

# CURRICULUM VITAE

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## Contact Information

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## Personal Information

**Date of Birth:** 24 June 1977

**Place of Birth:** Amol

**Citizenship:** Iran

## Present Status:

**Assistant Professor in Physical Chemistry**

## Education:

**Ph.D (Physical Chemistry):** Bu-Ali Sina University, Hamedan, Iran, 2006-2011.

**M.Sc. (Physical Chemistry):** Bu-Ali Sina University, Hamedan, Iran, 2000-2003.

**B.Sc. (Applied Chemistry):** University of Guilan, Rasht, Iran, 1996-2000.

## **Teaching Experience (2011-up to now):**

### **Undergraduate:**

1. General Chemistry I and II
2. Practical General Chemistry I and II
3. Physical Chemistry I & II
4. Practical Physical Chemistry I & II
5. Quantum Chemistry

### **Postgraduate:**

1. Advanced Physical Chemistry
2. Surface Chemistry
3. Statistical Thermodynamic I
4. Statistical Thermodynamic II

### **Research Interests:**

1. Surface Chemistry (Prediction and Correlation of Surface Tension, Adsorption)
2. Surfactant and Amphiphilic Drug properties (Synergism and Antagonism)
3. Host-Guest Inclusion Complex Formation (Computational and Experimental)

### **Membership:**

1. Iranian Chemical Society
- 2- American Chemical Society (ACS)

### **List of Publication:**

#### **Articles in Journals (ISI)**

21- **A. Bagheri**, S. M. Alinasab Ahmadi, Mixed micellization between amphiphilic drug propranolol hydrochloride and cetyltrimethylammonium bromide surfactant in aqueous medium, *Journal of Molecular Liquids*. 230 (2017) 454-260

20- **A. Bagheri**, M. Fazli, M. Bakhshaei, Surface properties and surface thickness of aqueous solutions of alcohols, *Journal of Molecular Liquids*. 224 (2016) 442-451.

- 19- **A. Bagheri**, M. Fazli, M. Bakhshaei, Effect of temperature and composition on the surface tension and surface properties of binary mixtures containing DMSO and short chain alcohols, *J. Chem. Thermodynamics*, 101 (2016) 236–244.
- 18- **A. Bagheri**, Prediction of surface tension and surface concentration of binary refrigerant system (R290/R600a) at various temperatures and pressures, *Physics and Chemistry of Liquids*, 75 (2016) 727-739.
- 17- **A. Bagheri**, S. L. Mirbakhshi, Study of the surface properties and surface concentration of ionic liquid–alcohol mixtures, *Physics and Chemistry of Liquids*, 54 (2016) 529-541.
- 16- A. Hajian, A. A. Rafati, O. Yurchenko, G. Urban, A. Afraz, M. Najafi, **A. Bagheri**, Nanostructured Flower like Pt-Ru for Ethanol Oxidation and Determination" *Journal of the Electrochemical Society*, 162 (2015) 41-46.
- 15- **A. Bagheri**, K. Alizadeh, How do temperature and chemical structure affect surface properties of aqueous solutions of carboxylic acids?, *Colloids and Surfaces A: Physicochemical and Engineering Aspects*. 467 (2015) 78-88.
- 14- **A. Bagheri**, A. Abolhasani, Binary mixtures of cationic surfactants with triton X-100 and the studies of physicochemical parameters of the mixed micelles" *Korean J. Chem. Eng.*, 32 (2014) 308-315.
- 13- **A. Bagheri**, Z. Moradian, Equilibrium surface tension and the interaction energy of DMSO with tert-butyl alcohol or iso-amyl alcohol at various temperatures" *J. Chem. Thermodynamics*. 78 (2014) 16-22.
- 12- **A. Bagheri**, A. A. Rafati, Thermodynamic investigation of inclusion complex formation between cetyltrimethyl ammonium bromide(CTAB) and  $\beta$ -cyclodextrin at various temperatures", *Journal of Molecular Liquids*. 195 (2014) 145-149.

- 11- S. Khosharay, M. Seyfi Mazraeno, F. Varaminian, **A. Bagheri**, A proposed combination model for predicting surface tension and surface properties of binary refrigerant mixtures, *International Journal of Refrigeration*, 40 (2014) 347-361.
- 10- **A. Bagheri**, A. A. Rafati, A. Adeli Tajani, A. R. Afraz Borujeni, A. Hajian "Prediction of the Surface Tension, Surface Concentration and the Relative Gibbs Adsorption Isotherm of Non-ideal Binary Liquid Mixtures", *J. Solution. Chem.* 42 (2013) 2071-2086.
- 9- **A. Bagheri**, A. Abolhasani, A. R. Moghadasi, A. A. Nazari-Moghaddam, S. A. Alavi, "Study of surface tension and surface properties of binary systems of DMSO with long chain alcohols at various temperatures" *J. Chem. Thermodynamics.* 63 (2013) 108–115.
- 8- **A. Bagheri**, A. H. Amiri-Majed, Surface thermodynamics of binary mixtures of aliphatic alcohols in heavy water, *J. Chem. Thermodynamics.* 51 (2012) 45–50.
- 7- A. A Rafati, **A. Bagheri**, A. R. Khanchi, E. Ghasemian, Application of the UNIFAC Model for Prediction of Surface Tension and Thickness of the Surface Layer in the Binary Mixtures, *J. Colloid and Interface science* 355 (2011) 252-258.
- 6- A. A Rafati, A. R. Afraz, **A. Bagheri**, Ultrasonic/surfactant assisted of CdS nano hollow sphere synthesis and Characterization", *Materials Characterization.* 62 (2011) 94-98.
- 5- A. A. Rafati, **A. Bagheri**, M. Najafi, Surface Tension of Nonideal Binary and Ternary Liquid Mixtures at Various Temperatures and  $p = 81.5$  kPa, *J. Chem. Thermodynamics* 43 (2011) 248-254.

4- A. A. Rafati, **A. Bagheri**, M. Najafi, "Experimental Data and Correlation of Surface Tensions of the Binary and Ternary Systems Water + Acetonitrile + 2-Propanol at 298.15 K and Atmospheric Pressure", *J. Chem. Eng. Data* 55 (2010) 4039-4043.

3- H. Beiginejad, **A. Bagheri**, L. Safdari Yekta, Z. B. Nojini, Thermodynamic studies of inclusion complex formation between alkyl pyridinium chlorides and  $\beta$ -cyclodextrin using conductometric method, *J. Incl. Phenom. Macrocycl. Chem* 67 (2010) 247-252.

2- A. A. Rafati, **A. Bagheri**, H. Iluokkhani, M. Zarinehzad, Study of inclusion complex formation between a homologous series of n-alkyl trimethyl ammonium bromides and  $\beta$ -Cyclodextrin, using conductometric technique, *Journal of Molecular Liquids*. 116 (2005) 37-41.

1- A. A. Rafati, **A. Bagheri**, Electrochemical and Thermodynamic Studies of inclusion complex Formation between Tetradecyltrimethyl ammonium Bromide (TTAB) and  $\beta$ -Cyclodextrin ( $\beta$ -CD)", *Bulletin of the Chemical Society of Japan*, 77(2004) 485-490.

### **Papers Presented at Conferences and Seminars**

**23-** M. Bakhshaei, **A. Bagheri**, M. Fazli, "Application of the LWW Model for Surface Tension Prediction of Nonideal Aqueous Solutions of Alcohols by new method", Iranian Physical Chemistry Conference, 13-15 September **2016**, University of Guilan, Rasht, Iran.

**22-** M. Bakhshaei, **A. Bagheri**, M. Fazli, "Surface thermodynamics and surface properties of binary mixtures containing DMSO and alcohols", Iranian Physical Chemistry Conference, 13-15 September **2016**, University of Guilan, Rasht, Iran.

**21-** **A. Bagheri**, J. Chadha, "Investigating of Synergism in Critical Micelle Concentration (CMC) of Cationic Surfactant and Amphiphilic drug Mixtures", Iranian Physical Chemistry Conference, 13-15 September **2016**, University of Guilan, Rasht, Iran.

**20-** **A. Bagheri**, J. Chadha, "Interface and Mixed Micelle Analysis between Surfactants (CPC and Hyamine) by Using Conductometric Technique", Iranian Physical Chemistry Conference, 13-15 September **2016**, University of Guilan, Rasht, Iran.

**19-** **A. Bagheri**, "Application of the UNIFAC Group-Contribution Model for Calculation of the Surface Concentration and Thickness of the Surface Layer in Binary System" 18th

Iranian Chemistry Congress, 30 August-1 September **2015**, Semnan University, Semnan, Iran.

**18-** Z. Mahdaviifar, **A. Bagheri**, M. Afshari, "Theoretical prediction of geometry and electronic properties of pristine  $\text{Ge}_n$  ( $n=3-20$ ) clusters", 18th Iranian Chemistry Congress, 30 August-1 September **2015**, Semnan University, Semnan, Iran.

**17-** **A. Bagheri**, S. A. Mirbakhshi, "Investigation of the surface tension and the interaction energy between the ionic liquid and long-chain alkyl alcohols at different temperatures", 18th Iranian Chemistry Congress, 30 August-1 September **2015**, Semnan University, Semnan, Iran.

**16-** **A. Bagheri**, P. Khalili, "Synergism and Surface Studies of Mixed Cationic and Non-ionic Surfactants", 18th Iranian Chemistry Congress, 30 August-1 September **2015**, Semnan University, Semnan, Iran.

**15-** **A. Bagheri**, Z. Moradian, "Application of the UNIFAC Model for Calculation of the Relative Gibbs Adsorption in the Binary Mixtures at Various Temperatures", 17th Iranian Physical Chemistry Conference, 21-23 October **2014**, University of K. N. Toosi, Tehran, Iran.

**14-** **A. Bagheri**, Z. Moradian, "Experimental Data and Correlation of Surface Tensions of the Binary Systems at Various Temperatures and Atmospheric Pressure", 17th Iranian Physical Chemistry Conference, 21-23 October **2014**, University of K. N. Toosi, Tehran, Iran.

**13-** **A. Bagheri**, K. Alizadeh, "Application of the UNIFAC Model for Estimation of Relative Gibbs Adsorption and Thickness of Surface Layer in the Binary Mixtures", 15th Iranian Physical Chemistry Conference, 3-6 September **2012**, University of Tehran, Tehran, Iran.

**12-** **A. Bagheri**, F. Varaminian, S. Khosharay, "Prediction of surface properties of binary refrigerant mixture with density (volume) based model", 15th Iranian Physical Chemistry Conference, 3-6 September **2012**, University of Tehran, Tehran, Iran.

**11-** A. Abolhasani, **A. Bagheri**, A. R. Moghadasi, "Prediction and Correlation of Surface Tension Data for Binary System at Various Temperatures: DMSO-Long Chain Alcohols", 15th Iranian Physical Chemistry Conference, 3-6 September **2012**, University of Tehran, Tehran, Iran.

**10-** A. Abolhasani, A. R. Moghadasi **A. Bagheri**, "Investigating Synergism in Critical Micelle Concentration (CMC) of cationic-nonionic Surfactant Mixtures", 15th Iranian Physical Chemistry Conference, 3-6 September **2012**, University of Tehran, Tehran, Iran.

- 9- A. A. Nazari-Moghaddam, S. A. Alavi, **A. Bagheri**, "Synergism/antagonism studies between antifoam-antihydrate using surface tension technique", 15th Iranian Physical Chemistry Conference, 3-6 September **2012**, University of Tehran, Tehran, Iran.
- 8- **A. Bagheri**, A. H. Amiri-Majed, "Surface thermodynamics of binary mixtures of heavy water in alcohols", 15th Iranian Chemistry Congress, 4-6 September **2011**, Bu-Ali Sina University, Hamadan, Iran.
- 7- **A. Bagheri**, A.A. Rafati, "Surface Tension of Nonideal Ternary Liquid Mixtures at 298.15 K and Atmospheric Pressure" 13th Iranian Physical Chemistry Seminar, April, **2010**, Shiraz University and Shiraz University of Technology, Shiraz, Iran.
- 6- **A. Bagheri**, A.A. Rafati, "Theoretical prediction of surface tension of binary liquid system (R290 + R600a) at various temperature and pressure", 13th Iranian Physical Chemistry Seminar, April, **2010**, Shiraz University and Shiraz University of Technology, Shiraz, Iran.
- 5- **A. Bagheri**, H. Beigianejad, L. Safdari-Yekta, "Thermodynamic and Electrochemical Studies of the Inclusion complex Formation between Cationic Surfactants and  $\beta$ -Cyclodextrin", 16th Iranian Seminar of Analytical Chemistry, 28-30 July **2009**, Bu-Ali Sina University, Hamadan, Iran.
- 4- A. A. Rafati, **A. Bagheri**, L. Safdari-Yekta, "Determination of the Complexation Constants between Cetyltrimethylammonium Bromide(CTAB) and  $\beta$ -Cyclodextrin at Various Temperatures Using Coated Wire Ion Selective Electrodes", 7th Biennial Electrochemistry Seminar of Iran(7BESI), August **2007/8/28** to **2007/8/30**, Urmia University, Urmia, Iran.
- 3- A. A. Rafati, **A. Bagheri**, L. Safdari-Yekta, "Electrochemical and Thermodynamic Study of the Inclusion Complex Between Tetradecyltrimethyl Ammonium Bromide and beta-Cyclodextrin", 12th Iranian Seminar of Analytical Chemistry, **2003/9/6** to **2003/9/6**, Mazandaran University, Babolsar, Iran.
- 2- A. A. Rafati, **A. Bagheri**, L. Safdari-Yekta, "Study of Inclusion Complex Between a Homologous Series of n-Alkyltrimethyl Ammonium Bromides and  $\beta$ -Cyclodextrin by Conductometric Technique", 12th Iranian Seminar of Analytical Chemistry, **2003/9/6** to **2003/9/6**, Mazandaran University, Babolsar, Iran.
- 1- A.A. Rafati, **A. Bagheri**, L. Safdari-Yekta, "Thermodynamic Study of Inclusion Complex between Cationic Surfactants and Cyclodextrins By Coating Wire Surfactant Ion Selective Electrode", 5th Conference of Physical Chemistry, **2002/9/6** to **2002/9/6**, Persian Gulf University, Bushehr, Iran.
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