynamics*, *Volume 40, Issue 1*, *January 2008*, *Pages 84-95.*

33- Hamid Modarress, Mohsen Mohsen-Nia, Mani Safamirzaei, Modelling the Solubility of 1,1,1,2-Tetrafluoroethane, 1-Chloro-1,1-difluoroethane, Butane and Iso-butane in LDPE with Artificial Neural Network, Iranian Polymer J., 2008, 17, 7.

34- M. Mohsen-Nia, H. Rasa and H. Modarress, Liquid-Liquid Equilibria for the Poly(ethylene glycol + Water + Copper Sulphate System at Different Temperatures. *J. Chem. Eng. Data,* 53, 946-949, 2008.