

Biography

Personal Information: Date of Birth : 13 september 1974

Place of Birth; Maragheh, Iran

Present Position: Associated Professor of Physical Chemistry

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Courses

Some Courses (Master and Ph.D in Physical Chemistry)

- Chemical Kinetics (M.Sc)
- Advanced Physical Chemistry (M.Sc, text used H. Callen and etc)
- Quantum I & II (M.Sc, text used Ira. N. Levine, P. W. Atkins and etc)
- Colloid and Surface Science (Ph.D, text used M. J. Rosen, A. W. Adamson, H-J. Butt and etc)
- Statistical Thermodynamics (M. Sc, text used D. McQuarri and etc)
- Classic Thermodynamics(Ph. D, text used J. M Prausnitz H. Callen and etc)

Present Research Topics

- * Modifying of nano structures and physical-chemical properties of self assembled colloidal systems such as: Dye-surfactant, mixed surfactants, gemini surfactants, and ionic liquids.
- * Improving the dispersion stability of the exfoliated graphene and carbon nanotubes in aqueous solution by using surfactants.
- * To develop of the inhibition efficiency of surfactants using modulators such as ionic liquid, dye and ...
- * To develop of the lithium-ion battery that is now used worldwide in laptop computers and cell-phones.

Conference Papers

17- "Quantum chemical study on electrostatic interaction between lysine with a homologue set of n- alkyl sulfates", 7th Biennial

Electrochemistry Seminar of Iran, 2007.

16- "Study of temperature effect on mixed micellization and interfacial properties of TritonX-100 and hexadecyltrimethylammonium bromide (CTAB) in absence and presence of sodium bromide using Conductometry", 7th Biennial Electrochemistry Seminar of Iran, 2007.

15- "Electrolyte effect on mixed micelle and interfacial properties of binding mixtures of cationic and non ion surfactants", The 10 th Iranian Physical Chemistry Seminar, University of Isfahan, 2007.

14- "An Ab initio study of the binding of 3,4-methylenedioxymethamphetamine or MDMA (Ecstasy) to the active site of cytochrome P450", The 10 th Iranian Physical Chemistry Seminar, University of Isfahan, 2007.

13- "An Ab initio study on Tetracycline and its derivatives", The 10 th Iranian Physical Chemistry Seminar, University of Isfahan, 2007.

12- "Determination of the physico-chemical parameters and aggregation number of surfactant in micelles in binary alcohol-water mixtures using PFG-NMR and potentiometry techniques", Australian Colloid and Interface Symposium, Sydney, 2007, Australia.

11- "The phase diagram of mixed anionic/cationic surfactant system: transition from micro structure to nano structure", Australian Colloid and Interface Symposium, Sydney, 2007, Australia.

10- "A new approach to study of phase transition from micro structure to nano structure in ionic/ionic surfactants mixture", 9th Iranian Physical Chemistry Seminar, Guilan University, 2006.

9- "Study of the physico-chemical parameters and aggregation number

of surfactant in micelles in binary alcohol-water mixtures using PFG-NMR and potentiometry techniques", 9th Iranian Physical Chemistry Seminar, Guilan University, 2006.

8- "An Ab initio study of 3, 4-methylenedioxymethamphetamine or MDMA (Ecstasy) and its derivatives", 9th Iranian Physical Chemistry Seminar, Guilan University, 2006.

7- "Ab initio Molecular Orbital Study of the Thermochemistry and 3, 4-methylenedioxymethamphetamine (MDMA) Metabolite in Humans", 7th Iranian Biophysical Chemistry Conference, 2006.

6- "Investigation of ionic and nonionic mixed micelle using pulsed field gradient NMR and potentiometric technique", 14th Iranian Conference of Chemistry and Chemical Engineering, Tehran-Tarbiat Moallem University-2004.

5- "Investigation of interaction of cationic surfactant with HSA using potentiometric and PFG-NMR spectroscopy technique", 39th Iupac Congress and 86th Conference of the Canadian society for chemistry, Canada-2003.

4- "Investigation of interaction parameters ionic and nonionic mixed surfactant using pulsed field gradient NMR and potentiometric technique", 2nd International Conferences on Chemistry & its Applications, Qatar-2003.

3- "Investigation of interaction of cationic surfactant with macromolecule using potentiometric and PFG-NMR spectroscopy technique", 5th Seminar of Physical Chemistry, Khalij farse University-2002.

2- "Ab initio study of structure and thermochemical properties of 3, 6

–Dihydro-1, 2, - dithiin and its dimer 1, 2, 7, 8- Tetrathiacyclododeca –10,4-deine", 9th Seminar of Organic Chemistry, Tehran-Imam Hussein University-2001.

1- "Semi-empirical quantum mechanical calculations of ^{35}Cl NQR frequencies in some compound", 13th Iranian Conference of Chemistry and Chemical Engineering, Tehran-Tarbiat Moddares University-1998.

Journal Papers

25- Javadian, S., Yousefi, A., Neshati, J. "Synergistic effect of mixed cationic and anionic surfactants on the corrosion inhibitor behavior of mild steel in 3.5% NaCl" Applied Surface Science, (2013), 285, pp. 674-681.[\(link\)](#)

24- Taghavi, F., Javadian, S., Hashemianzadeh, S.M. "Molecular dynamics simulation of single-walled silicon carbide nanotubes immersed in water" Journal of Molecular Graphics and Modelling, (2013), 44, pp. 33-43.[\(link\)](#)

23- Javadian, S., Aghdastinat, H., Tehrani-Bagha, A., Gharibi, H. "Self-assembled nano structures of cationic ester-containing gemini surfactants: The surfactant structure and salt effects" Journal of Chemical Thermodynamics, (2013) 62, pp. 201-210.[\(link\)](#)

22- Javadian, S., Ruhi, V., Heydari, A., Asadzadeh Shahir, A., Yousefi, A., Akbari, J. "Self-assembled CTAB nanostructures in aqueous/ionic liquid systems: Effects of hydrogen bonding" Industrial and Engineering Chemistry Research (2013), 52 (12), pp. 4517-4526.[\(link\)](#)

21- Javadian, S., Taghavi, F., Yari, F., Hashemianzadeh, S.M. "Phase transition study of confined water molecules inside carbon nanotubes:

Hierarchical multiscale method from molecular dynamics simulation to ab initio calculation” Journal of Molecular Graphics and Modelling (2012), 38, pp. 40-49.[\(link\)](#)

20- Khodadadi, Z., Mousavi-Khoshdel, S.M., Gharibi, H., Hashemianzadeh, S.M., Javadian, S. “Monte Carlo simulation of binary surfactant/contaminant/water systems” Journal of Molecular Graphics and Modelling (2012), 36, pp. 20-29.[\(link\)](#)

19- Hajy Alimohammadi, M., Javadian, S., Gharibi, H., Tehrani-Bagha, A.R., Alavijeh, M.R., Kakaei, K. “Aggregation behavior and intermicellar interactions of cationic Gemini surfactants: Effects of alkyl chain, spacer lengths and temperature” Journal of Chemical Thermodynamics (2012), 44 (1), pp. 107-115.[\(link\)](#)

18- Asadzadeh Shahir, A., Javadian, S., Razavizadeh, B.B.M., Gharibi, H. “Comprehensive study of tartrazine/cationic surfactant interaction” Journal of Physical Chemistry B (2011), 115 (49), pp. 14435-14444.[\(link\)](#)

17- Yousefi, A., Javadian, S., Gharibi, H., Kakemam, J., Rashidi-Alavijeh, M. “Cosolvent effects on the spontaneous formation of nanorod vesicles in catanionic mixtures in the rich cationic region” Journal of Physical Chemistry B (2011), 115 (25), pp. 8112-8121.[\(link\)](#)

16- Shahir, A.A., Rashidi-Alavijeh, M., Javadian, S., Kakemam, J., Yousefi, A. “Molecular interaction of Congo Red with conventional and cationic gemini surfactants” Fluid Phase Equilibria (2011), 305 (2), pp. 219-226.[\(link\)](#)

15- Rashidi-Alavijeh, M., Javadian, S., Gharibi, H., Moradi, M.,

Tehrani-Bagha, A.R., Shahir, A.A. “[Intermolecular interactions between a dye and cationic surfactants: Effects of alkyl chain, head group, and counterion](#)” Colloids and Surfaces A: Physicochemical and Engineering Aspects (2011), 380 (1-3), pp. 119-127.[\(link\)](#)

14- Javadian, S., Gharibi, H., Fallah, H.T. “[Adsorption and micellar properties of binary ionic/nonionic surfactant mixtures in ethylene glycol + water](#)” Journal of Chemical and Engineering Data (2010), 55 (3), pp. 1122-1130.[\(link\)](#)

13- Javadian, S., Araghi, R. “[A DFT study of the \$67\text{Zn}\$, \$14\text{N}\$ and \$2\text{H}\$ electric field gradient tensors in Zinc\(II\)-4-MeIm complexes and extrapolation to superoxide dismutase](#)” Journal of Molecular Graphics and Modelling (2009), 27 (5), pp. 620-627.[\(link\)](#)

12- Sohrabi, B., Gharibi, H., Tajik, B., Javadian, S., Hashemianzadeh, M.
“[Molecular interactions of cationic and anionic surfactants in mixed monolayers and aggregates](#)” Journal of Physical Chemistry B, 112 (47), pp. 14869-14876(2008).[\(link\)](#)

11- Javadian, S., Gharibi, H., Bromand, Z., Sohrabi, B. “[Electrolyte effect on mixed micelle and interfacial properties of binary mixtures of cationic and nonionic](#)” surfactants Journal of Colloid and Interface Science, 318 (2), pp. 449-456(2008).[\(link\)](#)

10- Javadian, S., Gharibi, H., Sohrabi, B., Bijanzadeh, H., Safarpour, M.A., Behjatmanesh-Ardakani, R. “[Determination of the physico-chemical parameters and aggregation number of surfactant in micelles in binary alcohol-water mixtures](#)” Journal of Molecular Liquids, 137 (1-3), pp. 74-79(2008).[\(link\)](#)

9- Sohrabi, B., Gharibi, H., Javadian, S., Hashemianzadeh, M.
“[A new model to study the phase transition from microstructures to](#)

[nanostructures in ionic/ionic surfactants mixture](#)”(2007) Journal of Physical Chemistry B, 111 (34), pp. 10069-10078.[\(link\)](#)

8- Gharibi, H., Behjatmanesh-Ardakani, R., Hashemianzadeh, S.M., Sohrabi, B., Javadian, S. Further “ [study on the micellization of a symmetric amphiphile using the Monte Carlo technique](#)”(2006) Bulletin of the Chemical Society of Japan, 79 (9), pp. 1355-1361.[\(link\)](#)

7- Gharibi, H., Behjatmanesh-Ardakani, R., Hashemianzadeh, S.M., Mousavi-Khoshdel, S.M., Javadian, S., Sohrabi, B. “[Study of thermodynamic parameters in amphiphilic systems by lattice Monte Carlo: Effect of tails and heads](#)”(2006) Theoretical Chemistry Accounts, 115 (1), pp. 1-17.[\(link\)](#)

6- Javadian, S., Sabzyan, H. “[A theoretical study of the dimerization of 1,2-dithia-4-cyclohexene \(or 3,6-dihydro-1,2-dithiin\), and its corresponding O, N and Se-substituted relatives](#)” (2005) Journal of Molecular Structure: THEOCHEM, 723 (1-3), pp. 37-42.[\(link\)](#)

5- Gharibi, H., Javadian, S., Sohrabi, B., Behjatmanesh, R. “[Investigation of interaction parameters in mixed micelle using pulsed field gradient NMR spectroscopy](#) (2005) Journal of Colloid and Interface Science, 285 (1), pp. 351-359.[\(link\)](#)

4- Gharibi, H., Sohrabi, B., Javadian, S., Hashemianzadeh, M. [Study of the electrostatic and steric contributions to the free energy of ionic/nonionic mixed micellization](#) (2004) Colloids and Surfaces A: Physicochemical and Engineering Aspects, 244 (1-3), pp. 187-196.[\(link\)](#)

3- Razavizadeh, B.M., Mousavi-Khoshdel, M., Gharibi, H., Behjatmanesh-Ardakani, R., Javadian, S., Sohrabi, B. [Thermodynamic studies of mixed ionic/nonionic surfactant systems](#) (2004) Journal of Colloid and Interface Science, 276 (1), pp. 197-207.[\(link\)](#)

2- Gharibi, H., Javadian, S., Hashemianzadeh, M. [Investigation of interaction of cationic surfactant with HSA in the presence of alcohols using PFG-NMR and potentiometric technique](#) (2004) *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 232 (1), pp. 77-86.[\(link\)](#)

1- Hadipour, N.L., Javadian, S. [Semi-empirical quantum mechanical calculations of electronic distribution and NQR parameters of bromine atoms in some organic and inorganic compounds](#) (2000) *Journal of Molecular Structure*, 525 (1-3), pp. 129-134.[\(link\)](#)

Students

Students

Ph.D. Students

Current Students

1. Jamal Kakemam
2. Parviz Noor Pour
3. Fatemeh Ektefa
4. Mahnaz Khosravian
5. Ali Motaee

Alumni Students

1. Fariba Taghavi
2. Hasti Aghdastinat
3. Ali yousefi

M.S. Students

Current Students

1. Hashem Moradi
2. Golchehreh Rahmati
3. Kazem Saadi
4. Shirin Lashkari
5. Mehrdad Bahri

alumni students

1. Zahra Fallah Ebrahimi
2. Soleila Omidi
3. Morad Abdollahi
4. Hajar Fallah Totkar
5. Marjan Alimohammadi
6. Ali yousefi
7. Mohammad Rashidi Alvijeh
8. Jamal Kakemam
9. Afshin Asadzadeh Shahir
10. Vahdat Ruhi
11. Fayyezeh Sayyad Nasiri
12. Mehrdad Mansouryar
13. Maryam Sharifi
14. Abbas Sadeghi
15. Behzad Darbasizadeh
16. Ali Akbar Afkar
17. Nima Dalir

