

Curriculum Vita

Ali Haghtalab (Ph.D.)

- Professor of Chemical Engineering
- Department of Chemical Engineering
- Tarbiat Modares University, Tehran, Iran
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- Birth: 15/05/1956 (Kashan, Iran)

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Citations indices (Google Scholar: April 2023)

- Citations: 3563
- h-index: 36
- i10-index : 94

Education:

- Ph.D., Chemical Engineering, McGill University, Canada. 1990
- M. Eng., Chemical Engineering, McGill University, Canada, 1985
- BSc, Chemical Engineering, Shiraz University, Iran, 1982.

Employment:

- Professor, Tarbiat Modares University, Tehran, Iran (2007).
- Associate Professor, Tarbiat Modares University, Tehran, Iran (1997-2006).
- Assistant Professor, Tarbiat Modares University, Tehran, Iran 1990-1997).
- Visiting Professor, University of Toronto, Toronto, Canada (2001- 2002).
- Visiting Professor, Qatar University, Doha, Qatar (2003-2006).

Research interests:

- Thermodynamics & Kinetics
- Molecular Thermodynamics of Fluid Phase Equilibria
- Thermodynamics of Mixtures (Electrolyte, Polymer,...)
- Treatment of Natural Gas and Gas processing
- Phase behavior of reservoir fluids
- Scaling in petroleum reservoir and metal surfaces
- Fluid Mechanics and Rheology
- Gas hydrate
- Extraction of Biomolecules by Aqueous Two-Phase Partitioning and Reverse micellar Extraction
- Pharmaceutical & Drug solubility in solvents
- Nanocomposite polymer rheology
- Heterogenous Catalysts-Gas to Liquid (GTL)

Research projects:

- Experiment and modeling of scaling in oil transportation pipes and on the metal surfaces

- Experiment and thermodynamic modeling of solubility of acid gases in chemical solvents
- Experiment and thermodynamic modeling of solubility of acid gases in deep eutectic solvents.
- Modeling and vapor-liquid and liquid-liquid equilibria calculations of hydrocarbon and nonhydrocarbon systems
- Modeling and simulation of acid gas removal of natural gas with Alkanolamines using Aspen Plus and OLI system, Qatar University, Doha, Qatar
- Modeling of the Dehydration process of Natural Gas with TEG
- Study of Gas to Liquid (GTL) using the Fischer- Tropsch process.
- Extraction and purification of Proteins using Aqueous Two-Phase Systems, 1996-2001, National Research Council of Iran
- Partitioning of drugs using aqueous two-phase systems through deep eutectic solvents.
- Solubility of pharmaceuticals in Deep Eutectic Solvents
- Purification of Proteins using Reverse Micelles, 1996-2001
- Construction of a Parallel Plate rheometer for Molten Polymers, 1996-2001, National Research Council of Iran
- Optimization of Rubber Mixing using Banbury, 1996-1998, Kiian Tire Rubber Industry
- The Chemo Rheological Study of Hydroxy Terminated Poly Butadiene with Solid Fillers, 1991-1993, the Research Center of National Defense

Courses taught:

- Advanced Thermodynamics
- Advanced Fluid Mechanics
- Prediction of Physical Properties of Fluids
- Phase behavior of Reservoir Fluids
- Thermodynamic of Mixtures
- Advanced Rheology
- Transport Phenomena of Non-Newtonian Fluids
- Gas Engineering
- Treatment of Natural Gas
- Petrochemical Processes
- Advanced Topics in Aqueous Process Engineering (the University of Toronto, Department of Chemical Engineering and Applied Chemistry - Graduate Course, 2001-2002).
- Industrial Rheology
- Physical Chemistry
- Fluid Mechanics
- Chemical Engineering Thermodynamics I & II
- Heat Transfer

Service Activities:

- Head of Reservoir Engineering Group (2014-2016)
- Head of Chemical Engineering Group (2011-2013)
- General Director of Continuing Educational Office, 1990-1993 (Ministry of Science, Technology, and Research, Iran).
- Vice-President of National Research Council of Iran, 1996-2001.
- General Director of Graduate Programming Office, 1993-1996 (Tarbiat Modares University).
- Head of Thermodynamics Group, 1990-1992 (Tarbiat Modares University).
- Director of the Rheology Laboratory, 1998-2003 (Tarbiat Modares University).
- Member of the Board of Directors, 1997-2002 (The Iranian Association of Chemical Engineers).

- Member of special National Scientific Iranian Research Council, 1376-1381.
- Member of the strategic committee of the Chemical Engineering Department, Qatar University.
- Member of Recruitment committee of Chemical Engineering, Qatar University.
- Member of the curriculum committee of Chemical Engineering, Qatar University.
- Member of Scientific Committee of National Iranian Chemical Engineering Congress, 1373-1383.
- Member of Editorial Chemical Engineering Board of Iranian Chemical Engineering Journal 1380-1383.
- Member of Iranian Rheology Association Founder, 2015
- Member of the Editorial Board of the Applied Chemical Engineering/Polymer Research Journal (Iran)
- Member of Editorial Board of Journal of Oil, Gas, and Petrochemical Technology (Iran)

Professional Developments:

- Supervision and graduating of 110 Master Engineering Students
- Supervision and graduating of 30 Ph.D. Students.
- Supervising 15 master and Ph.D. students (in progress)

Honors and Awards:

- The Iranian Association of Chemical Engineers for Secretary of the First National Chemical Engineering Congress, 1373.
- Tarbiat Modares University, Award for the author of the book “Fluid Phase Equilibria of Molecular Thermodynamics of Fluid Mixtures”, Tarbiat Modares University Press, Tehran, Iran (2012).
- Tarbiat Modares University, Award for high-rank qualified researcher and publication in 10 % JCR of periodicals indexed by the citation of Thomson Reuters

Professional Societies:

- Secretary of the First National Chemical Engineering Congress, Tehran, Iran (1995).
- General Secretary of the International Second Non-Renewable Energy Congress, Tehran, Iran (1997).
- Member of the Editorial Board of Iranian Chemical Engineering Journal (2001-2003).
- Member of the Iranian Chemical Engineering Society
- Member of the Iranian Polymer Engineering Society
- Member of Iranian Rheology Association Board Institutes

Book Publication:

- “Fluid Phase Equilibria of Molecular Thermodynamics of Fluid Mixtures”, Tarbiat Modares University, Tehran, Iran (2012). Author: Ali Haghtalab and Collaborator: Abolfazl Shojaeian.

Journal Publications

- 1) Kargozarfard, Zahra, Haghtalab, Ali, Ayetollahi Shahab, “A Nano-scale insight into the formation damage of carbonate reservoir due to water incompatibility during smart water injection: A molecular dynamics study”, Computational Particle Mechanics, (2022), <https://doi.org/10.1007/s40571-022-00534-1>.
- 2) Amini, Tahereh; Ali Haghtala, Yousofi Seyf Jaber, “Celecoxib Solubility Two Choline Chloride-Based Deep Eutectic Solvents- Experimental Study, Thermodynamic Modeling, and Molecular Dynamic Simulation”, Fluid Phase Equilibria, (2023), 568, 113761.
- 3) Hossein Ghanbari-Kalajahi; Ali Haghtalab, Vapor-liquid equilibrium of carbon dioxide solubility in a deep eutectic solvent (choline chloride: MDEA) and a mixture of DES with piperazine-experimental study and modeling”, Journal of Molecular Liquids (2023), 375, 121310
- 4) Babaei, Milad; Ali Haghtalab, High-pressure CO₂ solubility measurement in aqueous mixtures of (2-amino-2-methyl-1-propanol (AMP) and deep eutectic solvent (tetra butyl

- ammonium bromide 1: 3 ethylene glycol)) at various temperatures. *Fluid Phase Equilibria*, (2023), 565, 113643.
- 5) Amini, Tahereh; Ali Haghtala, Yousofi Seyf Jaber, Experimental Study and Thermodynamic Modeling of Mesalamine and Azathioprine Solubility in Some Choline Chloride-Based Deep Eutectic Solvents, *J. Chem. Eng. Data*, (2022), 67, 3252-3267.
 - 6) Zebardast, Soheil; Ali Haghtalab, Thermodynamic modeling and measurement of CO₂ clathrate equilibrium conditions with a hydrophobic surface-An application in dry water hydrate, in *Chemical Engineering Science*, (2022), 251, 117486, DOI: 10.1016/J.CES.2022.117486
 - 7) Abdkarimi, Forough, Ali Haghtalab, Solubility measurement and thermodynamic modeling of sertraline hydrochloride and clopidogrel bisulfate in a deep eutectic solvent of choline chloride and malonic acid, *Journal of Molecular Liquids* (2021), DOI: 10.1016/J.MOLLIQ.2021.11794
 - 8) Golkhou, Fatemeh; Ali Haghtalab, Hydrate-Based CO₂ Capture through Nano Dry Gels plus Tetrahydrofuran – A Kinetic and Thermodynamic Study, *Chemical Engineering & Technology* (2021), DOI: 0.1002/CEAT.202100110
 - 9) Razavi, Seyed Mohammad; Haghtalab, Ali; Khanchi, Ali Reza Optimization of vanadium(V) extraction by 2-ethyl-1-hexanol and the study of extraction reaction mechanism, *Minerals Engineering* (2021), DOI: 10.1016/J.MINENG.2021.106984
 - 10) Harandi, Mostafa Nazemi; Ali Haghtalab, Thermodynamic modeling of CO₂ solubility into an aqueous solution of N-methyl diethanolamine using EoS/G(E) approach and different Alpha-functions, *Fluid Phase Equilibria* (2021), DOI: 0.1016/J.FLUID.2021.113030
 - 11) Shirazizadeh, Habib Allah, Ali Haghtalab, Measurement and modeling of CO₂ solubility in binary aqueous DMSO and MDEA and their ternary mixtures at different temperatures and compositions, *Fluid Phase Equilibria* (2021) DOI: 10.1016/J.FLUID.2020.11284
 - 12) Kargozarfard, Zahra, Haghtalab, Ali, Ayetollahi Shahab, Badizad, Mohammad Hasan Molecular Dynamics Simulation of Calcium Sulfate Nucleation in Homogeneous and Heterogeneous Crystallization Conditions: An Application in Water Flooding , *Industrial & Engineering Chemistry Research* (2020) DOI: 10.1021/ACS.IECR.0C04290
 - 13) Kalatjari, Hamid Reza; Haghtalab, Ali; ... Heydarinasab, Amir, Experimental, and modeling using a generalized Patel-Teja-Valderrama equation of state for computation of mono ethanol amine (MEA) solution density in a CO₂ capturing pilot plant, *Fluid Phase Equilibria* (2020) DOI: 10.1016/J.FLUID.2020.112803
 - 14) Abdolmajidi, M.; Joshaghani, A. H Haghtalab, A., Thermodynamic Modeling the Solubility of CO₂ in Aqua System of Methyl diethanolamine and 2-(2-Aminoethylamino)ethanol Using the Nonelectrolyte Wilson Nonrandom Factor, *International Journal of Engineering* (2020) DOI: 10.5829/IJE.2020.33.12C.01
 - 15) Golkhou, Fatemeh; Haghtalab, Ali, Kinetic and thermodynamic study of CO₂ storage in reversible gellan gum supported dry water clathrates, *Journal of the Taiwan Institute of Chemical Engineers* (2020) DOI: 10.1016/J.JTICE.2020.09.034
 - 16) Hoseini, Maryam; Haghtalab, Ali; Family, Mohammad Hossein Navid, Elongational behavior of silica nanoparticle-filled low-density polyethylene/poly(lactic acid) blends and their morphology, *Rheologica Acta* (2020) DOI: 10.1007/S00397-020-01225-5
 - 17) Hosseini, Alireza; Khoshsima, Ali; Haghtalab, “Comparison of different alpha functions, alpha(T-r), applied in the prediction of supercritical properties of different polar and nonpolar fluids at Boyle temperature, May 2020 in *Fluid Phase Equilibria* DOI: 10.1016/J.FLUID.2020.1125

- 18) Asadi Ehsan, Ali Haghtala, Mostefa Shahsavari, High-Pressure Vapor-Liquid Equilibrium Measurement of CO₂ Solubility into Aqueous Solvents of (Diisopropylamine plus L-Lysine) and (Diisopropylamine plus Piperazine plus L-Lysine) at Different Temperatures and Compositions, *J. Chem. Eng. Data*, 66 (11), 4254-4271 (2021).
- 19) Kalatjari, Hamid Reza; Haghtalab, Ali; ... Heydarinasab, Amir, "Improving the accuracy of the Eyring equation by pseudo-ideal solution model to predict the viscosity of the mono-ethanol amine-[Bmim] PF₆ ionic liquid blends in a CO₂ capturing pilot plant, *The Canadian Journal of Chemical Engineering* (2021), DOI: 10.1002/CJCE.24009.
- 20) Asadi Ehsan, Ali Haghtalab, Habib Allah Shirazizadeh, High-pressure measurement and thermodynamic modeling of the carbon dioxide solubility in the aqueous 2-((2-aminoethyl)-amino)-ethanol + sulfolane system at different temperatures", *Journal of Molecular Liquids*, 314, 113650 (2020).
- 21) Azin kamal, Ali Haghtalab, "Experimental and thermodynamic modeling of cefixime trihydrate solubility in an aqueous deep eutectic system", *Journal of Molecular Liquids*, 296, 112727 (2020).
- 22) Ali Haghtalab, Habib Allah Shirazizadeh, "An electrolyte segmental Wilson-nonrandom excess Gibbs energy model and measurement of carbon dioxide solubility into sulfolane+water and N-methyldiethanolamine+sulfolane+water systems", *Journal of Molecular Liquids*, 296, 111786 (2019).
- 23) Mohammad Amin Shariatmadar Tehrani and Ali Haghtalab, "Correlation of Ternary Aqueous Two-Phase Systems Containing Ionic Liquids and Salts Using Symmetric Electrolyte Local Composition Models: NRTL-NRF, UNIQUAC-NRF, and UNIQUAC" *J. Chem. Eng. Data*, 64, 5448-5461 (2019).
- 24) Ali Haghtalab *, Habib Allah Shirazizadeh, "An electrolyte segmental Wilson-nonrandom excess Gibbs energy model and measurement of carbon dioxide solubility into sulfolane+water and N-methyldiethanolamine+sulfolane+water systems", *Journal of Molecular Liquids*, 296, 111786 (2019).
- 25) Narges Gheitasi, Amin Heidardokht Nazari, and Ali Haghtalab." Thermodynamic Modeling and Solubility Measurement of Cetirizine Hydrochloride and Deferiprone in Pure Solvents of Acetonitrile, Ethanol, Acetic Acid, Sulfolane, and Ethyl Acetate and Their Mixtures", *J. Chem. Eng. Data*, 64, 5486-5496 (2019).
- 26) Hamid Reza Kalatjari, Ali Haghtalab, Mohammad Reza Jafari Nasra, Amir Heydarinasaba, "Experimental, simulation and thermodynamic modeling of an acid gas removal pilot plant for CO₂ capturing by mono-ethanol amine solution", *Journal of Natural Gas Science and Engineering*, 72, 103001 (2019).
- 27) Afsharpour Ali, A. Haghtalab, "Correlation and prediction of H₂S and a mixture of CO₂ +H₂S solubility in aqueous MDEA solutions using electrolyte modified HKM plus association EoS", *Fluid Phase Equilibria*, 494, 192-200 (2019).
- 28) Ali Haghtalab, Valiollah Gholami, "Carbon dioxide solubility in the aqueous mixtures of diisopropanolamine + l-arginine and diethanolamine +l-arginine at high pressures", *Journal of Molecular Liquids*, 288, 111064 (2019).
- 29) Fatemeh Golkhou, Ali Haghtalab," Measurement and thermodynamic modeling of carbon dioxide hydrate formation conditions using dry water through hydrophobic nano-silica", *Journal of Natural Gas Science and Engineering*, 68, 102906 (2019).
- 30) Habib Allah Shirazizadeh, Ali Haghtalab," Simultaneous solubility measurement of (ethyl mercaptan + carbon dioxide) into the aqueous solutions of (N-methyl diethanolamine + sulfolane + water)", *J. Chem. Thermodynamics* 133, 111–122 (2019).
- 31) Seyed Mohammad Razavi, Ali Haghtalab, Ali Reza Khanchi, "An Electrolyte Non-random-UNIQUAC Model for Thermodynamic Modeling of Binary and Multicomponent Aqueous Electrolyte Systems", *Journal of Solution Chemistry* 48:624–657(2019).
- 32) Jafar Shariati, Ali Haghtalab, Amir Mosayebi, " Fischer–Tropsch synthesis using Co and

- Co-Ru bifunctional nanocatalyst supported on carbon nanotube prepared via chemical reduction method”, *Journal of Energy Chemistry*, 28, 9-22 (2019).
- 33) Jafar Shariati, Ali Haghtalab, Amir Mosayebi, “ Fischer–Tropsch synthesis using Co and Co-Ru bifunctional nanocatalyst supported on carbon nanotube prepared via chemical reduction method”, *Journal of Energy Chemistry*, 28, 9-22 (2019).
 - 34) Seyed Mohammad Razavi, Ali Haghtalab, Ali Reza Khanchi,” Thermodynamic modeling of the solvent extraction equilibrium for the recovery of vanadium (V) from acidic sulfate solutions using Di-(2-ethylhexyl) phosphoric acid”, *Fluid Phase Equilib.*, 474, 20-31 (2018).
 - 35) Ali Haghtalab, Hesam Hasannataj, Hamidreza Soltani Panah, “Prediction of minimum miscibility pressure of pure CO₂, carbon dioxide gas mixtures and polymer-supercritical CO₂ in oil using modified quadrupole Cubic Plus Association Equation of State (mqCPA EoS)”, *Fluid Phase Equilib.* 478, 114-128 (2018).
 - 36) Haghtalab Ali, Mohammad Bagher Zare Talavaki, “Measurement of carbon dioxide solubility in aqueous diisopropanolamine solutions blended by N-(2-aminoethyl) ethanolamine + piperazine and density measurement of solutions”, *Journal of Natural Gas Science and Engineering*, 46, 242-250 (2017).
 - 37) Irandoust Amir · Ali Haghtalab, “A Hybrid Reduction–Impregnation Method in Preparation of Co–Ru/ γ -Al₂O₃ Catalyst for Fischer–Tropsch Synthesis”, *Catal Lett, Catal Lett*, 147:2967–2981 (2017).
 - 38) Yarveicy Hamid, Ali Haghtalab, “Effect of amphoteric surfactant on the phase behavior of the hydrocarbon-electrolyte-water system-an application in enhanced oil recovery”, *Journal of Dispersion Science and Technology*, 39(4), 522-530 (2017).
 - 39) Hoseini Maryam, Ali Haghtalab, Mohammad Hossein Navid Famili, “Rheology and morphology study of immiscible linear low-density polyethylene/poly(lactic acid) blends filled with nano-silica particles”, *Journal of Applied Polymer Science*, V. 134, I. 46, 45526-45538 (2017).
 - 40) Razavi Seyed Mohammad, Ali Haghtalab, Ali Reza Khanchi, “Solvent extraction and selective separation of vanadium (V) from an acidic sulfate solution using 2-Ethyl-1-Hexanol”, *Separation and Purification Technology*, 188, 358-366 (2017).
 - 41) Afsharpour A., A. Haghtalab, “Simultaneous measurement absorption of CO₂ and H₂S mixture into aqueous solutions containing Diisopropanolamine blended with 1-butyl-3-methylimidazolium acetate ionic liquid”, *International Journal of Greenhouse gas Control*, 58, 71-80 (2017).
 - 42) Yousofi Seyf Jaber, Ali Haghtalab,” A Junction between Molecular Dynamic Simulation and Local Composition Models for Computation of Solid-Liquid Equilibrium-A Pharmaceutical Solubility Application, *Fluid Phase Equilibria*, 437, 83-95(2017).
 - 43) Haghtalab Ali, H. Hasannataj. H. Soltani Panah,” Modified quadrupole Cubic Plus Association Equation of State (mqCPA EoS) for thermodynamic modeling of polymer-supercritical CO₂ systems”. *Fluid Phase Equilibria*, 435, 27-36(2017).
 - 44) Afsharpour Ali, A. Haghtalab, "Modeling of CO₂ Solubility in aqueous N-methyldiethanolamine Solution Using Electrolyte modified HKM Plus Association Equation of State", *Fluid Phase Equilibria*, 433, 149-158(2017).
 - 45) Shahi P., A. H. Behraves, Ali Haghtalab, Ghaus Rizivi, F. Goharpei, " An experimental study on foaming of linear low-density polyethylene/high-density polyethylene blends", *Journal of Cellular Plastics*, V. 53, N.1, 83-105 (2017)
 - 46) Hoseini M., Ali Haghtalab, M. N. Famili,"Influence of Compounding Methods on Rheology and Morphology of Linear Low-Density Polyethylene/Poly (Lactic Acid)", *Applied Rheology*, 26, 64746 (2016).
 - 47) Haghtalab Ali, A. Moghaddam, " Prediction of Minimum Miscibility Pressure using UNIFAC Group Contribution Activity Coefficient model and LCVM mixing rule", *Ind. Eng. Chem. Res.*, 55, 2840-2851 (2016).
 - 48) Haghtalab Ali, J. Yousofi, “Measurement and Thermodynamic Modeling the Solubility of Lamotrigine, Deferiprone, Cefixime Trihydrate, and Cephalexin Monohydrate in

- Different Pure Solvents from 283.1 to 323.1 K”, *Journal of Chem. Eng. Data*, 61, 2170-2178 (2016)
- 49) Haghtalab Ali, M. Mohammadi, " Experimental study and thermodynamic modeling of CO₂ gas hydrate formation in presence of zinc oxide nanoparticles", *J. Chem. Thermodynamics*, 96, 24-33 (2016).
 - 50) Soltani Panah H.R., Ali Haghtalab, M. Abdollahi, A. H. Mohammadi, D.Ramjugernath, W.M. Nelson, A. Zarringhalam Moghaddam, M.Hemmati, "Experimental measurements and thermodynamic modeling of the cloud point pressure for solubility of copolymers of vinyl acetate and dibutyl maleate in supercritical CO₂", *Fluid Phase Equilib.*, 425, 136-142 (2016).
 - 51) Haghtalab Ali, J. Yousofi, Y. Mansouri, " Flash Point Prediction of Binary and Ternary Mixtures Using Different Activity Coefficient Models", *Fluid Phase Equilib.*, 415, 58-63 (2016)
 - 52) Haghtalab Ali, J. Yousefi Seyf, "A new insight to validation of local composition models in binary mixtures using molecular dynamic simulation", *AIChE J.*, V. 62 (1), 275-286, (2016).
 - 53) Haghtalab Ali, M. H. Badizad, "Solubility of gypsum in aqueous NaCl+K₂SO₄ solution using calcium ion selective electrode- investigation of ionic interactions", *Fluid Phase Equilib.*, 409, 341-353 (2016).
 - 54) Haghtalab Ali, J. Yousefi Seyf, " Vapor-Liquid and Solid-Liquid modeling with a UNiVersal QUAsiChemical Segment-based Activity Coefficient model (UNIQUAC-SAC)", *Ind. Eng. Chem. Res.*, 54,8611-8623 (2015).
 - 55) Shahi P., A. H. Behraves, Ali Haghtalab, Ghaus Rizivi, R. Pop-Iliev, F. Goharpei, " Effect of Mixing Intensity on Foaming Behavior of LLDPE/HDPE Blends in Thermal Induced Batch Process", *Polymer-Plastics Technology and Engineering*, V. 55, N.9, 949-964 (2016).
 - 56) Haghtalab Ali, A. Afshapour, "Solubility of CO₂+ H₂S gas mixture into different aqueous N-methyldiethanolamine solutions blended with 1-butyl-3-methylimidazolium acetate ionic liquid", *Fluid Phase Equilibria*, 406, 10-20 (2015).
 - 57) Haghtalab Ali, A. Izadi, "Solubility and thermodynamic modeling of hydrogen sulfide in aqueous diisopropanolamine + 2-amino-2-methyl-1-propanol + piperazine solution at high pressure", *J. Chem. Thermodynamics*, 90, 106-115 (2015).
 - 58) Haghtalab Ali, A. Kheiri, "High-pressure measurement and CPA Equation of State for solubility of carbon dioxide and hydrogen sulfide in 1-butyl-3-methylimidazolium acetate", *J. Chem. Thermodynamics*, 89, 41-50 (2015).
 - 59) Haghtalab Ali, E. Ghahremani, "The solubility measurement and modeling of CO₂ in an aqueous solution of N-methyldiethanolamine+ 2-amino-2-methyl-1-propanol+piperazine at high pressure", *Fluid Phase Equilibria*, 400, 62-75 (2015).
 - 60) Haghtalab Ali, M. Mohammadi, Zahra Fakhroueian, " Absorption and solubility measurement of CO₂ in water-based ZnO and SiO₂ nanofluids", *Fluid Phase Equilibria*. 392, 33-42 (2015).
 - 61) Haghtalab Ali, Hamidreza Soltanipناه, "Modeling cloud point of soluble polymers in supercritical carbon dioxide fluid using PCP-SAFT equation of state- An application in enhanced oil recovery", *The J. of Supercritical Fluids*, 97, 45-50 (2015).
 - 62) Haghtalab Ali, Abolfazl Shojaeian, "High-pressure measurement and thermodynamic modeling of the solubility of carbon dioxide in N-methyldiethanolamine and 1-butyl-3-methylimidazolium acetate mixture", *J. Chem. Thermodynamics*, 81,237-244 (2015).
 - 63) Amir Mosayebi, Ali Haghtalab, "The comprehensive kinetic modeling of the Fischer-Tropsch synthesis over Co@Ru/c-Al₂O₃ core-shell structure catalyst", *Chemical Engineering Journal*, 259, 191-204 (2015).

- 64) Reza Gharibshahi, Arezou Jafari, Ali Haghtalab, Mohammad Saber Karambeigi, "Application of CFD to evaluate the pore morphology effect on nanofluid flooding for enhanced oil recovery", *RSC Adv.*, 2015, 5, 28938–28949 (2015).
- 65) Amir Mosayebi, Ali Haghtalab, "Co@Ru nanoparticle with a core-shell structure supported over γ -Al₂O₃ for Fischer-Tropsch synthesis", *The International Journal of Hydrogen Energy*, 391, 8882-18893 (2014).
- 66) Delavar Hajar, Ali Haghtalab, "Thermodynamic modeling of gas hydrate formation conditions in the presence of organic inhibitors, salts and their mixtures using UNIQUAC model", *Fluid Phase Equilibrium.*, v. 394, 101-117, (2015).
- 67) Somayeh Farzad, Alimorad Rashidi, Ali Haghtalab, Mohsen Ali Mandegari, "Study of effective parameters in the Fischer Tropsch synthesis using monolithic CNT supported cobalt catalysts", *Fuel*, 132, 27-35 (2014).
- 68) Aliakbar Paraj, Ali Haghtalab, Babak Mokhtarani, "[1-Ethyl-2,3-dimethyl-imidazolium][ethylsulfate]-based aqueous two-phase systems: New experimental data and modeling", *Fluid Phase Equilibria*, 382, 212-218 (2014).
- 69) Rahmat Sotudeh-Gharebagh, Hamed Bashiri, Amin Sarvar-Amini, Ali Haghtalab, Navid Mostoufi, "Comparative simulation of a fluidized bed reformer using industrial process simulators", *International Journal of Sustainable Energy*
"http://dx.doi.org/10.1080/14786451.2014.932280, Comparative (2014)
- 70) Haghtalab Ali, M. J. Kamali, A. Shahrabadi, H. Golghanddashti, "Investigation of the Precipitation of Calcium Sulfate in Porous Media: Experimental and Mathematical Modeling", *Chemical Engineering Communications*, 202, 1221-1230 (2014)
- 71) Zahra Kiaei, Ali Haghtalab, "Experimental study of using Ca-DTPMP nanoparticles in inhibition of CaCO₃ scaling in a bulk water process", *Desalination*, 338, 84-92 (2014)
- 72) Haghtalab Ali, Mohamad Javad Kamali, Abbas Shahrabadi, "Prediction mineral scale formation in oil reservoirs during water injection", *Fluid Phase Equilibria*, 373, 43-54 (2014).
- 73) Haghtalab Ali., Amin Izadi, "Simultaneous measurement solubility of carbon dioxide + hydrogen sulfide into aqueous blends of alkanolamines at high pressure", *Fluid Phase Equilibria*, 375, 181-190 (2014).
- 74) Haghtalab Ali, Amin Izadi, Abolfazl Shojaeian, "High-pressure measurement and thermodynamic modeling the solubility of H₂S in the aqueous N-methyldiethanolamine+ 2-amino-2-methyl-1-propanol + piperazine systems", *Fluid Phase Equilibria*, 363, 263-275 (2014).
- 75) Haghtalab Ali, H. Eghbali, A. Shojaeian, "Experiment and modeling solubility of CO₂ in aqueous solutions of Diisopropanolamine + 2-amino-2-methyl-1-propanol + Piperazine at high pressures", *The Journal of Chemical Thermodynamics*, 71, 71-83(2014).
- 76) Haghtalab Ali, A. Shojaeian, A. E. Ebrahimiaqda, "A new segmental local composition model for calculation of thermodynamic properties of binary polymer solutions", *Scientia Iranica. Transaction C, Chemistry, Chemical Engineering* 21.6, 2087-2097, (2014).
- 77) Delavar Hajar, Ali Haghtalab, "Prediction of hydrate formation conditions using GE-EOS and UNIQUAC models for pure and mixed-gas systems", *Fluid Phase Equilibrium.*, v. 369, 1-12, (2014).
- 78) Mohammadi Abolfazl, Mehrdad Manteghian, Ali Haghtalab, Amir H. Mohammadi, Mahboubeh Rahmati-Abkenar, "Kinetic study of carbon dioxide hydrate formation in presence of silver nanoparticles and SDS", *The Chemical Engineering Journal*, 237, 387-395 (2013).
- 79) Haghtalab Ali, A. Shojaeian, "Solubility and density of carbon dioxide in different aqueous alkanolamine solutions blended with 1-butyl-3-methylimidazolium acetate ionic

- liquid at high pressure". *Journal of Molecular Liquids*, 187, 218-225 (2013).
- 80) Haghtalab Ali, A. Shojaeian, "Volumetric and viscometric behavior of the binary systems of N-methyldiethanolamine and Diethanolamine with 1-butyl-3-methylimidazolium acetate at various temperatures", *The Journal of Chemical Thermodynamics*, 68, 128-137 (2013).
 - 81) Haghtalab Ali, A. A. Paraj, " [1-Ethyl-3-Methyl-Imidazolium][EthylSulfate]-based aqueous two-phase systems: New experimental data and new modeling", *Journal of Chemical Thermodynamics*, 65, 83-90 (2013)
 - 82) Moradi Sara, Ali Haghtalab, Alireza Fazlali, Prediction of hydrate formation conditions in the solutions containing electrolyte and alcohol inhibitors and their mixtures using UNIQUAC-NRF models", *Fluid Phase Equilibria*, 349, 61-66 (2013)
 - 83) Zare Marziyeh, Ali Haghtalab, Amir Naser Ahmadi, Khodadad Nazari, " Experiment and thermodynamic modeling of methane hydrate equilibria in the presence of aqueous imidazolium-based ionic liquid solutions using electrolyte cubic square well equation of state", *Fluid Phase Equilibria*, 341, 61-69 (2013)
 - 84) Nabipoor Hassankiadek Mojtaba, Ali Haghtalab, "Product Distribution of Fischer-Tropsch Synthesis in a Slurry Bubble Column Reactor Based on Langmuir-Freundlich Isotherm", *Chem. Eng. Comm.*, 200:1170–1186 (2013).
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