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| **Ezzat RafieeC:\Users\FireWall\Desktop\Rafiee.png****Professor Department of ChemistryFaculty of ScienceRazi University****Address: Department of Chemistry,Razi University, Tagh Bostan, Kermanshah, Iran****Tel:+98(83) 34274580Fax:+98(83) 34228439 Emails: (☻=AT)** **e.rafiei☻ razi.ac.ir****Ezzat\_Rafiee☻ yahoo.com****Homepage:****[http://www.razi.ac.ir/Rafiee](http://www.razi.ac.ir/Rafiee%20)**  |
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| **I. Personal Informations** |
| Name: E. RafieeDate of Birth: Sep. 13, 1971Place of Birth: Mashhad, IranMarital Status: Married, 1 Child |
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| **II. Educational Records** |
| * Visiting Student: Liverpool University's Leverhulme Centre for Innovative Catalysis, Liverpool, UK , 2003
* Ph.D. in Inorganic Chemistry: Isfahan University, Iran, 2003
* M.S. in Inorganic Chemistry: Shiraz University, Shiraz, Iran, 1996
* B.S. in Chemistry: Shiraz University, Shiraz, Iran, 1992
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| **III. Academic Experiences** |
| * Assistant Professor: Razi University , Kermanshah, Iran, 2003-2007
* Associate Professor: Razi University , Kermanshah, Iran, 2007-2011
* Professor: Razi University , Kermanshah, Iran, Since 2011
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| **IV. Courses Taught** |
| * Ph.D.: Inorganic Polymer, Bioinorganic Chemistry, Heterogeneous nanocatalysts, Advanced Inorganic Chemistry, Clusters, Advance subject in Inorganic Chemistry, Nanoinorganic Chemistry
* M.S.: Advanced Inorganic Chemistry, Advance subject in Inorganic Chemistry, Bioinorganic Chemistry, Sol-Gel Chemistry.
* B.S.: General Chemistry I and II, Inorganic Chemistry I and II, Organometallic Chemistry
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| **V. Awards** |
| * 1. Distinguished Researcher of Razi University, 2003
	2. Distinguished Researcher of Razi University, 2004
	3. Distinguished Researcher of Razi University, 2005
	4. Distinguished Researcher of Razi University, 2006
	5. Distinguished Researcher of Razi University, 2007
	6. Distinguished Researcher of Razi University, 2009
	7. Distinguished Researcher of Razi University, 2010
	8. Distinguished Researcher of Razi University, 2011
	9. Distinguished Researcher of Razi University, 2012
	10. Distinguished Researcher of Razi University, 2013
	11. Distinguished Researcher of Razi University, 2014
	12. Distinguished Researcher of Razi University, 2015
	13. Distinguished Researcher of Razi University, 2016
	14. پژوهشگر برتر جوان کشور در شیمی معدنی، 1394
	15. Distinguished Researcher of Razi University, 2017
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| **VI. Research Interests** |
| * 1. Synthesis of Polyoxometalates
	2. Heteropoly Anions as Catalyst in Organic Synthesis
	3. Heterogeneous and Homogeneous Catalysts
	4. Industrial applications of catalysts
	5. Schiff Bases
	6. Nanocatalysts
	7. Hybrid Ionic Liquid
	8. Nanometals in Coupling Reactions
	9. Biodiesel
	10. Sweetening of sulfur
	11. Photocatalyst
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| **VII. Students Graduated** |
| ***M.S. Degree****:* |

1. Hediye Dezfouli “Synthesis and characterization of some Schiff base ligands and complexation with nickel, copper, and cobalt
2. Fariba Tork “Application of heteropoly acids in homogeneous and heterogeneous systems for organic synthesis”
3. Alireza Azad “ Application of Sn(II), (IV) and Co(III) polyoxometalates in some organic reactions”
4. Solmaz Rashidzadeh “Investigation of activity of supported heteropoly acids in some organic reactions”
5. Fatemehsadat Paknejad “Investigation of different supports effect on the activity of heteropoly acids in synthesis of B-acetamido ketones and B-enaminones as catalyst”
6. Zahra Seidzadeh “Effect of polytungstic acid on morphology and performance of polyether sulfone and polyvinyl alcohol membranes for gas separation”
7. Sara Eavani “Synthesis and Characterization of HPA-Based Catalysts and Investigation of Their Acidity-Catalytic Activity Relationship in the Synthesis of Enaminones, 1, 4-Dihydropyridins and Glycosylation of Organic Compounds”
8. Hori Mahdavi “Investigation of Catalytic Acidity of Heteropoly Anions with Different Addenda Atom, Heteroatom and Counter Cation in the Synthesis of Enaminones, Tetrasubstuted Imidazoles and Iodations of Alcohols”
9. Akram Fakhri “Investigation of properties of heteropoly acids, their salts and supported heteropoly acids and application of them as catalyst for the synthesis of coumarins and mandelates”
10. Zohreh Zolfaghari “Comparison of Catalytic Activity of Heteropoly Compounds in the Synthesis of Bis(indolyl)alkanes”
11. Fereshteh Khajoei “New methods for the synthesis of quinoline derivatives and comparison of catalytic activity of different Keggin type heteropoly acids, their salts and supported ones
12. Shabnam Shahebrahimi “Preparation and Characterization of Nanosilica from Rice Husk Investigation of Catalytic Properties of 12-Tungstophosphoric Acid Supported on Nanosilica
13. Zahra Shirazi “Synthesis and investigation of catalytic activity of Keggin POMs including Fe3+ and Al3+ in some organic reactions”
14. Farzaneh Rahimi “Improvement of catalytic activity of heteropoly compounds in Claisen-Schmidt condensation”
15. Maryam Khodayari “Nano Supported Heteropoly Acid and Their Salts as Highly Efficient Catalysts for Direct Benzylation of 1,3-Dicarbonyl Compounds”
16. Masoud Kahrizi “Investigation of activity of 12-tungstocobaltate supported on nano silica from rice husk its potassium salt and cesium 12-tungstophosphoric acid as nano catalyst in the synthesis of β-ketoenol ethers and some organic reactions”
17. Norollah Noori “Preparation and Review of factors affecting the formation of dense coating of nano metal-organic framework on silk fibers by sequential steps”
18. Leila Heidari “Comparative DNA and BSA interaction studies of antidiabetic drug, metformin and its platinum (II) complex using different instrumental methods”
19. Fereshteh Jalilian “Catalytic application of K5CoW12O40 and its acidic form supported on nanosilica in the desulfurization, synthesis of indole derivatives and direct alkylation of aromatic compounds”
20. Sara Kazemi
21. Sosan Rezaei
22. Nilofar Pami
23. Mohammad Hosein

**Ph.D. Degree:**

1. Mehdi Amirinejad “Preparation and characterization of organic-inorganic composite membrane for high temperature application in PEM fuel cells”
2. Sara Eavani “Synthesis and characterization of hybrids and nano magnetically recoverable heteropoly acid-based compounds: Investigation of biological applications and their catalytic performances in biodiesel production, desulfurization and some organic reactions”
3. Nasibeh Rahpeima
4. Shirin Nadri “Synthesis, characterization and application of SiO2-supported Co-Fe and Fe-Mn nanocatalysts in the Fischer-Tropsch synthesis and kinetic studies of the Fischer-Tropsch reaction; and application of efficient palladium catalyst systems in coupling reactions”
5. Maryam Khodayari
6. Narges Nobakht
7. Parvaneh Ghaderi
8. Fakhrossadat Mirnezami
9. Ayoub Shahbazi
10. Masoud Kahrizi
11. Ali Ataei
12. Elham Noori
13. Shabnam Shahebrahimi
14. Maryam Mahmoodi
15. Farnaz Karimi
16. Hamed Ramezanalizadeh

**VIII. List of Publications**

1. **E. Rafiee**, S. Tangestaninejad, M. H. Habibi, V. Mirkhani, “A Mild, Efficient and α- Selective Glycosidation by Using Potassium dodecatungstocobaltate trihydrate as Catalyst” Bioorg. Med. Chem. Lett., 2004, 13, 3611.
2. **E. Rafiee**, S. Tangestaninejad, M. H. Habibi, V. Mirkhani, “K5CoW12O40.3H2O as a New and Efficient Catalyst for Preparation of Mandelates” Bull. of Korean Chem. Soc., 2004, 25(5), 599.
3. **E. Rafiee**, S. Tangestaninejad, M. H. Habibi, V. Mirkhani, “Potassium dodecatungstocobaltate trihydrate (K5CoW12O40.3H2O) as an Efficient Catalyst for Aminolysis of Epoxides” Synthetic commun., 2004, 34, 3673.
4. E. F. Kozhevnikova, **E. Rafiee**, I. V. Kozhevnikov, “Fries Rearrangement of Aryl Esters Catalysed by Heteropoly Acid: Catalyst Regeneration and Reuse” Applied Catalysis A: General, 2004, 260, 25-34.
5. **E. Rafiee**, S. Tangestaninejad, M. H. Habibi, I. Mohammadpoor-Baltork, V. Mirkhani, “Efficient One-Step Conversion of Tetrahydropyranyl Ethers to Acetates and Formates in the Presence of Potassium Dodecatungstocobaltate trihydrate K5CoW12O40.3H2O” Russ. J. of Org. Chem., 2005, 41(3), 403-405.
6. **E. Rafiee**, S. Tangestaninejad, M. H. Habibi, V. Mirkhani, “Cobalt Polyoxometalate, [CoW12O40]5-, as a New Reusable Catalyst for Addition of Trimethylsilyl Cyanide to Carbonyl Compounds” Bull. Of Korean Chem. Soc., 2005, 26, 9.
7. **E. Rafiee**, F. Shahbazi, M. Joshaghani, F. Tork. ”The Silica Supported H3PW12O40 (a Heteropoly Acid) as an Efficient and Reusable Catalyst for a One-Pot Synthesis of β-Acetamido Ketones by Dakin-West Reaction” J. Mol. Catal. A, 2005, 242, 129-134.
8. **E. Rafiee**, F. Tork, M. Joshaghani; “Heteropoly Acids as Solid Green Bronsted Acids for a One-Pot Synthesis of β-acetamido ketones by Dakin-West Reaction” Bioorg. Med. Chem. Lett., 2006, 16, 1221.
9. **E. Rafiee**, H. Jafari,“A Pactical and Green Approach Towards Synthesis of Dihydro-pyrimidinones: Using Heteropoly Acids as Efficient Catalysts” Bioorg. Med. Chem. Lett., 2006, 16, 2463.
10. **E. Rafiee**, F. Shahbazi, “One-Pot Synthesis of Dihydropyrimidones Using Silia-Supported Heteropoly Acid as Efficient and Reusable Catalys: Improved Protocol Conditions for the Biginelli Reaction” J. Mol. Catal. A, 2006, 250, 57-61.
11. **E. Rafiee**, I. Mohammadpoor Baltork, S. Tangestaninejad, A. Azad, S. Moinee; “Tin(II) Polyoxometalate as an Efficient Catalyst for the Selective Oxidation of Sulfides” Z. Naturforsch., 2006, 61b, 269-271.
12. M. Joshaghani, E. Faramarzi, **E. Rafiee**, M. Daryanavard, J. Xiao, C. Bailie, “Efficient Suzuki cross-coupling reactions using bulky phosphines” J. Mol. Catal., 2006, 259, 35-40.
13. M. B. Gholivand, F. Ahmadi, **E. Rafiee**, “Highly Copper(II) Ion-Selective Transport Through Liquid Membrane Containing N,N’-bis(salicylidene)-1,2-phenyldiamine” Separation Sci. Technol., 2006, 41, 315-327.
14. R. Tayebee, **E. Rafiee**, “Acetylation and oxygenation transformations catalyzed by silica –supported dodecatungestophosphoric acid” Bull. Chem. Soc. Ethiopia, 2006, 20, 329-333.
15. **E. Rafiee**, S. Rashidzadeh, A. Azad, “Silica-supported heteropoly acids: Highly efficient catalysts for synthesis of α-aminonitriles, using trimethylsilyle cyanide or potassium cyanide” J. Mol. Catal. A, 2006, 260, 49-52.
16. M. B. Gholivand, F. Ahmadi, **E. Rafiee**, “A Novel Al(III)-Selective Electrochemical Sensor Based on N,N’-Bis(salicylidene)-1,2-phenylenediamine Complexes” Electroanalysis, 2006, 18, 1620-1626.
17. M. B. Gholivand, F. Ahmadi, **E. Rafiee**, “Solid phase interaction and determination of ultra-trace amount of copper using activated carbon modified by salophen” Separation Sci. Technol., 2007, 42, 897-910.
18. **E. Rafiee**, A. Azad, “K5CoW12O40. 3H2O: Heterogeneouse catalyst for the Strecker-type aminative cyanation of aldehyde and ketones” Synth. Commun., 2007, 37, 7, 1127-1132.
19. **E. Rafiee**, A. Azad, M. Joshaghani, “K5CoW12O40.3H2O: Highly Efficient Heterogeneous Catalyst for the Synthesis of α-Aminonitriles” Lett. Org. Chem., 2007, 4, 60-63.
20. **E. Rafiee**, A. Azad, “Cobaltpolyoxometalate-catalyzed cyclization of glucal with aryl amines: Synthesis of 2,4-disubstituted tetrahydroquinolines” Bioorg. Med. Chem. Lett., 2007, 17, 2756.
21. M. Joshaghani, E. Faramarzi, **E. Rafiee**, M. Daryanavard, J. Xiao, C. Bailie, “Highly efficient Suzuki coupling using moderately bulky tolylphosphine ligands” J. Mol. Catal. A, 2007, 273, 310-315
22. M. Joshaghani, **E. Rafiee**, M. Daryanavard, J. Xiao, C. Bailie, “A highly efficient catalyst for Suzuki coupling of aryl halides and bromoarylphosphine oxides” Tet. Lett., 2007, 48, 2025-2027.
23. M. Joshaghani, **E. Rafiee**, F. Shahbazi, H. Jafari, S. Amiri, M. Omiodi, “Quinolinium tribromide: A mild and very efficient oxidant in organic synthesis” Arkivoc, Arcat, 2007, 164-172.
24. M. Joshaghani, M. Bahadori, **E. Rafiee**, M. Bagherzadeh “Oxidative transformation of organic compounds using bis(bipyridine)silver (II) peroxydisulfate” Arkivoc, 2007, 260-265.
25. **E. Rafiee**, S. Eavani, E. Babaee, F. Toodehroosta, K. Daneshpazhuh, “Catalytic Performance of Heteropoly Acids on Different Supports in the Synthesis of Dihydropyrimidones” Z. Naturforsch., 2008, 63b, 178-182.
26. **E. Rafiee**, F. Paknezhad, Sh. Shahebrahimi, M. Joshaghani, S. Eavani, S. Rashidzadeh, “Acid catalysis of different supported heteropoly acids for a one-pot synthesis of β-acetamido ketones” J. Mol. Catal. A, 282, 2008, 92–98.
27. **E. Rafiee**, M. Joshaghan, F. Tork, A. Fakhri, S. Eavani, “Esterification of mandelic acid catalyzed by heteropoly acid” J. Mol. Catal. A, 283, 2008, 1–4.
28. **E. Rafiee**, M. Joshaghani, S. Eavani, S. Rashidzadeh, “A revision for the synthesis of b-enaminones in solvent free conditions: efficacy of different supported heteropoly acids as active and reusable catalysts” Green Chem., 2008, 10, 982–989.
29. **E. Rafiee**, S. Eavani, S. Rashidzadeh, M. Joshaghani, “Tungstophosphoric acid supported on titania as an eco-friendly, green and reusable catalyst for the solvent-free Hantzsch multi-component condensation” HETEROCYCLES, 75, 2008, 2225-2233.
30. M. Joshaghani, M. Daryanavard, **E. Rafiee**, Sh. Nadri “Synthesis and applications of a new palladacycle as a high active catalyst in the Suzuki couplings” J. Organom. Chem. 2008, 693, 3135-3140.
31. M. B. Gholivand, A. Babakhanian, **E. Rafiee**, “Determination of Sn(II) and Sn(IV) after mixed micelle-mediated cloud point extraction using \_-polyoxometalate as a complexing agent by flame atomic absorption spectrometry “ Talanta, 2008, 76, 503-508.
32. M. Joshaghani, M. Bahadori, **E. Rafiee**, M. Bagherzadeh “Oxidative Transformation of Organic Copounds Using Bis(1,10-phenanthroline)silver (II) Peroxydisulfate as a Twin Catalyst/Oxidant” J. Iran Chem. Soc., 2008, 5, S108-S112.
33. **E. Rafiee**, S. Rashidzadeh, M. Joshaghani, H. Chalabeh, K. Afza “γ-Al2O3-supported 12-tungstosilicic acid as an efficient heterogeneous catalyst for the synthesis of α-aminonitriles” Synth. Commun., 2008, 37, 2741-2747.
34. M. Irandoust, M. Joshaghani, **E. Rafiee**, M. Pourshahbaz, “31P NMR study of the stoichiometry, stability and thermodynamics of complex formation between palladium(II) acetate and bis(diphenylphosphino)ferrocene” Spectrochimica Acta Part A, 74, 2009, 855-859.
35. M. Pourshahbaz, M. Joshaghani, **E. Rafiee**, J. Shahmoradi, F. Emami, A. Iranpour, “Amine-catalyzed preparation of oxygenated derivatives of symmetric trisulfides” Tetrahedron Lett., 50 ,2009,5987–5989.
36. Sh. Nadri, M. Joshaghani, **E. Rafiee**, “Selective arylation of 1,1-disubstituted olefins using a biphenyl-based phosphine in Heck coupling reactions” Tetrahedron Lett., 50, 2009, 5470–5473.
37. **E. Rafiee**, S. Eavani, S. Rashidzadeh, M. Joshaghani, “Silica supported 12-tungstophosphoric acid catalysts for synthesis of 1,4-dihydropyridines under solvent-free conditions” Inorg. Chimica Acta 362, 2009, 3555–3562.
38. **E. Rafiee**, H. Mahdavi, S. Eavani, M. Joshaghani, F. Shiri, “Catalytic activity of tungstophosphoric acid supported on carriers of diverse acidity in the synthesis of enaminones” Appl. Catal. A, 352, 2009, 202–207.
39. Sh. Nadri, M. Joshaghani, **E. Rafiee**, “Biphenyl-based phosphine: A well-defined, air-stable, and efficient ligand for the Mizoroki–Heck reaction” Appl. Catal. A, 362, 2009 ,163–168.
40. **E. Rafiee**, Z. Zolfagharifar, M. Joshaghani, S. Eavani, “Facile condensation of indole with benzaldehyde over Keggin-type heteropoly compounds: An initial effort toward catalyst design” Appl. Catal. A, 365, 2009, 287–291
41. Sh. Nadri, M. Joshaghani, **E. Rafiee**, “Catalytic Performance of a Phosphapalladacycle Bearing a Biphenyl Moiety, Possessing an sp3 C-Pd Bond, toward the Heck Coupling Reaction” Organomet. 2009, 28, 6281–6287.
42. S. S. Madaeni, **E. Rafiee**, Z. Seyedzadeh, J. Barzin “Effect of dodeca-tungstophosphric acid on morphology and performance of polyvinyl alcohol membrane for gas separation” J. Appl. Polymer Sci., 2009, 114, 484–490.
43. M. Pourshahbaz, M. Irandust, **E. Rafiee**, M. Joshaghani “Kinetics of complex formation between palladium (II) acetate and bis(diphenylphosphino)ferrocene” Polyhedron, 2009, 28, 609-613.
44. **E. Rafiee**, S. Eavani, M. Joshaghani, “Reactions of various nucleophiles with D-glucal over Keggin type heteropoly compounds: A simple, rapid, and expedient method for the synthesis of pesudoglycals” J. Carbohydrate Chem., 29, 2010, 20–29.
45. **E. Rafiee**, S. Eavani, F. Khajoei nejad, M. Joshaghani “Cs2.5H0.5PW12O40 catalyzed diastereoselective synthesis of b-amino ketones via three component Mannich-type reaction in water” Tetrahedron, 66, 2010, 6858-6863.
46. **E. Rafiee**, S. Rashidzadeh, S. Eavani, M. Joshaghani “KSF-Supported Heteropoly Acids Catalyzed One-pot Synthesis of α-Aminonitriles” Bull. Chem. Soc. Ethiop. , 2010, 24, 209-215.
47. **E. Rafiee**, H. Mahdavi, and M. Joshaghani “Iodination of Alcohols over Keggin-type Heteropoly Compounds: A Simple, Selective and Expedient Method for the Synthesis of Alkyl Iodides” S. Afr. J. Chem., 2010, **63**, 135-140.
48. M. Amirinejad, S. S. Madaeni, M. A. Navarra, **E. Rafiee**, B. Scrosati “Solvent-free nanocomposite proton-conducting membranes composed of cesium salt of phosphotungstic acid doped PVDF-CTFE/PEO blend” *Ionics*, 2010, 16, 681-687.
49. S. S. Madaeni, **E. Rafiee**, Z. Seyedzadeh, Barzin “Effect of Dodeca-Tungstophosphoric Acid on Morphology and Performance of Polyethersulfone Membrane for Gas Separation” J. Polymer Eng., 2010, 30, 109-134.
50. **E. Rafiee**, F. Khajoei nejad, M. Joshaghani “CsxH3-xPW12O40 heteropoly salts catalyzed quinoline synthesis *via* Friedländer reaction” Chin. Chem. Lett., 2011, 22, 288.
51. **E. Rafiee**, H. Mahdavi, M. Joshaghani, “Supported Heteropoly Acids Offering Strong Option for Efficient and Cleaner Processing for the Synthesis of Biologically Active Imidazoles under Solvent-Free Condition”, Mol. Diversity, 2011, 15, 125-134.
52. M. Amirinejad, S. S. Madaeni, M. A. Navarra**, E. Rafiee**, B. Scrosati “Preparation and characterization of phosphotungstic acid-derived salt/Nafion nanocomposite membranes for proton exchange membrane fuel cells” *J. Power Sources, 2011,* 196, 988-998.
53. .**E. Rafiee**, Z. Zolfagharifar, M. Joshaghani, S. Eavani “12-Tungstosilicic Acid Supported on Different Carriers: A Pronounced Catalytic Activity in the Synthesis of Bis(indolyl)methanes under Solvent-Free Condition” Synth. Commun. ***2011****, 41, 459–467.*
54. M. Amirinejad, S. S. Madaeni, **E. Rafiee**, S. Amirinejad “Cesium hydrogen salt of heteropolyacids/Nafion nanocomposite membranes for proton exchange membrane fuel cells” J. Membrane Science 377, 2011, 89– 98.
55. **E. Rafiee**, Sara Eavani, "H3PW12O40 supported on silica-encapsulated γ-Fe2O3 nanoparticles: a novel magnetically-recoverable catalyst for three-component Mannich-type reactions in water" *Green Chem. 2011, 13, 2116-2122*.
56. **E. Rafiee**, M. Khodayari, Sh. Shahebrahimi, M. Joshaghani “12-Tungstophosphoric acid supported on nano silica from rice husk ash as an efficient catalyst for direct benzylation of 1,3-dicarbonyl compounds in solvent-free Condition” J. Mol. Catal. A, 2011, 351, 204-209.
57. R. Tayebee, F. Nezhat, E. Rezaei-Seresht, F. Z. Mohammadi, **E. Rafiee**, “An efficient and green synthethic protocol for the preparation of bis(indolyl)methanes catalyzed by H6P2W18O62.24H2O, with emphasis on the catalytic proficiency of Wells-Dawson versus Keggin heteropoly acids” J. Mol. Catal. A, 2011, 351, 154-164.
58. Sh. Nadri, E. Azadi, A. Ataei, M. Joshaghani, **E. Rafiee** “Investigation of the catalytic activity of a Pd/biphenyl-based phosphine system in the Ullmann homocoupling of aryl bromides” J. Organomet. Chem., 2011, 696, 2966-2970.
59. **E. Rafiee**, M. Khodayari, M. Joshaghani Direct benzylation of 1,3-dicarbonyl compounds catalyzed by Cs2.5H0.5PW12O40 in solvent-free conditions” Can. J. Chem., 2011, 89, 1533-1538.
60. **E. Rafiee**, F. Khajooei Nejad, M. Joshaghani “Solventless Synthesis of Quinoline Derivatives: Acceleration of Friedländer Reaction by Supported Heteropoly Acids” S. Afr. J. Chem. 2011, 64, 95-100.
61. M. G. Tajgardoon, M. Jafari, **E. Rafiee**, M. Feyzi, M. Joshaghani “A New Nano Bismuth(III) Salophen Catalyst for Green and Efficient Catalytic Oxidation of Sulfides into the Corresponding Sulfoxides” Inter. Nano Lett., 2012, 1, 69-74.
62. Z. Solati, M. Hashemi, A. Keshavarzi, **E. Rafiee** Catalytic epoxidation of Cis-stilbene by tetra-n-butylammonium hydrogen monopersulfate in the presence of manganese(III) tetraarylporphyrins and various anionic co-catalysts” J. Porph. Phethal., 2012, 16, 149-153.
63. **E. Rafiee**, Sh. Shahebrahimi, M. Feyzi, M. Shaterzadeh, Optimization of synthesis and fully characterization of nanosilica produced from rice husk: A common wast material” Inter. Nano Lett. 2012, 2, 29, 1-8.
64. **E. Rafiee**, S. Eavani, B. Malaekeh-Nikouei “12-Tungstophosphoric Acid Immobilized on γ-Fe2O3@SiO2 Core-Shell Nanoparticles: An Effective Solid Acid Catalyst for the Synthesis of Indole Derivatives in Water” Chem. Lett. 2012, 41, 438-440.
65. M. Amirinejad, S. A. Madaeni, K.S. Lee, **E. Rafiee**, J. Suk Lee “ Sulfonated poly(arylene ether)/ heteropoly acids nanocomposite membranes for proton exchange membrane fuel cells.” Electrochemica Acta, 2012, 62, 227-233.
66. **E. Rafiee**, M. Khodayari, M. Kahrizi, R. Tayebee “ H5CoW12O40 supported on nano silica from rice husk ash: A green bifunctional catalyst for the reaction of alcohols with cyclic and acyclic 1, 3-dicarbonyl compounds” J. Mol. Catal. A: Chem. 2012, 358, 121-128.
67. K. Hamidian, M. Irandoost, M. Joshaghani, **E. Rafiee**, “Synthesis, characterization, and tautomeric properties of some azo-azomethine compounds” Z. Naturforsch 2012, 67b, 159-164.
68. **E. Rafiee**, Sh. Shahebrahimi “Nanosilica with high surface area from rice husk as a support for 12-tungstophosphoric acid: An efficient nano catalyst in some organic reaction” Chin. J. Catal. 2012, 33, 1326-1333.
69. **E. Rafiee**, S. Eavani “Polyoxometalate-based acid salts with tunable separation properties as recyclable Bronsted acid catalysts for the synthesis of β-keto enol ethers” Catal. Commun. 2012, 25, 64-68.
70. **E. Rafiee**, M. Kahrizi, M. Joshaghani “Different products in the reaction of the alcohols with cyclic and acyclic 1,3-dicarbonyl compounds: K5CoW12O40 as an electron transfer nano catalyst. Chin. Chem. Lett. 2012, 23, 12, 1363-1366.
71. **E. Rafiee**, Z. Zolfagharifar, M. Joshaghani, S. Eavani “Dodecatungstocobaltate and Sn (IV)-Substituted Polyoxometalate: Preparation, Characterization and Catalytic Performances in Solventless Synthesis of Bis(indolyl)methanes” S. Afr. J. Chem., 2012, 65, 138-144.
72. A. Ataee, Sh. Nadri, **E. Rafiee**, S. Jamali, M. Joshaghani “Activation of C-X (=Cl, Br) bond in aryl halides toward the palladium-catalyzed Heck reaction using 2,6-bis(diphenylphosphino)pyridine” J. Mol. Catal. A: Chem. 2013, 366, 30-35.
73. **E. Rafiee**, F. Rahimi “A green approach to the synthesis of chalcones via Claisen-Schmidt condensation reaction using cesium salts of 12-tungstophosphoric acid as a reusable nanocatalyst” Monatsh. Chem. 2013, 144:361-367.
74. Sh. Shamaei, A. Reza Abbasi, **E. Rafiee**, A. Azadbakht, N. Noori “Ultrasound-assisted coating of silk yarn with nano-porous Co3(BTC)2·12H2O with iodine adsorption affinity” Colloids and Surf. A: Physicochem. Eng. Aspects, 2013, 431, 66-72.
75. A. Azadbakht, A. R. Abbasi, N. Noori, **E. Rafiee**, M. Taran, “Synthesis and Characterization of Nanocrystalline CoWO*4*@Silk Fibers with Antibacterial Activity under Ultrasound Irradiation” Fiber and Polymers, 2013, 14, 4, 687-692.
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**IX. List of Papers Presented in International Congresses and Seminars**

1. **E. Rafiee**, M. Joshaghani, F. Shahbazi, H. Jafari, M. Amiri, S. Omidi; “**Isoquinolinium- and Quinolinium Hydrobromide Perbromide, New Mild and Very Efficient Oxidants in Organic Synthesis”** 7th Tetrahedron Symposium, Kyoto Japan, 24-26 May 2006; Poster.

2. M. Joshaghani, E. Faramarzi, **E. Rafiee**, J. Xiao, C. Baillie; “Highly Efficient Suzuki Cross Coupling Reactions Using Bulky TolylPhosphine Ligands” 7th Tetrahedron Symposium, Kyoto Japan, 24-26 May 2006, Poster.

3. **E. Rafiee**, S. Rashidzadeh, M. Joshaghani, “Supported Heteropoly Acid: Highly Efficient Catalyst for Synthesis of α-aminonitriles” 12thACC Malaysia, August 2007, Poster.

4. **E. Rafiee**, F. Paknezhad, S. Shahebrahimi, M. Joshaghani, “One Pot Synthesis of β-Acetamido Ketones by Different Supported Heteropoly Acid as Reusable Catalysts”, 12thACC Malaysia, August 2007, Poster.

5. M. Joshaghani, M. Bahadori, **E. Rafiee**, “Quinolinium tribromide; a mild and very efficient oxidant for oxidation of anilines in solvent-free condition” 12thACC Malaysia, August 2007.

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7. M. Amirinejad, S.S. Madaeni, **E. Rafiee**, A survey of proton conducting composite membranes containing heteropolyacides for proton exchange membrane fuel cells, 5th International Conference on Fuel Cell Science, Engineering and Technology, 18-20 June 2007, New York, USA.

8. B. Seddighi, **E. Rafiee**, H. Mahdavi, 13th EuChem. “Iodination of alcohol over Keggin type heteropoly compounds: A simple, selective, and expedient method for the synthesis of alkyl iodines” Nuremberg, 29 Aug.-2 Sep, 2010, Germany.

9. E. Rafiee, Sh. Shahebrahimi “Nano silica from rice husk ash as a support material for heteropoly acids: heterogeneous nano catalyst” Colloids and Materials, 8-10 May 2011, Amsterdam, Netherland.

10. **E. Rafiee**, F. Khajoei Nejad, M. Joshaghani, S. Eavani “Synthesis of nano supported heteropoly compounds as efficient catalysts for Friedlander raction” Colloids and Materials, 8-10 May 2011, Amsterdam, Netherland.

11. M. Joshaghani, M. Jafari, **E. Rafiee**, M. Faizi “A new nano Bismuth (III) salophen catalyst for green and efficient catalytic oxidation of benzoins to benzyls” Colloids and Materials, 8-10 May 2011, Amsterdam, Netherland.

12. **E. Rafiee**, M. Khodayari, M. Joshaghani “Synthesis and characterization of H5CoW12O40 supported on nano silica from rice husk ash as a green bifunctional nano catalyst” 4th EuCheMS Chemistry Congress, Czech Republic, August 2012.

13. **E. Rafiee**, S. Eavani, M. Joshaghani, F. Mahmoodi “Synthesis and characterization of 12-tungstophosphoric acid immobilized on Fe2O3@SiO2 core-shell nanoparticles as solid catalyst for Biginelli reaction” 4th EuCheMS Chemistry Congress, Czech Republic, August 2012.

14. M. Joshaghani, **E. Rafiee**, E. Azadi “Efficient Ullmann Cross-Couplings using Pd Nanoparticles” 4th EuCheMS Chemistry Congress, Czech Republic, August 2012.

15. **E. Rafiee**, M. Joshaghani, S. Eavani “ Green approaches to the desulfurization of oil or industrial efficient by polyoxometalates as nano-catalyst” Third International Symposium on Green Chemistry for Environment,Health and Development, Greece, Skiathos, 2012, October.

16. M. Joshaghani, M. Bahadori, **E. Rafiee** “Green and efficient oxidation of sulfide to sulfoxides in aqueous micelle surface” Third International Symposium on Green Chemistry for Environment,Health and Development, Greece, Skiathos, 2012, October.

17. E. Rafiee “Heteropoly acids as nanocatalyst, My research group and me” 17th conference of inorganic chemistry, Tabriz, Iran, August, 2015.

18. E. Rafiee, M. Khodayari, A. Shahbazi, “Different Nano Structures of Carbone-based Heteropoly Acids: Magnetically Heterogeneous Green Nano Catalyst for Industrial Applications” 6th Inter. IUPAC Conf. on Green Chem., 2016, 4-8th September, Venice, Italy.

19. E. Rafiee, E. Noori, A.A. Zinatizadeh, H. Zanganeh, “Three Components Modified TiO2 Nano Composite for Photodegradation of Pollutants” 6th Inter. IUPAC Conf. on Green Chem., 2016, 4-8th September, Venice, Italy.

20. D. Yazdani, E. Rafiee, A. Zinatizadeh, M. Joshaghani, “”6th Inter. IUPAC Conf. on Green Chem., 2016, 4-8th September, Venice, Italy.

**X. List of Books**

1. M. Joshaghani, **E. Rafiee** “Some Tests in Inorganic Chemistry” Razi University Press- 2003.
2. M. Joshaghani, **E. Rafiee**, R. Zibaseresht “Kinetics and Mechanisms of Inorganic Reactions” Razi University Press, 2008.
3. M. Joshaghani, **E. Rafiee**, Sh. Nadri “Palladium Catalyzed C-C Coupling Reactions” First Edition, Razi University Press, 2010.
4. M. Joshaghani, **E. Rafiee**, Sh. Nadri “Palladium Catalyzed C-C Coupling Reactions” Second Edition, Razi University Press, 2015.
5. M. Mirzaei Sharabi, E. Rafiee, J. Soleimannejad, A. Sh. Saljooghi, V. Nobakht “Inorganic Chemistry I”. First Ed. Pazhuheshi Noavaran Sharif Press.

XI. List of Project:

* 1. “Management of Distillation and Conversion Units in Kermanshah Refinery” Employer: Kermanshah Oil Refinery Company, 2002-2003.
	2. Collaborator in project “Feasibility study of Merox’s Catalyst recovery” Employer: Kermanshah Oil Refinery Company, 2002-2003.
	3. “Synthesis and characterization of some base-Schiff ligands”; Employer: Razi University, 2003-2004.
	4. “Synthesis and characterization of heteropoly acids supported on silica coated iron oxides nanoparticles, activity investigation as magnetically reusable nanocatalyst in organic compound synthesis” 2010-2011. Employer: INSF.
	5. Optimization of biodiesel production condition using heteropoly anions supported on magnetically support and ionic liquids-polyoxometalate hybrids as a new homogeneous/heterogeneous thermoregulated reusable catalyst” Employer: INSF, 2011-2012.
	6. Synthesis and characterization of metal-organic framework and polyoxometalate hybrid nanostructures and their catalytically activity investigation in b-keto-enol ethers synthesis, selective oxidation of sulfides and other organic reactions” Employer: INSF, 2013-2014.
	7. “Synthesis and characterization of modified-TiO2/heteropoly acid nanocomposite and investigation of photocatalytic applications in degradation of nonbiodegradable organic wastewater in fix bed photoreactor” Employer: INSF, 2015-2017.
	8. Collborator of project “
	9. مجري طرح: "مديريت نرم افزاري واحدهاي تقطير و تبديل در پالايشگاه كرمانشاه". كارفرما: شركت پالايش نفت كرمانشاه. 1383 (خاتمه يافته).
	10. همكار طرح پژوهشي: "بررسي امكان استحصال كاتاليست واحد مراكس". كارفرما: شركت پالايش نفت كرمانشاه. 1382-1381 (خاتمه يافته).
	11. مجری طرح " سنتز و شناسايي چند ليگاند باز شيف ". كارفرما: دانشگاه رازی. 1385- 1384.
	12. مجری طرح " سنتز و شناسایی هتروپلی اسیدهای نشانده شده روی بستر نانوذرات اکسید آهن با پوشش سیلیکا و بررسی کارایی آنها به عنوان نانو کاتالیزورهای مغناطیسی جدید قابل بازیافت در سنتز مواد آلی" 1392-1391 کارفرما: صندوق حمایت از پژوهشگران و فناوران کشور.
	13. مجری طرح "بهینه سازی شرایط تولید بیودیزل با استفاده از هتروپلی آنیونهای نشانده شده روی پایه مغناطیسی و مایع یونی-پلی اکسومتالات هیبرید ها به عنوان یک کاتالیزور جدید هموژن/هتروژن قابل بازیافت با تنظیم دما" 1393-1392 کارفرما:صندوق حمایت از پژوهشگران و فناوران کشور.
	14. مجری طرح "سنتز و شناسایی ساختارهای هیبریدی چارچوب­های فلز-آلی و پلی­اکسومتالات­ها و بررسی کارآیی کاتالیستی آنها در سنتز بتا –کتو انول اترها و اکسایش انتخابی سولفید­ها و سایر واکنش­های آلی" 1395-1394، کارفرما:صندوق حمایت از پژوهشگران و فناوران کشور.
	15. مجری طرح " سنتز و شناسایی نانوکامپوزیت¬های اصلاح شده¬ی تیتانیم دی اکسید/هتروپلی اسید و کاربرد آن¬ها به منظور حذف آلاینده های غیرقابل تجزیه بیولوژیکی از پساب های صنعتی در یک فتو راکتور بستر ثابت " 1398-1396 کارفرما:صندوق حمایت از پژوهشگران و فناوران کشور.
	16. همکار طرح " بررسي تركيبي كاني شناسي گرد و غبار و آلودگي آنها در استان كرمانشاه" خاتمه یافته 1397- کارفرما محیط زیست کرمانشاه.

**فعالیت های اجرایی:**

1. مدیریت تحصیلات تکمیلی دانشگاه 1390-1392
2. عضو شورای چاپ و نشر دانشگاه از بدو تاسیس (1389) تا کنون.
3. عضو کمیته منتخب دانشکده شیمی
4. عضو کمیسیون تخصصی علوم پایه.
5. معاون پژوهشی و اجرایی دانشکده شیمی 1398.