



Dr Sadegh Salehzadeh
Professor of Inorganic and Computational Chemistry

First name: Sadegh

Family name: Salehzadeh

Born: 1966, Hamedan

Nationality: Iranian

Married, My wife has a B.Sc. degree in Chemistry

Children: one daughter and one son

Address:

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EDUCATION

	<u>Year</u>	<u>University</u>
Ph.D.	2000	Bu-Ali Sina University
M.Sc.	1995	Bu-Ali Sina University
B.Sc.	1991	Bu-Ali Sina University

Awards:

- 1) Distinguished PhD student of the Bu Ali Sina University in year 2000.

- 2) Distinguished researcher of the chemistry group of the Bu-Ali Sina University in year 2005.
- 3) Distinguished researcher of the faculty of chemistry of the Bu-Ali Sina University in year 2007.
- 4) Distinguished researcher of the faculty of chemistry of the Bu-Ali Sina University in year 2009.

Research interest:

- Design, synthesis and characterization of new polydentate ligands and macrocyclic and macroacyclic complexes, specially Schiff base complexes
- Experimental and computational study on binding of organic and inorganic drugs to DNA
- Proton affinity of polybasic ligands and corresponding metal complexes
- Protonation constants and/or microconstants of polybasic ligands
- Relative stabilities of different conformers of ligands and different isomeric forms of metal complexes and designing compounds with special properties or structures
- Binding energies and the nature of metal-ligand bonds in metal complexes
- Interaction between the nano size and/or non-nano size molecules
- Computational study on non-covalent bonds in host guest Chemistry

Sabbatical leaves:

- a) I have been for four months in UMIST, Manchester, UK, as a member of Prof. Parish's research group in year 1999.
- b) I have been for six months in University of Shefiled, Sheffield, UK as a member of Prof. Ward's research group in year 2007.

Supervision of MSc and PhD students:

- a) I have directed **18** MSc and **4** PhD students.
- b) At the moment I have **5** MSc and **5** PhD students.

Teaching experience:

BSc level:

- General Chemistry I and II
- Inorganic Chemistry I and II
- Chemical Applications of Group Theory
- Chemical literature
- Scientific English for Chemistry Students

MSc and PhD levels:

- Advanced Inorganic Chemistry
- Inorganic Spectroscopy
- New Subjects in Inorganic Chemistry
- Inorganic Polymers

PUBLICATIONS and PRESENTATIONS

a) Scientific papers (ISI-indexed Journals)

1. Rakhtshah J, Salehzadeh S, Zolfigol MA, Baghery S. Synthesis, characterization and heterogeneous catalytic application of an immobilized nickel (II) Schiff-base complex supported on MWCNTs for the Hantzsch four-component condensation. *Journal of Coordination Chemistry*. 2017; 70:340-360. doi:10.1080/00958972.2016.1253068
2. Salehzadeh S, Maleki F. New equation for calculating total interaction energy in one noncyclic ABC triad and new insights into cooperativity of noncovalent bonds. *Journal of Computational Chemistry*. 2016; 37:2799–2807. doi: 10.1002/jcc.24505
3. Salehzadeh S, Maleki F. The 4s and 3d subshells: Which one fills first in progressing through the periodic table and which one fills first in any particular atom? *Foundations of Chemistry*. 2016; 18(1):57-65. doi:10.1007/s10698-016-9249-0
4. Sabounchei SJ, Hosseinzadeh M, Hashemi A, Salehzadeh S, Maleki F. P,C-Chelation: Versus P,P-coordination of unsymmetrical phosphorus ylides in palladacyclopropane[60]fullerene complexes; Synthetic, spectroscopic, and theoretical studies. *Dalton Transactions*. 2016; 45(35):13899-906. doi:10.1039/c6dt02332k
5. Saberinasab M, Salehzadeh S, Solimannejad M. The effect of a strong cation···π interaction on a weak selenium···π interaction: A theoretical study. *Computational and Theoretical Chemistry*. 2016; 1092: 41-46. doi:10.1016/j.comptc.2016.07.027

6. Saberinasab M, Salehzadeh S, Maghsoud Y, Bayat M. The significant effect of electron donating and electron withdrawing substituents on nature and strength of an intermolecular Se center dot center dot center dot pi interaction. A theoretical study. Computational and Theoretical Chemistry. 2016; 1078:9-15. doi:10.1016/j.comptc.2015.12.009
7. Rakhtshah J, Salehzadeh S, Gowdini E, Maleki F, Baghery S, Zolfigol MA. Synthesis of pyrazole derivatives in the presence of dioxomolybdenum complex supported on silica-coated magnetite nanoparticles as an efficient and easily recyclable catalyst. RSC Advances. 2016; **6**:104875-104885. doi:10.1039/C6RA20988B
8. Rakhtshah J, Salehzadeh S. Multi-wall carbon nanotube supported Co (II) Schiff base complex: an efficient and highly reusable catalyst for synthesis of 1-amidoalkyl-2-naphthol and tetrahydrobenzo [b] pyran derivatives. Applied Organometallic Chemistry. 2016. doi: 10.1002/aoc.3560
9. Golbedaghi R, Moradi S, Salehzadeh S, Blackman AG. Some metal complexes of three new potentially heptadentate (N_4O_3) tripodal Schiff base ligands; synthesis, characterizatin and X-ray crystal structure of a novel eight coordinate Gd(III) complex. Journal of Molecular Structure. 2016; 1108:727-34. doi:10.1016/j.molstruc.2015.12.052
10. Bayat M, Ebrahimkhani L, Salehzadeh S. Where, how and how much the strength of interaction between a hydrated lanthanide cation and a π -system would be increased? A theoretical study. Journal of Molecular Liquids. 2016; 218:59-67.
11. Bayat M, Amraie F, Salehzadeh S. Theoretical studies on structure, formation and nature of bond in a Disila-, Digerma-and distannacyclobutene ring. Journal of Theoretical and Computational Chemistry. 2016:1650032.
12. Zolfigol MA, Safaiee M, Afsharnadery F, et al. Silica vanadic acid SiO₂-VO(OH)(2) as an efficient heterogeneous catalyst for the synthesis of 1,2-dihydro-1-aryl-3H-naphth 1,2-e

1,3 oxazin-3-one and 2,4,6-triarylpyridine derivatives via anomeric based oxidation. Rsc Advances. 2015; 5(122):100546-59. doi:10.1039/c5ra21392d

13. Zolfigol MA, Afsharnadery F, Baghery S, Salehzadeh S, Maleki F. Catalytic applications of { HMIM C(NO₂)(3)}: as a nano ionic liquid for the synthesis of pyrazole derivatives under green conditions and a mechanistic investigation with a new approach. Rsc Advances. 2015; 5(92):75555-68. doi:10.1039/c5ra16289k

14. Salehzadeh S, Gholiee Y. A theoretical study on the encapsulation of halide anions by hexaprotonated form of aliphatic azacryptand 1,4,8,11,14,18,23,27-octaazabicyclo 9.9.9 nonacosane in both the gas phase and solution. Computational and Theoretical Chemistry. 2015; 1060:43-51. doi:10.1016/j.comptc.2015.02.019

15. Salehzadeh S, Gholiee Y. What causes the weakest host to act as the strongest one? A theoretical study on the host-guest chemistry of five azacryptands and fluoride anions. Dalton Transactions. 2015; 44(45):19708-16. doi:10.1039/c5dt01965f

16. Saien J, Badieh MMS, Norouzi M, Salehzadeh S. Ionic liquid 1-hexyl-3-methylimidazolium hexafluorophosphate, an efficient solvent for extraction of acetone from aqueous solutions. Journal of Chemical Thermodynamics. 2015; 91:404-13. doi:10.1016/j.jct.2015.08.027

17. Sabounchei SJ, Shahriary P, Salehzadeh S, et al. Pd(II) and Pd(IV) complexes with 5-methyl-5-(4-pyridyl)hydantoin: Synthesis, physicochemical, theoretical, and pharmacological investigation. Spectrochimica Acta Part a-Molecular and Biomolecular Spectroscopy. 2015; 135:1019-31. doi:10.1016/j.saa.2014.08.002

18. Sabounchei SJ, Shahriary P, Salehzadeh S, Gholiee Y, Chehregani A. Spectroscopic, theoretical, and antibacterial approach in the characterization of 5-methyl-5-(3-pyridyl)-2, 4-imidazolidenedione ligand and of its platinum and palladium complexes. Comptes Rendus Chimie. 2015; 18(5):564-72. doi:10.1016/j.crci.2014.04.013

19. Sabounchei SJ, Pourshahbaz M, Salehzadeh S, et al. New chlorine bridged binuclear silver(I) complexes of bidentate phosphorus ylides: Synthesis, spectroscopy, theoretical and anti-bacterial studies. *Polyhedron*. 2015; 85:652-64. doi:10.1016/j.poly.2014.09.030
20. Maleki F, Salehzadeh S. The effect of fullerene and some electron donating/withdrawing substituents on the molecular orbitals, strength and the nature of C=N bond in a number of RCH=NR' imines: A theoretical study. *Computational and Theoretical Chemistry*. 2015; 1059:18-26. doi:10.1016/j.comptc.2015.02.005
21. Keypour H, Shayesteh M, Salehzadeh S, et al. Probing the effect of arm length and inter- and intramolecular interactions in the formation of Cu(II) complexes of Schiff base ligands derived from some unsymmetrical tripodal amines. *New Journal of Chemistry*. 2015; 39(9):7429-41. doi:10.1039/c5nj01318f
22. Hatami M, Bayat M, Keypour H, Salehzadeh S. Ab initio and DFT studies on the structures, binding energies and nature of bonds in X₂Y₃ metal clusters (X⁺ = Li⁺, Na⁺ and K⁺; Y-3(2-) = Zn-3(2-), Cd-3(2-) and Hg-3(2-)). *Journal of Theoretical & Computational Chemistry*. 2015; 14(6). doi:10.1142/s0219633615500431
23. Gholiee Y, Salehzadeh S. MP2 and DFT studies on interaction of a halide anion with the fully protonated form of 1,4,7-triazacyclononane. *Journal of Theoretical & Computational Chemistry*. 2015; 14(1). doi:10.1142/s0219633615500017
24. Dastineh F, Salehzadeh S, Bayat M, Maghsoud Y. Comparison of the selectivity of M(12-Crown-4) (+) (M = Li⁺, Na⁺, K⁺) complexes for halide anions and some neutral molecules; a computational study. *Journal of Theoretical & Computational Chemistry*. 2015; 14(8). doi:10.1142/s0219633615500571
25. Salehzadeh S, Yaghoobi F, Bayat M. Theoretical studies on the interaction of some endohedral fullerenes { X@C-60 (-) (X = F⁻, Cl⁻, Br⁻) or M@C-60 (M = Li, Na, K) } with

Al(H₂O)(6) (3+) and Mg(H₂O)(6) (2+) cations. Computational and Theoretical Chemistry. 2014; 1034:73-9. doi:10.1016/j.comptc.2014.01.033

26. Salehzadeh S, Khalaj M, Dehghanpour S, Bayat M. Synthesis and structure of Hg-2(L)(2)(NO₃)(2) (L = (4-nitrophenyl)pyridin-2-ylmethylenamine); a theoretical study on Hg-Hg bond in this and in linear Hg₂X₂ (X = F, Cl, Br, I, Ph) complexes. Journal of the Iranian Chemical Society. 2014; 11(1):9-16. doi:10.1007/s13738-013-0268-7

27. Salehzadeh S, Gholiee Y, Bayat M. The significant role of the solvent in high selectivity of symmetrical calix 4 tubes for potassium ion in solution: A DFT study. Computational and Theoretical Chemistry. 2014; 1048:62-8. doi:10.1016/j.comptc.2014.09.013

28. Sabounchei SJ, Shahriary P, Salehzadeh S, et al. Gold(III) complexes of 5-methyl-5-(pyridyl)-2,4-imidazolidenedione: synthesis, physicochemical, theoretical, antibacterial, and cytotoxicity investigation. New Journal of Chemistry. 2014; 38(3):1199-210. doi:10.1039/c3nj01042b

29. Sabounchei SJ, Shahriary P, Gholiee Y, Salehzadeh S, Khavasi HR, Chehregani A. Platinum and palladium complexes with 5-methyl-5-(2-pyridyl)-2,4-imidazolidenedione: Synthesis, crystal and molecular structure, theoretical study, and pharmacological investigation. Inorganica Chimica Acta. 2014; 409:265-75. doi:10.1016/j.ica.2013.09.051

30. Sabounchei SJ, Samiee S, Pourshahbaz M, et al. Synthesis and characterisation of Hg(II) complexes including bidentate phosphorus ylides. Journal of Chemical Research. 2014; (1):35-40. doi:10.3184/174751914x13863254117794

31. Rezaeivala M, Keypour H, Salehzadeh S, Latifi R, Chalabian F, Katouzian F. Synthesis, characterization and crystal structure of some new Mn(II) and Zn(II) macroacyclic Schiff base complexes derived from two new asymmetrical (N-5) branched amines and

pyridine-2-carbaldehyde or O-vaniline and their antibacterial properties. Journal of the Iranian Chemical Society. 2014; 11(2):431-40. doi:10.1007/s13738-013-0315-4

32. Golbedaghi R, Salehzadeh S, Khavasi HR, Blackman AG. Mn(II) complexes of three 2+2 macrocyclic Schiff base ligands. Synthesis and X-ray crystal structure of the first binuclear-di(binuclear) cocrystal. Polyhedron. 2014; 68:151-6. doi:10.1016/j.poly.2013.09.036

33. Bayat M, Salehzadeh S, Hokmi S, Gholiee Y, Yaghoobi F. Regioselective Diels-Alder reaction of 2-phosphaindolizine with some 1,3-butadiene derivatives (RCHCHCHCH_2 , $\text{R} = \text{F, Cl, CH}_3$ and SiH_3): A theoretical study. Journal of Organometallic Chemistry. 2014; 767:54-9. doi:10.1016/j.jorgchem.2014.05.020

34. Salehzadeh S, Khalaj M, Dehghanpour S, Mahmoudi A. Reaction of ZnCl_2 and HgCl_2 metal salts with a bidentate Schiff base ligand in methanol solution, X-ray crystal structure, and theoretical studies. Journal of the Iranian Chemical Society. 2013; 10(5):921-8. doi:10.1007/s13738-013-0229-1

35. Salehzadeh S, Bayat M, Gholiee Y. A theoretical study on the importance of steric effects, electronic properties, interaction and solvation energies in the 'host-guest' chemistry of protonated azacryptands and halide anions. Tetrahedron. 2013; 69(44):9183-91. doi:10.1016/j.tet.2013.08.064

36. Sabounchei SJ, Shahriary P, Salehzadeh S, Gholiee Y, Khavasi HR. Mercury(II) complexes with 5-methyl-5-(4-pyridyl)-2, 4-imidazolidenedione: Synthesis, structural characterization, and theoretical studies. Journal of Molecular Structure. 2013; 1051:15-22. doi:10.1016/j.molstruc.2013.07.044

37. Sabounchei SJ, Sarlakifar M, Pourshahbaz M, et al. Structural, Theoretical and Multinuclear NMR Study of a New Polymeric Mercury(II) Complex with an Ambidentate

Phosphorus Ylide. Journal of Inorganic and Organometallic Polymers and Materials. 2013; 23(2):401-8. doi:10.1007/s10904-012-9793-6

38. Sabounchei SJ, Panahimehr M, Salehzadeh S, Bayat M, Khavasi HR, Morales-Morales D. STRUCTURAL, THEORETICAL, AND SPECTROSCOPIC STUDY OF MERCURY(II) COMPLEXES OF TWO NEW UNSYMMETRIC PHOSPHORUS YLIDES.

Phosphorus Sulfur and Silicon and the Related Elements. 2013; 188(12):1743-58. doi:10.1080/10426507.2013.779274

39. Sabounchei SJ, Ahmadi M, Nasri Z, et al. Synthesis, characterization, thermal, electrochemical, and DFT studies of mononuclear cyclopalladated complexes containing bidentate phosphine ligands and their biological evaluation as antioxidant and antibacterial agents. Comptes Rendus Chimie. 2013; 16(2):159-75. doi:10.1016/j.crci.2012.10.006

40. Salehzadeh S, Mahdavian M, Khalaj M. Aqua tris(2-{5- (4-methylphenyl)diazeny 1 -2- oxidobenzylideneamino}ethyl) amine samarium(III) acetonitrile monosolvate. Acta Crystallographica Section E-Structure Reports Online. 2012; 68:M96-U216. doi:10.1107/s1600536811054961

41. Salehzadeh S, Khalaj M, Dehghanpour S. Diiodido{2- (4-meth-oxy-phen-yl)imino-meth-yl pyridine-kappa(2)N,N'}zinc. Acta crystallographica. Section E, Structure reports online. 2012; 68(Pt 8):m1041-m. doi:10.1107/s1600536812030486

42. Sabounchei SJ, Sarlakifar M, Salehzadeh S, Bayat M, Pourshahbaz M, Khavasi HR. Structural, theoretical and multinuclear NMR study of mercury(II) and silver(I) complexes with two new ambidentate phosphorus ylides. Polyhedron. 2012; 38(1):131-6. doi:10.1016/j.poly.2012.02.034

43. Golbedaghi R, Jafari S, Yaftian MR, Azadbakht R, Salehzadeh S, Jaleh B. Determination of cadmium(II) ion by atomic absorption spectrometry after cloud point

extraction. Journal of the Iranian Chemical Society. 2012; 9(3):251-6. doi:10.1007/s13738-011-0018-7

44. Bayat M, Salehzadeh S, Frenking G. Energy decomposition analysis of the metal-imine bond in (CO)(4)M-SB (M = Cr, Mo, W; SB: RHC=N-CH₂CH₂-N=CHR). Journal of Organometallic Chemistry. 2012; 697(1):74-9. doi:10.1016/j.jorgchem.2011.10.024

45. Zolfogol MA, Kolvari E, Koukabi N, et al. A New Crystal Engineering Approach for the Synthesis of { K.18-Crown-6 I-3}(n) as a Nanotube-Like and Recyclable Catalyst for the Chemoselective Silylation of Alcohols. Journal of the Iranian Chemical Society. 2011; 8(2):484-94.

46. Salehzadeh S, Mahdavian M, Khalaj M. Zwitterionic form of tris({ 5-(4-methoxyphenylazo)salicylidene amino}ethyl)amine. Acta Crystallographica Section E-Structure Reports Online. 2011; 67:O606-U1597. doi:10.1107/s1600536811004405

47. Salehzadeh S, Khalaj M, Dehghanpour S, Tarmoradi I. Dibromido{2- (4-nitrophenyl)iminomethyl pyridine-kappa N-2,N '}zinc(II). Acta Crystallographica Section E-Structure Reports Online. 2011; 67:M1556-+. doi:10.1107/s1600536811042231

48. Salehzadeh S, Gholiee Y, Bayat M. Prediction of Microscopic Protonation Constants of Polybasic Molecules Via Computational Methods: A Complete Microequilibrium Analysis of Spermine. International Journal of Quantum Chemistry. 2011; 111(14):3608-15. doi:10.1002/qua.22927

49. Salehzadeh S, Dehghanpour S, Khalaj M, Rahimishakiba M. Di-mu-chlorido-bis{chlorido 4-nitro-N-(pyridin-2-ylmethylidene-kappa N)aniline-kappa N mercury(II)}. Acta Crystallographica Section E-Structure Reports Online. 2011; 67:M327-U425. doi:10.1107/s1600536811004703

50. Salehzadeh S, Bayat M. Computational evidence of preferred energy and preferred binding energy in the formation of "1+1" versus "2+2" macrocyclic Schiff base complexes.

Computational and Theoretical Chemistry. 2011; 965(1):131-6.

doi:10.1016/j.comptc.2011.01.036

51. Salehzadeh S, Bayat M. A theoretical study on the formation of "1+1" versus "2+2" macrocyclic Schiff base complexes in the absence of coordinated anions. Computational and Theoretical Chemistry. 2011; 971(1-3):30-7. doi:10.1016/j.comptc.2011.05.034

52. Sabounchei SJ, Salehzadeh S, Hosseinzadeh M, Bagherjeri FA, Khavasi HR. Structural, theoretical and multinuclear NMR study of mercury(II) complexes with a new ambidentate phosphorus ylide. Polyhedron. 2011; 30(15):2486-92.
doi:10.1016/j.poly.2011.06.033

53. Khalaj M, Dehghanpour S, Salehzadeh S, Mahmoudi A. Dichlorido{2- (3,4-dimethylphenyl)iminomethyl pyridine-kappa N-2,N '}copper(II). Acta Crystallographica Section E-Structure Reports Online. 2011; 67:M1624-+. doi:10.1107/s160053681104390x

54. Bayat M, Yaghoobi F, Salehzadeh S, Hokmi S. A theoretical study on the interaction of Al(H₂O)(6) (3+) and Mg(H₂O)(6) (2+) cations with fullerene (C-60), coronene and benzene pi-systems. Polyhedron. 2011; 30(17):2809-14. doi:10.1016/j.poly.2011.08.017

55. Bayat M, von Hopffgarten M, Salehzadeh S, Frenking G. Energy decomposition analysis of the metal-oxime bond in M{RC(NOH)C(NO)R}(2) (M = Ni(II), Pd(II), Pt(II), R = CH₃, H, F, Cl, Br, Ph, CF₃). Journal of Organometallic Chemistry. 2011; 696(18):2976-84.
doi:10.1016/j.jorgancem.2011.05.009

56. Salehzadeh S, Golbedaghi R, Blackman AG. Synthesis, characterization, and X-ray crystal structure analysis of Cd(II) and Cu(II) complexes of an acyclic pentadentate Schiff base. Journal of Coordination Chemistry. 2010; 63(4):634-42.
doi:10.1080/00958971003587379

57. Salehzadeh S, Ee YG, Bayat M. Complete gas-phase proton microaffinity analysis of five linear tetraamines containing two ethylenediamine residues. *Journal of Molecular Structure-Theochem*. 2010; 952(1-3):124-7. doi:10.1016/j.theochem.2010.04.019
58. Salehzadeh S, Bayat M, Davoodi L, Golbedaghi R, Izadkhah V. SYNTHESIS AND CHARACTERIZATION OF A HEPTADENTATE (N₄O₃) SCHIFF BASE LIGAND AND ASSOCIATED La(III), Sm(III) AND Gd(III) COMPLEXES, AND A THEORETICAL STUDY. *Bulletin of the Chemical Society of Ethiopia*. 2010; 24(1):59-66.
59. Salehzadeh S, Bayat M. Theoretical Studies on the Structure and Protonation of Cu(II) Complexes of a Series of Tripodal Aliphatic Tetraamines: Good Correlations with the Experimental Data. *Journal of Computational Chemistry*. 2010; 31(13):2371-80. doi:10.1002/jcc.21530
60. Sabounchei SJ, Samiee S, Salehzadeh S, Nojini ZB, Irran E. Four-coordinate and pseudo five-coordinate Hg(II) complexes of a new bidentate phosphorus ylide: X-ray crystal structure and spectral characterization. *Journal of Organometallic Chemistry*. 2010; 695(10-11):1441-50. doi:10.1016/j.jorgancem.2010.02.029
61. Sabounchei SJ, Samiee S, Salehzadeh S, et al. New mononuclear mercury(II) complexes of a bifunctionalized ylide containing five-membered chelate ring: Spectral and structural characterization. *Inorganica Chimica Acta*. 2010; 363(14):3654-61. doi:10.1016/j.ica.2010.05.004
62. Sabounchei SJ, Samiee S, Salehzadeh S, Bayat M, Nojini ZB, Morales-Morales D. Synthesis, characterization, and structural studies of mercury(II) complexes of new bidentate phosphorus ylide. *Inorganica Chimica Acta*. 2010; 363(6):1254-61. doi:10.1016/j.ica.2010.01.024
63. Sabounchei SJ, Jodaian V, Salehzadeh S, et al. Synthesis of New Phosphonium Ylides Containing Thiophene and Furan Rings and Study of Their Reaction with Mercury(II)

Halides: Spectral and Structural Characterization. *Helvetica Chimica Acta*. 2010; 93(6):1105-19.

64. Golbedaghi R, Salehzadeh S, Keypour H, Blackman AG. Mn(II) and Cd(II) macrocyclic Schiff base complexes with a single pendant coordinating 2-pyridylmethyl arm: Synthesis, X-ray crystal structure and NMR studies. *Polyhedron*. 2010; 29(2):850-6. doi:10.1016/j.poly.2009.09.027

65. Bayat M, Salehzadeh S. Theoretical studies on the proton affinities of four different series of nano-size diamines and designing strong superbases based on fullerene(C-60) molecule. *Journal of Molecular Structure-Theochem*. 2010; 957(1-3):120-5. doi:10.1016/j.theochem.2010.07.015

66. Salehzadeh S, Yaghoobi F, Bayat M. Illustration of all species and all microspecies involved in full protonation steps of spermine and determination of corresponding most abundant and most stable conformers, a gas phase theoretical study. *Chemical Physics*. 2009; 361(1-2):18-26. doi:10.1016/j.chemphys.2009.05.002

67. Salehzadeh S, Ward MD, Adams H. A novel chelate-assisted C-C bond formation on a Cd(II) complex of an asymmetric heptadentate(N-7) tripodal Schiff base ligand. *Inorganic Chemistry Communications*. 2009; 12(5):433-5. doi:10.1016/j.inoche.2009.03.006

68. Salehzadeh S, Shooshtari A, Bayat M. Theoretical studies on the first proton macroaffinity of Ni(II), Cu(II), Zn(II) and Cd(II) complexes of four triazacycloalkanes (X ane N-3, X=9-12): good correlations with the formation constants in solution. *Dalton Transactions*. 2009; (15):2865-70. doi:10.1039/b822260f

69. Salehzadeh S, Shooshtari A, Bayat M. Good correlation between the calculated gas-phase first proton macroaffinities of some triazacycloalkanes (X aneN(3), X=9-12) with their protonation constants in solution. *Journal of Molecular Structure-Theochem*. 2009; 911(1-3):88-91. doi:10.1016/j.theochem.2009.07.002

70. Salehzadeh S, Golbedaghi R, Tidmarsh IS, Sorace L, Adams H, Ward MD. Syntheses, crystal structures and magnetic properties of three new binuclear Ni(II) complexes derived from tripodal tetradentate (N(4)) ligands. *Polyhedron*. 2009; 28(1):162-6. doi:10.1016/j.poly.2008.09.026
71. Salehzadeh S, Golbedaghi R, Khavasi HR. Synthesis, characterization, and crystal structure of a Ni(II) complex of an acyclic pentadentate Schiff base; an agreement between the experimental and theoretical results. *Journal of Coordination Chemistry*. 2009; 62(15):2532-9. doi:10.1080/00958970902842489
72. Salehzadeh S, Bayat M, Yaghoobi F. Theoretical studies on proton affinities of H₂N-(CH₂)_n-NH₂ (n=2-10) diamines at gas phase. Good correlation with protonation constants in solution. *Journal of Molecular Structure-Theochem*. 2009; 906(1-3):68-71. doi:10.1016/j.theochem.2009.04.003
73. Sabounchei SJ, Nemattalab H, Salehzadeh S, et al. Synthesis and characterization of binuclear mercury(II) complexes of phosphorus ylides, X-ray analysis and multinuclear NMR measurements. *Inorganica Chimica Acta*. 2009; 362(1):105-12. doi:10.1016/j.ica.2008.03.015
74. Keypour H, Rezaeivala M, Valencia L, Salehzadeh S, Perez-Lourido P, Khavasi HR. Synthesis and crystal structure of some new cadmium (II) macrocyclic Schiff-base complexes containing piperazine moiety. *Polyhedron*. 2009; 28(16):3533-41. doi:10.1016/j.poly.2009.05.083
75. Keypour H, Dehghani-Firouzabadi AA, Rezaeivala M, Salehzadeh S. Synthesis of a New Heteropolytopic Cryptand Through Schiff Base Condensation in the Presence of Ba(II) Ion. *Synthetic Communications*. 2009; 39(7):1136-42. doi:10.1080/00397910802513037
76. Keypour H, Azadbakht R, Salehzadeh S, Rudbari HA, Adams H. Synthesis, characterization and X-ray structural determination of a stable dication derived from

symmetrical ortho-aminophenyl diamine and 2-pyridinecarboxaldehyde. *Tetrahedron Letters*. 2009; 50(2):169-71. doi:10.1016/j.tetlet.2008.10.109

77. Izadkhah V, Salehzadeh S, Davoodi L, Golbedaghi R, Bayat M. La(III) Complex of Assymetrical Heptadentate (N₄O₃) Schiff Base. *Asian Journal of Chemistry*. 2009; 21(1):787-94.

78. Salehzadeh S, Golbedaghi R, Tidmarsh IS, Al-Rasbi NK, Adams H, Ward MD. Cd(II) and Mn(II) complexes of a new hexadentate Schiff base ligand derived from an asymmetric tripodal tetraamine and 2-pyridinecarboxaldehyde. *Polyhedron*. 2008; 27(18):3549-56. doi:10.1016/j.poly.2008.08.019

79. Salehzadeh S, Bayat M, Ward MD. First reported correlation between the calculated gas-phase proton macroaffinities of some metal complexes with their measured formation constants in solution: Zn(II) complexes of a series of tripodal aliphatic tetraamines. *Journal of Physical Chemistry A*. 2008; 112(17):4090-4. doi:10.1021/jp709603r

80. Sabounchei SJ, Nemattalab H, Salehzadeh S, Khani S, Bayat M, Khavasi HR. Structural, theoretical and multinuclear NMR study of mercury(II) complexes of phosphorus ylides: Mono and binuclear complexes. *Polyhedron*. 2008; 27(8):2015-21. doi:10.1016/j.poly.2008.03.009

81. Sabounchei SJ, Nemattalab H, Salehzadeh S, Bayat M, Khavasi HR, Adams H. New mono and binuclear mercury(II) complexes of phosphorus ylides containing DMSO as ligand: Spectral and structural characterization. *Journal of Organometallic Chemistry*. 2008; 693(11):1975-85. doi:10.1016/j.jorganchem.2008.02.025

82. Keypour H, Shayesteh M, Sharifi-Rad A, Salehzadeh S, Khavasi H, Valencia L. Synthesis and characterization of copper(II) and cobalt(II) complexes with two new potentially hexadentate Schiff base ligands. X-ray crystal structure determination of one

copper(II) complex. *Journal of Organometallic Chemistry.* 2008; 693(19):3179-87.
doi:10.1016/j.jorgancchem.2008.07.012

83. Keypour H, Dehghani-Firouzabadi AA, Shayesteh M, Salehzadeh S. Synthesis and characterisation of macrocyclic copper(II) complexes containing N(3)O(4) donor sets. *Journal of Chemical Research.* 2008; (10):587-8. doi:10.3184/030823408x360184

84. Keypour H, Azadbakht R, Salehzadeh S, Khanmohammadi H, Khavasi H, Adams H. Synthesis of two new tripodal ligands and their cyclocondensation with 2- 2-(2-formylphenoxy)ethoxy benzaldehyde in the presence of manganese(II) and cadmium(II) metal ions. *Polyhedron.* 2008; 27(6):1631-8. doi:10.1016/j.poly.2008.01.036

85. Keypour H, Azadbakht R, Salehzadeh S, Khanmohammadi H, Khavasi H, Adams H. Synthesis, crystal structure and spectroscopic properties of some cadmium(II) complexes with three polyamine and corresponding macroacyclic Schiff base ligands. *Journal of Organometallic Chemistry.* 2008; 693(13):2237-43. doi:10.1016/j.jorgancchem.2008.03.025

86. Zolfigol MA, Chehardoli G, Salehzadeh S, Adams H, Ward MD. { K.18-Crown-6 Br-3}(n): a unique tribromide-type and columnar nanotube-like structure for the oxidative coupling of thiols and bromination of some aromatic compounds. *Tetrahedron Letters.* 2007; 48(45):7969-73. doi:10.1016/j.tetlet.2007.09.050

87. Salehzadeh S, Golbedaghi R. Synthesis and characterisation of the Cd(II) complex of a hexadentate(N₄O₂) Schiff base ligand; IR, NMR and theoretical studies. *Journal of Chemical Research-S.* 2007; (2):86-8.

88. Salehzadeh S, Bayat M, Hashemi M. Complete gas-phase proton microaffinity analysis of two bulky polyamine molecules. *Journal of Physical Chemistry A.* 2007; 111(33):8188-92. doi:10.1021/jp072882v

89. Salehzadeh S, Bayat M. Comparison between the experimental and theoretical investigations on carbon-13 isotropic shielding constants of some tripodal tetraamine ligands. *Journal of the Chinese Chemical Society*. 2007; 54(5):1145-50.
90. Sabounchei SJ, Dadrass A, Jafarzadeh M, Salehzadeh S, Khavasi HR. Synthesis of a new carbbenzyloxymethylenetriparatolylphosphorane ylide and study of its reaction with mercury(II) halides: Spectral and structural characterization. *Journal of Organometallic Chemistry*. 2007; 692(12):2500-7. doi:10.1016/j.jorgancem.2007.02.027
91. Izadkhah V, Salehzadeh S, Golbedaghi R, Bayat M, Davoodi L. Synthesis and theoretical study of gadolinium(III) complex of heptadentate (N_4O_3) tripodal Schiff base ligand. *Asian Journal of Chemistry*. 2007; 19(7):5505-12.
92. Salehzadeh S, Nouri SM, Keypour H. Synthesis and characterization of two new asymmetrical potentially heptadentate (N_4O_3) tripodal Schiff base ligands and a theoretical study. *Asian Journal of Chemistry*. 2006; 18(1):515-22.
93. Salehzadeh S, Keypour H. Synthesis and characterization of Mn(II), Ni(II), Cu(II), Zn(II) and Cd(II) complexes of heptadentate asymmetrical tripodal Schiff base. *Asian Journal of Chemistry*. 2006; 18(2):1387-93.
94. Salehzadeh S, Javarsineh SA, Keypour H. Metal complexes of a new potentially heptadentate($N\text{-}7$) tripodal Schiff base ligand. *Synthesis, NMR studies and ab initio calculations. Journal of Molecular Structure*. 2006; 785(1-3):54-62. doi:10.1016/j.molstruc.2005.09.033
95. Salehzadeh S, Golbedaghi R. Synthesis and characterization of Zn(II) complex of a tripodal tetridentate (N-4) ligand and a theoretical study. *Asian Journal of Chemistry*. 2006; 18(3):2211-5.

96. Salehzadeh S, Bayat M. Three new defined proton affinities for polybasic molecules in the gas-phase: Proton microaffinity, proton macroaffinity and proton overallaffinity. *Chemical Physics Letters*. 2006; 427(4-6):455-60. doi:10.1016/j.cplett.2006.06.088
97. Salehzadeh S, Nouri SM, Keypour H, Bagherzadeh M. Synthesis of gadolinium(III) and samarium(III) complexes of new potentially heptadentate (N₄O₃) tripodal Schiff base ligands, and a theoretical study. *Polyhedron*. 2005; 24(12):1478-86. doi:10.1016/j.poly.2005.03.099
98. Zolfigol MA, Poor-Baltork IM, Mirjalili BF, et al. Silica sulfuric acid/wet SiO₂ as a novel heterogeneous system for cleavage of carbon nitrogen double bonds under mild conditions. *Phosphorus Sulfur and Silicon and the Related Elements*. 2003; 178(12):2735-43. doi:10.1080/10426500390252452
99. Zolfigol MA, Choghamarani AG, Taqian-Nasab A, Keypour H, Salehzadeh S. Chemoselective N-nitrosation of secondary amines under mild and heterogeneous conditions. *Bulletin of the Korean Chemical Society*. 2003; 24(5):638-40.
100. Keypour H, Dehdari M, Salehzadeh S, Wainwright KP. Potentiometric determination of the formation constants for complexes of 3,2 '2 "-triaminopropyldiethylamine with cobalt(II), nickel(II), copper(II), zinc(II) and cadmium(II). *Transition Metal Chemistry*. 2003; 28(4):425-9. doi:10.1023/a:1023670918923
101. Keypour H, Salehzadeh S, Pritchard RG, Parish RV. Copper(II) complexes of asymmetrical and symmetrical acyclic pentadentate (N-5) mono-Schiff-base ligands. The X-ray structure of Cu(ppe-py) (ClO₄)₂. *Transition Metal Chemistry*. 2002; 27(7):720-3. doi:10.1023/a:1020357327379
102. Keypour H, Salehzadeh S, Parish RV. Synthesis of two potentially heptadentate (N₄O₃) Schiff-base ligands derived from condensation of tris(3-aminopropyl)-amine and

salicylaldehyde or 4-hydroxysalicylaldehyde. Nickel(II) and copper(II) complexes of the former ligand. *Molecules*. 2002; 7(2):140-4. doi:10.3390/70200140

103. Keypour H, Dehdari M, Salehzadeh S. Potentiometric determination of the formation constants of complexes of 3,3 ',2 "-triaminodipropylethylamine with Co(II), Ni(II), Zn(II) and Cd(II). *Asian Journal of Chemistry*. 2002; 14(2):856-66.

104. Zolfigol MA, Zebarjadian MH, Chehardoli G, Keypour H, Salehzadeh S, Shamsipur M. N-nitrosation of secondary amines with NO+center dot crown center dot H(NO₃)₂(-). *Journal of Organic Chemistry*. 2001; 66(10):3619-20. doi:10.1021/jo001729t

105. Zolfigol MA, Shirini F, Choghamarani AG, Shiri A, Keypour H, Salehzadeh S. Chemoselective N-nitrosation of secondary amines under mild and heterogeneous conditions with ZrCl₄/NaNO₂. *Asian Journal of Chemistry*. 2001; 13(3):849-53.

106. Zolfigol MA, Choghamarani AG, Shirini F, Keypour H, Salehzadeh S. Chemoselective N-nitrosation of secondary amines under mild and heterogeneous conditions. *Synthetic Communications*. 2001; 31(3):359-65. doi:10.1081/scc-100000524

107. Zolfigol MA, Bagherzadeh M, Choghamarani AG, Keypour H, Salehzadeh S. N-nitrosation of secondary amines under mild and heterogeneous conditions. *Synthetic Communications*. 2001; 31(8):1161-6. doi:10.1081/scc-100103999

108. Keypour H, Salehzadeh S, Pritchard RG, Parish RV. Synthesis and crystal structure determination of a nickel(II) complex of an acyclic pentadentate (N-5) mono Schiff base ligand. *Molecules*. 2001; 6(11):909-14. doi:10.3390/61100909

109. Zolfigol MA, Shirini F, Choghamarani AG, Taqian-Nasab A, Keypour H, Salehzadeh S. Chemoselective N-nitrosation of secondary amines under mild and heterogeneous conditions via in situ generation of NOCl. *Journal of Chemical Research-S*. 2000; (9):420-2.

110. Keypour H, Salehzadeh S, Pritchard RG, Parish RV. Cadmium(II) complexes of fully condensed Schiff-base ligands derived from two different symmetrical and asymmetrical

tripodal tetraamines and 2-acetylpyridine; the novel observations for heptadentate mono-capped trigonal antiprismatic Schiff-base complexes. *Polyhedron*. 2000; 19(13):1633-7.
doi:10.1016/s0277-5387(00)00444-7

111. Keypour H, Salehzadeh S, Pritchard RG, Parish RV. Synthesis and crystal structure determination of some asymmetrical and symmetrical CR-type macrocyclic schiff base complexes, with a single pendant coordinating 2-aminoethyl arm. *Inorganic Chemistry*. 2000; 39(25):5787-90. doi:10.1021/ic000511m

112. Keypour H, Salehzadeh S. Binuclear copper(II) complexes containing two crown-type macrocyclic rings. *Asian Journal of Chemistry*. 2000; 12(1):19-22.

113. Keypour H, Salehzadeh S. Nickel(II) and copper(II) complexes of macrocyclic and acyclic Schiff-base ligands derived from new asymmetrical tripodal tetraamines and 2,6-diacylpyridine. *Transition Metal Chemistry*. 2000; 25(2):205-8.

doi:10.1023/a:1007017400893

114. Sabounchei J, Salehzadeh S. Multinuclear variable temperature NMR studies on cyanide, water and hydroxyl group scrambling on halogenation of K-2 Pt(CN)(4) and related reactions. *Iranian Journal of Chemistry & Chemical Engineering-International English Edition*. 1998; 17(2):61-5.

115. Keypour H, Salehzadeh S, Pritchard RG, Parish RV. Nickel(II) complexes of fully and partially condensed Schiff-base ligands derived from tris(3-aminopropyl)amine and acetylpyridine. *Transition Metal Chemistry*. 1998; 23(5):605-7.

doi:10.1023/a:1006919725480

b) Posters and lectures in international seminars and conferences.

More than 150 posters and 10 lectures

دکتر صادق صالح زاده

■ تاریخ تولد:

۱۳۴۵/۱۰/۵ در شهر همدان

■ وضعیت تا هل:

متاهل، دارای یک دختر و یک پسر

■ روند تحصیل:

دیپلم علوم تجربی از دبیرستان دکتر علی شریعتی همدان، ۱۳۶۴
کارشناسی دبیری شیمی از دانشگاه بوعالی سینا، ۱۳۶۹
کارشناسی ارشد شیمی معدنی از دانشگاه بوعالی سینا، ۱۳۷۴
دکترای شیمی معدنی از دانشگاه بوعالی سینا، ۱۳۷۹
(دانشجوی نمونه دانشگاه بوعالی سینا در سال ۱۳۷۹)

■ شروع به کار در دانشگاه

استادیار شیمی معدنی دانشگاه بوعالی سینا از آذر ماه ۱۳۷۹
دانشیار شیمی معدنی از تیر ماه ۱۳۸۵
استاد شیمی معدنی و محاسباتی از تیر ماه ۱۳۸۹

■ مقالات علمی:

- * در حال حاضر بیش از یکصد و ده مقاله علمی اینجانب در ژورنال های معتبر بین المللی (ISI) به چاپ رسیده است.
- * دو مقاله در مجلات داخلی در زمینه علم سنجی (مجله رهیافت).
- * حدود ۱۶۰ مقاله در سمینارهای داخلی یا خارجی به صورت پوستر یا سخنرانی.

■ طرح های تحقیقاتی:

تا کنون هفت طرح تحقیقاتی به انجام رسیده

■ هدایت دانشجویان تحصیلات تکمیلی:

* استاد راهنمای ۲۱ دانش آموخته کارشناسی ارشد

* استاد راهنمای ۶ دانش آموخته دکتری

* در حال حاضر استاد راهنمای ۵ دانشجوی کارشناسی ارشد و ۵ دانشجوی دکتری.

■ مسئولیت های اجرایی:

* مدیر گروه شیمی معدنی از سال ۱۳۸۷ تا کنون

* معاون اداری و مالی دانشکده شیمی از پائیز ۱۳۸۷ تا تابستان ۱۳۹۳

* دبیر شانزدهمین کنفرانس شیمی معدنی ایران (شهریور ۱۳۹۴)

مقالات فارسی

(۱) صادق صالح زاده، مهدی بیات خط فقر در علم کجا و چگونه. رهیافت ۱۳۸۷ شماره ۴۲.

(۲) صادق صالح زاده، مهدی بیات جهش علمی ایران در طی یک دهه (۱۹۹۸-۲۰۰۸). رهیافت

۴۴ شماره ۱۳۸۸