Resume

Sara Sobhani

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Personal Information:

Name: Sara Sobhani

Place and Date of Birth: Shiraz, Iran, 1973.

Marital Status: Single

Academic Position:

Assistant Professor of Organic Chemistry, Chemistry Department, College of Sciences, University of Birjand, Birjand, Iran, 2006-2010.

Associate Professor of Organic Chemistry, Chemistry Department, College of Sciences, University of Birjand, Birjand, Iran, Since 2011.

Professor of Organic Chemistry, Chemistry Department, College of Sciences, University of Birjand, Birjand, Iran, Since 2015.

- **Google Scholar:** https://scholar.google.com/citations?user=satSzncAAAAJ
- https://orcid.org/0000-0002-7764-8847

Education:

B.Sc.: Chemistry, Shiraz University, Iran, 1996.

M. Sc.: Organic Chemistry, Isfahan University, Iran, 1999 (Supervision: Prof. M. M. Sadeghi, Prof. I. Mohammadpoor, Prof. H. R. Memarian).

Ph.D.: Organic Chemistry, Shiraz University, Iran, 2005 (Supervision: Prof. H. Firouzabadi, Prof. N. Iranpoor).

Visiting Scholar: Asymmetric Organic Chemistry, Aarhus University, Aarhus, Denmark, (Advisor: Prof. Karl Anker Jørgensen), 2004-2005.

Title of M.Sc. thesis:

Oxidation of 1,4-Dihydropyridine to Pyridines by Chromium Based Oxidants

Title of Ph.D. thesis:

New methods for the Synthesis of α-Functionalized Phosphonates from α-Hydroxy Phosphonates

Courses passed during M. Sc. and Ph. D programs:

- **M. Sc.**

1. Advanced Organic Chemistry
2. Physical Organic Chemistry
3. Advance Physical Chemistry
4. Organic Synthesis
5. Advance Inorganic Chemistry
6. Spectroscopy
7. Heterocyclic chemistry

- **Ph. D.**

1. Advanced Organic Chemistry
2. Advanced Heterocyclic Chemistry
3. Organometalic Chemistry
4. Advanced Organic Synthesis

Courses Thought

1. Physical Organic Chemistry, B.Sc.
2. Organic Chemistry, B.Sc.
3. Spectroscopy, B.Sc.
4. Organic Synthesis, B.Sc.
5. Advanced Organic Synthesis, M.Sc.
6. Advanced Organic Chemistry, M.Sc.
7. Asymmetric Synthesis, M.Sc.
8. Physical Organic Chemistry, M.Sc.
9. Advanced Heterocyclic Chemistry, M.Sc.
10. Organometallic Chemistry, Ph.D.
11. Stereochemistry, Ph.D.
12. Active intermediates, Ph.D.
13. Advanced Physical Organic Chemistry, M. Sc.
14. Advanced Heterocyclic Chemistry, Ph.D.

Research Interest

1. Synthesis and Application of New Nanocatalysts for organic reactions (multicomponent, tandem, oxidation, reduction and photocatalytic reactions)
2. Introduction of New Methods for the Synthesis of Organophosphorous Compounds
3. Synthesis and Application of New Nanocatalysts for Water Purifications and Drug Delivery
4. Asymmetric Catalytic Reactions

Distinctions and Honours:

1. Distinguished Research Professor of Universityof Birjand, 2009.
2. Received Elsevier honoraria for publication of a report, 2010.
3. Distinguished Research Professor of Universityof Birjand, 2011.
4. Distinguished Researcher of South Khorasan, 2011.
5. Distinguished Professor of Faculty of Science of Universityof Birjand, 2012.
6. Distinguished Research Professor of Universityof Birjand, 2013.
7. Member of the Editorial Board of Advances in Chemistry, since 2013.
8. Member of the Editorial Board of The Scientific World Journal, since 2011.
9. Distinguished Research Project Selected by Iran National Science Foundation, 2015.
10. Distinguished Research Professor of Universityof Birjand, 2017.
11. Distinguished Professor of Birjand University, 2019.
12. Member of the Editorial Board of Chemistry Research, since 2018.
13. Member of the Editorial Board of the International Journal of New Chemistry, since 2019.
14. Distinguished Research Professor of Universityof Birjand, 2019.

Thesis Conducted Under Supervision:

M. Sc. Thesis

1. By Farshad Daneshmand; September 2008, **Preparation of bis(indolyl)methane and dipyrromethane**
2. By Asieh Vafaee shaarbaf; March 2009, **Preparation of beta-hydroxy and alpha-aminophosphonates**
3. By Zahra Tashrifi; January 2009, **Preparation of primary α-amino phosphonates in the presence of aluminum triflate**
4. By Soodabeh Rezazadeh; January 2009, **Investigation of Michael addition in the presence of solid catalysts**
5. By Mahdi Faal Maleki; February 2009, **Investigation of new methods for the synthesis of ketophosphonates**
6. By Zahra Pakdin Parizi; September 2010, **Investigation of Michael addition reaction in the presence of basic catalysts**
7. By Sima Aryanejad; October 2011, **Investigation of oxidation of amines and thiols in the presence of dichromates**
8. By Farshid Barani, October 2011, **Investigation of new applications of supported triflic acid as a catalyst in organic reactions**
9. By Razieh Nasseri, October 2011, **Preparation of pyrazole derivatives in ionic liquids**
10. By Nasrin Razavi, January 2012, **New application of aminopropylated functionalized mesoporous silica (SBA-15) as a catalyst in phosphonate synthesis**
11. By Ali Ashoori, January 2012, **Investigation of Michael addition reaction and reductive amination in the presence of sulfonic acid functionalized carbon nanotube catalyst**
12. By Amin Arabshahi Delloei, September 2012, **New application of γ-Fe_2O_3 nanoparticles in organic reactions**
13. By Samaneh Khodadadi, September 2012, **Synthesis of highly substituted pyridines via three-component reactions**
14. By Mahboobeh Bazrafshan, October 2012**, Synthesis and application of organic base supported on the nano surface in organic reactions**
15. By Roya Jahanshahi, October 2012, **Synthesis of supported *n*-propylsulfonate on γ-Fe_2O_3 and its applications in organic chemistry**
16. By Maryam Sadat Ghasemzadeh, September 2013, **Synthesis of functionalized γ-Fe_2O_3 magnetic nanoparticles with piperidine and piperazine and their applications as catalyst in organic reactions**

17. By Zahra Mesbah Falatooni, September 2013, **Synthesis of γ-Fe_2O_3 magnetic nanoparticles functionalized by phosphoric acid and its application as a catalyst for the synthesis of α-aminophosphonates**
18. By Fatemeh Naseri, 2015, **Synthesis and application of functionalized ionic liquids immobilized on iron oxide magnetic nanoparticles in organic reactions**
19. By Samira Esmaeilzadeh, 2015, **Synthesis of palladium-pyridine complex supported on γ-Fe_2O_3 magnetic nanoparticles and its application as a catalyst in C-C bond formation**
20. By Zohreh Ramezani, 2016, **Synthesis of isatin–palladium complex immobilized on iron oxide nanoparticles as a magnetically separable catalyst for the synthesis of phosphonates**
21. By Zahra Vahidi, 2016, **Synthesis of new bis-iminopyridine-palladium complex supported on magnetic nanoparticles as a heterogeneous catalyst for the synthesis of phosphonates**
22. By Solmaz Asadi, 2016, **Synthesis of supported copper complexes on magnetic nanoparticales and their application in organic reactions**
23. By Fatemeh Khakzad, 2017, **Synthesis of hydrophilic and hydrophobic copper complex on γ-Fe_2O_3 and their application in organic reaction**
24. By Zeinab Talebi, 2018, **Synthesis of Schiff base complex of aminoguanidine established on γ-Fe_2O_3 and its application in organic reactions**
25. By Toktam Yari, 2018, **Synthesis of hydrophobic sulfonic acid catalyst established on γ-Fe_2O_3 and its application in organic reactions**
26. By Azam Habibollahi, 2019, **Synthesis of hydrophilic palladium complex immobilized on nano magnetic support and its application in coupling reaction as a heterogeneous catalyst**
27. By Asma Khazaee, 2019, **Synthesis of copper iminopyridine complex immobilized on γ-Fe2O3 as a new hererogeneous catalyst and its applications in organic reactions**
28. By Hamimdeh kargar Bidokhti, 2020**, Synthesis of metal nanoparticles stabilized on a hydrophilic nanomagnetic material and application in carbon-carbon coupling reactions in aqueous media**
29. By Oveis Rezvani, 2020,

Ph.D. Thesis

1. By Moones Honarmand, September 2013, **Applications of functionalized ionic liquids in organic reactions**
2. By Zahra Pakdin Parizi, June 2014, **Synthesis and application of new nano magnetically heterogeneous catalysts**
3. By Farzaneh Zarifi, 2017, **Synthesis and application of new nanofunctionalized supports as heterogeneous catalysts in organic reactions**
4. By Zohreh Zeraatkar, 2017, **Synthesis of new metal complexes immobilized on nano magnetic supports as heterogeneous catalysts and their applications in organic reactions**

Post-doc researcher

1. Roya Jahanshahi, 2019-2021, supported by University of Birjand.

Projects:

1. Preparation of amino phosphonates, Supported by University of Birjand, September 2008.
2. Synthesis of phosphonate derivatives by green methods, Supported by University of Birjand, March 2010.
3. Synthesis of new nano magnetically recyclable heterogeneous acidic and basic catalysts, Supported by Iran National Science Foundation, 2015 **(Distinguished project of INSF).**
4. Synthesis of new multifunctional nano catalysts supported on graphene oxide and investigation of their catalytic activity in one-pot multi-step reactions, Supported by Iran National Science Foundation, 2017.
5. Synthesis of new hydrophilic heterogeneous catalysts for catalyzing organic reactions in water as a green solvent, Supported by Iran National Science Foundation, 2020.

Projects Conducted Under Supervision:

1. Synthesis of iron oxide nanoparticles using ionic liquids, Supported by University of Birjand, 2015.
2. Investigation of Heck reaction in the presence of phosphine-free pyridine- palladium complex as a new catalyst, Supported by University of Birjand, 2015.
3. Synthesis of phosphonates by using imino pyridin–palladium complex immobilized on iron oxide nanoparticles, Supported by University of Birjand, 2015.
4. Synthesis of phosphonates by using DABCO-palladium complex supported on magnetic nanoparticles as a heterogeneous catalyst, Supported by University of Birjand, 2015.
5. Cu□isatin Schiff base complex immobilized on γ□Fe_2O_3 as a magnetically recyclable catalyst for reduction of nitroarenes

Publications:

2000

1. Sadeghi, M. M., Mohammadpoor-Baltork**,** I., Memarian, H. R., Sobhani, S., **Efficient oxidation of Hantzsch 1,4-dihydropyridines with nicotinium dichromate**, *Synthetic Commun.,***2000**, *30*, 1661.

2001

2. Firouzabadi, H., Iranpoor, N, Sobhani, S., Sardarian, A. R., **High yield preparation of α-ketophosphonates by oxidation of α-hydroxyphosphonates with zinc dichromate trihydrate ($ZnCr_2O_7.3H_2O$) under solvent-free conditions,** *Tetrahedron Lett.*, **2001,***42,* 4369.

2002

3. Firouzabadi, H., Iranpoor, N., Sobhani, S., **Preparation of α-ketophosphonates by oxidation of α-hydroxyphosphonates with neutral alumina supported potassium permanganate (NASPP) under solvent-free conditions and potassium permanganate in dry benzene**, *Tetrahedron Lett.*, **2002**, *43*, 477.

4. Firouzabadi, H., Iranpoor, N., Sobhani, S., **A high yielding preparation of α- trimethylsilyloxyphosphonates by silylation of α-hydroxyphosphonates with HMDS catalyzed by iodine,** *Tetrahedron Lett.,***2002***, 43,* 3653.

2003

5. Firouzabadi, H., Iranpoor, N., Sobhani, S., Ghassamipour, S., Ammoozgar, Z., **Copper triflate[$Cu(OTf)_2$] is an efficient and mild catalyst for the silylation of α-hydroxyphosphinates to α–trimethylsilyloxyphosphinates with HMDS at room temperature**, *Tetrahedron Lett.,* **2003**, *44*, 891.

2004

6. Firouzabadi, H., Iranpoor, N., Sobhani, S., **PPh_3/DDQ as a neutral system for the facile preparation of diethyl α-bromo, α-iodo and α-azido- phosphonates from diethyl α-hydroxy phosphonates**, *Tetrahedron*, **2004**, *60*, 203.

7. Firouzabadi, H., Iranpoor, N., Sobhani, S., **Preparation of α-ketophosphonates from α-hydroxyphosphonates by chromium-based oxidants**, *Synthetic Commun*., **2004**, *34*, 1463.

8. Firouzabadi, H., Iranpoor, N., Hassani, H., Sobhani, S., **Immediate and efficient oxidative deprotection of dithioacetals to carbonyl compounds by zinc dichromate trihydrate ($ZnCr_2O_7.3H_2O$),** *Synthetic Commun.,* **2004,** *34*, 1967**.**

9. Firouzabadi, H., Iranpoor, N., Sobhani, S.,Amoozgar, Z., **Copper triflate as a useful catalyst for the high yielding preparation of α-acetyloxyphosphonates under solventless conditions,** *Synthesis*, **2004,** 295**.**

10. Firouzabadi, H., Iranpoor, N., Sobhani, S., **Ph_3P/DDQ/NH_4SCN as a new and neutral system for direct preparation of diethyl α-thiocyanatophosphonates from diethyl α-hydroxyphosphonates,** *Synthesis*, **2004,** 290**.**

11. Firouzabadi, H., Iranpoor, N., Sobhani, S., **Preparation ofα–ketophosphonates by oxidation of α–hydroxyphosphonates with PCC**, *Phosphorus, Sulfur & Silicon*, **2004,** *179*, 1483.

12. Firouzabadi, H., Iranpoor, N., Sobhani, S.,Amoozgar, Z., **Facile and high yielding preparation of α-acetyloxyphosphonates from α-hydroxyphosphonates assisted by microwave irradiation**, *Synthesis,* **2004**, 1771.

13. Firouzabadi, H., Iranpoor, N., Sobhani, S.,Ghassamipour, S., **Magnesium triflate [$Mg(OTf)_2$] a highly stable, non-hygroscopic and a recyclable catalyst for the high yielding preparation of diethyl α-trimethylsilyloxyphosphonates from diethyl α-hydroxyphosphonates by HMDS under Solventless conditions**, *J. Organomet. Chem.,* **2004**, *689*, 3197.

14. Firouzabadi, H., Iranpoor, N., Sobhani, S., **Metal triflates catalyzed one pot synthesis of α-aminophosphonates from carbonyl compounds in the absence of solvent,** *Synthesis,* **2004**, 2692.

2005

15. Firouzabadi, H., Iranpoor, N., Sobhani, S., Ghassamipour, S., **Aluminiumtriflate [$Al(OTf)_3$] as a recyclable catalyst for the conversion of α-hydroxyphosphonates, alcohols and phenols to their corresponding O-silylated products with hexamethyldisilazane (HMDS),** *Synthesis,* **2005**, 595.

16. Sobhani, S., Fielenbach, D., Marigo, M., Wabnitz, T. C., Jørgensen, K. A., **Direct organocatalytic asymmetric α-sulfenylation of activated C-H bonds in lactones, lactams and β-dicarbonyl compounds,** *Chem.: A Eur. J.,* **2005**, *11*, 5689.

2008

17. Sobhani, S., Safaei, E., Asadi, M., Jalili, F., Tashrifi, Z. **Efficient synthesis of secondary and primary dialkyl α-aminophosphonates catalyzed by tetramethyl-tetra-3,4-pyridinoporphyrazinato copper (II) methyl sulfate under solvent-free conditions,** *J. Porphyrins and Phthalocyanines*, **2008**, *12*, 849.

18. Sobhani, S., Safaei, E., Asadi, M., Jalili, F., **An eco-friendly procedure for the efficient synthesis of dialkylα-aminophosphonates in aqueous media**, *J. Organomet. Chem*., **2008**, *693*, 3313.

2009

19. Sobhani, S., Tashrifi, Z. **$Al(OTf)_3$ as an efficient catalyst for one-pot synthesis of primary diethyl 1-aminophosphonates under solvent-free conditions***, Synth. Commun.*, **2009**, *39*, 120.

20. Sobhani, S., Tashrifi, Z. **One-pot synthesis of primary 1-aminophosphonates: coupling reaction of carbonyl compounds, hexamethyldisilazane, and diethyl phosphite catalyzed by $Al(OTf)_3$***, Heteroatom Chem.,* **2009**, *20*, 109.

21. Sobhani, S., Vafaee, A. **Micellar solution of sodium dodecyl sulfate (SDS) catalyzes Kabacknik–Fields reaction in aqueous media,** *Synthesis,* **2009**, 1909.

22. Sobhani, S., Vafaee, A. **Efficient one-pot synthesis of β-hydroxyphosphonates: regioselective nucleophilic ring opening reaction of epoxides with triethylphosphite catalyzed by $Al(OTf)_3$**, *Tetrahedron*, **2009**, *66,* 7691.

23. Sobhani, S., Safaei, E., Hasaninejad, A. R., Rezazadeh, S. **An eco-friendly procedure for the efficient synthesis of bis(indolyl)methanes in aqueous media,** *J. Organomet. Chem*., **2009**, *694*, 3027.

2010

24. Sobhani, S., Vafaee, A. **Molecular iodine: an efficient catalyst for the one-pot synthesis of primary 1-aminophosphonates***, JICS*, **2010**, *7*, 227.

25. Sobhani, S., Tashrifi, Z**. Synthesis of α-functionalized phosphonates from α-hydroxyphosphonates**, *Tetrahedron*, **2010**, *66*, 1429 **(*Review, HOT PAPER*).**

26. Sobhani, S., Rezazadeh, S. **$HClO_4$–SiO_2 as a novel and recyclable catalyst for the phospha-Michael addition of phosphorous nucleophiles to α,β-unsaturated malonates,** *Synlett*, **2010**, 1485.

27. Sobhani, S., Faal Maleki, M. **Oxidative deamination of α-aminophosphonates and amines by zinc dichromate trihydrate ($ZnCr_2O_7·3H_2O$) under solvent-free conditions at room temperature,** *Synlett*, **2010**, 383.

28. Sobhani, S., Rezazadeh, S. **Michael addition reaction of thioacetic acid (AcSH) to conjugated alkenes under solvent- and catalyst-free conditions,** *Phosphorus, Sulfur & Silicon,* **2010***, 185,* 2076.

2011

29. Sobhani, S., Pakdin Parizi, Z., Rezazadeh, S. **Phospha-Michael addition of phosphorous nucleophiles to α,β-unsaturated malonates using 3-aminopropylated silica gel as an efficient and recyclable catalyst,** *J. Organomet. Chem*., **2011**, *696*, 813.

30. Sobhani, S., Rezazadeh, S. **Phosphomolybdic acid: an efficient and reusable catalyst for the synthesis of β-phosphonomalonates,** *JICS*, **2011**, *8*, 198.

31. Sobhani, S., Pakdin Parizi, Z., **An eco-friendly procedure for one-pot synthesis of β-phosphonomalonates: micellar solution of sodium stearate catalyzes tandem Knoevenagel-phospha-Michael reaction of aldehydes, malonitrile and phosphites in aqueous media,** *Tetrahedron*, **2011**, *67*, 3540.

32. Sobhani, S., Aryanejad, S., Faal Maleki, M. **Zinc dichromate trihydrate ($ZnCr_2O_7·3H_2O$) as an efficient reagent for the one-pot synthesis of thiosulfonates from thiols,** *Synlett,* **2011***,* 319.

33. Malakooti,R., Sobhani, S., Razavi, N., Shafiei, S., Mokhtari R. **Formylation of amines and alcohols using aminopropylatedmesoporous silica gel (APMS) as an efficient and recyclable catalyst**, Collect. Czech. Chem. Commun. **2011**, *76*, 1979-1990.

34. Sobhani, S., Pakdin Parizi Z., Razavi, N. **Nano *n*-propylsulfonated γ-Fe_2O_3 as magnetically recyclable heterogeneous catalyst for the efficient synthesis of β-phosphonomalonates,** *Appl. Catal. A: Gen.***2011**, *409-410*, 162.

2012

35. Sobhani, S., Hasaninejad, A. R., Faal Maleki, M., Pakdin Parizi Z. **Tandem Knoevenagel-Michael reaction of 1-phenyl-3-methyl-5-pyrazolone with aldehydes using 3-aminopropylated silica gel as an efficient and reusable catalyst,** *Synth. Commun.***2012**, *42*, 2245-2255.

36. Safaei, E., Sobhani, S., Razavi, N. **Efficient synthesis of 2-indolyl-1-nitroalkanes catalyzed by tetramethyl-tetra-3,4-pyridinoporphyrazinato copper (II) methyl sulfate**, *J. Porphyrins and Phthalocyanines*, **2012**, *16*, 227-234.

37. Sobhani, S., Honarmand, M. **5-Hydroxypentylammonium acetate as a reusable ionic liquid catalyzes tandem Knoevenagel-phospha-Michael reaction of aldehydes, malononitrile and phosphites,** *J. Iran. Chem. Soc.*, **2012**, *9,* 661-669.

38. Sobhani, S., Aryanejad, S., Faal Maleki, M. **Nicotinium dichromate (NDC) as an efficient reagent for the oxidative deamination of amines and α-aminophosphonates** *Helv. Chim. Acta*, **2012**, *95*, 613-617.

39. Doroodmand, M. M., Sobhani, S., Ashoori, A. **Sulfonated multi-walled carbon nanotubes (MWCNTs) as a new, efficient and recyclable heterogeneous nanocatalyst for the synthesis of amines**, *Can. J. Chem.* **2012**, *90 (8)*, 701-707.

40. Sobhani, S., Nasseri, R., Honarmand, M. **2-Hydroxyethylammonium acetate as a reusable and cost-effective ionic liquid for the efficient synthesis of bis(pyrazolyl)methanes and 2-pyrazolyl-1-nitroalkanes,** *Can. J. Chem.,* **2012**, *90,* 798-804.

2013

41. Sobhani, S., Honarmand, M. **2-Hydroxyethylammonium acetate: A reusable task-specific ionic liquid promoted one-pot, three-component synthesis of 2-amino-3,5-dicarbonitrile-6-thio-pyridines,** C. R. Chimie, **2013**, *16*, 279-286.

42. Sobhani, S., Honarmand, M. **A Simple and Efficient Method for One-Pot Three-Component Synthesis of Terminal Vinylphosphonates Using a Task-Specific Ionic Liquid**, *Synlett*. **2013**, *24*, 236-240.

43. Sobhani, S., Bazrafshan, M., Arabshahi Delluei, A., Pakdin Parizi, Z. **Phospha-Michael addition of diethyl phosphite to α,β-unsaturated malonatescatalyzed by nano γ-Fe_2O_3-pyridine based catalyst as a new magnetically recyclable heterogeneous organic base,** *Appl. Catal. A: Gen.,* **2013***, 454,* 145-151.

44. Sobhani, S., Jahanshahi, R. **Nano *n*-propylsulfonated γ-Fe_2O_3 (NPS-γ-Fe_2O_3) as a magnetically recyclable heterogeneous catalyst for the efficient synthesis of 2-indolyl-1-nitroalkanes and bis(indolyl)methanes**, *New J. Chem.* **2013**, *37*, 1009-1015.

45. Sobhani, S., Jahanshahi, R. **One-pot synthesis of β-phosphonomalonatescatalyzed by molecular iodine,** *Synth. Commun.* **2013**, *43,* 3247-3257.

46. Sobhani, S., Honarmand, M. **Silica-Bonded 2-Hydroxyethylammonium Acetate as an Efficient and Recyclable Catalyst for the Synthesis of 2-Amino-4H-chromen-4-yl Phosphonates and β-Phosphonomalonates,** *Catal. Lett.* **2013**, *143*, 476-485.

47. Sobhani, S., Pakdin Parizi Z., Nasseri N. **Nano *n*-propylsulfonated γ-Fe_2O_3: A novel magnetically recyclable heterogeneous catalyst for the efficient synthesis of bis(pyrazolyl)methanes in water,** *J. Chem. Sci.* **2013**, *125*, 975-979.

48. Sobhani, S., Honarmand, M. **Ionic liquid immobilized on γ-Fe_2O_3 nanoparticles: A new magnetically recyclable heterogeneous catalyst for one-pot three-component synthesis of 2-amino-3,5-dicarbonitrile-6-thio-pyridines** *Appl. Catal. A: Gen*, **2013**, *467*, 456–462.

2014

49. Sobhani, S., Pakdin Parizi Z. **Lanthanum (III) triflate supported on nanomagnetic γ-Fe_2O_3: A new magnetically recyclable heterogeneous Lewis acid for the one-pot synthesis of β-phosphonomalonates** *RSC Adv.* **2014**, *4* (25), 13071 - 13077.

50. Sobhani, S., Mesbah Falatooni, Z., Honarmand, M. **Synthesis of phosphoric acid supported on magnetic core-shell nanoparticles: A novel recyclable heterogeneous catalyst for Kabachnik-Fields reaction in water** *RSC Adv.***2014**, *4* (30), 15797-15806.

51. Sobhani, S., Pakdin Parizi Z. **Palladium-DABCO complex supported on γ-Fe_2O_3 magnetic nanoparticles as a new catalyst for C-C bond formation *via* Mizoroki-Heck cross-coupling reaction** *Appl. Catal. A: Gen*, **2014**, *479 (3)*, 112-120.

52. Sobhani, S., Ghasemzadeh, M., Honarmand, M. **Piperidine and Piperazine Immobilized on Iron Oxide Nanoparticles as Magnetically Recyclable Heterogeneous Catalysts for One-Pot Synthesis of β-Phosphonomalonates** *Catal. Lett.,* **2014**, *144 (9)*, 1515-1523.

53. Sobhani, S., Ghasemzadeh, M., Honarmand, M., Zarifi, F. **Acetamidine-palladium complex immobilized on γ-Fe_2O_3 nanoparticles: A novel magnetically separable catalyst for Heck and Suzuki coupling reactions** *RSC Adv.* **2014,** *4 (83)*, 44166-44174.

2015

54. Sobhani, S., Zarifi, F. **Pd-isatin Schiff base complex immobilized on γ-Fe_2O_3 as a new magnetically recyclable catalyst for the Heck and Suzuki cross-coupling reactions** *Chin. J. Catal.* **2015**, *36*, 555-563.

55. Sobhani, S., Vahidi, Z., Zeraatkar, Z.,Khodadadi, S. **A Pd complex of a NNN pincer ligand supported on γ-Fe_2O_3@SiO_2 as the first magnetically recoverable heterogeneous catalyst for the C–P bond forming reactions** *RSC Adv.* **2015**, *5*, 36552-36559. Sobhani, S., Vahidi, Z., Zeraatkar, Z., Khodadadi, S. **C–P Bond Formation Catalyzed by a Magnetic Nanoparticle-Supported Palladium Catalyst, *Synfacts* 2015**, *11 (07)*, 0772.

56. Sobhani, S., Zeraatkar, Z., Zarifi, F. **Pd Complex of a NNN Pincer Ligand Supported on γ-Fe_2O_3@SiO_2 Magnetic Nanoparticles: A New Catalyst for Heck, Suzuki and Sonogashira Coupling Reactions** *New J. Chem.* **2015**, 39, 7076-7085.

57. Sobhani, S., Zarifi, F. **Pyridine-grafted graphene oxide: a reusable acid-base bifunctional catalyst for the one-pot synthesis of β-phosphonomalonates *via* cascade Knoevenogel-phospha Michael addition reaction in water**, *RSC Adv.* **2015**, *5*, 96532-96538. DOI: 10.1039/c5ra13083b, Sobhani, S., Zarifi, F. **Synthesis of β-Phosphonomalonates with Pyridine-Grafted Graphene Oxide, *Synfacts* 2016**, *12 (02)*, 0212.

2016

58. Sobhani, S., Zeraatkar, Z. **A new magnetically recoverable heterogeneous palladium catalyst for the phosphonation reaction in aqueous micellar solution**, *Applied Organometallic Chem*., **2016**, *30*, 12-19. DOI. 10.1002/aoc.3392

59. Khani, R., Sobhani, S., Hossein Beyki, M. **Highly selective and efficient removal of lead with magnetic nano-adsorbent: Multivariate optimization, isotherm and thermodynamic studies** *J. Colloid and Interface Sci.* **2016**, *466*, 198–205.

60. Sobhani, S., Mesbah Falatooni, Z., Asadi, S., Honarmand, M. **Palladium-Schiff Base Complex Immobilized Covalently on Magnetic Nanoparticles as an Efficient and Recyclable Catalyst for Heck and Suzuki Cross-Coupling Reactions**, *Catal. Lett.*, **2016**, *146*, 255–268. 10.1007/s10562-015-1636-y

61. Sobhani, S., Ramezani, Z. **Synthesis of arylphosphonates catalyzed by Pdimino-Py-γ-Fe_2O_3 as a new magnetically recyclable heterogeneous catalyst in pure water without requiring any additive**, *RSC Adv*. **2016**, *6*, 29237. Sobhani, S., Ramezani, Z. **Phosphonylation of Aryl Halides with a Palladium Complex on Fe (III) Oxide in Water,** *Synfacts*, **2016**, *12*, 0644.

62. Sobhani, S., Zarifi, F., Skibsted, J. **One-pot Synthesis of Terminal Vinylphosphonates Catalyzed by Pyridine Grafted GO as Reusable Acid-Base Bifunctional Catalyst**, *ChemistrySelect*, **2016***, 1,* 2945–2951. 10.1002/slct.201600517.

63. Sobhani, S., Asadi, S., Salimi, M., Zarifi, F., **Cu-isatin schiff base complex supported on magnetic nanoparticles as an efficient and recyclable catalyst for the synthesis of bis(indolyl)methanes and bis(pyrazolyl)methanes in aqueous media**, *J. Organomet. Chem*., **2016**, *822*, 154.

2017

64. Motamedi, R., Sobhani, S., Barani, F., **$H_3PW_{12}O_{40}$ as an efficient catalyst for one-pot- tricomponent synthesis of chromeno[4,3-b]quinolones under microwave irradiation**, *Iran. Chem. Commun.*, **2017**, *5 (3)*, 338-344.

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