

Hamid Reza Shahsavari



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H-index: 16

Date of Birth: June 02, 1984

Marital Status: Married

Educational Background:

Ph.D. in Inorganic Chemistry with Prof. Mehdi Rashidi	Shiraz University, Iran, 2012
M.Sc. in Inorganic Chemistry with Prof. Mehdi Rashidi	Shiraz University, Iran, 2008
B.Sc. in Pure Chemistry with Prof. Ali Reza Sardarian	Shiraz University, Iran, 2006

Professional Experience:

Associate Professor of Inorganic Chemistry, Institute for Advanced Studies in Basic Sciences (IASBS), Iran, Since May 2019 - Present.

Assistant Professor of Inorganic Chemistry, Institute for Advanced Studies in Basic Sciences (IASBS), Iran, August 2013 - May 2019.

Visiting Professor; at Department of Chemistry and Biochemistry, University of Arkansas, USA, with Prof. M. Hassan Beyzavi, July 2019 - September 2019.

Visiting Professor; at Department of Chemistry and Biochemistry, University of Arkansas, USA, with Prof. M. Hassan Beyzavi, October 2018 - March 2019.

Visiting Professor; at Department of DICATECh, Politecnico di Bari, Italy, with Prof. Piero Mastrorilli, March 2018 - May 2018.

Visiting Professor; at Department of DICATECh, Politecnico di Bari, Italy, with Prof. Piero Mastrorilli, March 2017 - June 2017.

Visiting Professor; at Department of Chemistry, Universidad de La Rioja, Spain, with Prof. Elena Lalinde, March 2015 - April 2015.

Visiting Student; at Department of Chemistry, Universidad de La Rioja, Spain, with Prof. Elena Lalinde, September 2011 - June 2012.

Research Area:

I) Design of organometallic systems with transitions metals (Ru, Rh, Pd, Ir, Pt, Au) and study of their optoelectronic, biological properties and potential applications.

II) Kinetic study on organometallic complexes.

III) Study of catalytic properties of inorganic and organometallic compounds in some organic transformation.

List of Publication:

- 1) Fluorinated cycloplatinated(II) complexes bearing bisphosphine ligands as potent anticancer agents
H. R. Shahsavari,* Y. Sakamaki, S. Chamyani, C. Salmon, R. Babadi Aghakhanpour, M. Fereidoonzehad, M. H. Beyzavi*
2020, Submitted.
- 2) A C^N cycloplatinated(II) fluorido complex: Photophysical studies and Csp³-F bond formation
J. Hu, M. Nikravesh, **H. R. Shahsavari**,* R. Babadi Aghakhanpour, A. L. Rheingold, M. Alshami, Y. Sakamaki, M. H. Beyzavi*
2020, Submitted.
- 3) Half-sandwich cyclometalated Rh^{III} complexes bearing thionate ligands: Biomolecular interactions, *in vitro* and *in vivo* evaluations
A. Nahaei, Z. Mandegani, S. Chamyani, M. Fereidoonzehad, **H. R. Shahsavari**,* S. M. Nabavizadeh*
2020, Submitted.
- 4) Synthesis and characterization of Rh^{III}-M^{II} (M = Pt, Pd) heterobimetallic complexes based on a bisphosphine ligand: Facile tandem reactions using ethanol
Z. Mandegani, A. Nahaei, M. Nikravesh, S. M. Nabavizadeh,* **H. R. Shahsavari**,* M. M. Abu-Omar*
2020, Submitted.
- 5) A photocatalytically active cycloplatinated covalent organic framework for difluoroalkylation and photo-oxidative cyclization reactions
Z. Almansaf, J. Hu, F. Zanca, B. Kampmeyer, M. Tsuji, K. Maity, V. Lomonte, Y. Ha, P. Mastrorilli, S. Todisco, M. Benamara, A. Mirjafari, P. Z. Moghadam,* **H. R. Shahsavari**,* A. R. Khosropour,* M. H. Beyzavi*
2020, Submitted.
- 6) Luminescent cycloplatinated(II) complexes: Impact of ancillary ligands and second metals
H. R. Shahsavari,* S. Pazireh, R. Babadi Aghakhanpour, S. Chamyani
Inorganic Chemistry Research, 2020, 4, 225-249.
- 7) PtSn nanoalloys thin films as anode catalysts in methanol fuel cells
N. Aramesh, S. J. Hoseini,* **H. R. Shahsavari**, S. M. Nabavizadeh, M. Bahrami, M. R. Halvagar, E. De Giglio, M. Latronico, P. Mastrorilli*
Inorganic Chemistry, 2020, **59**, 10688-10698.
- 8) Five- and six-coordinated silver(I) complexes formed by a metallomacrocyclic ligand with an "Au₂N₂" donor group: Observation of pendulum motion and dual phosphorescence
S. Nayeri, S. Jamali,* A. Jamjah, J. R. Shakirova, S. P. Tunik, V. Gurzhiy, H. Samouei, **H. R. Shahsavari**
Inorganic Chemistry, 2020, **59**, 5702-5712.
- 9) Recombinant peptide fusion protein-templated palladium nanoparticles for Suzuki-Miyaura and Stille coupling reactions
I. Mosleh, **H. R. Shahsavari**, R. Beitle, M. H. Beyzavi*
ChemCatChem, 2020, **12**, 2942-2946.
Featured Article as the **Front Cover Article** in the *ChemCatChem*.
Selected as Part of a Joint Special Collection with *ChemBioChem* on "*Excellence in Biocatalysis Research*."

- 10) Facile $C_{sp^2}-C_{sp^2}$ reductive elimination from a biarylplatinum(II) complex induced by a S-S bond oxidative addition at room temperature
H. R. Shahsavari,* R. Babadi Aghakhanpour, A. Biglari, M. Niazi, P. Mastrorilli,* S. Todisco, V. Gallo, E. Lalinde,* M. T. Moreno, N. Giménez, M. R. Halvagar
Organometallics, 2020, **39**, 417-424.
 Featured Article as the **Front Cover Article** in the *Organometallics*.
- 11) *trans*-Platinum(II) thionate complexes: Synthesis, structural characterization, and *in vitro* biological assessment as potent anticancer agents
 Y. Sakamaki, H. Ahmadi Mirsadeghi, M. Fereidoonhezad,* F. Mirzaei, Z. Moghimi Dehkordi, S. Chamyani, M. Alshami, S. Abedanzadeh, **H. R. Shahsavari**,* M. H. Beyzavi*
ChemPlusChem, 2019, **84**, 1525-1535.
- 12) Synthesis and biological evaluation of thiolate gold(I) complexes as thioredoxin reductases (TrxRs) and glutathione reductase (GR) inhibitors
 M. Fereidoonhezad, H. Ahmadi Mirsadeghi, S. Abedanzadeh, A. Yazdani, A. Alamdarlou, M. Babaghasabha, Z. Almansaf, Z. Faghih, Z. McConnell, **H. R. Shahsavari**,* M. H. Beyzavi*
New Journal of Chemistry, 2019, **43**, 13173-13182.
- 13) Strong red emissions induced by Pt-Pt interactions in binuclear cycloplatinated(II) complexes containing bridging diphosphines
 M. Nazari, **H. R. Shahsavari***
Applied Organometallic Chemistry, 2019, **33**, e5020, 1-11.
- 14) Half-lantern cyclometalated Pt(II) and Pt(III) complexes with bridging heterocyclic thiolate ligands: Synthesis, structural characterization, electrochemical and photophysical properties
H. R. Shahsavari,* E. Lalinde, M. T. Moreno,* M. Niazi, S. H. Kazemi, S. Abedanzadeh, M. Barazandeh, M. R. Halvagar
New Journal of Chemistry, 2019, **43**, 7716-7724.
- 15) Pt–M (M = Au and Tl) dative bonds using bis(cyclometalated)platinum(II) complexes
 S. Rajabi, S. Jamali,* S. Naseri, A. Jamjah, R. Kia, H. Samouei, P. Mastrorilli, **H. R. Shahsavari**, P. R. Raithby
Organometallics, 2019, **38**, 1709-1720.
- 16) Heterobimetallic $Pt^{II}-Au^I$ complexes comprising unsymmetrical 1,1-bis(diphenylphosphanyl)methane bridges: Synthesis, photophysical, and cytotoxic studies
H. R. Shahsavari,* N. Giménez, E. Lalinde,* M. T. Moreno, M. Fereidoonhezad,* R. Babadi Aghakhanpour, M. Khatami, F. Kalantari, Z. Jamshidi, M. Mohammadpour
European Journal of Inorganic Chemistry, 2019, 1360-1373.
- 17) Carbon-iodide bond activation by cyclometalated Pt(II) complexes bearing tricyclohexylphosphine ligand: A comparative kinetic study and theoretical elucidation
 S. Chamyani, **H. R. Shahsavari**,* S. Abedanzadeh, M. Golbon Haghghi, S. Shabani, B. Notash
Applied Organometallic Chemistry, 2019, **33**, e4674, 1-13.
- 18) Metal–Organic frameworks and covalent organic frameworks as platforms for photodynamic therapy
 Y. Sakamaki, J. Ozdemir, Z. Heidrick, O. Watson, **H. R. Shahsavari**, M. Fereidoonhezad, A. R. Khosropour, M. H. Beyzavi*
Comments on Inorganic Chemistry, 2018, **38**, 238–293. (*Invited Review Article*)

- 19) Highly emissive cycloplatinated(II) complexes obtained by the chloride abstraction from the complex [Pt(ppy)(PPh₃)(Cl)]: Employing various silver salts
H. R. Shahsavari,* R. Babadi Aghakhanpour, M. Nikravesh, J. Ozdemir, M. Golbon Haghghi, B. Notash, M. H. Beyzavi*
Organometallics, 2018, **37**, 2890-2900.
- 20) Reactivity of a new aryl cycloplatinated(II) complex containing rollover 2,2'-bipyridine *N*-oxide toward a series of diphosphine ligands
H. R. Shahsavari,* R. Babadi Aghakhanpour, M. Hossein-Abadi, R. Kia,* M. R. Halvagar, P. R. Raithby
New Journal of Chemistry, 2018, **42**, 9159-9167.
- 21) Synthesis, structural characterization, biological evaluation and molecular docking studies of new platinum(II) complexes containing isocyanides
M. Fereidoonzhad, **H. R. Shahsavari**,* S. Abedanzadeh, A. Nezafati, A. Khazali, P. Mastrorilli, M. Babaghasabha, J. Webb, Z. Faghieh, Z. Faghieh, S. Bahemmath, M. H. Beyzavi*
New Journal of Chemistry, 2018, **42**, 8681-8692.
- 22) Cycloplatinated(II) complexes bearing an O,S heterocyclic ligand: search for anticancer drugs
M. Fereidoonzhad, Z. Ramezani, M. Nikravesh, J. Zangeneh, M. Golbon Haghghi, Z. Faghieh, B. Notash, **H. R. Shahsavari***
New Journal of Chemistry, 2018, **42**, 7177-7187.
- 23) Stable *trans* isomer as the kinetic and thermodynamic product for the oxidative addition of MeI to cycloplatinated(II) complexes comprising isocyanide ligands
H. R. Shahsavari,* R. Babadi Aghakhanpour, M. Hossein-Abadi, R. Kia,* P. R. Raithby
Applied Organometallic Chemistry, 2018, **32**, e4216, 1-11.
- 24) (Benzyl isocyanide)gold(I) pyrimidine-2-thiolate complex: Synthesis and biological activity
M. Fereidoonzhad, **H. R. Shahsavari**,* E. Lotfi, M. Babaghasabha, M. Fakhri, Z. Faghieh, Z. Faghieh, M. H. Beyzavi*
Applied Organometallic Chemistry, 2018, **32**, e4200, 1-7.
Featured Article as the **Front Cover Article** in the *Applied Organometallic Chemistry*.
Highlighted in KNWA TV Channel, FOX24 TV Channel.
- 25) A borane platinum complex undergoing reversible hydride migration in solution
A. Neshat,* **H. R. Shahsavari**,* P. Mastrorilli,* S. Todisco, M. Golbon Haghghi, B. Notash
Inorganic Chemistry, 2018, **57**, 1398-1407.
- 26) An in-depth investigation on the C–I bond activation by rollover cycloplatinated(II) complexes bearing monodentate phosphane ligands: Kinetic and kinetic isotope effect
H. R. Shahsavari,* R. Babadi Aghakhanpour, M. Fereidoonzhad
New Journal of Chemistry, 2018, **42**, 2564-2573.
- 27) Cycloplatinated(II) complexes bearing 1,1'-bis(diphenylphosphino)ferrocene ligand: Biological evaluation and molecular docking studies
M. Fereidoonzhad, **H. R. Shahsavari**,* S. Abedanzadeh, B. Behchenari, M. Hossein-Abadi, Z. Faghieh, M. H. Beyzavi*
New Journal of Chemistry, 2018, **42**, 2385-2392.
Featured Article as the **Front Cover Article** in the *New Journal of Chemistry*.
Highlighted in KNWA TV Channel, FOX24 TV Channel.

- 28) A new approach to the effects of isocyanide (CN-R) ligands on the luminescence properties of cycloplatinated(II) complexes
H. R. Shahsavari,* R. Babadi Aghakhanpour, M. Hossein-Abadi, M. Golbon Haghghi, B. Notash, M. Fereidoonzhad
New Journal of Chemistry, 2017, **41**, 15347-15356.
- 29) The influence of thiolate ligands on the luminescence properties of cycloplatinated(II) complexes
M. Jamshidi, M. Babaghasabha, **H. R. Shahsavari**,* S. M. Nabavizadeh*
Dalton Transactions, 2017, **46**, 15919-15927.
- 30) Cyclometalated platinum(II) complexes bearing bidentate *O,O'*-di(alkyl)dithiophosphate ligands: Photoluminescence and cytotoxic properties
M. Fereidoonzhad, B. Kaboudin, T. Mirzaee, R. Babadi Aghakhanpour, M. Golbon Haghghi, Z. Faghhih, Z. Faghhih, Z. Ahmadipour, B. Notash, **H. R. Shahsavari***
Organometallics, 2017, **36**, 1707–1717.
- 31) Photophysical properties of a series of cycloplatinated(II) complexes featuring allyldiphenylphosphane
H. R. Shahsavari,* R. Babadi Aghakhanpour, M. Babaghasabha, M. Golbon Haghghi, S. M. Nabavizadeh, B. Notash
New Journal of Chemistry, 2017, **41**, 3798-3810.
- 32) Combined kinetic-mechanistic and theoretical elucidation on oxidative addition of iodomethane to cycloplatinated(II) complexes: Controlling rate of *trans-cis* isomerization
H. R. Shahsavari,* R. Babadi Aghakhanpour, M. Babaghasabha, M. Golbon Haghghi, S. M. Nabavizadeh, B. Notash
European Journal of Inorganic Chemistry, 2017, 2682–2690.
- 33) Cyclometalated platinum(II) complexes comprising 2-(diphenylphosphino)pyridine and various thiolate ligands: Synthesis, spectroscopic characterization and biological activity
M. Fereidoonzhad, M. Niazi, Z. Ahmadipour, T. Mirzaee, Z. Faghhih, Z. Faghhih, **H. R. Shahsavari***
European Journal of Inorganic Chemistry, 2017, 2247–2254.
- 34) Synthesis, biological evaluation, and molecular docking studies on the DNA binding interactions of platinum(II) rollover complexes containing phosphorus donor ligands
M. Fereidoonzhad, M. Niazi, M. Shahmohammadi Beni, S. Mohammadi, Z. Faghhih, Z. Faghhih, **H. R. Shahsavari***
ChemMedChem, 2017, **12**, 456–465.
- 35) Cyclometalated platinum(II) complexes of 2,2'-bipyridine N-oxide containing a 1,1'-bis(diphenylphosphino)ferrocene ligand: structural, computational and electrochemical studies
H. R. Shahsavari,* M. Fereidoonzhad,* M. Niazi, S. T. Mosavi, S. H. Kazemi, R. Kia,* S. Shir Khan, S. Abdollahi Aghdam, P. R. Raithby
Dalton Transactions, 2017, **46**, 2013–2022.
- 36) A cooperative pathway for water activation process using a bimetallic Pt⁰-Cu^I system
S. Jamali,* S. Abedanzadeh, N. K. Khaledi, H. Samouei, Z. Hendi, S. Zacchini, R. Kia, **H. R. Shahsavari**
Dalton Transactions, 2016, **45**, 17644–17651.
- 37) Carbon–sulfur bond reductive coupling from a platinum(II) thiolate complex
M. Niazi, **H. R. Shahsavari**,* M. Golbon Haghghi, M. R. Halvagar, S. Hatami, B. Notash

RSC Advances, 2016, **6**, 95073-95084.

38) Reactivity of a half-lantern Pt₂(II,II) complex with triphenylphosphine: selectivity in a protonation reaction

M. Niazi, **H. R. Shahsavari**,* M. Golbon Haghighi, M. R. Halvagar, S. Hatami, B. Notash
RSC Advances, 2016, **6**, 76463-76472.

39) Bimetallic clusters and extended chains featuring Pt(II)-Tl(I) bonds: Effect of the pyridine-2-thiolate and cyclometalated ligands in the luminescence and mechanochromism

J. R. Berenguer, E. Lalinde,* A. Martín, M. T. Moreno,* S. Sánchez, **H. R. Shahsavari**
Inorganic Chemistry, 2016, **55**, 7866-7878.

40) Organoplatinum(II) complexes featuring the 2-vinylpyridine ligand

M. Niazi, **H. R. Shahsavari***
ChemistrySelect, 2016, **1**, 1780-1783.

41) Cycloplatinated(II) complex bearing 2-vinylpyridine and monodentate phosphine ligands: Optical properties and kinetic study

M. Niazi, **H. R. Shahsavari***
Journal of Organometallic Chemistry, 2016, **803**, 82-91.

42) Photophysical and DFT studies on cycloplatinated complexes: Modification in luminescence properties by expanding of π - conjugated system

M. Jamshidi, S. M. Nabavizadeh,* **H. R. Shahsavari**, M. Rashidi*
RSC Advances, 2015, **5**, 57581-57591.

43) 2-(Diphenylphosphino)pyridine platinum(I) and palladium(I) complex as a new efficient binuclear catalyst for Suzuki-Miyaura coupling reaction in water under mild reaction conditions

M. Gholinejad,* **H. R. Shahsavari**,* M. Razeghi, M. Niazi, F. Hamed
Journal of Organometallic Chemistry, 2015, **796**, 3-10.
Selected for Special Issue: *Catalysis using Organometallics in Environmentally-Friendly Solvents*.

44) C-H reductive elimination during the reaction of cycloplatinated(II) complexes with pyridine-2-thione: Kinetic follow up

M. Dadkhah Aseman, S. M. Nabavizadeh,* **H. R. Shahsavari**, M. Rashidi*
RSC Advances, 2015, **5**, 22692-22702.

45) Photophysical responses in Pt₂Pb clusters driven by solvent interactions and structural changes in the Pb^{II} environment

J. R. Berenguer, E. Lalinde,* A. Martín, M. T. Moreno,* S. Ruiz, S. Sánchez, **H. R. Shahsavari**
Inorganic Chemistry, 2014, **53**, 8770-8785.

46) N,N'-bis(2-Pyridinecarboxamide)-1,2-benzene palladium complex as a new efficient catalyst for Suzuki-Miyaura coupling reaction under phosphane free

M. Gholinejad,* **H. R. Shahsavari***
Inorganica Chimica Acta, 2014, **421**, 433-438.

47) Cyclometalated heteronuclear Pt/Ag and Pt/Tl complexes: photophysical study

S. Jamali,* R. Ghazfar, E. Lalinde, Z. Jamshidi, H. Samouei, **H. R. Shahsavari**, M. T. Moreno, E. Escudero-Adán, J. Benet-Buchholz, D. Milic
Dalton Transactions, 2014, **43**, 1105-1116.

- 48) Solvent-induced lone pair activity tuning and vapoluminescence in a Pt₂Pb cluster
J. R. Berenguer, E. Lalinde,* A. Martín, M. T. Moreno,* S. Ruiz, S. Sánchez, **H. R. Shahsavari**
Chemical Communications, 2013, **49**, 5067-5069.
- 49) Influence of anionic components of ionic liquid solvents on oxidative addition reactions of organoplatinum(II) complexes with MeI
S. M. Nabavizadeh,* H. Sepehrpour, **H. R. Shahsavari**, M. Rashidi*
New Journal of Chemistry, 2012, **36**, 1739-1743.
- 50) Oxidative addition of MeI to some cyclometalated organoplatinum(II) complexes: Kinetics and mechanism
S. M. Nabavizadeh,* H. Amini, F. Jame, S. Khosraviolya, **H. R. Shahsavari**, F. Niroomand Hosseini, M. Rashidi*
Journal of Organometallic Chemistry, 2012, **698**, 53-61.
- 51) Substitution reactions involving cyclometalated platinum(II) complexes: Kinetic investigations
S. M. Nabavizadeh,* **H. R. Shahsavari**, M. Namdar, M. Rashidi*
Journal of Organometallic Chemistry, 2011, **696**, 3564-3571.
- 52) Assembly of cyclometalated platinum(II) complexes via 1,1'-bis(diphenylphosphino)ferrocene ligand: kinetics and mechanisms
S. M. Nabavizadeh,* H. Amini, **H. R. Shahsavari**, M. Namdar, M. Rashidi,* R. Kia, B. Hemmateenejad, M. Nekoeinia, A. Ariaferd, F. Niroomand Hosseini, A. Gharavi, A. Khalafi-Nezhad, M. T. Sharbati, F. Panahi
Organometallics, 2011, **30**, 1466-1477.
- 53) Oxidative addition reaction of diarylplatinum(II) complexes with MeI in ionic liquid media: A kinetic study
S. M. Nabavizadeh,* **H. R. Shahsavari**, H. Sepehrpour, F. Niroomand Hosseini, S. Jamali, M. Rashidi*
Dalton Transactions, 2010, **39**, 7800-7805.
- 54) A tetramethylplatinum(IV) complex with 1,1'-bis(diphenylphosphanyl)-ferrocene ligands: Reaction with trifluoroacetic acid
H. R. Shahsavari, M. Rashidi,* S. M. Nabavizadeh, S. Habibzadeh, F. W. Heinemann
European Journal of Inorganic Chemistry, 2009, 3814-3820.
- 55) Efficient Beckmann rearrangement and dehydration of oximes via phosphonate intermediates
A. R. Sardarian,* Z. Shahsavari-Fard, **H. R. Shahsavari**, Z. Ebrahimi
Tetrahedron Letters, 2007, **48**, 2639-2643.

Conference Presentation:

- 1) Heterobimetallic Pt-Au complexes as optical theranostic agents
H. R. Shahsavari*
1st meeting of Iranian Organometallic Chemists, Shiraz, Iran, February 2020.
- 2) Room temperature C_{sp3}-F bond formation from cycloplatinated(II) complexes: mechanistic investigation
M. Nikraves, **H. R. Shahsavari***
1st meeting of Iranian Organometallic Chemists, Shiraz, Iran, February 2020.

- 3) Room temperature $C_{sp^2}-C_{sp^2}$ bond formation from organoplatinum complexes: modification in disulfide ligands
E. Lalinde, * **H. R. Shahsavari**,* P. Mastrorilli,* N. Giménez, M. Niazi, M. T. Moreno, S. Todisco, R. Babadi Aghakhanpour
XXXVI GEQO Congress Organometallic Chemistry Group, Zaragoza, Spain, September 2018.
- 4) Assembly of heterobimetallic $Pt^{II}-Au^I$ complexes with 1,1-bis(diphenylphosphino)methane ligand: luminescence properties
M. T. Moreno, N. Giménez, M. Khatami, E. Lalinde,* **H. R. Shahsavari***
XXXVI GEQO Congress Organometallic Chemistry Group, Zaragoza, Spain, September 2018.
- 5) 2-(2,4-Difluorophenyl)pyridine based cycloplatinated chromophores: luminescence and cytotoxic properties
H. R. Shahsavari,* S. Chamyani
XXVIII International Conference on Organometallic Chemistry, Florence, Italy, July 2018.
- 6) Chloride abstraction from a cycloplatinated(II) complex: optical and biological studies
H. R. Shahsavari,* M. Nikravesh
XXVIII International Conference on Organometallic Chemistry, Florence, Italy, July 2018.
- 7) Strong red emissions induced by metal-metal bonds in binuclear cycloplatinated(II) complexes containing bridging diphosphine
M. Nikravesh, **H. R. Shahsavari**,* R. Babadi Aghakhanpour, S. Chamyani
XXVIII International Conference on Organometallic Chemistry, Florence, Italy, July 2018.
- 8) Kinetic investigation on rollover cycloplatinated(II) complexes comprising various monodentate phosphine ligands
M. Nikravesh, **H. R. Shahsavari**,* R. Babadi Aghakhanpour
XXVIII International Conference on Organometallic Chemistry, Florence, Italy, July 2018.
- 9) Synthesis, biological evaluations and DNA interaction studies on trans platinum(II) thiolate complexes
S. Chamyani, **H. R. Shahsavari**,* M. Fereidoonmezahd
The 20th Iranian Chemistry Congress, Mashhad, Iran, July 2018.
- 10) Pt–Au complexes built on a diphosphine scaffold: cytotoxic properties
S. Chamyani, **H. R. Shahsavari**,* M. Khatami
The 20th Iranian Chemistry Congress, Mashhad, Iran, July 2018.
- 11) Design, synthesis and characterization of gold(I) complexes containing allyldiphenylphosphine as improved cytotoxic agents
M. Kohi, **H. R. Shahsavari**,* M. Fereidoonmezahd
The 20th Iranian Chemistry Congress, Mashhad, Iran, July 2018.
- 12) Activation of C–I bond by cycloplatinated(II) complexes comprising tricyclohexylphosphine ligand: kinetics and mechanism investigations
M. Kohi, **H. R. Shahsavari**,* S. Shabani, M. Golbon Haghghi, B Notash
The 20th Iranian Chemistry Congress, Mashhad, Iran, July 2018.
- 13) Pyridine-2-thiolate as a versatile ligand in platinum chemistry
H. R. Shahsavari*

19th Iranian Inorganic Chemistry Conference, Tehran, Iran, September 2017.

14) Cyclometalated platinum(II) complexes comprising O,S-heterocyclic ligand: searching for anticancer drugs

M. Babaghassabha, **H. R. Shahsavari**,* M. Fereidoonzezhad, M. Golbon Haghighi, B. Notash

19th Iranian Inorganic Chemistry Conference, Tehran, Iran, September 2017.

15) Oxidation of cycloplatinated(II) complexes by iodomethane: isolation of the kinetic product

M. Babaghassabha, **H. R. Shahsavari**,* R. Babadi Aghakhanpour, M. Golbon Haghighi, S. M. Nabavizadeh, B. Notash

19th Iranian Inorganic Chemistry Conference, Tehran, Iran, September 2017.

16) Organoplatinum(II) complexes bearing various isocyanide ligands: synthesis, spectroscopic characterization, and biological activity

M. Babaghassabha, **H. R. Shahsavari**,* M. Fereidoonzezhad, A. Khazali, S. Bahemmat

19th Iranian Inorganic Chemistry Conference, Tehran, Iran, September 2017.

17) Assembly of platinum(II) rollover complexes with diphosphine ligands

M. Hossein-Abadi, **H. R. Shahsavari**,* R. Kia

19th Iranian Inorganic Chemistry Conference, Tehran, Iran, September 2017.

18) Influence of isocyanide ligands on the luminescence properties of cycloplatinated(II) complexes

M. Hossein-Abadi, **H. R. Shahsavari**,* R. Babadi Aghakhanpour, M. Golbon Haghighi, B. Notash

19th Iranian Inorganic Chemistry Conference, Tehran, Iran, September 2017.

19) Synthesis and photophysics of mono-cycloplatinated(II) phosphine complexes: an experimental study into the influence of aromatic thiolate ligands on tuning the excited state and rigidity

M. Jamshidi, M. Babaghassabha, S. M. Nabavizadeh, **H. R. Shahsavari***

19th Iranian Inorganic Chemistry Conference, Tehran, Iran, September 2017.

20) Different Cycloplatinated(II) Complexes with Allyldiphenylphosphine as Ancillary Ligand: Photophysical Study

R. Babadi Aghakhanpour, **H. R. Shahsavari**,* M. Babaghassabha, M. Golbon Haghighi, S. M. Nabavizadeh, B. Notash

The 19th Iranian Chemistry Congress, Shiraz, Iran, February 2017.

21) Synthesis, molecular docking studies on DNA binding interactions and cytotoxic activity evaluations of novel thiolated Gold(I) complexes containing phosphine ligands as potential anticancer agents

A. Nezafati, A. Yazdani, M. Fereidoonzezhad, **H. R. Shahsavari***

20th Iranian Pharmacy Students' Seminar, Tehran, Iran, April 2017.

22) Different cycloplatinated(II) complexes with allyldiphenylphosphine as ancillary ligand: photophysical study

R. Babadi Aghakhanpour, **H. R. Shahsavari**,* M. Babaghassabha, M. Golbon Haghighi, S. M. Nabavizadeh, B. Notash

The 19th Iranian Chemistry Congress, Shiraz, Iran, February 2017.

23) Synthesis, molecular docking Studies on DNA binding interaction and biological evaluations of phosphine gold(I)-thiolate complexes as potential anticancer agents

A. Yazdani, M. Fereidoonzezhad, **H. R. Shahsavari**,* A. Alamdarloo,

The 3rd Molecular Medicine Congress, Isfahan, Iran, December 2016.

- 24) Synthesis of novel platinum complexes: biological evaluations and molecular docking studies on DNA binding interaction
T. Mirzaei, M. Fereidoonzhad, * **H. R. Shahsavari**,* H. Mirzaei
The 14th Iranian Biochemical Congress, Tehran, Iran, August 2016.
- 25) Synthesis, biological evaluations and DNA binding studies on cycloplatinated complexes containing thiolate and phosphine ligands as potential anticancer agents
Z. Ahmadipour, M. Fereidoonzhad, * **H. R. Shahsavari***
The 14th Iranian Biochemical Congress, Tehran, Iran, August 2016.
- 26) Different solvent-induced luminescent responses in Pt₂Pb clusters
M. T. Moreno,* J. R. Berenguer, E. Lalinde,* A. Martín, S. Ruiz, S. Sánchez, **H. R. Shahsavari**
XXIV Reunión Nacional y VIII Congreso Ibérico de ESPECTROSCOPIA, Logroño, Spain, July 2014.
- 27) Vapoluminiscencia de clusters Pt₂Pb asociada a cambios en la estereoquímica del Pb(II)
S. Ruiz, J. R. Berenguer, E. Lalinde,* A. Martín, M. T. Moreno,* S. Sánchez, **H. R. Shahsavari**
X Simposio de Investigadores Jóvenes RSEQ - Sigma Aldrich; Madrid, Spain, November 2013.
- 28) Photophysical study of cycloplatinated complexes
M. Jamshidi Semiromi, **H. R. Shahsavari**, S. M. Nabavizadeh,* M. Rashidi*
The 16th Iranian Chemistry Congress, Yazd, Iran, September 2013.
- 29) Solvent-induced rearrangement and luminescence vapochromism trinuclear in a Pt₂Pb cluster
S. Ruiz, J. R. Berenguer, E. Lalinde,* A. Martín, M. T. Moreno,* S. Sánchez, **H. R. Shahsavari**
VI International School on Organometallic Chemistry "Marcial Moreno Mañas", Alicante, Spain, June 2013.
- 30) Synthesis, structure and photophysical study of cyclometalated heteronuclear Pt/Tl and Pt/Au complexes
S. Jamali,* R. Ghazfar, **H. R. Shahsavari**, E. Lalinde
XXV International Conference on Organometallic Chemistry, Lisbon, Portugal, September 2012.
- 31) Photophysical and structural study of setro bi-tri and tetranuclear cyclometalated complexes containing Pt, Ag and Tl metals
S. Jamali,* R. Ghazfar, **H. R. Shahsavari**, E. Lalinde, D. Milić
14th Iranian Inorganic Chemistry Conference, Tehran, Iran, August 2012.
- 32) Solvate cycloplatin(II) complexes as building blocks in the synthesis of luminescent Pt^{II}-Tl^I systems
M. T. Moreno,* E. Lalinde,* J. R. Berenguer, S. Sánchez, **H. R. Shahsavari**
Vth International Conference on Molecular Materials. Barcelona, Spain, July 2012.
- 33) 5th Frolic Goats Workshop on High-Pressure Diffraction, Poznań, Poland, April 2012.
- 34) Oxidative addition reaction of MeI with cyclometalated organoplatinum complexes containing phosphorus ligands: a kinetic study
H. R. Shahsavari, S. M. Nabavizadeh,* H. Amini, M. Rashidi*
9th European Workshop on Phosphorus Chemistry, Rennes, France, March 2012.
- 35) Cyclometalated diplatinum(II) complexes each with a bridging 1,1'-bis(diphenylphosphino)ferrocene ligand: synthesis, characterization and mechanism of formation
H. R. Shahsavari, S. M. Nabavizadeh,* H. Amini, M. Rashidi*

10th Ferrocene Colloquium, Braunschweig, Germany, February 2012.

36) Oxidative addition reaction of a dimethylplatinum(II) complex with H₂O₂ : a kinetic study

H. R. Shahsavari, S. M. Nabavizadeh, * M. Rashidi*

13th Iranian Inorganic Chemistry Conference, Kermanshah, Iran, September 2011.

37) Kinetic study of oxidative addition of methyl iodide to organoplatinum (II) complexes in ionic liquids media

H. Sepehrpour, S. M. Nabavizadeh, * **H. R. Shahsavari**, M. Rashidi*

13th Iranian Inorganic Chemistry Conference, Kermanshah, Iran, September 2011.

38) Oxidative addition of MeI to cyclometalated organoplatinum complexes: a kinetic study

H. R. Shahsavari, S. M. Nabavizadeh, * S. Khosravi, F. Jame, M. Rashidi*

12th Iranian Inorganic Chemistry Conference, Rasht, Iran, September 2010.

39) Alcohol oxidation by cobalt Schiff base complexes in aqueous solution

A. Zare, * **H. R. Shahsavari**, Z. Hajian, S. Akbari, R. Khalife

12th Iranian Inorganic Chemistry Conference, Rasht, Iran, September 2010.

40) Kinetic study of oxidative addition reaction of Pt(II) complexes with MeI in ionic liquid

H. R. Shahsavari, H. Sepehrpour, S. M. Nabavizadeh, * M. Rashidi*

7th Chemistry congress of Payam Noor, Shiraz, Iran, October 2009.

41) Study of ligand substitution on cyclometalated platinum(II) complexes

M. Rashidi, * S. M. Nabavizadeh, * **H. R. Shahsavari**

11th Iranian Inorganic Chemistry Conference, Isfahan, Iran, May 2009.

42) Cyclometalated platinum complexes

M. Rashidi, * S. M. Nabavizadeh, * **H. R. Shahsavari**

10th Iranian Inorganic Chemistry Conference, Zahedan, Iran, May 2008.

Invited Speaker:

H. R. Shahsavari, Cycloplatinated(II) complexes could lead to more effective chemotherapy, Universidad de La Rioja, Spain, 2018.

Patent:

Gold(I) and platinum(II) with isocyanide ligand complexes: Synthesis and biological activity

M. H. Beyzavi, **H. R. Shahsavari**

United States Patent Application Publication, Patent Number: US 20200215018A1, Patent Date: July 2020

Synergistic Activity:

Guest Editor, *Molecules*, 2020-

Research Project:

1) Iran National Science Foundation (GR-INSF-98025803). Title: "Heterobimetallic complexes (Pt-M, M = Ru, Rh, Ir, Au) based on cyclometalated ligands: Theranostic applications". Role: PI.

- 2) Iran National Science Foundation (GR-INSF-97007977). Title: "Synthesis and characterization of strong luminescent organoplatinum(II) complexes based on the cyclometalating 2(2,4-difluorophenyl)pyridine". Role: PI.
- 3) Iran National Science Foundation (GR-INSF-95834232). Title: "The reactivity of different Ag(I) salts toward cycloplatinated(II) complexes: study of photophysical properties, biological activity and transphobia effect". Role: PI.
- 4) Iran National Science Foundation (GR-INSF-93026027). Title: "SH bond activation by Na and Tl metals and its application for preparing of organoplatinum compounds: photophysical and electrochemistry study". Role: PI.
- 5) Iran National Science Foundation (GR-INSF-92027596). Title: "Active palladium bis pyridine complex catalyzed Suzuki- Miyaura coupling in water under phosphine free conditions". Role: PI.

Teaching Experience:

- 1) General and Inorganic Chemistry Laboratories (B.Sc.)
- 2) General Chemistry Courses (B.Sc.)
- 3) Inorganic Chemistry Courses (B.Sc.)
- 4) Organometallic Chemistry (B.Sc. & M.Sc. & Ph.D.)
- 5) Advanced Inorganic Chemistry (M.Sc.)
- 6) Inorganic Reaction Mechanism (M.Sc.)
- 7) Application of Spectroscopy in Inorganic Chemistry (M.Sc.)
- 8) Advanced Topics in Inorganic Chemistry (M.Sc. & Ph.D.)
- 9) Photochemistry (Ph.D.)
- 10) Inorganic Polymer (Ph.D.)
- 11) Structural and Bonding (Ph.D.)
- 12) Special Topics in Inorganic Chemistry (Ph.D.)

Book Translation:

عنوان: جهان مولکولی، مدل سازی و پیوند مولکولی

ترجمه: مسعود فریدون نژاد، حمید رضا شهسواری، سیدمحمدحسین طبایی، علیرضا یزدانی کچویی

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Persian Paper:

سنتز و شناسایی کمپلکس های آلی فلزی پلاتین(II) حاوی لیگاندهای ایزوسیانیید: مطالعات داکینگ مولکولی

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