

Personal Information

Name	Kazem Karami
Marital status	Married
Official Address	Department of Chemistry, Isfahan University of Technology, Isfahan, 84156-83111, IRAN
Home Address	Daneshgah Blvd 5/3 Isfahan, Iran
Phone	+983113913239
E-Mail	karami@cc.iut.ac.ir
Skype name	Kazem Karami
Date/place of birth	03/30/1966- Ilam, Iran
Nationality	Iranian

Education and Training

10/2006-present	Professor of Inorganic Chemistry (Department of Chemistry, Isfahan University of Technology, Isfahan, 84156-83111, IRAN)
12/11/2004- 4/04/2005	Visiting researcher in the Organometallic group of Professor Dr. Jose Vicente and Isabel Saura Llamas, University of Murcia , Spain Title: Synthesis of benzyl amine cyclopalladated complexes containing carbonyl-stabilized ylides (C-H activation)
10/2000- 04/2006	Ph.D. in inorganic Chemistry (Department of Chemistry, Bu-Ali Sina University, Hamedan, Iran). Professor S.J .Sabounchei Thesis title: Synthesis and Characterization of keto-stabilize phosphorus ylides and Pt(0), Pd(0), Ag(I), Rh(III) mononuclear cyclopalladated complexes with multinuclear NMR study and X-ray analysis methods.
09/1995-06/1997	M.Sc in Inorganic Chemistry (Department of Chemistry, Tehran University of Teacher training, Tehran, Iran) Professor Ahmad Emad Thesis title: Synthesis & Characterization of Complexes Benzoyl methyltriphenyl Phosphorane with elements of Cobalt & Nickle & Copper & Cadmium & Chromium & Lanthanum.

10/1988-02/1991

B.Sc in Pure Chemistry (Department of Chemistry Lorestan University, Lorestan, Iran).

Work Experiences

Lecturing to undergraduate and graduate student on:

Multi nuclear NMR, Inorganic Spectroscopy, Advance Organometallic Chemistry, Advance Inorganic Chemistry, Group Theory in Inorganic Chemistry, Structure and bonding, Inorganic Chemistry (I), Inorganic Chemistry (II), Organometallic Chemistry, , Environmental Chemistry, General Chemistry (I), General Chemistry (II), Inorganic Chemistry Lab, General Chemistry Lab.

Supervising and Mentoring Activities

- Supervising **2** Postdoctoral researcher.
- Supervising **13** Doctoral degree students.
- Supervising **39** Master's degree students.
- Supervising **10** Bachelor's degree students.
- Supervising **2** Doctorate proposals.
- Reviewer **50** Postdoctoral proposals.
- Reviewer 85 papers
- Advising **12** Doctoral degree students.
- Advising **35** Master's degree students.
- Working as the referee of more than 100 ISI papers
- Member of editorial board of more than 15 research projects of the vice President for Science (INSF.ORG).

Titles of research projects of the vice President (INSF):

Preparation of anti-tumor orthopaladite complexes: Investigation of structure and activity of orthopaladite complexes with first and second type amines.

Synthesis and determination of structure for new orthopaladite triphenylphosphite complexes and studies on their interaction with calf thymus DNA.

Synthesis and characterization of new cyclopaladite complexes with bioactive ligands O, O chelate and studies on their interaction with CT-DNA & BSA by drug markers and evaluation of biological and anti-cancer activity of the complex on cancer cell line.

Synthesis and structural characterization of new palladicyclic phosphorylide complexes containing amino acids: A study of interaction with biological macromolecules and investigation of antitumor activity.

Synthesis and characterization of MILL101 Fe / Cu (oac) composite and its application in electrochemical measurement of glucose and hydrogen peroxide.

Responsible of project (Post. Doctoral):

Synthesis and characterization of metal sulfide nanocomposites (MS) (M: Cd, Zn, Cu) with polyaxometals and study of their application for removal and degradation of color contaminants.

Field of research:

1. 1: Design of new molecules with biochemical properties, The general objective of the project, involves the design, realization, characterization and pre-competitive development of new molecules with predetermined biochemical properties.
2. 2: Coordination chemistry of orthopalladated complexes & Heterogeneous and homogeneous catalyses
3. Orthopalladation of first amines and reactions with Keto stabilized Phosphorus ylide. Cyclopalladation of Keto stabilized Phosphorus ylide (C-H activation)
4. BSA nanoparticles as controlled release carriers for isophethalaldoxime palladacycle complex; synthesis, characterization, in vitro evaluation, cytotoxicity and release
5. BSA nanoparticles as controlled release carriers for isophethalaldoxime palladacycle complex; synthesis, characterization, in vitro evaluation, cytotoxicity and release

Publications

- [1] Palladium complexes with 3-phenylpropylamine ligand: synthesis, structures, theoretical studies and application in the aerobic oxidation of alcohols as a heterogeneous catalyst. *kazem karami*, Nasrin Haghighat Naeini, Václav Eigner, Michal Dušek, Janusz Lipkowski, Pablo Hervés and Hossein Tavakol, RSC Adv., 2015, DOI: 0.1039/C5RA17249G
- [2] Design and synthesis of a novel trinuclear palladium(II) complex containing an oxime chelate ligand: determining the interaction mechanism with the DNA groove and BSA site I by spectroscopic and molecular dynamics simulation approaches. *Kazem Karami*, Zohreh Mehri Lighvan, a Somayeh Asgari Barzani, Ali Yeganeh Faal, Marziyeh Poshteh-Shirani, Taghi Khayamian, Václav Eigner and Michal Dus. New J. Chem., 2015, 39, 8708—8719.

- [3] Synthesis, spectral characterization, crystal structure and in vitro DNA/protein binding studies of phosphorous ylide palladacyclic complexes containing azide group. **Kazem Karami**, Zahra Shirani-Sarmazeh, Mahboubeh Hosseini-Kharat, Janusz Lipkowski, Maryam Saeidifar. *Journal of Photochemistry and Photobiology B: Biology* 144 (2015) 11–19
- [4] Palladium nanoparticles supported on cucurbit[6]uril: an efficient heterogeneous catalyst for the Suzuki reaction under mild conditions. **K. Karami** and N. Haghighat Naeini, *Appl. Organometal. Chem.* 2015, 29, 33–39
- [5] Mono- and binuclear orthopalladated complexes of phosphorus ylides containing nitrogen, phosphorus or bridging diphosphine ligands: Self-assembly, theoretical calculations and comparative catalytic activity. **Kazem Karami**, Sedigheh Abedanzadeh, Firoozeh Yadollahi a, Orhan üyüküngüor, Hossein Farrokhpour a, Corrado Rizzoli c, Janusz Lipkowski *Journal of Organometallic Chemistry* 781 (2015) 35-46.
- [6] In vitro cytotoxicity studies of palladacyclic complexes containing the symmetric diphosphine bridging ligand. Studies of their interactions with DNA and BSA. **Kazem Karami**, , Mahboubeh Hosseini-Kharat a, Hojjat Sadeghi-Aliabadi b, Janusz Lipkowski c, Mina Mir *European Journal of Medicinal Chemistry* 73 (2014) 8-17.
- [7] P,C-palladacycle complexes of triphenylphosphite: Synthesis, characterization and catalytic activity in the Suzuki cross-coupling reaction. **Kazem Karami**, , Shokouh Esfarjani a, Sedigheh bedanzadeh a, Janusz Lipkowski *Polyhedron* 68 (2014) 249–257.
- [8] Palladium particles from oxime-derived palladacycle supported on Fe₃O₄/oleic acid as a catalyst for the copper-free Sonogashira cross-coupling reaction. **Kazem Karami**, , Samaneh Dehghani Najvani a, Nasrin Haghighat Naeini a, Pablo Hervés .*Chinese Journal of Catalysis* 36 (2015) 1047–1053
- [9] Synthesis and characterization of 2-phenylaniline cyclopalladated complexes, **Karami, K.**, Rizzoli, C., Rahimi, N., *Transition Metal Chemistry* 36 (8) , pp. 841-846, 2011
- [10] Characterization Reaction of Benzoyl Methylene Triphenylphosphorane and Benzoyl Methylene Tri-n-buthylphosphorane with Rhodium (III) and Ruthenium

(III) Chloride. A Multinuclear NMR Study Phosphorus, Sulfur, and Silicon and the Related Elements (July

- [11] Synthesis and characterization of cyclopalladated complexes of benzylamine by IR and NMR spectroscopy studies. *Kazem karami*. Journal of Coordination Chemistry Volume 61, Issue 16, 2008, Pages 2584-2589
- [12] 2) Synthesis, spectroscopic and X-ray structural studies of silver(I) complexes of α -keto stabilized phosphorus ylides, *Karami, K.*, Buyukgungor, O., Journal of Coordination Chemistry 62 (18) , pp. 2949-2956, 2009.
- [13] Triphenyl[(4-phenylbenzoyl)methyl]phosphonium trifluoromethanesulfonate, • Rizzoli, C., *Karami, K.*, Salah, M.M., Acta Crystallographica Section E: Structure Reports Online 66 (10) , pp. o2675-o2676, 2010.
- [14] Oxygen- versus carbon-coordination of the alpha-stabilized phosphorus ylide $\text{Ph}_3\text{P}=\text{C}(\text{H})\text{R}$ in palladacycles bearing secondary amines, *Karami, K.*, Salah, M.M., Transition Metal Chemistry 36 (4) , pp. 363-367, 2011.
- [15] Di- μ -iodido-bis{[(4-fluorobenzoylmethylene)triphenyl]phosphorane}iodido mercury (II)} Acta Crystallographica Section E (May 2008), 64 (5), pg. m612-m613 Mehmet Akkurt; *Kazem Karami*; Şerife Pınar Yalçın; Orhan Büyükgüngör
- [16] Application of dimeric orthopalladate complex of homoveratrylamine as an efficient catalyst in the Heck cross-coupling reaction, Hajipour, A.R., *Karami, K.*, Pirisedigh, A., Ruoho, A.E., Journal of Organometallic Chemistry 694 (16) , pp. 2548-2554, 200
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- [21] (4-Methoxy-benzoyl-meth-yl)triphenyl-phospho-niumtrifluoro-methane-ulfonate *Karami, K.*, Büyükgüngör, O. Acta Crystallographica Section E: Structure Reports Online 65 (2) , pp. o296,
- [22] Accelerated Heck reaction using ortho-palladated complex with controlled microwave heating, Hajipour, A.R., *Karami, K.*, Pirisedigh, A., Applied Organometallic Chemistry 23 (12) , pp. 504-511, 2009.
- [23] Synthesis and application of ortho-palladated complex of (4-phenylbenzoylmethylene)triphenylphosphorane as a highly active catalyst in the Suzuki cross-coupling reaction, *Karami, K.*, Rizzoli, C., Salah, M.M., Journal of Organometallic Chemistry 2011
- [24] A comparative homocoupling reaction of aryl halides using monomeric orthopalladated complex of 4-methoxybenzoylmethylenetri-phenylphosphorane under conventional and microwave irradiation conditions, Hajipour, A.R., *Karami, K.*, Tavakoli, G., Applied Organ
- [25] Preparation and Characterization of Ni(II), Co(II) and Cr(III) Complexes with Benzoylmethylene triphenyl phosphineEmad, A., *Karami, K.* 2000 Iranian Journal of Chemistry and Chemical Engineering 19 (1) , pp. 19-23
- [26] Synthesis, characterization, and spectroscopic studies of palladium(II) and silver(I) complexes of 4-methoxybenzoylmethylenetriphenylphosphorane and 4-fluorobenzoylmethylenetriphenylphosphorane Transition Metal Chemistry (October 2008), 33 (7), pg.
- [27] Synthesis and characterization of new Pd(II) complexes of l-ethylphenylalanate, • Hajipour, A.R., *Karami, K.*, Pirisedigh, A., Ruoho, A.E., *Amino Acids* 37 (3) , pp. 537-541, 2009.
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- coupling, *Karami, K.*, Journal of Coordination Chemistry 63 (20) , pp. 3688-3696, 2010.
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- [30] Cyclopalladated complexes of 2-phenylaniline and their catalytic activity in Suzuki and Heck reactions under mild conditions *Kazem Karami* , Naser Rahimi, Mahlagha Bahrami Shehni *Tetrahedron Letters* 53 (2012) 2428–2431
- [31] Synthesis and characterisation of Hg (II) and Ag (I) complexes of 4-fluorobenzoyl methylene- triphenyl phosphorane and 4-chlorobenzoyl methylenetriphenyl phosphorane, with spectroscopic studies. *kazem karami.*
- [32] X-ray and spectroscopy studies of antisymbiotic effect O-23)coordination of the 4-methoxy benzoyl methylene triphenyl phosphorane ligand in palladium(II) complex, *Karami, K.*, Büyükgüngör, O. Inorganica Chimica Acta 362 (6) , pp. 2093-209
- [33] Palladium-catalyzed cyanation reaction of aryl halides using K₄[Fe(CN)₆] as non-toxic source of cyanide under microwave irradiation, Hajipour, A.R., *Karami, K.*, Pirisedigh, A., *Applied Organometallic Chemistry* 24 (6) , pp. 454-457, 2010.
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- [36] An efficient Stille cross-coupling reaction catalyzed by ortho-palladated complex of tribenzylamine under microwave irradiation Abdol R. Hajipoura, , *Kazem Karami* and Fatemeh Rafiee Appl. Organometal. Chem. 2012, 26, 27–31

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- [40] Palladium nanoparticles supported on polymer: An efficient and reusable heterogeneous catalyst for the Suzuki cross-coupling reactions and aerobic oxidation of alcohols *Kazem Karami*, Mahdiyeh Ghasemi, Nasrin Haghighat Naeini. *Catalysis Communications* 38 (2013) 10–15
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- [42] Bis (dibenzylidene acetone) palladium (0) catalyst for glycerol oxidation in half cell and in alkaline direct glycerol fuel cell Mohammad Zhiani, Hussein Rostami, Somayeh Majidi, *Kazem Karami*. *international journal of hydrogen energy* 38 (2013) 5435-5441
- [43] Cyclopalladated complexes of 2-phenylaniline and their catalytic activity in Suzuki and Heck reactions under mild conditions *Kazem Karami*, Naser Rahimi, Mahlagha Bahrami Shehni *Tetrahedron Letters* 53 (2012) 2428–2431
- [44] Catalytic activity of some palladium complexes of a phosphorus ylide and the structure of a 2-phenylaniline-based palladacycle complex *Kazem Karami*, Nasser Rahimi a, Corrado Rizzoli *Polyhedron* 59 (2013) 133–137
- [45] Synthesis, structural and theoretical studies of Pd(II) complexes containing an orthometallated C,C-chelating phosphorus ylide *Kazem Karami*, Mina Salimian

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- [46] Preparation of a titania-supported highly dispersed palladium nano-catalyst and its application in Suzuki and Heck coupling reactions *Kazem Karami*, Mahlagha Bahrami Shehni and Nasser Rahimi *Appl. Organometal. Chem.* 2013, 27, 437–443
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- [48] P,C-palladacycle complexes of triphenylphosphite: Synthesis, characterization and catalytic activity in the Suzuki cross-coupling reaction *Kazem Karami*, Shokouh Esfarjani, Sedigheh Abedanzadeh, Janusz Lipkowski Polyhedron 68 (2014) 249–257
- [49] Structural and theoretical studies of mono and di-insertion of symmetric alkynes into the Pd-C s bond of cyclopalladated secondary (tert-butyl and ethyl) benzylamines *Kazem Karami*, Mahboubeh Hosseini-Kharat, Corrado Rizzoli, Hossein Tavakol, Janusz Lipkowski Journal of Organometallic Chemistry 752 (2014) 152-160
- [50] In vitro cytotoxicity studies of palladacyclic complexes containing the symmetric diphosphine bridging ligand. Studies of their interactions with DNA and BSA *Kazem Karami*, Mahboubeh Hosseini-Kharat, Hojjat Sadeghi-Aliabadi, Janusz Lipkowski, Mina Mirian *European Journal of Medicinal Chemistry* 73 (2014) 8-17
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- orthopalladated complex of benzophenone imine: catalytic activity in the copper-free Sonogashira cross-coupling reactions at low palladium loadings." *RSC advances* 6.96 (2016): 93660-93672.
- [54] **Kazem Karami**, et al. "NC Palladacycles and C, C-chelating phosphorus ylide complexes: synthesis, X-ray characterization, and comparison of the catalytic activity in the Suzuki-Miyaura reaction." *Journal of Coordination Chemistry* 69.5 (2016): 763-778.
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- [78] **Kazem Karami**, et al. "Glassy carbon electrode modified by new Copper (I) oxide nanocomposite for glucose detection: An electroanalysis study." **Applied Organometallic Chemistry** 33.6 (2019): e4834.
- [79] **Kazem Karami**, et al. "Luminescent Palladacycles Containing a Pyrene Chromophor; Synthesis, Biological and Computational Studies of the Interaction with DNA and BSA." **ChemistrySelect** 4.17 (2019): 5126-5137.
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- [90] Novel fluorescence palladium-alkoxime complexes: Synthesis, characterization, DNA/BSA spectroscopic and docking studies, evaluation of cytotoxicity and DNA cleavage mechanism
K Karami, N Jamshidian, A Bagheri, A Hajiaghahi, AA Momtazi-Borojeni, ...
Journal of Molecular Structure 1206, 127595 (2020)
- [91] A Pd (II) complex derived from pyridine-2-carbaldehyde oxime ligand: Synthesis, characterization, DNA and BSA interaction studies and in vitro anticancer activity
M Alinaghi, K Karami, A Shahpiri, AA Momtazi-Borojeni, E Abdollahi, ...
Journal of Molecular Structure 1219, 128479 (2020)
- [92] Synthesis and Characterization of a New Cu (BHB) 2/Fe-MIL-101-NH₂ Composite: A Novel Hydrogen Peroxide Sensor based upon the Bimetallic Complex
K Karami, P Bayat, H Khosropour, F Siadatnasab, B Rezaei, ...
Journal of The Electrochemical Society 168 (1), 017508 2021)
- [93] Synthesis and Characterization of Palladium Nanoparticles Immobilized on Modified Cellulose Nanocrystals as Heterogeneous Catalyst for Reduction of Nitroaromatic Compounds
K Karami, H Saadatzaadeh, A Ramezanpour
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- [94] Experimental and theoretical studies of Palladium-hydrazide complexes' interaction with DNA and BSA, in vitro cytotoxicity activity and plasmid cleavage ability
K Karami, N Jamshidian, M Zakariazadeh, AA Momtazi-Borojeni, ...
Computational Biology and Chemistry 91, 107435 (2021)
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Prof. Dr. Kazem Karami

Isfahan University of Technology;

E-mail: karami@cc.iut.ac.ir; Tel: +983113913239