

## Curriculum Vitae

**Dr. S. Ahmad Mozaffari**

Sayed Ahmad Mozaffari, Ph.D.  
Associate Professor in Analytical Chemistry  
Thin Layer and Nanotechnology Laboratory  
Department of Chemical Technology  
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### Education:

<b>2007-2008</b>	Analytical Chemistry-Electrochemistry (Postdoctoral) POSTECH, Pohang, South Korea (Supervisor: Prof. Su-Moon Park)
<b>2001-2006</b>	Analytical Chemistry-Electrochemistry (PhD) Isfahan University, Isfahan, IRAN (Supervisor: Prof. R. Karimi Shervedani)
<b>1995-1997</b>	Analytical Chemistry (M.Sc.) Shiraz University, Shiraz, IRAN
<b>1991-1995</b>	Applied Chemistry (B.Sc.) Mazandaran University, Mazandaran, IRAN

### EXPERIENCE:

<b>1998-present</b>	Academic staff, Department of Chemical Technology, Iranian Research Organization for Science & Technology (IROST), Tehran, Iran
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### Awards and Honors:

- 1- Outstanding student in PhD, M.Sc. and B.Sc.
- 2- National outstanding student in chemistry, 2006
- 3- Alumni award for ranked 1st PhD in Analytical Chemistry, 2006, Isfahan University, Iran

### Executive responsibilities:

<b>2017-2018</b>	Vice Chancellor of Technology Commercialization
<b>2014- 2017</b>	Director of the Office of Technology Commercialization
<b>2014-2016</b>	Member of Scientific Council of Chemical Technologies Institute
<b>2013-2014</b>	Head of Catalyst & Inorganic Industry Group
<b>2010-2012</b>	Director General, Industry- University Liaison Office
<b>2010-present</b>	Establishment and Management of "Thin Layer and Nanotechnology Laboratory"
<b>2006- 2007</b>	Head of Analytical & Inorganic Chemistry Group
<b>2006- 2007</b>	Member of Scientific Council of Chemical Technologies Institute
<b>2006- present</b>	Member of Scientific Expert Committee in Chemistry, (Khwarizmi International Award & Khwarizmi Award for Young)
<b>2006-present</b>	Member of Scientific Expert Committee in Nanotechnology, (Khwarizmi International Award & Khwarizmi Award for Young)
<b>1998-present</b>	Academic Staff, Department of Chemical Technologies, Iranian Research Organization for Science & Technology, IROST, Tehran, Iran

## Journal Papers:

- 2021 S. A. Mozaffari, S. H. Mahmoudi, Z. Norouzi, "Hierarchical NiO@Ni(OH)<sub>2</sub> Nanoarrays as High-Performance Supercapacitor Electrode Material", *Electrochimica Acta* 368 (2021) 137633.
- 2021 M. S. Sowmehearaee, M. Ranjbar, M. Abedi, S. A. Mozaffari, "Fabrication of lead iodide perovskite solar cells by incorporating zirconium, indium and zinc metal-organic frameworks", *Solar Energy* 214 (2021) 138-148.
- 2021 E. Kouhestanian, M. Ranjbar, S. A. Mozaffari, H. Salaramoli, "Investigating the Effects of Thickness on the Performance of ZnO-Based DSSC", *Progress in Color, Colorants and Coatings* 14 (2021), 101-112.
- 2020 M. Alizadeh, P. Aberoomand Azar, S. A. Mozaffari, H. Karimi-Maleh and A.-M. Tamaddon, "A DNA Based Biosensor Amplified With ZIF-8/Ionic Liquid Composite for Determination of Mitoxantrone Anticancer Drug: An Experimental/Docking Investigation", *Frontiers in Chemistry Supramolecular Chemistry* 8 (2020) article 00814.
- 2020 M. Alizadeh, P. Aberoomand Azar, S. A. Mozaffari, H. Karimi-Maleh and A.-M. Tamaddon, "Evaluation of Pt,Pd-Doped, NiO-Decorated, Single-Wall Carbon Nanotube-Ionic Liquid Carbon Paste Chemically Modified Electrode: An Ultrasensitive Anticancer Drug Sensor for the Determination of Daunorubicin in the Presence of Tamoxifen", *Frontiers in Chemistry (Electrochemistry)*, 8 (2020) article 00677.
- 2020 E. Kouhestanian, S. A. Mozaffari, M. Ranjbar, H. Salaramoli, "Enhancing the electron transfer process of TiO<sub>2</sub>-based DSSC using DC magnetron sputtered ZnO as an efficient alternative for blocking layer", *Organic Electronics*, 86 (2021), 105915.
- 2020 P. Naderi Asrami, P. Aberoomand Azar, M. Saber Tehrani, S. A. Mozaffari, "Glucose Oxidase/Nano-ZnO/Thin Film Deposit FTO as an Innovative Clinical Transducer: A Sensitive Glucose Biosensor", *Frontiers in Chemistry* 8 (2020) article 00503.
- 2020 M. Ershadi, M. Javanbakht, S. A. Mozaffari, D. Brandell, M. T. Lee, B. Zahiri, "Preparing graphene-based anodes with enhanced electrochemical performance for lithium-ion batteries", *Ionics* 26 (2020) 4877-4895.
- 2020 M. Ershadi, M. Javanbakht, S. A. Mozaffari, D. Brandell, M. T. Lee, B. Zahiri, "Facile stitching of graphene oxide nanosheets with ethylenediamine as three dimensional anode material for lithium-ion battery", *Journal of Alloys and Compounds* 818 (2020) 152912.
- 2019 S. Behboudi-Khiavi, M. Javanbakht, S. A. Mozaffari, M. Ghaemi, "Controllable Pulse Reverse Electrodeposition of Mesoporous LiMnO Nano/Microstructures with Enhanced Electrochemical Performance for Li-Ion Storage", *ACS Applied Materials & Interfaces* 11 (2019) 21552-21566.
- 2018 K. Ghayedi Karimi, S. A. Mozaffari, M. Ebrahimi, "Spin-coated ZnO-graphene nanostructure thin film as a promising matrix for urease immobilization of impedimetric urea biosensor", *Journal of The Chinese Chemical Society* 65 (2018) 1379-1388.
- 2018 P. Naderi Asrami, S. A. Mozaffari, M. Saber Tehrani, P. Aberoomand Azar, "A novel impedimetric glucose biosensor based on immobilized glucose oxidase on a CuO-Chitosan nanobiocomposite modified FTO electrode", *International Journal of Biological Macromolecules* 118 (2018) 649-660.
- 2018 M. R. Moharamzadeh, H. Salar Amoli, R. Rahmanian, S. A. Mozaffari, "Cu<sup>2+</sup>-doped ITO as a Novel Efficient, Transparent, and Fast-Response Transducer for Ammonia Sensing", *Journal of The Chinese Chemical Society* 65 (2018) 735-742.
- 2018 K. Ghayedi Karimi, M. Ebrahimi, S. A. Mozaffari, "ZnO-carbon Active Nanostructured Thin Film Fabrication by Spin Coating Technique for Enzymatic Urea Biosensing", *Journal of New Materials for Electrochemical Systems* 21 (2018) 081-089.
- 2018 M. Moharamzadeh, H. Salar Amoli, S. A. Mozaffari, "Fabrication of ultra-fast humidity ZITO nanoporous sensor by sol-gel technique for dynamic situation and human breath", *Journal of Sol-Gel Science and Technology* 85 (2018) 596-609.
- 2018 S. Behboudi-Khiavi, M. Javanbakht, S. A. Mozaffari, M. Ghaemi, "Facile pulse electrodeposition of LiMnO<sub>2</sub> nanostructures as high performance cathode materials for lithium ion battery", *Electrochimica Acta* 261 (2018) 491-502.
- 2018 R. Rahmanian, S. A. Mozaffari, H. Salar Amoli, M. Abedi, "Development of sensitive impedimetric urea biosensor using DC sputtered Nano-ZnO on TiO<sub>2</sub> thin film as a novel hierarchical nanostructure transducer", *Sensors and Actuators B* 256 (2018) 760-774.
- 2017 M. H. Salmani, M. Abedi, S. A. Mozaffari, H. A. Sadeghian "Modification of pomegranate waste with iron ions a green composite for removal of Pb from aqueous solution: equilibrium, thermodynamic and kinetic studies", *AMB Expr* 7 (2017) 225.
- 2017 M. Khalili, M. Abedi, H. Salar Amoli, S. A. Mozaffari, "Comparison of chitosan and chitosan nanoparticles on the performance and charge recombination of water-based gel electrolyte in dye sensitized solar cells", *Carbohydrate Polymers* 175 (2017) 1-6.
- 2017 P. Naderi Asrami, M. Saber Tehrani, P. Aberoomand Azar, S. A. Mozaffari, "Impedimetric glucose biosensor based on nanostructure nickel oxide transducer fabricated by reactive RF magnetron sputtering system", *Journal of Electroanalytical Chemistry* 801 (2017) 258-266.
- 2017 S. Behboudi-Khiavi, M. Javanbakht, S. A. Mozaffari, M. Ghaemi, "Synthesis of mesoporous LiMnO as a cathode

- material of Lithium ion battery via one-pot galvanostatic electrodeposition method", *Journal of Electroanalytical Chemistry* 801 (2017) 224–234.
- 2017 E. Lohrasbi, M. Javanbakht, **S. A. Mozaffari**, "Effect of atomic composition on the compressive strain and electrocatalytic activity of PtCoFe/sulfonated graphene", *Applied Surface Science* 407 (2017) 236–245.
- 2016 M. Abbasian, M. Balali-Mood, **S. A. Mozaffari**, H. Salar Amoli, "Solid-phase microextraction of ultra-trace amounts of tramadol from human urine by using a carbon nanotube/flower-shaped zinc oxide hollow fiber", *Journal of Separation Science* 39 (2016) 4449–4457.
- 2016 E. Lohrasbi, M. Javanbakht, **S. A. Mozaffari**, "Synthesis of Graphene-Supported PtCoFe Alloy with Different Thermal Treatment Procedures as Highly Active Oxygen Reduction Reaction Electrocatalysts for Proton Exchange Membrane Fuel Cells", *Industrial and Engineering Chemistry Research* 55 (34), (2016) 9154–9163.
- 2016 E. Lohrasbi, M. Javanbakht, S. A. Mozaffari, "Glycerol stabilized Borohydride Synthesis of the PtFeCo/Gr Electrocatalysts for Oxygen Reduction Reaction in Proton Exchange Membrane Fuel Cells", *International Journal of Advanced Biotechnology and Research (IJBR)* 7 (2016) 1209-1217.
- 2016 E. Kouhestanian, **S. A. Mozaffari**, M. Ranjbar, H. Salar Amoli, M. H. Armanmehr, "Electrodeposited ZnO thin film as an efficient alternative blocking layer for TiCl<sub>4</sub> pre-treatment in TiO<sub>2</sub>-based dye sensitized solar cells", *Superlattices and Microstructures* 96 (2016) 82-94.
- 2016 M. Ranjbar, **S. A. Mozaffari**, E. Kouhestanian, H. Salar Amoli, "Sonochemical synthesis and characterization of a Zn(II) supramolecule, bis(2,6 diaminopyridinium)bis(pyridine-2,6-dicarboxylato) zincate(II), as a novel precursor for the ZnO-based dye sensitizer solar cell", *Journal of Photochemistry and Photobiology A: Chemistry* 321 (2016) 110–121.
- 2016 M. Abedi, M. H. Salmani, **S. A. Mozaffari**, "Adsorption of Cd ions from aqueous solutions by iron modified pomegranate peel carbons: kinetic and thermodynamic studies" *International Journal of Environmental Science and Technology*, 13(8) (2016) 2045–2056.
- 2016 M. H. Salmani, M. Abedi, **S. A. Mozaffari**, "Adsorption Efficiency of Iron Modified Carbons for Removal of Pb(II) Ions from Aqueous Solution", *Journal of Community Health Research*, 5(2) (2016) 140-148.
- 2016 M. H. Salmani, M. Abedi, **S. A. Mozaffari**, "Evaluation of factor affecting adsorption of Pb(II) by iron modified pomegranate peel carbons using factorial design", *Journal of Chemical and Pharmaceutical Research*, 8 (2016) 40-45.
- 2016 R. Rahmanian, **S. A. Mozaffari**, "Urea biosensor based on urease immobilization in nanostructured ZnO thin film", *Journal of Iranian Electrochemical Society (JIES)* 1 (2016) 51-57.
- 2015 M. Javanbakht, E. Lohrasbi, **S. A. Mozaffari**, "Synthesis of Supported Pt Alloy three-Dimensional Rhombus Shapes Nanoparticles for Oxygen Reduction Reaction", *Iranian Journal of Hydrogen & Fuel Cell* 2 (2015) 121-130.
- 2015 **S. A. Mozaffari**, H. Salar Amoli, S. Simorgh, R. Rahmanian, "Impedimetric Thiourea Sensing in Copper Electrorefining Bath based on DC Magnetron Sputtered Nanosilver as Highly Uniform Transducer", *Electrochimica Acta* 184 (2015) 475–482.
- 2015 M. Bagherzadeh, **S. A. Mozaffari**, M. Momeni, "Fabrication and Electrochemical Characterization of Dopamine Sensing Electrode Based on Modified Graphene Nanosheets", *Analytical Methods*, 7 (2015) 9317-9323.
- 2015 H. Salar Amoli, H. Amanidaz, **S. A. Mozaffari**, M. R. Moharamzadeh, A. Abdous, "Opto-electronic properties of carbon nanotube doped ITO electrode using ArF excimer laser annealing", *Int. J. Nanoelectronics and Materials* 8 (2015) 83-90.
- 2015 R. Rahmanian, **S. A. Mozaffari**, M. Abedi, "Disposable urea biosensor based on nanoporous ZnO film fabricated from omissible polymeric substrate", *Materials Science and Engineering C* 57 (2015) 387–396.
- 2015 **S. A. Mozaffari**, M. Ranjbar, E. Kouhestanian, H. Salar Amoli, M. H. Armanmehr, "An investigation on the effect of electrodeposited nanostructured ZnO on the electron transfer process efficiency of TiO<sub>2</sub> based DSSC", *Materials Science in Semiconductor Processing* 40 (2015) 285–292.
- 2015 **S. A. Mozaffari**, M. Saeidi, R. Rahmanian, "Photoelectric characterization of fabricated dye-sensitized solar cell using dye extracted from red Siahkooti fruit as natural sensitizer", *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy* 142 (2015) 226-231.
- 2015 R. Rahmanian, **S. A. Mozaffari**, "Electrochemical fabrication of ZnO-polyvinyl alcohol nanostructured hybrid film for application to urea biosensor", *Sensors and Actuators B* 207 (2015) 772-781.
- 2014 **S. A. Mozaffari**, R. Rahmanian, M. Abedi, H. Salar Amoli, "Urea impedimetric biosensor based on reactive RF magnetron sputtered zinc oxide nanoporous transducer" *Electrochimica Acta* 146 (2014) 538-547.
- 2014 M.H. Salmani, M. Vakili, M. Abedi, **S. A. Mozaffari**, "Serum levels of Magnesium, Copper and Zinc in Young Couples", *International Journal of Food Science, Nutrition and Dietetics* 3:102 (2014).
- 2013 H. Salar Amoli, H. Amani, **Mozaffari**, "Deposition of ITO nanopowder layers on flexible substrate by spin coating using pulsed Nd-Yag laser for crystallization and bonding", *Journal of Russian Laser Research* 34 (2013)581-585.
- 2013 M. Mazloum Ardakani, A. Dehghan Manshadi, **S. A. Mozaffari**, H. Azizi, "Using electrochemical impedance spectroscopy of salicylate anion selective electrode: simulation for behavior of electrode", *Iranian Journal of Mathematical Chemistry*, 4 (2013) 41-57.
- 2011 A. Ashori, H. Kiani, **S. A. Mozaffari**, "Mechanical Properties of Reinforced PVC Composites: Effect of Filler Form

- and Content", *Applied Polymer Science* 120 (2011) 1788-1793.
- 2011 H. Kiani, A. Ashori, **S.A. Mozaffari**, "Water Resistance and Thermal Stability of Hybrid Lignocellulosic Filler-PVC Composites", *Polymer Bulletin* 66 (6) (2011) 797-802.
- 2010 **S. A. Mozaffari**, T. Chang, and Su-Moon Park, "Self-Assembled Monolayer as a Selective Pre-concentrating Medium for Serotonin Sensing", *Biosensors and Bioelectronics*, 26 (2010) 74-79 (IF=5.429).
- 2009 **S. A. Mozaffari**, T. Chang, and Su-Moon Park, "Diffusional Electrochemistry of Cytochrome c on Mixed Captopril/3-Mercapto-1-propanol Self-Assembled Monolayer Modified Gold Electrodes", *Journal of Physical Chemistry C*, 113 (2009) 12434-12442 (IF=4.224).
- 2009 R. Shabani, **S. A. Mozaffari**, S. Waqif Husain, Mohammad Saber Tehrani, "Selective Nanosensing of Copper (II) Ion using L-Lysine in-situ Functionalized Gold Cysteamine Self-Assembled Monolayer", *Iranian J. Sci. Tech.*, Vol. 33, No. A4 (2009) 335-347.
- 2006 R. K. Shervedani, **S. A. Mozaffari**, "Copper(II) Nanosensor based on a Gold Cysteamine Self-Assembled Monolayer Functionalized with Salicylaldehyde", *Analytical Chemistry*, 78 (2006) 4957-4963 (IF=5.635).
- 2006 R. K. Shervedani, M. Bagherzadeh, and **S. A. Mozaffari**, "Determination of Dopamine in the Presence of High Concentration of Ascorbic Acid by using Gold Cysteamine Self-Assembled Monolayers as a Nanosensor", *Sensors and Actuators B: Chemical*, 115 (2006) 614-621 (IF=2.331).
- 2006 R. K. Shervedani, **S. A. Mozaffari**, "Impedimetric Sensing of Uranyl Ion based on Phosphate Functionalized Cysteamine Self Assembled Monolayers", *Analytica Chimica Acta*, 562 (2006) 223-228 (IF=2.894).
- 2005 R. K. Shervedani, **S. A. Mozaffari**, "Preparation and Electrochemical Characterization of a New Nanosensor based on Self-Assembled Monolayer of Cysteamine Functionalized with Phosphate Groups", *Surface and Coatings Technology*, 198 (2005) 123-128 (IF=1.646).

### Journal Papers (in Persian):

- 2015 M. Khalili, M. Abedi, H. Salar Amoli, **S. A. Mozaffari**, "Dye sensitized solar cells with chitosan and carboxy methyl cellulose gel electrolytes", *Journal of Energy Engineering Management* 5 (3) (2015) 30-35.
- 2015 **S. A. Mozaffari**, M. Saeidi, R. Rahmanian, "Fabrication and electrochemical evaluation of dye hibiscus tea sensitized solar cell with nanostructured titanium dioxide electrode", *Journal of Applied Research in Chemistry* 2 (2015) 5-12.
- 2015 S. Simorgh, R. Rahmanian, **S. A. Mozaffari**, M. H. Armanmehr, Impedimetric determination of low concentration of thiourea in Cu<sup>2+</sup> containing acidic media on nanostructured platinum electrode, *Journal of Applied Chemistry* 10(36) (2015) 53-66.
- 2015 **S. A. Mozaffari**, M. Bahmaie, P. Mahdian, R. Rahmanian, "Preparation of platinum nanoparticles electrocatalyst layer as PEM fuel cell electrode by electrochemical method and its electrocatalyst activity evaluation in ORR", *Journal of Applied Chemistry* 10 (34) (2015) 91-108.
- 2014 M. H. Salmani, M. Abedi, **S. A. Mozaffari**, M. H. Ehrampoush, "Nanotechnology and water pollutants removal", *Journal of Toloo-e-Behdasht* 12(4), (2014) 242-255.
- 2013 M. Saeidi, **S. A. Mozaffari**, S. Rahimnejad, R. Rahmanian, "Electrochemical evaluation of fabricated dye sensitized solar cell (DSSC) with nanostructured thin film electrodes and natural dye", *Journal of Applied Chemistry* 8(28), (2013) 79-90.

### Conference Papers:

- More than 60 national and international conferences

### Invention (Patents):

- 2020 **US10865493B2**, S. Behboudi-Khiavi, M. Javanbakht, **S. A. Mozaffari**, M. Ghaemi, "Synthesis of Lithium Manganese Dioxide Micro/Nanostructures" 2020.
- 2019 **US Patent 20190136400 A1**, S. Behboudi-Khiavi, M. Javanbakht, **S. A. Mozaffari**, M. Ghaemi, "Synthesis of Lithium Manganese Dioxide Micro/Nanostructures" 2019.
- 2016 **S. A. Mozaffari**, S. Simorgh, R. Rahmanian, "Application of impedance spectroscopy for thiourea determination in metallic ions containing acidic electrolyte baths such as copper electrorefining bath by nanostructured indicator electrodes", Persian Patent No. 92633.
- 2016 R. Rahmanian, **S. A. Mozaffari**, "Capacitive urea biosensor based on nanostructured ZnO thin films for application in dialysis process", Persian Patent No. 93501.
- 2016 T. Emadoddin, **S. A. Mozaffari**, "impedimetric Dopamine sensor for zinc oxide / polyvinyl alcohol nanocomposite thin film by eliminating the effect of ascorbic acid interference", Persian Patent No. 92153.
- 2016 S. Khazaei, **S. A. Mozaffari**, "Design and preparation of impedimetric glucose biosensor using thin layer of zinc oxide nanoparticles", Persian Patent No. 91934.
- 2015 **S. A. Mozaffari**, S. Simorgh, R. Rahmanian, "Impedance spectroscopy process for detection and

*measurement of thiourea in acid electrolyte baths containing metal ions such as copper refining bath with nanostructured indicator electrodes”, Persian Patent No. 90500.*

**2015** S. A. Mozaffari, R. Rahmanian, “Fabrication of novel impedimetric urea biosensor based on DC sputtered-ZnO/TiO<sub>2</sub>/FTO as nanocomposite transducer”, Persian Patent No. 90187.

### **Major research and implementation of applied projects (1997-present):**

<b>2019- to be Continued</b>	Fabrication of a Laboratory Scale Electrochemical Deionization System of Brackish Water Based on Capacitive Electrostatic Properties
<b>2018-2019</b>	Application of metal oxide semiconductor thin film in electrochemical detection of phenol
<b>2016-2018</b>	Investigation of Effective Factors on Crystallization of Chloroferric in Storage Tanks in Water Treatment Plants
<b>2015-2016</b>	Preparation of metal oxide-enriched nano-ITOs for conductive and transparent electrodes
<b>2012-2014</b>	Preparation of Platinum Catalyst Layer Electrodes using Electrochemical Deposition for PEM Fuel Cell
<b>2010-2012</b>	Preparation of ZnO Thin Films on Glass and Polymer Surfaces using RF-Magnetron Sputtering for Application in Solar Cell
<b>2006-2007</b>	Purification and Preparation of Pharmaceutical Sodium Bicarbonate
<b>2000-2001</b>	Preparation of Calcium Aluminate (C <sub>12</sub> A <sub>7</sub> ) for using in the Ladle Furnace during the Secondary Metallurgy of Steel; Characterization by XRF, XRD, FTIR and the other Physical Tests. 2000-2001, Project employer: Mobarakeh- Steel factory
<b>2000-2001</b>	Extraction of Chitin and Chitosan from the Crab, Shrimp, and Other Crustaceans Shells for using in Control Release Drugs; Characterization by UV, FTIR, and the Other Tests
<b>1999-2000</b>	Recrystallization and Purification of Calcium Chloride for Producing of BP and USP Grade
<b>1998-1999</b>	Diatomaceous Earth Production from Azarshahr Mine in Bench Scale, Characterization by XRF, XRD, SEM and the Other Physical Tests. 1998-2000, Project employer: Behnoush factory
<b>1997-1998</b>	Preparation of Tin Powder by Electroless Method

### **Research Group Alumni:**

#### **Ph.D. Students:**

Rostam Shabani (as main supervisor)  
Reza Rahmanian (as main supervisor)  
Elham Kouhestanian (as main supervisor)  
Mohammad Hsasan Salmani (as 2<sup>nd</sup> supervisor)  
Malihe Khalili (as adviser)  
Elahe Lohrasbi (as 2<sup>nd</sup> supervisor)  
Maryam Abbasian (as adviser)  
Kobra Ghayedi Karimi (as 2<sup>nd</sup> supervisor)  
Sepideh Behboudi-Khiavi (as 2<sup>nd</sup> supervisor)  
Mahshid Ershadi (as 2<sup>nd</sup> supervisor)  
Padideh Naderi Asrami (as adviser)  
Mohammad Reza Moharamzadeh (as adviser)  
Marzieh Alizadeh (as 2<sup>nd</sup> supervisor)

#### **M.Sc. Students:**

Hossein Amanidaz  
Mahsa Saeidi  
Parastoo Mahdian  
Saeid Simorgh  
Mehri Momeni  
Fatemeh Ashrafi  
Sahere Khazaei  
Motahhare Emadoddin

### **Research Group Members:**

Maryam Hosseinzadeh (Research Assistant)  
Fatemeh Ebrahimi (Ph.D. Student)  
Zahra Norouzi (Ph.D. Student)  
Hamid Dehghan Manshadi (Ph.D. Student)

### **Courses Taught at Universities:**

General Chemistry I & II, Analytical Chemistry I & II (Undergraduate Courses).  
Chemistry in nanobiotechnology (PhD Course).  
Nanomaterials: Introduction, Synthesis, Characterization and Applications (PhD Course).

Specific Topics in Analytical Chemistry (PhD Course).  
Industrial Electrochemistry (M.Sc. Course).  
General Chemistry Lab. I & II, Analytical Chemistry Lab. I & II (Undergraduate Courses).  
Instrumental Analysis Lab. (Undergraduate Courses).  
Inorganic Chemistry Lab. II, Water and Wastewater Treatment Lab. (Undergraduate Courses).

## **RESEARCH INTERESTS:**

### **• Nano-electrochemistry**

- ✓ Preparation and application of nanostructure and thin film modified electrodes for electro-catalysis, sensor and biosensor, solar cell and fuel cell
- ✓ Electrochemically preparation, detection, reaction study, electron-transfer kinetics and application of thin film-based sensors and biosensors
- ✓ Application of electrochemical impedance spectroscopy (EIS) and electrochemical quartz crystal microbalance (EQCM) for interface reaction monitoring
- ✓ Electrodeposition of thin film materials for environmental applications