

Academic CV

EMPLOYMENT

Name: **Amir Abbas Rafati**
Department of: **Physical Chemistry**
Faculty of Chemistry
Bu-Ali Sina University
Hamedan, Iran
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EDUCATION

	<u>Year</u>	<u>University</u>
Ph.D.	1998	Tarbiat Moddares University
M.Sc	1993	Tarbiat Moddares University
B.Sc	1991	Mazandaran University

PROFESSIONAL MEMBERSHIPS

Iranian Chemistry Association

SKILLS

Use this section to write about your computational skills, administrative skills, team-working skills, time-management, communication skills and project management skills giving some evidence of how you acquired them. What IT skills do you have?

RESEARCH

Interesting field of work: Nanotechnology (Nanofabrication, Nanowires, Nanoadsorbents), Sensor and Biosensors, Electrochemistry (Potentiometric Techniques), Colloid Chemistry (Surfactant/Polymer interactions, Synergism of mixed surfactants), Thermodynamic of solutions, Biothermodynamics.

Supervising projects:

M.Sc: 5 are running.

Ph.D: 4 are running.

M.Sc.: 28 were finished

Ph.D: 8 were finished.

TEACHING

B.Sc.: Physical chemistry I, Physical chemistry II, Molecular spectroscopy, General chemistry.

M.Sc: Advanced physical chemistry, Advanced chemical kinetics, Surface chemistry, Statistical thermodynamics, Quantum chemistry.

Ph.D: Solid state thermodynamic, Nanotechnology

PUBLICATIONS and PRESENTATIONS

List of Publications:

1. Yalda Shoja, **Amir Abbas Rafati**, Javad Ghodsi, Electropolymerization of Ni-LD metallopolymers on gold nanoparticles enriched multi-walled carbon nanotubes as nano-structure electrocatalyst for efficient voltammetric sertraline detection in human serum, **Electrochimica Acta**, 203 (2016) 281–291
2. Yalda Shoja, **Amir Abbas Rafati** , Javad Ghodsi, Glassy carbon electrode modified with horse radish peroxidase/organic nucleophilic-functionalized carbon nanotube composite for enhanced electrocatalytic oxidation and efficient voltammetric sensing of levodopa, **Materials Science and Engineering: C**, 58 (2016) 835–845
3. Javad Ghodsi, **Amir Abbas Rafati**, Yalda Shoja, First report on electrocatalytic oxidation of oxytetracycline by horse radish peroxidase: Application in developing a biosensor to oxytetracycline determination, **Sensors and Actuators B: Chemical**, 224 (2016) 692–699

4. Javad Ghodsi, Ali Hajian, **Amir Abbas Rafati**, Yalda Shoja, Olena Yurchenko, Gerald Urban, Electrostatically Immobilized Hemoglobin on Silica-Coated Magnetic Nanoparticles for Simultaneous Determination of Dopamine, Uric Acid, and Folic Acid, **J. Electrochem. Soc.** 163 (2016) B609-B616
5. Javad Ghodsi, **Amir Abbas Rafati**, Yalda Shoja, First report on hemoglobin electrostatic immobilization on WO₃ nanoparticles: application in the simultaneous determination of levodopa, uric acid, and folic acid, **Analytical and Bioanalytical Chemistry**, 408 (2016) 3899–3909
6. Javad Ghodsi, **Amir Abbas Rafati**, Yalda Shoja, Mojgan Najafi, Determination of Dopamine in the Presence of Uric Acid and Folic Acid by Carbon Paste Electrode Modified with CuO Nanoparticles/Hemoglobin and Multi-Walled Carbon Nanotube, **J. Electrochem. Soc.** 162 (2015) B69-B74.
7. Ali Hajian, **Amir Abbas Rafati**, Olena Yurchenko, Gerald Urban, Ahmadreza Afraz, Mojgan Najafi, Ahmad Bagheri, Nanostructured Flower like Pt-Ru for Ethanol Oxidation and Determination, **J. Electrochem. Soc.** 162 (2015) B41-B46
8. Ahmadreza Afraz, **Amir Abbas Rafati**, Ali Hajian, Maryam Khoshnood, Electrodeposition of Pt Nanoparticles on New Porous Graphitic Carbon Nanostructures Prepared from Biomass for Fuel Cell and Methanol Sensing Applications, **Electrocatalysis**, 6 (2015) 220–228
9. A. Hajian, J. Ghodsi, A. Afraz, **A.A. Rafati**, Y. Shoja, O. Yurchenko, G. Urban, Development of a Novel Biosensor for Nanomolar Detection of Methylparaben, **Procedia Engineering**, 120 (2015) 552-555
10. A. Ebadi, **A. A. Rafati**, “Preparation of silica mesoporous nanoparticles functionalized with β -cyclodextrin and its application for methylene blue removal” **J. Mol. Liq.**, 209 (2015) 239-245.
11. **Amir Abbas Rafati**, Ahmadreza Afraz, Ali Hajian, Parnaz Assari, Simultaneous determination of ascorbic acid, dopamine, and uric acid using a carbon paste electrode

modified with multiwalled carbon nanotubes, ionic liquid, and palladium nanoparticles, **Microchimica Acta**, 181 (2014) 1999–2008.

12. **Amir Abbas Rafati**, Ahmadreza Afraz, Amperometric sensing of anti-HIV drug zidovudine on Ag nanofilm-multiwalled carbon nanotubes modified glassy carbon electrode, **Materials Science and Engineering: C**, 39 (2014) 105–112.

13. Ahmadreza Afraz, **Amir Abbas Rafati**, Mojgan Najafi, Optimization of modified carbon paste electrode with multiwalled carbon nanotube/ionic liquid/cauliflower-like gold nanostructures for simultaneous determination of ascorbic acid, dopamine and uric acid, **Materials Science and Engineering: C**, 44 (2014) 58–68

14. Ali Hajian, **Amir Abbas Rafati**, Ahmadreza Afraz, Mojgan Najafi, Electrosynthesis of Polythiophene Nanowires and Their Application for Sensing of Chlorpromazine, **J. Electrochem. Soc.** 161 (2014) B196-B200.

15. Ali Hajian, **Amir Abbas Rafati**, Ahmadreza Afraz, Mojgan Najafi, Electrosynthesis of high-density polythiophene nanotube arrays and their application for sensing of riboflavin, **Journal of Molecular Liquids**, 199 (2014) 150–155

16. A. Bagheri, **A. A. Rafati**, “Thermodynamic investigation of inclusion complex formation between cetyltrimethyl ammonium bromide (CTAB) and β -cyclodextrin at various temperatures” **J. Mol. Liq.**, 195 (2014) 145-149.

17. Mojgan Najafi, **Amir Abbas Rafati**, Mona Khorshidi Fart, Atefeh Zare, Effect of the pH and electrodeposition frequency on magnetic properties of binary $\text{Co}_{1-x}\text{Sn}_x$ nanowire arrays, **Journal of Materials Research**, 29 (2014) 190-196

18. M. Najafi, P. Assari, **A. A. Rafati**, M. Hamehvaisy, “Effect of the Electrodeposition Frequency, Wave Form, and Thermal Annealing on Magnetic Properties of $[\text{Co}_{0.975}\text{Cr}_{0.025}]_{0.99}\text{Cu}_{0.01}$ Nanowire Arrays” **J. Superconduct. Novel Magnet.**, 27, 12 (2014) 2821-2827

19. A. A. Saki, M. Abbasinezhad, **A. A. Rafati**, “Iron Nanoparticles and Methionine Hydroxy Analogue Chelate in ovo Feeding of Broiler Chickens”, **Int. J. Nanosci. Nanotechnol.**, 10, 3 (2014) 187-196
20. A. Afraz, **A. A. Rafati**, A. Hajian, “Analytical sensing of hydrogen peroxide on Ag nanoparticles–multiwalled carbon nanotube-modified glassy carbon electrode”, **J. Solid State Electrochem.**, 17, 7 (2013) 2017-2025.
21. 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, **Journal of Solution Chemistry**, 42 (2013) 2071–2086
22. **A. A. Rafati**, A. Afraz Borujeni, M. Najafi, A. Hajian, “Synthesis and characterization of supported silica nano hollow spheres with CdS quantum dots” **J. Mol. Liq.**, 174 (2012) 124-128.
23. M. Najafi, Y. Yousefi, **A.A. Rafati** “ Synthesis, characterization and adsorption studies of several heavy metal ions on amino-functionalized silica nano hollow sphere and silica gel”, **Separation and Purification Technology**, 85 (2012) 193–205.
24. R. Rostamian, M. Najafi, **A. A. Rafati**, “Synthesis and characterization of thiol-functionalized silica nano hollow sphere as a novel adsorbent for removal of poisonous heavy metal ions from water: Kinetics, isotherms and error analysis” **Chem. Eng. J.**, 171, 3 (2011) 1004–1011
25. Zabiollah Bolboli Nojini, **Amir Abbas Rafati**, Seyed Majid Hashemianzadeh, Sepideh Samiee, Predicting helium and neon adsorption and separation on carbon nanotubes by Monte Carlo simulation, **Journal of Molecular Modeling**, 17(2011) 785–794

26. **Rafati, A.A.**; Bagheri, A.; Khanchi, A.R., E. Ghasemian, Mojgan Najafi, "Application of the UNIFAC model for prediction of surface tension and thickness of the surface layer in the binary mixtures" **J. Coll. Interface Sci.** 355 (2011) 252-258.
27. **Rafati, A. A.**; Borujeni, A. R. A.; Najafi, M., et al., "Ultrasonic/surfactant assisted of CdS nano hollow sphere synthesis and characterization" **Mat. Charact.** 62 (2011) 94-98.
28. **Rafati, A. A.**, Bagheri, A., Najafi, M., "Surface tension of non-ideal binary and ternary liquid mixtures at various temperatures and $p=81.5$ kPa" **J. Chem. Thermodyn.** 43 (2011) 248-254.
29. Najafi, M; Maleki, L; **Rafati, A. A.** "Novel surfactant selective electrochemical sensors based on single walled carbon nanotubes" **J. Mol. Liq.**, 159 (2011) 226-229.
30. Najafi, M.; Rostamian, R.; **Rafati, A. A.**, "Chemically modified silica gel with thiol group as an adsorbent for retention of some toxic soft metal ions from water and industrial effluent", **Chem. Eng. J.**, 168 (2011) 426-432.
31. **Rafati, A.A.**; Bagheri, A.; Najafi, M., "Experimental Data and Correlation of Surface Tensions of the Binary and Ternary Systems of Water plus Acetonitrile+2-Propanol at 298.15 K and Atmospheric Pressure", **J. Chem. Eng. Data** 55 (2010) 4039-4043.
32. Ghasemian, E; Najafi, M; **Rafati, AA**, Felegari, Z., "Effect of electrolytes on surface tension and surface adsorption of 1-hexyl-3-methylimidazolium chloride ionic liquid in aqueous solution" **J. Chem. Thermodyn.** 42 (2010) 962-966.
33. **A.A. Rafati**, S. M. Hashemianzadeh, Z. Bolboli Nojini, N. Naghshineh " Canonical Monte Carlo Simulation of Adsorption of O₂ and N₂ Mixture on Single Walled Carbon Nanotube at Different Temperatures and Pressures", **J. Computational Chem.** 31 (2010) 1443-1449.

34. **A.A. Rafati**, S. M. Hashemianzadeh, Z. Bolboli Nojini, " Host-Guest Inclusion Complexes of the Local Anesthetic Drugs Procaine Hydrochloride and Butacaine Hydrochloride with α - and β -Cyclodextrins: Semi-Empirical Studies ", **Advanced Micro and Mesoporous Materials**, (2009) 97-109
35. **Rafati, A.A.**, Ghasemian, E., " Experimental and theoretical study of surface tension of binary mixtures of (n-alkyl acetates + heptane, benzene, and toluene)", **Journal of Chemical Thermodynamics**, 41 (2009) 386-391.
36. **Rafati, A.A.**, Ghasemian, E., Iloukhani, H., "Surface tension and surface properties of binary mixtures of 1,4-dioxane or N,N-dimethyl formamide with n-Alkyl acetates", **Journal of Chemical and Engineering Data**, 54 (12) (2009) 3224-3228.
37. **A. A. Rafati**, Ensieh Ghasemian, "Thermodynamic and Binding Study of Hemoglobin, Oxy-hemoglobin and Carbamino-hemoglobin upon Interaction with Cationic Surfactants, Using Surfactant Membrane Selective Electrodes" **J. Molecular Liquids**. 144 (2009) 131-137
38. **A.A. Rafati**, S. M. Hashemianzadeh, Z. Bolboli Nojini, "Effect of the Adsorption of Oxygen on Electronic Structures and Geometrical Parameters of Armchair Single-Wall Carbon Nanotubes: a Density Functional Study", **Journal of Colloid and Interface Science** 336 (2009) 1-12.
39. **A.A. Rafati**, N. Hamnabard, E. Ghasemian, Z. Bolboli Nojini, "Study of inclusion complex formation between chlorpromazine hydrochloride, as an antiemetic drug, and β -cyclodextrin, using conductometric technique", **Materials Science and Engineering C** 29 (2009) 791-795.
40. **Rafati, A.A.**, Ghasemian, E., "Study of surface tension and surface properties of binary alcohol/n-alkyl acetate mixtures", **Journal of Colloid and Interface Science**, 328 (2008) 385-390.

41. **Rafati, A. A.**; Ghasemian, E.; Abdolmaleki, M., "Surface Properties of Binary Mixtures of Ethylene Glycol with a Series of Aliphatic Alcohols (1-Pentanol, 1-Hexanol, and 1-Heptanol)" **J. Chem. Eng. Data**; 53 (2008) 1944-1949.
42. **A. A. Rafati**, S. M. Hashemianzadeh, Z. Bolboli Nojini, "Electronic Properties of Adsorption Nitrogen Monoxide on Inside and Outside of the Armchair Single Wall Carbon Nanotubes: A Density Functional Theory Calculations, **J. Phys. Chem. C**, 112 (2008) 3597-3604.
43. Hashemianzadeh, S. M., **Rafati, A.A.**, Nojini, Z. B., " Quantum chemical study of the host-guest inclusion complexes of the local anaesthetic drugs, procaine hydrochloride and butacaine hydrochloride, with α - and β -cyclodextrins' **Monatsh Chem** 139 (2008) 763–771.
44. **Rafati, A.A.**, Azizian, S., Chahardoli, M., ” Conductometric studies of interaction between anionic dyes and cetylpyridinium bromide in water-alcohol mixed solvents”, **J. Mol. Liq.** 137 (2008) 80-87.
45. **Rafati, A.A.**, Safatian, F. "Thermodynamic studies of inclusion complex between cetyltrimethylammonium bromide (CTAB) and β -cyclodextrin (β -CD) in water/n-butanol mixture, using potentiometric technique", **Physics and Chemistry of Liquids** 46 (2008), pp. 587-598.
46. **Rafati, A.A.**, Maleki, H., ” Mixed Micellization of Tetradecyltrimethyl-ammonium Bromide and Triton X-100 in Water-Ethanol Mixtures, Using Potentiometric and Surface Tension Techniques”, **J. Mol. Liq.** 135 (2007) 128-134.
47. **Rafati, A.A.**, Etesami, M., Razavizadeh, B. M. ” Study of Interaction Between *Aspergillus Niger* Cellulase (ANC) and Cetyltrimethylammon-ium Bromide (CTAB) Using Surfactant Membrane Selective Electrode”, **J. Mol. Liq.** 136 (2007) 44-49.

48. **Rafati, A.A.**, Hashemianzadeh, S. M., Nojini, Z. B., Safarpour, M.A. "Theoretical study of the Inclusion Complexes of α and β -Cyclodextrins with Decyltrimethylammonium Bromide (DTAB) and Tetradecyltrimethylammonium Bromide (TTAB)", **J. Mol. Liq.** 135 (2007) 153-157.
49. **Rafati, A.A.**; Safarpour, M.A. "Physico-Chemical and Thermodynamic Studies Associated with Micellization of Sodium Dodecyl Sulfate (SDS) in n-Alkanol/Water Mixtures" **Asian Journal of Chemistry**, 2006, 18, 165-175.
50. **Rafati, A.A.**; Bagheri, A., Iloukhani, H.; Zarinehzad, M. " Study of Inclusion Complex Formation Between a Homologous Series of n-Alkyltrimethylammonium Bromides and β -Cyclodextrin, Using Conductometric Technique" **J. Mol. Liq.**, 2005, 116, 37-41.
51. **Rafati, A.A.**; Bordbar, A.K.; Gharibi, H.; Amini, M. K.; Safarpour, M.A., "Study on Interaction of a Homologous Series of Cationic Surfactants with Bovine Serum Albumin by Using the Surfactant Membrane Selective Electrodes and Isothermal Titration Microcalorimetric Techniques" **Bull. Chem. Soc. Jpn.** 2004, 77, 1111-1116.
52. **Rafati, A.A.**; Bagheri, A., "Electrochemical and Thermodynamic Studies of Inclusion Complex Formation between Tetradecyltrimethylammonium Bromide(TTAB) and β -Cyclodextrin(β -CD)" **Bull. Chem. Soc. Jpn.**, 2004, 77, 485-490.
53. **Rafati, A.A.**; Gharibi, H.; Rezaie-Sameti, M. "Investigation of the Aggregation Number, Degree of Alcohol Attachment and Premicellar Aggregation of Sodium Dodecyl Sulfate in Alcohol-Water Mixtures" **J. Mol. Liq.** , 2004, 111, 109-116.
54. **Rafati, A.A.** ; Gharibi, H.; Iloukhani, H., " Aggregation number of ionic surfactants and its application for alkyltrimethyl ammonium bromides and sodium tetradecyl sulfate by potentiometric technique" **Physics and Chemistry of Liquids**, 2003, 41, 227-238.

55. **Rafati, A.A.** ; Gharibi, H.; Iloukhani, H.,“Conformational Stability Study of Bovine Serum Albumin (BSA) by Treatments with Cationic Surfactant” **Physics and Chemistry of Liquids**, 2003, 41, 509-517.
56. Iloukhani, H.; Ekvan, S.R.; **Rafati, A.A.**, “Oxidation of L-phenylalanine by Manganese(VII) in Concentrated Sulfuric Acid Medium” **Physics and Chemistry of Liquids**, 2003, 41, 25-31.
57. Iloukhani H, Arjomandi J, **Rafati, A.A.**, H1-NMR and thermodynamic studies of methanol-formamide mixtures , **Asian Journal of Chemistry**, 2002, 14, 34-38
58. Iloukhani, H.; **Rafati, A.A.**, Ravari, F., “Thermodynamic Studies of Interaction Between Cationic Surfactants and Lysozyme Using Potentiometric Techniques” **Physics and Chemistry of Liquids**, 2001, 39, 533-541.
59. **Rafati, A.A.**; Gharibi, H.; Iloukhani, H., “Micellization of Cetylpyridinium Chloride Using Conductometric Technique” **Physics and Chemistry of Liquids**, 2001, 39, 521-532.
60. Iloukhani, H.; **Rafati, A.A.** ; Ravari, F.,“ Thermodynamic Studies of Interaction Between Cetyltrimethyl Ammonium Bromide and Lysozyme Using Potentiometric Techniques” **Asian Journal of Chemistry**, 2000, 12, 4, 1015-1020.
61. Iloukhani, H.; Arjomandi, J.; **Rafati, A.A.**,“Intermolecular Interactions in Liquid Ethanol-Dioxane Mixtures” **Asian Journal of Chemistry**, 2000, 12, 4, 1118-1122.
62. Gharibi, H.; Safarpour, M.A.; **Rafati, A.A.** , “New Approach for Determination of Macroscopic Binding Constants of Ligands to Macromolecules” **Journal of Colloid and Interface Science**, 1999, 219, 217-224.

63. Safarpour, M.A.; **Rafati, A.A.** , “Influence of Short Chain Alcohols on the Micellization Parameters of Sodium Dodecyl Sulfate” **Journal of the Chinese Chemical Society**, 1999, 46, 6, 983-992.
64. Gharibi, H.; Razavizadeh, B.M.; **Rafati, A.A.**, “Electrochemical Studies Associated with the Micellization of Dodecyltrimethyl Ammonium Bromide in Aqueous Mixtures of Ethanol and 1-Propanol” **Colloids and Surfaces**, 1998, 136, 123-132.
65. Gharibi, H.; **Rafati, A.A.** , Faizollahi, A.; Razavizadeh, B.M.; Safarpour, M.A.; “Thermodynamic Studies of Interaction Between Cationic Surfactants and Polyvinyl Pyrrolidone(PVP) Using Potentiometric Techniques ” **Colloids and Surfaces**, 1998, 11, 2191-2196.
66. Gharibi, H.; **Rafati, A.A.** “Electrochemical and Kinetic Studies of Micellization of Sodium Tetradecyl Sulfate(STS) in the Presence of Polyvinyl Pyrrolidone(PVP) ” **Langmuir**, 1998, 11, 2191-2196.

List of Conference Presentations:

- 1) Gharibi, H.; **Rafati, A.A.**; Razavizadeh, B.M.; “Determination of Physical Parameters of DOTAB in Aqueous, Mixed and Non-aqueous Solution Using Potentiometric Technique” **Accept for Presentation in XII Scandinavian Symposium on Surface Chemistry, Finland, 1994.**
- 2) Gharibi, H.; **Rafati, A.A.**; Razavizadeh, B.M.; “Interaction of Tetradecyltrimethyl Ammonium Bromide (TTAB) with BSA and Investigation of Thermodynamic Parameters of TTAB in the Presence of BSA” **Accept for Presentation in XII Scandinavian Symposium on Surface Chemistry, Finland, 1994.**
- 3) **Rafati, A.A.**; Gharibi, H., “Fabrication of Surfactant Ion Selective Electrode and Study of Physico-Chemical Parameters in Aqueous and Non-Aqueous Solvents” **9th Iranian Congress of Chemistry and Chemical Engineering , Tehran, 1994.**
- 4) Jalili, S.; Gharibi, H.; **Rafati, A.A.**, “Thermodynamic Study of Micellar Systems in aqueous media and Interactions between Surfactant and Cyclodextrin” **11th Iranian**

Congress of Chemistry and Chemical Engineering , Tehran, Tarbiat Moalem Univ., 1996.

5) **Rafati, A.A.**; Gharibi, H.; Safarpour, M.A.,“Binding Study of Ligand to Macromolecule by a Mathematical Method and Computer Programming” **11th Iranian Congress of Chemistry and Chemical Engineering , Tehran, Tarbiat Moalem Univ., 1996.**

6) **Rafati, A.A.**; Gharibi, H.; Safarpour, M.A.,“Thermodynamic Study of Denaturation of HAS and BSA Proteins by Cationic Surfactants(DOTAB, TTAB, HTAB) by Potentiometric and Spectrophotometric Techniques” **11th Iranian Congress of Chemistry and Chemical Engineering , Tehran, Tarbiat Moalem Univ., 1996.**

7) **Rafati, A.A.**; Safarpour, M.A.; Gharibi, H., **Poster Presentation in 36th IUPAC Congress, Switzerland, 1997.**

8) **Rafati, A.A.**; Safarpour, M.A.; Gharibi, H.,“Electrochemical Study of Micellization of ionic Surfactants in Non-aqueous solvents” **2th Iranian Seminar of Electrochemistry, Tabriz, Tabriz Univ., 1997.**

9) **Rafati, A.A.**; Safarpour, M.A.; Gharibi, H.,“A New Method For Determination of Aggregation Number of Ionic Surfactants in the Presence of Electrolyte by Potentiometric Technique” **2th Iranian Seminar of Electrochemistry, Tabriz, Tabriz Univ., 1997.**

10) Safarpour, M.A.; **Rafati, A.A.**; Gharibi, H.,“Thermodynamic Study of Micellization in two and three component Systems by Potentiometric Technique” **2th Iranian Seminar of Electrochemistry, Tabriz, Tabriz Univ., 1997.**

11) **Rafati, A.A.**; Bagheri, A. and Safdari-Yekta, L.,“Thermodynamic Study of Inclusion Complex between Cationic Surfactants and Cyclodextrins By Coating Wire Surfactant Ion Selective Electrode” **5th Conference of Physical Chemistry, Bushehr, Persian Gulf University, 2002.**

12) **Rafati, A.A.**; Bagheri, A. and Safdari-Yekta, L.,“ “Study of Inclusion Complex Between a Homologous Series of n-Alkyltrimethyl Ammonium Bromides and β -Cyclodextrin by Conductometric Technique” **12th Iranian Seminar of Analytical Chemistry, Mazandaran University, 2003.**

13) **Rafati, A.A.**; Bagheri, A. and Safdari-Yekta, L.,“Electrochemical and Thermodynamic Study of the Inclusion Complex Between Tetradecyltrimethyl Ammonium Bromide and β -Cyclodextrin” **12th Iranian Seminar of Analytical Chemistry, Mazandaran University, 2003.**

- 14) **Rafati, A.A.**; Salimi, A. and Etesami, M., "The interaction of Cetyltrimethylammonium Bromide with Aspergillus Niger Cellulase Studied Using Surfactant Selective Electrode" **2th International Symposium of Sensor Science (I3S 2004), 29 May 2004.**
- 15) **Rafati, A.A.**; Ghasemian, E., "The interaction of a Homologous Series of Cationic Surfactants with Bovine Hemoglobin (Hb) Studied Using Surfactant Selective Electrode" **7th Physical Chemistry Seminar, Isfahan University of Technology, 8-10 March 2005.**
- 16) **Rafati, A.A.**; Souri, M. and Ghasemian, E., "Thermodynamic and Electrochemical Studies of Effect of Ionic Strength and pH on Interaction Between a Cationic Surfactant(CTAB) and Bovine Serum Albumin(BSA) By Potentiometric Technique" **7th Physical Chemistry Seminar, Isfahan University of Technology, 8-10 March 2005.**
- 17) **Rafati, A.A.**; Azizian, S. and Chardoli, M., "Interaction of a Cationic Surfactant(CPB) With an anionic Dye(MO) in Water-Alcohol Mixed Solvents" **7th Physical Chemistry Seminar, Isfahan University of Technology, 8-10 March 2005.**
- 18) Rezaei Sameti, M., Iloukhani, H., **Rafati, A.A.**; "Acoustic Parameters of Binary Mixtures of Methylcyclo-Hexane + n-Alkanes at T=298.15 K, Comparison with Theories" **8th Iranian Physical Chemistry Seminar, Ferdowsi University of Mashhad, 21-24 November, 2005.**
- 19) **Rafati, A.A.**; Hashemianzadeh, S.M. and Nojini, Z.B., "Theoretical Studies of Inclusion Complexes of a and b-Cyclodextrins With DETAB" **8th Iranian Physical Chemistry Seminar, Ferdowsi University of Mashhad, 21-24 November, 2005.**
- 20) M. Rezaei Sameti, H. Gharibi, **A.A. Rafati**, H. Iloukhani, "Electrochemical Study of Interaction of Sodium dodecyl Sulphate(SDS) with Bovine Serum Albumin(BSA)" **6th Biennial Electrochemistry Seminar of Iran(6BESI), 7-9 September 2005.**
- 21) M. Souri, **A.A. Rafati**, "Thermodynamic Studies of Surfactant-Protein interaction in Binary Water/Alcohol Mixtures, Using Potentiometric Technique", **6th Biennial Electrochemistry Seminar of Iran(6BESI), 7-9 September 2005.**
- 22) E. Ghasemian, **A.A. Rafati**, "Potentiometric Studies Associated with Interaction of Cetyltrimethylammonium Bromide(CTAB) and Oxyhemoglobin and Carboxyhemoglobin, Using Surfactant Ion Selective Electrode", **6th Biennial Electrochemistry Seminar of Iran(6BESI), 7-9 September 2005.**
- 23) **A.A. Rafati**, N. Hamnabard "Electrochemical and thermodynamic study of inclusion complex formation between chlorpromazine and β -cyclodextrin", **7th Biennial Electrochemistry Seminar of Iran (7BESI), 28-30 Aug. 2007.**

- 24) **A.A. Rafati, L. Safdari-Yekta, A. Bagheri** "Determination of complexation constants between CTAB and α -cyclodextrin at various temperatures using coated wire ion selective electrodes", **7th Biennial Electrochemistry Seminar of Iran (7BESI), 28-30 Aug. 2007.**
- 25) **A.A. Rafati, R. Naviri Fallah** "Conductometric and thermodynamic study on the inclusion complex between Imperamine and α -cyclodextrin", **7th Biennial Electrochemistry Seminar of Iran (7BESI), 28-30 Aug. 2007.**
- 26) S.M. Hashemianzadeh, **A.A. Rafati**, Z.B. Nojini, "Host-Guest Inclusion Complexes of the Local Anesthetic Drugs Procaine Hydrochloride and Butacaine Hydrochloride with α - and β -Cyclodextrins: Semi-Empirical Studies" **ADVANCED MICRO- and MESOPOROUS MATERIALS (2008) Sofia, Bulgaria.**
- 27) **A.A. Rafati**, S.M. Hashemianzadeh, Z.B. Nojini, "Density functional study of oxygen adsorption on armchair single wall carbon nanotube", **3th Nanotechnology Student Conference , 6-9 Feb. 2008.**
- 28) **A.A. Rafati**, "A new developed PVC based potentiometric sensor for anionic surfactants based on ion-pair carrier complex", **5th Electrochemistry Seminar of Iran , 7-8 May 2009.**
- 29) **A.A. Rafati, L. Maleki** "Fabrication of membrane ion selective electrodes for some ionic surfactants using single walled carbon nanotubes ", **5th Nanotechnology Student Conference , 30May-1Jun 2009.**
- 30) **A.A. Rafati, L. Maleki** "Study of micellization of CTAB using a novel surfactant membrane ion selective electrode based on carbon nanotube", **12th Iranian Physical Chemistry Seminar, Kurdistan University, 20-23 Jul., 2009.**
- 31) **A.A. Rafati, E. Ghasemian** "Experimental study of surface tension of alcohols/n-alkyl acetates binary mixtures ", **12th Iranian Physical Chemistry Seminar, Kurdistan University, 20-23 Jul., 2009.**