

## Rahmatollah Rahimi

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# **Academic Degrees:**

-Bachelor of Science: Chemistry, Howard University, USA, 1983

-Master of Science: Physical chemistry, Howard University, USA, 1987

-Ph. D.: Inorganic Chemistry, Howard University, USA, 1991

## **Active Research fields:**

- -Synthesis and characterization of porphyrin-bioinorganic compounds a photocatalysts
- Application of bioinorganic compound in environmental, medicine, and industrial projects

# **Teaching Experiences:**

# A) Teaching Courses at undergraduate level:

- -General chemistry
- -Inorganic Chemistry
- -Physical chemistry
- -Physical chemistry laboratory
- -General Chemistry laboratory
- -Chemistry science literature

# B) Teaching Courses at graduate level(MS):

- -The professional language for Chemistry
- -Inorganic kinetics and Thermodynamics
- -Physical Inorganic Chemistry
- -Research method
- -Advanced Inorganic Chemistry
- -Bio Inorganic Chemistry

## C) Teaching Courses at graduate level(PhD):

- -Advanced Bio Inorganic Chemistry
- -Structures and bonds of inorganic components
- Organometallic Chemistry

#### Patent: 11

1-"Application of LED lamps for treatment and disinfection of wastewaters using nanophotocatalysts" Rahmatollah Rahimi, Javad Shokraian, Mahboobeh Rabbani, 2013

- 2-"Synthesis of ZnO Nanorods in low temperature via Coprecipitation Method" Rahmatollah Rahimi, Marzieh Yaghoubi Berijani, Solmaz Zargari, 2013
- 3-"Synthesis of BiVO4 photocatalyst with two monoclinic and tetragonal phases, active in visible and ultraviolet region", Rahmatollah Rahimi, Marzieh Yaghoubi Berijani, Solmaz Zargari, 2013
- 4-"Synthesis of polypyrrole-iron oxide functionalized with porphyrin as an efficient sorbent of industrial pollutions", Rahmatollah Rahimi, Meisam Asadi Davati, Solmaz Zargari, 2013
- 5-" Synthesis of Titanium dioxide (TiO<sub>2</sub>)-Vanadium phosphorous nanocomposite oxidized with silver (Ag-VPO) as a catalyst (Ag-VPO/TiO<sub>2</sub>) and is organic pollution degradation under visible light illumination", Rahmatollah Rahimi, Masoumeh Mahjoub Moghaddas, Solmaz Zargari, 2012
- 6-" Synthesis of SbVO<sub>4</sub>-TiO<sub>2</sub> nanocomposite as a catalysts and its investigation in degradation of organic pollutions under visible light irradiation", Rahmatollah Rahimi, Masoumeh Mahjoub Moghaddas, Solmaz Zargari, 2012
- 7-"Synthesis of Titanium dioxide-Bismut vanadat (BiVO<sub>4</sub>-TiO<sub>2</sub>) sensitized with porphyrin (TCPP) and its photocatalytic application under visible light irradiation", Rahmatollah Rahimi, Masoumeh Mahjoub Moghaddas, Solmaz Zargari, 2012
- 8-"Preparation of V-TiO<sub>2</sub>-TCPP and its concurrent application in removal and degradation of industrial pollutants", Rahmatollah Rahimi, Masoumeh Mahjoub Moghaddas, Solmaz Zargari, 2012

9-"Preparation of V doped TiO<sub>2</sub> mesoporous and sensitized with porphyrin over

SBA-15 substrate", Ahmad Najafian, Masoumeh Mahjoub Moghaddas,

Rahmatollah Rahimi, 2012

10-"Preparation of porphyrin on SBA-15 catalysts", Mehdi Deilam Kamar, Ahmad

najafian, Rahmatollah Rahimi, 2012.

11-"Nanoporous TiO<sub>2</sub> solar cell sensitized with tetra(4-carboxyphenyl)porphyrin",

Rahmatollah Rahimi, Pegah Tvakoli fard, 2010

Research activities:

A)Scientific Research articles:

More than 175 Articles Published at Conferences and Journals

Titles of published papers in Journals: 125

2017:

1-Maryam Khosravi, Rahmatollah Rahimi, Jalal Pour Ahmad, Mohammad Hadi

Zareie, Mahboubeh Rabbani, "Comparsion of kinetic study and protective

effects of biological dipeptide and two porphyrin derivatives against metals

cytotoxicity in human lymphocytes" Iranian Journal of Pharmaceutical

Research, In press.

2- Maryam Khosravi, Rahmatollah Rahimi, Jalal pourahmad, Mohammad. Hadi

Zareib, Mahboubeh Rabbani, "Comparison of kinetic study and protective

effects of biological inmetal cytotoxicity against wo porphyrin derivatives

dipeptide andhuman lymphocytes, Journal of Applied Chemical Research, In

Press.

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- 1- Rahmatollah Rahimi, Maryam Khosravi, Mahboubeh Rabbani, Ebrahim Safavi, "Comparison of chelating ability of dipeptide (histidine-β-alanine) and (tetrakis(4-sulfonatophenyl)porphyrin) (TPPS4) for in vitro removal of toxic metals" *Iran. Chem. Commun.* In press.
- 2- Mohammad Hossein Keshavarz, Ali Reza Akbarzadeh, Rahmatollah Rahimi, Mohammad Jafari, Matin Pasandideh, Roohollah Sadeghi, "A reliable method for prediction of enthalpy of fusion in energetic materials using their molecular structures "Fluid Phase Equilibria, 427 (2016) 46-55.
- 3-Mahboubeh Rabbani, Mahdi Heidari-Golafzani, Rahmatollah Rahimi, "Synthesis of TCPP/ZnFe2O4@ZnO nanohollow sphere composite for degradation of methylene blue and 4-nitrophenol under visible light" Materials Chemistry and Physics 179 (2016) 35-41, DOI:10.1016/j.matchemphys.2016.05.005
- 4-Rahmatollah Rahimi, Shabnam Pordel, Mahboubeh Rabbani, "Synthesis of Bi<sub>2</sub>WO<sub>6</sub> nanoplates using oleic acid as a green capping agent and its application for thiols oxidation" J Nanostruct Chem (2016) 6:191–196, DOI 10.1007/s40097-016-0195-0
- 5- Mahsa Moshari, Mahboubeh Rabbani, Rahmatollah, "Synthesis of TCPP– Fe<sub>3</sub>O<sub>4</sub>@S/RGO and its application for purification of water" *Research on Chemical Intermediate*, 42 (2016) 5441-5455. DOI: 10.1007/s11164-015-2378-6.
- 6- Rahmatollah Rahimi, Solmaz Zargari, Ali Ghaffarinejad, Ali Morsali, "Investigation of the synergistic effect of porphyrin photosensitizer on

- graphene-TiO<sub>2</sub> nanocomposite for visible light photoactivity improvement "Environmental Progress and Sustainable Energy, 35 (2016) 642-652.
- 7- Rahmatollah Rahimi, Fatemeh Fayyaz, Mehdi Rassa, Mahboubeh Rabbani, "Microwave-assisted synthesis of 5,10,15,20-tetrakis(4-nitrophenyl)porphyrin and zinc derivative and study of their bacterial Photoinactivation" *Iranian Chemical Communication*, 4 (2016) 175-185.
- 8- Solmaz Zargari, Rahmatollah Rahimi, Ali Ghaffarinejad, Ali Morsali, "Enhanced visible light photocurrent response and photodegradation efficiency over TiO<sub>2</sub>-graphene composite pillared with tin porphyrin" *Journal of colloid and interface science*, 466 (2016) 310-321. (DOI:10.1016/j.jcis.2015.12.046)
- 9- Rahmatollah Rahimi, Maryam Khosravi, Mohammd H. H. Tehrani,*b* Mahboubeh Rabbani and Ebrahim Safavi, "Solid-Phase Peptide Synthesis of Dipeptide (Histidine-β-Alanine) as a Chelating Agent by Using Trityl Chloride Resin, for Removal of Al<sup>3+</sup>, Cu<sup>2+</sup>, Hg<sup>2+</sup> and Pb<sup>2+</sup>: Experimental and Theoretical Study" *Journal of the Brazilian Chemical Society*, 27 (2016) 1814-1819.
- 10- Mahboubeh Rabbani, Fatemeh Rafiee, Hossein Ghafuri, Rahmatollah Rahimi, "Synthesis of Fe<sub>3</sub>O<sub>4</sub> nonoparticles via a fast and facile mechanochemic method: Modification of surface with porphyrin and photocatalytic study" *Materials Letters*, 166 (2016) 247-250. (DOI: 10.1016/j.matlet.2015.12.087)
- 11- Rahmatollah Rahimi, Mohammad Hossein Keshavarz, Ali Reza Akbarzadeh, "Prediction of the Density of Energetic Materials on the Basis of their Molecular Structures" *Central European Journal of Energetic Materials*, 13 (2016) 73-101

- 12- Rahmatollah Rahimi, Fatemeh Fayyaz, Mehdi Rassa, "The study of cellulosic fabrics impregnated with porphyrin compounds for use as photo-bactericidal polymers, *Materials Science and Engineering: C*, 59 (2016) 661–668. (DOI: 10.1016/j.msec.2015.10.067)
- 13-H Ghafuri, F Mohammadi, R Rahimi, E Mohammadiyan, "Synthesis and characterization of a new magnetic nanocomposite with metalloporphyrin (Co-TPyP) and sulfated tin dioxide (Fe<sub>3</sub>O<sub>4</sub>@SnO<sub>2</sub>/SO<sub>4</sub><sup>2-</sup>), and investigation of its photocatalytic effects in the degradation of Rhodamine B" RSC Advances, 6 (2016) 83947-83953.
- 14- H Ghafuri, S Rahmania, R Rahimi, Z Movahedinia, "Synthesis and characterization of benzilic alcohol metaloporphyrin and its nanocomposite with graphene oxide (GO-CoTHMP) and investigation of their efficiency in removal of environmental pollutants" RSC Advances, 6 (2016) 62916-62922.
- 15- Ali Maleki, Rahmatollah Rahimi, Saied Maleki, "Efficient oxidation and epoxidation using a chromium(VI)-based magnetic nanocomposite" Environ Chem Lett., 14 (2016) 195-199, DOI 10.1007/s10311-016-0558-2
- 16-R Rahimi, M Moshari, M Rabbani, A Azad, "Photooxidation of benzyl alcohols and photodegradation of cationic dyes by Fe<sub>3</sub>O<sub>4</sub>@ sulfur/reduced graphene oxide as catalyst" RSC Advances, 6 (2016) 41156-41164.
- 17- Mahboubeh Rabbani, Hamideh Bathaee, Rahmatollah Rahimi, Ali Maleki, "Photocatalytic degradation of p-nitrophenol and methylene blue using Zn-TCPP/Ag doped mesoporous TiO2 under UV and visible light irradiation", *Desalination and Water Treatment*, 57 (2016) 25848-25856, DOI: 10.1080/19443994.2016.1157762

- 18- S. Zargari, R. Rahimi, A. Yousefi, "An efficient visible light photocatalyst based tin porphyrin intercalated between TiO<sub>2</sub>-graphene nanosheets for inactivation of *E. coli* and investigation of charge transfer mechanism" *RSC Advances*, 6 (2016) 24218-24228, DOI: 10.1039/C5RA19927A
- 19- Rahmatollah Rahimi, Marzieh Yaghoubi-Berijani, Solmaz Zargari, Mahboubeh Rabbani, Samaneh Shariatinia, "SnTCPP modified ZnO nanorods prepared via a simple co-precipitation method: application as a new photocatalyst for photodegradation and photoreduction process" *Research on Chemical Intermediates*, 42 (2016) 4697-4714
- 20- Ahmad Najafian, Rahmatollah Rahimi, Solmaz Zargari, Masoumeh Mahjoub-Moghaddas, Azadeh Nazemi, "Synthesis and photocatalytic activity of V-doped mesoporous TiO<sub>2</sub> photosensitized with porphyrin supported by SBA-15", *Research on Chemical Intermediates*, 42 (2016) 3441-3458, DOI: 10.1007/s11164-015-2222-z

- 1-Rahmatollah Rahimi, Solmaz Zargari, Azam Yousefi, Marzieh Yaghobi Berijani, Ali Ghaffarinejad, Ali Morsali, "Visible light photocatalytic disinfection of E. Coli with TiO<sub>2</sub>-graphene nanocomposite sensitized with tetrakis(4-carboxyphenyl)porphyrin" *Applied Surface Science*, 355 (2015) 1098–1106.
- 2- Mahdi Heidari-Golafzani, Mahboubeh Rabbani, Rahmatollah Rahimi and Alireza Azad, "Catalytic oxidation of primary and secondary alcohols over a novel TCPP/Zn-Fe<sub>2</sub>O<sub>4</sub>@ZnO catalyst" *RSC Advances*, 5 (2015) 99640-99645, DOI: 10.1039/C5RA17741C

- 3- R Zare-Dorabei, R Rahimi, A Koohi, S Zargari, "Preparation and characterization of a novel tetrakis (4-hydroxyphenyl) porphyrin–graphene oxide nanocomposite and application in an optical sensor and determination of mercury ions" *RSC Advances* 5 (2015) 93310-93317
- 4- S. Noushin Ezzati, Mahboubeh Rabbani, Roger M. Leblanc, Ebadullah Asadi, S. Mohammad H. Ezzati, Rahmatollah Rahimi, Saman Azodi-Deilami, "Conducting, magnetic polyaniline/Ba<sub>0.25</sub>Sr<sub>0.75</sub> Fe<sub>11</sub>(Ni<sub>0.5</sub>Mn<sub>0.5</sub>)O<sub>19</sub> nanocomposite: Fabrication, characterization and application" *Journal of Alloys and Compounds*, 646 (2015) 1157-1164.
- 5- Fatemeh Hashemzadeh, Rahmatollah Rahimia, Ali Gaffarinejada, Vahideh Jalalata, Siamak Safapour, "Photocatalytic treatment of wastewater containing Rhodamine B dye via Nb<sub>2</sub>O<sub>5</sub> nanoparticles: effect of operational key parameters", *Desalination and Water Treatment*, 56 (2015) 181–193, doi: 10.1080/19443994.2014.936516
- 6- Fatemeh Fayyaz, Rahmatollah Rahimi, Mehdi Rassa, Ali Maleki, "Efficient photo-oxidation of phenol and photo-inactivation of bacteria by cationic tetrakis(trimethylanilinium)porphyrins", *Water Science & Technology: Water Supply*, In Press, Uncorrected Proof © IWA Publishing, 15 (2015) 1099-1105, doi:10.2166/ws.2015.068
- 7- Rahmatollah Rahimi, Mahdi Heidari Golfazani, Mahboubeh Rabbani, "Preparation and photocatalytic application of Zn\_Fe<sub>2</sub>O<sub>4</sub>@ZnO core—shell nanostructures" *Superlattices and Microstructures*, 85 (2015) 497-503.
- 8- Mohammad Asgari, Afsaneh Zonouzi, Rahmatollah Rahimi, Mahboubeh Rabbani, "Application of Porphyrin Modified SBA-15 in Adsorption of Lead Ions from Aqueous Media" *Oriental Journal of Chemistry* 31 (2015) 1537-1544.

- 9- Mohammad Hossein Keshavarz, Rahmatollah Rahimi, Ali Reza Akbarzadeh, "Two novel correlations for assessment of crystal density of hazardous ionic molecular energetic materials using their molecular structures" *Fluid Phase Equilibria*, 402 (2015) 1–8
- 10- Ahmad Najafian, Mahboubeh Rabbani, Rahmatollah Rahimi, Mehdi Deilamkamar, Ali Maleki, "Synthesis and characterization of copper porphyrin into SBA-16 through "ship in a bottle" method: A catalyst for photo oxidation reaction under visible light", *Solid State Sciences*, (2015) 46, 7-13.
- 11- Rahmatollah Rahimi, Sara Saadati, Elham Honarvar Fard, "Fluorine-doped TiO<sub>2</sub> nanoparticles sensitized by tetra(4-carboxyphenyl)porphyrin and zinc tetra(4-carboxyphenyl)porphyrin: Preparation, characterization, and evaluation of photocatalytic activity" *Environmental Progress and Sustainable Energy*, 34 (2015) 1341-1348.
  - 12- Hossein Ghafuri, Zahra Movahedinia, Rahmatollah Rahimi and Hamid Reza Esmaili Zand, "Synthesis of 5, 10, 15, 20-tetrakis (4-naphtalen-2-ylbenzoate) porphyrin, its complexes with Zinc and Cobalt and Fe<sub>3</sub>O<sub>4</sub>@ZrO<sub>2</sub>-TNBP as photocatalyst and investigating its photocatalytic activities", *RSC Advances*, 5 (2015) 60172-60178, DOI: 10.1039/C5RA11126A
- 13- Rahmatollah Rahimi, Samaneh Shariatinia, Solmaz Zargari, Marzieh Yaghoubi Berijani, Ali Ghaffarinejad and Zahra Sadat Shojaie, "Synthesis, characterization, and photocurrent generation of a new nanocomposite based Cu–TCPP MOF and ZnO nanorod" *RSC Advances*, 2015, 5, 46624.
  - 14-Fatemeh Hashemzadeh, Ali Gaffarinejad, Rahmatollah Rahimi, "Porous *p*-NiO/*n*-Nb<sub>2</sub>O<sub>5</sub> nanocomposites prepared by an EISA route with

enhanced photocatalytic activity in simultaneous Cr(VI) reduction and methyl orange decolorization under visible light irradiation", *Journal of Hazardous Materials*, (2015) 286, 64-74.

- 15- Rahmatollah Rahimi, Javad Shokraiyan, Mahboubeh Rabbani and Fatemeh Fayyaz, "Enhanced photobactericidal activity of ZnO nanorods modified by meso-tetrakis(4-sulfonatophenyl)porphyrin under visible LED lamp irradiation" *Water Science & Technology*, (2015) 71, 1249–1254.
- 16- Ali Maleki, Rahmatollah Rahimi, Saied Maleki, "Preparation and characterization of a new surface-modified dichromate/triethylamine/silica/iron oxide magnetic hybrid nanomaterial" *Journal of the Iranian Chemical Society*, 12 (2015) 191-196. DOI 10.1007/s13738-014-0473-z.

- 17-Rahmatollah Rahimi, Marzieh Yaghoubi Berijani, Solmaz Zargari "Synthesis of ZnO Nanorods via Coprecipitation Method and its Sensitizing with Tetrakis (4-Carboxy Phenyl) Porphyrin and its Tin Complex to Enhance the Visible Light Photocatalytic Activity", *Nanomaterials* 6:19 (2014) 228.
- 18-Mohsen Moradi-Haji Jafana, Mohammad-Reza Zamani-Meymian, Rahmatollah Rahimi, Mahboubeh Rabbani, "Effect of pyrolysis temperature on the electrical, optical, structural, and morphological properties of ITO thin films prepared by a sol–gel spin coating process" *Microelectronic Engineering* (2014) 130, 40–45.

- 19-Ali Maleki, Rahmatollah Rahimi, Saied Maleki, "Preparation and characterization of magnetic chlorochromate hybrid nanomaterials with triphenylphosphine surface-modified iron oxide nanoparticles" *J. Nanostruct Chem.*, DOI 10.1007/s40097-014-0131-0
- 20-Ali Maleki, Rahmatollah Rahimi, Saied Maleki and Negar Hamidi, "Synthesis and characterization of magnetic bromochromate hybrid nanomaterials with triphenylphosphine surface-modified iron oxide nanoparticles and their catalytic application in multicomponent reactions", *RSC Advances* (2014) 4, 29765-29771.
- 21-Milad Fallah, Mohammad-Reza Zamani-Meymian, Rahmatollah Rahimi, Mahboubeh Rabbani, "Effect of annealing treatment on electrical and optical properties of Nb doped TiO<sub>2</sub> thin films as a TCO prepared by sol–gel spin coating method" *Applied Surface Science* (2014) 316, 456–462.
- 22-Ali Maleki, Rahmatollah Rahimi, Saied Maleki, "Synthesis, characterization and morphology of new magnetic fluorochromate hybrid nanomaterials with triethylamine surfacemodified iron oxide nanoparticles", *Synthetic Metals*, 194 (2014) 11–18.
- 23-Rahmatollah Rahimi, Ali Maleki, Saied Maleki, "Synthesis and characterization of a new magnetic bromochromate hybrid nanomaterial with triethylamine surface modified iron oxide nanoparticles", *Chinese Chemical Letters* 25 (2014) 919–922.
- 24-Mohsen Moradi-Haji Jafan, Mohammad-Reza Zamani Meymian, Rahmatollah Rahimi, Mahboubeh Rabbani, "The effect of solvents and the thickness on structural, optical and electrical properties of ITO thin films

- prepared by a sol-gel spin-coating process", *Journal of Nanostructure in Chemistry*, 4 (2014) 89, DOI 10.1007/s40097-014-0089-y.
- 25-Mahboubeh Rabbani, Rahmatollah Rahimi, Mohammad Bozorgpour, Javad Shokraiyan, Samaneh Safalou Moghaddam, "Photocatalytic application of hollow CuO microspheres with hierarchical dandelion-like structures synthesized by a simpletemplate free approach", *Materials Letters* 119 (2014) 39–42.
- 26-F. Hashemzadeh, R. Rahimi, A. Ghaffarinejad, "Mesoporous nanostructures of Nb<sub>2</sub>O<sub>5</sub> obtained by an EISA route forthe treatment of malachite green dye-contaminated aqueous solutionunder UV and visible light irradiation", *Ceramics International*, 40 (2014) 9817–9829.
- 27-Fatemeh Hashemzadeh, Rahmatollah Rahimi, Ali Gaffarinejad, "Influence of operational key parameters on the photocatalytic decolorization of Rhodamine B dye using Fe<sup>2+</sup>/H<sub>2</sub>O<sub>2</sub>/Nb<sub>2</sub>O<sub>5</sub>/UV system", *Environmental Science and Pollution Research*, 21 (2014) 5121-5131.
- 28-Farhadi Houshang, Hashemzadeh Fatemeh, Rahimi Rahmatollah, Gaffarinejad Ali, "Surfactant-Free Hydrothermal Synthesisof Mesoporous Niobia Samples and Their Photoinduced Decomposition of Terephthalic Acid (TPA)", *Journal of Cluster Science*, 25 (2014) 651-666.
- 29-Rahmatollah Rahimi, Ali Maleki, Saied Maleki, "Preparation of magnetic fluorochromate hybrid nanomaterials with triphenylphosphine surface modified iron oxide nanoparticles and their characterization", *Journal of Magnetism and Magnetic Materials*, 355(2014)300–305.
- 30-Rahmatollah Rahimi, Ali Maleki, Saied Maleki, Ali Morsali, Mohmmad Javad Rahimi, "Synthesis and characterization of magnetic dichromate hybridnanomaterials with triphenylphosphine surface modified iron

oxidenanoparticles (Fe $_3$ O $_4$ @SiO $_2$ @PPh $_3$ @Cr $_2$ O $_7$ <sup>2-</sup>)", Solid State Sciences 28 (2014) 9-13.

- 31-F. Hashemzadeh, R.Rahimi, A.Gaffarinejad, "Photocatalytic Degradation of Methylene blue and Rhodamine B dyes by Niobium Oxide Nanoparticles synthesized Via Hydrothermal method", *International Journal of Applied Chemical Sciences Research*, 1 (2013) 95-102, ISSN: 2328-2827 (Online).
- 32-Rahmatollah Rahimi, Masoumeh Mahjoub Moghaddas, Solmaz Zargari, "SbVO<sub>4</sub>-TiO<sub>2</sub> Cation Deficient Photocatalyst: Synthesis and Photocatalytic Investigation", *Advanced Materials Research*, 702 (2013) 51-55.
- 33-Rahmatollah Rahimi, Masoumeh Mahjoub Moghaddas, Solmaz Zargari, Rahim Rahimi, "Synthesis of Mesoporous V-TiO<sub>2</sub> with Different Surfactants: The Effect of Surfactant Type on Photocatalytic Properties", *Advanced Materials Research*, 702 (2013) 56-61.
- 34-Rahmatollah Rahimi, Solmaz Zargarib, Masoumeh Mahjoub Moghaddas, "BiVO<sub>4</sub>-TiO<sub>2</sub> Nanocomposite: Synthesis and Photocatalytic Investigation", *Advanced Materials Research*, 702 (2013) 172-175.
- 35-R. Rahimi, M. Mahjoub Moghaddas, S. Zargari "Investigation of the anchoring silane coupling reagent effect in porphyrin sensitized mesoporous V-TiO<sub>2</sub> on the photodegradation efficiency of methyl orange under visible light irradiation" *Journal of Sol-Gel Science and Technology*, 65(3) (2013) 420-429.
- 36-Rahmatollah Rahimi, Azadeh Tadjarodi, Mahboubeh Rabbani, Hamed Kerdari, Mina Imani, "Preparation, Characterization and Photocatalytic Properties of Ba-Cd-Sr-Ti Doped Fe<sub>3</sub>O<sub>4</sub> Nanohollow Spheres on Removal

- of Congo Red Under Visible-Light Irradiation", *Journal of Superconductivity and Novel Magnetism*, 26 (2013) 219–228.
- 37-Rahmatollah Rahimi, Azadeh Tajarodi, Mina Imani, Mahboobeh Rabbani, Samaneh Safalou Moghadam, Hamed Kerdari, Synthesis of (carboxy phenyl) porphyrin coated paramagnetic iron oxide nanoparticles via amino acid for photodegradation of methylene blue, *Turkish Journal of Chemistry*, 37 (2013) 879-888.
- 38-NR Khalili, R Rahimi, M Rabbani, "Immobilized metalloporphyrins in mesoporous MCM-48 as efficient and selective heterogeneous catalysts for oxidation of cyclohexene" *Monatshefte für Chemical Monthly*, 144 (2013) 597-603

- 39-Ahmad Nozad Golikand, Khadijeh Didehban, Rahmatollah Rahimi, "Investigation of the properties of conductive hydrogel composite containing Zn particles", *Journal of Applied Polymer Science*, 126 (2012) 436–441.
- 40-Rahmatollah Rahimi, Ensieh Gholamrezapor, Mohammad Reza Naimi-Jamal, Mahboubeh Rabbani, "Oxidation of *o*-chloro and *o*-hydroxy benzyl alcohols catalyzed by copper (II) tetraphenylporphyrin nanoparticles synthesized by mixed solvent method", *Current Chemistry Letters* 1 (2012) 101–108.
- 41-Rahmatallah Rahimi and Neda Goodarzi, "Simultaneous Determination Water-soluble Vitamin B9 or Folic Acid in Mint Vegetable, by HPLC

Method Coupled with a Solid Phase Extraction", *International Journal of Pure & Applied Chemistry*, 7 (2012) 59-63.

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- 42-Rahmatollah Rahimi, Seyyedeh Zahra Ghoreishi & Mohammad G. Dekamin, "Immobilized metalloporphyrins on 3- aminopropyl-functionalized silica support as heterogeneous catalysts for selective oxidation of primary and secondary alcohols", *Monatshefte für Chemie Chemical Monthly*, 143 (2012) 1031-1038.
- 43-Masoomeh Madadi, Rahmatollah Rahimi, "Zeolite-Encapsulated Fe(III) Complex with 5,10,15,20-Tetraphenyl Porphyrin as Heterogeneous Catalysts for Epoxidation of α-Pinene: Synthesis, Characterization and Catalytic Activity", *Journal of Chemistry and Chemical Engineering*, 6 (2012) 173-178.
- 44-M. Madadi, R. Rahimi, "Zeolite-immobilized Mn(III), Fe(III) and Co(III) complexes with 5,10,15,20-tetra(4-methoxyphenyl)porphyrin as heterogeneous catalysts for epoxidation of (R)-(+)-limonene: Synthesis, characterization and catalytic activity", *Reaction Kinetics, Mechanisms and Catalysis* 107 (2012) 215–229.
- 45- A. Tadjarodi, R. Rahimi, M. Imani, H. Kerdari, M. Rabbani, "Synthesis, characterization and microwave absorbing properties of the novel ferrite nanocomposites", *Journal of Alloys and Compounds* 542 (2012) 43–50.
- 46-Rahmatollah Rahimi, Samaneh Safalou Moghaddam, Mahboubeh Rabbani, "Comparison of photocatalysis degradation of 4-Nitrophenol using N, S codoped TiO<sub>2</sub> nanoparticles synthesized by two different routes", *Journal o Sol-Gel science and technology*, 64 (2012) 17–26.

- 47- Rahmatollah Rahimi, Elham Honarvar Fard, Sara Saadati, Mahboubeh Rabbani, "Degradation of methylene blue via Co-TiO<sub>2</sub> nano powders modified by meso-tetra(carboxyphenyl)porphyrin", ", *Journal of Sol-Gel science and technology* 62 (2012) 351–357.
- 48-Ebrahim Alizadeh-Gheshlaghi, Behrouz Shaabani, Ali Khodayari, Yashar Azizian-Kalandaragh, Rahmatollah Rahimi. "Investigation of the catalytic activity of nano-sized CuO, Co<sub>3</sub>O<sub>4</sub> and CuCo<sub>2</sub>O<sub>4</sub> powders on thermal decomposition of ammonium perchlorate", *Powder Technology* 217 (2012) 330–339.
- 49- RAHMATOLLAH RAHIMI, SARA SAADATI, MAHBOUBEH RABBANI, "Investigation of Photocatalytic Activity of Porphyrin/F-Doped TiO<sub>2</sub>" *Journal of Biochemistry and Biotechnology*, 3 (2012) 49-53
- 50-RAHMATOLLAH RAHIMI, SAMANEH SAFALOU MOGHADDAM, MAHBOUBEH RABBANI, "Degradation of Crystal Violet by N, S-Codoped TiO2 Photocatalyst" 3 (2012) 29-32

51-Rahmatollah Rahimi, Hamed Kerdari, Mahboubeh Rabbani, Majid Shafiee, "Synthesis, characterization and adsorbing properties of hollow Zn-Fe<sub>2</sub>O<sub>4</sub> nanospheres on removal of Congo red from aqueous solution", *Desalination* 280 (2011) 412–418.

- 52-Seyed Hossein Hosseini, Rahmatollah Rahimi and Hamed Kerdari, "Preparation of a nanocomposite of magnetic, conducting nanoporous polyaniline and hollow manganese ferrite", *Polymer Journal* (2011) 1–6.
- 53- Rahmatolah Rahimi, Ensieh Gholamrezapor, Mohammad Reza Naimijamal, "Oxidation of benzyl alcohols to the corresponding carbonyl compounds catalyzed by copper (II) meso-tetra phenyl porphyrin as Cytochrome P-450 model reaction", *Inorganic Chemistry Communications*, 14 (2011) 1561–1568.
- 54-Rahmatallah Rahimi, Neda Goodarzi, "Determination of Folic Acid in Mint Vegetable, by High-Performance Liquid Chromatography", *Organic Chemistry Journal*, 1 (2011) 31-35.
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  Tehran, Iran, 19-21August 2008
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- 150-Rahimi, Rabani, Moharami, "Porphyrinotitania: Hybrid Organic-Inorganic MaterialsSynthesis sol-gel porphyrin", 10<sup>th</sup> Iranian Inorganic Chemistry Conference, Zahedan, 2008
- 151-Rahimi, Rabani, Jeddi, "The interaction between nanoporphyrins and melanin dye and the study of their application in skin cancer treatment", 10<sup>th</sup> Iranian Inorganic Chemistry Conference, Zahedan, 2008
- 152-Rahimi, Tavakoli, "Synthesis and Characterization of porphyrin and metalloporphyrin Nanoparticles", 10<sup>th</sup> Iranian Inorganic Chemistry Conference, Zahedan, 2008
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- 154-R. Rahimi, M. Rabani, "The surface photovoltaic properties of  $\alpha$ ,  $\beta$ ,  $\gamma$ ,  $\delta$  -tetrahydroxylphenylporphyrin (THPP) and  $\alpha$ ,  $\beta$ ,  $\gamma$ ,  $\delta$  -tetraphenylporphyrin (TPP) affected by nano-TiO<sub>2</sub>", *The First Regional Symposium on Bioelectrochemistry*, Oct. 13-15, 2008
- 155-Rahimi, Moharami, Jeddi, "The study of nano porphyrins and their application in electronic systems", 2nd International Congress on Nanoscience and Nanotechnology, Faculty of Chemistry, University of Tabriz, 28-30 October 2008
- 156-Rahimi, Rabani, Mahboobi, "The surface photovoltaic properties of  $\alpha$ ,  $\beta$ ,  $\gamma$ ,  $\delta$  -tetrahydroxylphenylporphyrin) THPP) and  $\alpha$ ,  $\beta$ ,  $\gamma$ ,  $\delta$  -tetraphenylporphyrin (TPP) affected by nano-TiO<sub>2</sub>", *2nd International Congress on Nanoscience and Nanotechnology*, Faculty of Chemistry, University of Tabriz, 28-30 October 2008

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- 164-R. Rahimi, P. Tavakolifard, "Synthesis and characterization of Tetra (4-carboxylphenyl) porphyrin nanoparticles and investigation of its effect on the efficiency of the nanoporous TiO<sub>2</sub> solar cell", 4<sup>th</sup> Student Conferences Nano Technology, Razi University, 2008
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- 166-R. Rahimi, F. Moharami, "Applications of nanoporphyrins in nano-wires", *Second Conferences of nano structures*, Kish, 2007
- 167-Rahimi, Azhdari, "Synthesis and characterization of CuO nanoparticles via photochemistry and thermal process", *Student conference of nanotechnology*, 2007
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- 188-R. Rahimi, F. Moharami, M. Jeddi, "Study of Molecular Electronic Nanometery of porphyrins", The First national Conference on Biotechnology and Biocatalysts, Islamic Azad University of Shahr-e-Rey, 2006
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- 199-Gh. Mohammad nejad Shirazi, R. Rahimi, M. Anbia, "synthesis and Characterization of Mesoporous silicate and investigation of presented mechanisms", second chemistry seminar, Varamin University, Pishva, 2004
- 200-R. Rahimi, Karimpoor "synthesis of complex of Cupper N-methyl tetra solfonated phenyl porphyrin and its reaction with Cyanide ", 6<sup>th</sup> National Congress of Engineering Chemistry, Isfahan University, 1991

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- 2-R. Rahimi, P. Farasati, "Chemical Education", Roshd Journal of Chemical Education, 1995
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- 1-Rahmatollah Rahimi, Abdous, Fariba Moharami, Mahboobeh Rabbani, "Physical Chemistry II" publisher: Amir Kabi University, 1391(2012)
- 2-R. Rahimi, L. Hojat Khashani, "Bioinorganic chemistry", publisher: Iran University of Science and Technology, 2012
- 3-R. Rahimi, F. MoharamiT M. Rabani, "Physical chemistry 1", publisher: Noavaran Sharif, 2010
- 4-R. Rahimi, "Reaction Mechanisms for coordination compound", publisher: Raze rezvan, 2007
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- 6-S. R. Aghapoor Moghadam, R. Rahimi, "chemistry of Aluminum", Edition: Sepidrood, publisher: Raze rezvan, 2003
- 7-R. Rahimi, H. Karimpoor, "general chemistry with multiple choice questions", Edition: Iran University of science and technology, publisher: Raze rezvan, 2002
- 8-R. Rahimi, S. Bozorgi, S. R. Aghapoor Moghadam, "chemistry 1, 2 and 3 with multiple choice questions", publisher: Ostadi, third edition: 2002, second edition: 2000, firs dition: 1999
- 9-R. Rahimi, "Kinetic of porphyrin chemistry", Edition: Iran University of science and technology, publisher: Dadkhah,1995

# **Research projects:**

	Project title	Date of Start	date of end
1	synthesis of Porphyrin complexes and Investigation of their applications in removal of cyanide	2001	2003
2	Acids - Bases and buffers in human body	2004	2005
3	Preparation of Heteropoly anions and Investigation of Applications	2005	2006
4	Study of Electerical Conductivity of Heteropoly anions	2006	2007
5	Study and characterization of kinetic reactions of porphyrins and metaloporphyrins with acids and metals in aqueous solutions	2007	2008

6	Study of Electerical Conductivity of Porphyrin Nano Particles	2008	2009
7	Study of Porphyrins and nano porphyrins and their applications as complexes of heavy transition metals	2009	2010
8	Study of catalytic effect of Porphyrins and metalloporphyrins immobilized in various Support on oxygen addition to various substrates and comparison with nanoporphyrins	2010	2011
9	Application of porphyrin modified  TiO <sub>2</sub> for photocatalytic decomposition of phenolic pollutants under visible light	2011	2012

## **Guided Projects at Ph.D. level:**

- 1-"Synthesis, and characterization of cobaloxime as an organometalic compound; a model of vitamin B12 with the approach of green nanochemistry", by Iraj Mesgarzadeh, for degree of Ph.D., Supervisors: Dr. R. Rahimi and, Advisor: Dr. Ali Maleki, Dr. Mahboobeh Rabbani, Chemistry Department, Iran University of Science and Technology, The completion of experimental processes is still under supervision
- 2-"A chemical study and investigation of kinetic processes of porphyrin compounds as photobactericidial and bacteriostatic agents", by Fatemeh Fayaz Joshari, for degree of Ph.D., Supervisor: Dr. R. Rahimi and Advisors: Dr. Ali Maleki and Engineer Mehdi Rasa, Chemistry Department, Iran

University of Science and Technology, The completion of experimental processes is still under supervision

- 3-"Synthesis and charactrization of L-Carnosine and porphyrin as a achelating agent for biological detoxification and investigation of their effects on the therapeutic samples", by Maryam Khosravi, for degree of Ph.D., Supervisor: Dr. R. Rahimi and Advisors: Dr. ebrahimi Safavi, Chemistry Department, Iran University of Science and Technology, The completion of experimental processes is still under supervision
- 4-"Synthesis, charactrization and the photocatalytic activity investigation of new compounds of the porphyrin-graphene-TiO<sub>2</sub> nanocomposite in the degradation of methyl orange and inactivation of *Escherichia coli*", by Solmaz Zargari, for degree of Ph.D., Supervisor: Dr. R. Rahimi and Advisors: Dr. Morsali and Dr. Ghaffarinejad, Chemistry Department, Iran University of Science and Technology.
- 5-"Immobilization of Chromium (VI) phase transfer catalysis on magnetic nanoparticles and study of their applications in organic reactions", by Ali Maleki, for degree of Ph.D., Supervisor: Dr. R. Rahimi and Advisors: Dr Morsali and Dr. Maleki, Chemistry Department, Iran University of Science and Technology, The completion of experimental processes is still under supervision
- 6-"Synthesis of nano catalysts with active site of TiCl<sub>4</sub>/AlR<sub>3</sub> based on Alkaline earth metals halide by using porphyrin for the α-Olefines polymerization" by Mahboubeh Rabbani, for degree of Ph.D., Supervisor: Dr. R. Rahimi, and Advisors: Dr. A. Maleki and Dr. H. Ghafouri, Chemistry Department, Iran University of Science and Technology.

7-"Synthesis and characterization of photocatalysts based niubum and investigation of photocatalytic application of these compounds" by Fatemeh Hashemzadeh for degree of Ph.D., Supervisor: Dr. R. Rahimi and Dr. Ali Ghaffarinejhad, Chemistry Department, Iran University of Science and Technology,

# **Guided Projects at graduate level:**

- 1-Synthesis, characterization and photocatalytic peoperties investigation of nano Fe<sub>3</sub>O<sub>4</sub>/NiO/V<sub>2</sub>O<sub>5</sub> functionalized with porphyrin", by Ghafar Kareh, Supervisor: Dr. R. Rahimi, Advisor: Dr. Mahboobeh Rabbani, Chemistry Department, Iran University of Science and Technology, The completion of experimental processes is still under supervision.
- 2-"Synthesis and characterization of Bismuth Tangestate functionalized with porphyrin", by Shabnam Pordel, Supervisor: Dr. R. Rahimi, Advisor: Dr. Mahboobeh Rabbani, Chemistry Department, Iran University of Science and Technology, The completion of experimental processes is still under supervision.
- 3-"Synthesis, characterization and photocatalytic application of graphene functionalization with sulfur and porphyrin", by Mahsa Moshari, Supervisor: Dr. R. Rahimi, Advisor: Dr. Mahboobeh Rabbani, Chemistry Department, Iran University of Science and Technology, The completion of experimental processes is still under supervision.
  - 4-"Synthesis, characterization, and photocatalytic activity investigation of core-shell nanoparticles of Zn-Fe<sub>2</sub>O<sub>4</sub>@ZnO with nanopore functionalized with porphyrin", by Mehdi Heidari Golfazani, Supervisor: Dr. R. Rahimi,

- Advisor: Dr. Mahboobeh Rabbani, Chemistry Department, Iran University of Science and Technology.
- 5-"Synthesis and characterization of Manganeze (II, III)-Bismuth Vanadateporphyrin and its photocatalytic activity under visible light irradiation", by Amin Mrhrejadi, Supervisor: Dr. R. Rahimi, Chemistry Department, Iran University of Science and Technology, The completion of experimental processes is still under supervision.
- 6-"Synthesis and characterization of magnetic sulfunated tin oxide nanoparticles and its functionalization with mateloporphyrin of tetrakis(4-pyridyl) porphyrin to investigate of oxidation processes", by Fatemeh Mohammadi Dolatabadi, Supervisors: Dr. R. Rahimi and Dr. Hosein Ghafuri, Chemistry Department, Iran University of Science and Technology.
  - 7-"Preparation of electrod based TiO<sub>2</sub> sensitized with porphyrin and investigation of its application as a photoelectrochemical sensor of NADH", by Zahra Sadat Shojaie, for degree of M.S., Supervisors: Dr. R. Rahimi and Dr. A. Ghaffarinejad, Chemistry Department, Iran University of Science and Technology.
- 8-"Synthesis and characterization of visible light photocatalyst based zinc oxide nanostructure modified with porphyrin", by Samaneh Shariatinia, for degree of M.S., Supervisor: Dr. R. Rahimi, Chemistry Department, Iran University of Science and Technology.
  - 9-"Synthesis and characterization of photocatalyst based ZnO-BiVO<sub>4</sub> nanocomposites sensitized with porphyrin in degradation of organic pollutants and reduction of graphene oxide to graphene", by Marziyeh Yaghubi Barijani, for degree of M.S., Supervisor: Dr. R. Rahimi, Chemistry Department, Iran University of Science and Technology.

- 10-"Design of optical chemical sensor based tetrkas(4-hydroxy phenyl)porphyrin stabilized on graphene oxide to quantitative determine of Hg(II) in water samples", by: Asgar Koohi Khasheh heiran, for degree of M.S., Supervisors: Dr. R. Rahimi and Dr. R. Zare Dorabi, Chemistry Department, Iran University of Science and Technology.
- 11-"Synthesis and characterization of metal complexes of 5, 10, 15, 20-tetrakis 1-E, 3-diphenyl, 2-propen, 1-one porphyrin and its photocatalytic activity investigation after fixing on the graphene oxide and its application in the oxidation of olefins", by Zahra Movahedinia, for degree of M.S., Supervisors: Dr. R. Rahimi and Dr. Ghafuri, Chemistry Department, Iran University of Science and Technology.
- 12-"Synthesis of 5, 10, 15, 20- tetrakis (parabenzoic acid) porphyrin cobalt and magnesium (III) and its linkage to natural polymer of chitosan and its photocatalytic properties investigation as well as its application in oxidation of sulfides to disulfides", by Ziba felfelian, for degree of M.S., Supervisors: Dr. R. Rahimi and Dr. Ghafuri, Chemistry Department, Iran University of Science and Technology.
- 13- "synthesis, characterization and properties investigation of Ca<sup>2+</sup>, Mg<sup>2+</sup>, Fe<sup>2+</sup> complexes with mononuclear and two nuclear ligands of 1, 4-dihydro pyridine (synthesized with baritoric acide)", by Fatemeh Rafie, for degree of M.S., Supervisors: Dr. R. Rahimi and Dr. Ghafuri, Chemistry Department, Iran University of Science and Technology.
- 14-"Synthesis and characterization of 5, 10, 15, 20-tetrakis (4-amino biphenyl, 4-iminophenyl) porphyrin cobalt (III) and its interaction with graphene oxide, its photocatalytic properties and its using in the oxidation of thols to disulfids", by Shirin Rahmani, for degree of M.S., Supervisors: Dr. R. Rahimi and Dr. Ghafuri, Chemistry Department, Iran University of Science and Technology.

- 15- "The alloy optimization of silica and alumina in kaolin to prepare a nanostructure of zeolite NaX", by: Sahar pirkhedri, Supervisors: Dr. R. Rahimi and M. Anbia, Chemistry Department, Iran University of Science and Technology.
- 16-"Preparation of dye sensitized solar cell based porphyrin dye and improvement of its efficiency using graphene in the anode electrod" by meisam Jamali, for degree of M.S., Supervisosr: Dr. R. Rahimi and Dr. Amani, Chemistry Department, Arak University.
- 17-"Using of porphyrins and nanotubes in the preparation of solar cells", by Zahra Kheradmand, for degree of M.S., Supervisor: Dr. R. Rahimi, Chemistry Department, Iran University of Science and Technology.
- 18- "Preparation and characterization of substrates of TiO2 nanoparticles doped with metals and complexes and their properties investigations in solar cells", by: Milad Fallah, Supervisors: Dr. ? Zamani and Dr. R. Rahimi, Physic Department, Iran University of Science and Technology.
- 19- "Preparation of TCO using indium oxide nanoparticles doped with transition metals and complexes and their properties investigations in solar cells", by: Mohsen Moradi Haji Jafan, Supervisors: Dr. ? Zamani and Dr. R. Rahimi, Physic Department, Iran University of Science and Technology.
- 20- "Synthesis, characterization, and photocatalytic application of nickel oxide nanostructures modified using nickel complexe of sulfunated tetrakis phenyl porphyrin", by: Mohammad Bozorgpour, Supervisors: Dr. R. Rahimi, Chemistry Department, Iran University of Science and Technology.
- 21-"Synthesis of poly pyrrole-iron oxide nanocore shell functionalized with TCPP porphyrin and investigation of its application in the removal of

- **mercury metal**", by Meisam Asadi Davati, for degree of M.S., Supervisor: Dr. R. Rahimi, Chemistry Department, Iran University of Science and Technology.
- 22- "Synthesis, characterization nad photocatalytic application of zinc oxide modified with copper complex of sulfunated tetrakis phenyl porphyrin", by: Javad Shokraian, Supervisors: Dr. R. Rahimi, Chemistry Department, Iran University of Science and Technology.
- 23-"Synthesis and characterization of TiO<sub>2</sub> mesoporous doped by V and Halogen and organi compounds", by Msoumeh Mahjoub, for degree of M.S., Supervisor: Dr. R. Rahimi and Advisor: Dr. Anbia and Dr. Zare, Chemistry Department, Iran University of Science and Technology.
- 24-"Study, investigation and removal of heavy metals from water by porphrins and metalloporphyrins nanoparticles on mesoporous silica", by Mahdi Deylam, for degree of M.S., Supervisor: Dr. R. Rahimiand and Advisor: Dr. Maleki, Chemistry Department, Iran University of Science and Technology.
- 25-"Removal of organic pollutants from water by porphrins on SBA-15 nanoprticles", by Ahmad Najafian, for degree of M.S., Supervisor: Dr. R. Rahimiand and Advisor: Dr. Maleki, Chemistry Department, Iran University of Science and Technology.
- 26-"Removal of organic pollutants from aqueous media by TiO<sub>2</sub> sensitized with porphyrins and metalloporphyrins", by Hamideh Bathaee, for degree of M.S., Supervisor: Dr. R. Rahimi and Advisor: Dr. Maleki, Chemistry Department, Iran University of Science and Technology.
- 27-"The photocatalytic degradation of 2,4-dichlrophenol and Methylene blue by porphyrin and metalloporphyrin immobilized on Co-TiO<sub>2</sub>

- nanopoweder", by Elham Honarvar Fard, for degree of M.S., Supervisor: Dr.R. Rahimi, 2012, Chemistry Department, Iran University of Science and Technology
- 28-"Investigation of synthesize of porphyrin and metalloporphyrin on F doped titanium dioxide nanoparticles for photocatalytic degradation of Rhodamine B", by Sara Saadati, for degree of M.S., Supervisor: Dr. R. Rahimi, 2012, Chemistry Department, Iran University of Science and Technology
- 29-"Photocatalytic degradation of 4-nitrophenol by porphyrin and metalloporphyrins immobilized on N, S-codoped TiO<sub>2</sub> nanoparticles", by Samaneh Safalou Moghaddam, for degree of M.S., Supervisor: Dr. R. Rahimi, 2012, Chemistry Department, Iran University of Science and Technology
- 30-"Study and investigation of catalytic oxidation of alkenes by porphyrins and metalloporphyrins immobilized in nanoporous", by Nafise Rahmani Khalili, for degree of M.S., Supervisor: Dr. R. Rahimi and Consulted by: Dr. M. Anbia, 2011, Chemistry Department, Iran University of Science and Technology
- 31-"Study and investigation of catalytic oxidation of alkenes by porphyrins and metalloporphyrins immobilized in silica", by Zahra Ghoreyshi, for degree of M.S., Supervisor: Dr. R. Rahimi and Consulted by: Dr. M. G. Dekamin, 2011, Chemistry Department, Iran University of Science and Technology
- 32-"Oxidation reactions of monoterpenes by nano metalloporphyrins on nanozeolite substrate", by Masoumeh Madadi, for degree of M.S., Supervisor: Dr. R. Rahimi, 2011, Chemistry Department, Iran University of Science and Technology

- 33-"The synthesis and characterization of nanoparticles of porphyrins and investigation of catalitic activity on oxidation of benzylic alcohols", by Ensie Gholam Reza poor, for degree of M.S., Supervisors: Dr. R. Rahimi, Dr. M. R. Naeemi Jamal, July 2009, Chemistry Department, Iran University of Science and Technology
- 34-"The synthesis and study of polymers involved Oxygen-donors atoms as ligand and their complexs with silver", by Mohammad Jamal Asad poor, for degree of M.S., Supervisors: Dr. R. Rahimi, Dr. A. Morsali, March 2010, Chemistry Department, Iran University of Science and Technology
- 35-"The synthesis, characterization and solution study of novel o-donor nitro schiff bases and their Thallium complexes", by Maryam Eskandari, for degree of M.S., Supervisors: Dr. R. Rahimi, Dr. A. Morsali, March 2010, Chemistry Department, Iran University of Science and Technology
- 36-"Synthesis and Characterization of NanoParticles of Porphyrins and Their Application as Sensor of Heavy Metals", by Marzieh Javaheri Kachosangi, for degree of M.S., Supervisors: Dr. R. Rahimi, Dr. M. Khashani, July 2009, Chemistry Department, Iran University of Science and Technology
- 37-"Synthesis and characterization of NanoPorphyrins and Study of their Applications on Nanoprous as photocatalysis", by Maryam Mahboobi, for degree of M.S., Supervisors: Dr. R. Rahimi, May 2009, Chemistry Department, Iran University of Science and Technology
- 38-"Association of Keggin-type anions with cationic meso-substituted porphyrins: synthesis, characterization and oxidative catalytic studies", by Zahra karamzadeh, for degree of M.S., Supervisors: Dr. R. Rahimi and Advisor: Dr. Hamid Reza Khavasi, September 2008, Chemistry Department, Iran University of Science and Technology

- 39-"Synthesis, characterization and metallation of pyrrole modified porphyrins and investigation of their catalytic activity in oxidation reactions", by Alireza Azhdari Tehrani, for degree of M.S., Supervisors: Dr. R. Rahimi and Advisor: Dr. Hamid Reza Khavasi, May 2008, Chemistry Department, Iran University of Science and Technology
- 40-"Synthesis and Characterization of Porphyrins and Their Nano Particles and Investigation of Electerical Conductivity of Their Compounent", by Pegah Tavakoli fard, for degree of M.S., Supervisors: Dr. R. Rahimi, May 2008, Chemistry Department, Iran University of Science and Technology
- 41-"Synthesis and Characterization of Silver Porphyrins and Study of their Applications", by F. Moharrami, for degree of M.S., Supervisors: Dr. R. Rahimi, Feb. 2007, Chemistry Department, Iran University of Science and Technology
- 42-"Synthesis of TPPS complex and Study of demetallation Reactions", by M. Jeddi, for degree of M.S., Supervisors: Dr. R. Rahimi, Feb. 2007, Chemistry Department, Iran University of Science and Technology
- 43- "Synthesis and Characterization of Tritungstovanadoselenic Heteropoly acid", by Amir Rajaee, for degree of M.S., Supervisors: Dr. R. Rahimi, Dr. A. Tadjarodi, Dec. 2006, Chemistry Department, Iran University of Science and Technology
- 44-"Synthesis, Characterization and Application of TCPP and Study of its Reaction with Hetropoly acids", by Sayyed Hamed Rahmanpour, Supervisors: Dr. R. Rahimi, Dec. 2006, Chemistry Department, Iran University of Science and Technology
- 45-"Synthesis of TPPS<sub>4</sub> Porphyrin molecule and Study of its Reaction with Chloroquine", by Sayyed Mohammad Reza Ravanfar, for degree of M.S., Supervisors: Dr. R. Rahimi, Dec. 2006, Chemistry Department, Iran University of Science and Technology

- 46-"Synthesis and detection of acidic porphyrin and study its interaction with synthetic melanin (Dopamelanin)", by Maryam Mokhtarimehr, for degree of M.S., Supervisors: Dr. R. Rahimi, Fall 2006, Chemistry Department, Iran University of Science and Technology
- 47-"Charachterization of Minerals of Some of The Vegetables", by Mahboobe Rabani, for degree of M.S., Supervisors: Dr. R. Rahimi, December 2005, Chemistry Department, Iran University of Science and Technology
- 48-"Syenthesis and Characterization of decatungstomolybdoniobogermanic Heteropoly Acid", by Mohammad Fatooreh, for degree of M.S., Supervisors: Dr. R. Rahimi, December 2005, Chemistry Department, Iran University of Science and Technology
- 49-"Synthesis & Charactrisation of UndecaTungstoCobaltoAluminic Heteropoly Acid", by Pasha Ghahramani, for degree of M.S., Supervisors: Dr. R. Rahimi, December 2005, Chemistry Department, Iran University of Science and Technology
- 50-"Synthesis of Titanium Mesoporous Silicate, Studying and Characterization", by Gh. Mohammadnezhad Shirazi, for degree of M.S., Supervisors: Dr. R. Rahimi and Dr. M. Anbia, Jan. 2005, Chemistry Department, Iran University of Science and Technology
- 51-"Producting of Hegmatan Pozzolanic Cement", by J. Haidari Mohazab, for degree of M.S., Supervisors: Dr. A. Taeb, and Consulted by: Dr. R. Rahimi, Oct. 1999, Chemistry Department, Iran University of Science and Technology
- 52-"Purification of Phosphoric Acid", by A. Amiri, for degree of M.S., Supervisors: Dr. A. Taeb, Dr. R. Rahimi, and Consulted by: Dr. T. Mohammadi, Dec.1999, Chemistry Department, Iran University of Science and Technology

53-"Reactivity of Glycin and Asparagine with Mn(III)Porohyrins", by A. Mani, for degree of M.S., Supervisors: Dr. R. Rahimi and Dr. D. boghaie, 1998, Chemistry Department, Iran University of Science and Technology

#### **Administrational Positions:**

- 1-Head of inorganic department (2016 to present)
- 1.Dean of Chemistry Department at Iran University of science and Technology (IUST) (Since 2010 to 2014)
- 2. Member of Board of Directors of Amir kabir petrochemistry (2011)
- 3. Secretary of executive board and head of secretarial office for instructor selection at university of applied science and technology, 2008
- 4.Member of Quran curriculum council in Islamic Azad university, branch of Saveh city, 2003
- 5.Member of research council in Islamic Azad university, branch of Saveh city, 1995
- 6.Committee member of faculty and scholarship students recruitment in Islamic Azad university, branch of Saveh city, 1999
- 7.Director of applied chemistry division in Islamic Azad university, branch of Saveh city, 2003
- 8. Supervisor of Iranian chemistry Olympiad team in Italy with commission of education ministry, 1992
- 9.Beholder of appraisal research plants in chemistry laboratories at nurtured education ministry, 1992
- 10.Deputy of nurtured education ministry in chemical and chemical engineering society of research and educational curriculum organization, 1992

- 11.Committee member of chemistry Olympiad of Iran by ordinance of vice minister for research and educational curriculum, 1992
- 12-Committee member of coordination in development office at University of applied science and technology, 2005
- 13-Member of editorial board for Roshd educational Journal of research and educational curriculum organization, 1992
- 14-Plenipotentiary deputy of vice ministry for student affairs in presenting statistics plants with ordinance of vice minister for research and curriculum, 1991
- 15-Major constant member of programming headcourter for cultural affairs of murderds children in ministry of cultural and education, 1993
- 16-Research concil member of Iran University of science and technology, 1992
- 17-Commission member for evalution of international degrees in ministry of research, Iran University of science and technology, 1999
- 18-Director of international relation affairs in UAST, 2005
- 19-Manager of examination and specific educations in UAST, 2004
- 20-Editorial manager for Journal of Exir in IUST, 2000
- 21-Head of inorganic chemistry division at chemistry department in IUST, 2001
- 22-Deputy of secretary-general in higher council of applied science in university of applied science and technology. 1995
- 23-Vice president for student affairs in Iran University of science and technology, 1994
- 24-Counselor and office manager of vice-ministry of higher education, 1993
- 25-Vice-chairman of chemical Engineering department in Iran University of science and Technology, 1992

# Membership in scientific and international councils, committees and associations:

- 1-member of Journal of porphyrin and phthalocyanine (JPP), 2007
- 2-member of Iranian professional association, 2006
- 3-member of Iranian chemical society, 2006
- 4-member of American chemical society (ACS), 1983, Howard university