**CURRICULUM VITAÉ**

**Professor H. Hadadzadeh**

(Professor of Inorganic & Bioinorganic Chemistry)

***I- Personal:***

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Nationality: Iranian

***II- Education:***

**1987- 1991: BSc: Applied Chemistry, IUT.**

**1992-1994: MSc : Inorganic Chemistry (Photochemistry), IUT.**

**(Thesis subject: Synthesis, characterization and photochemical reaction of cobaloxime complexes)**

**1997-2002: PhD: Inorganic Chemistry (Physical Inorganic Chemistry and Inorganic Electrochemistry), SBU and Carleton University (Professor R.J. Crutchley's Research Group, Ottawa, Canada)**

**(Thesis subject: Structure, electrochemical, spectroelectrochemical, and magnetic properties of mono- and dinuclear ruthenium, copper and cobalt complexes; cyclometalated ruthenium complexes)**

***III- Research Fields:***

**Current research interests and ongoing projects are listed below:**

**Stabilization of DOPA Zwitterions on Laser-Generated Gold Nanoparticles**

**Immobilization of gold nanoparticles on folate-conjugated dendritic mesoporous silica-coated reduced graphene oxide nanosheets**

**Perrhenate-Catalyzed Deoxydehydration of a Vicinal Diol**

**Graphite-like C3N4 nanoparticles (g-C3N4)**

**Preparation of folic acid-conjugated dendritic mesoporous silica nanoparticles for pH-controlled release and targeted delivery of a cyclometallated gold(III) complex**

 **DNA and BSA Interactions with Metal Complexes and Anticancer Drugs**

 **Organometallics (Ferrocenes and Cyclometalated Complexes)**

 **Electrochemical and Spectroelectrochemical Studies of Transition Metal Complexes**

 **Preparation of Inorganic Materials and Catalysts (Alumina-Supported Re and Ru Catalysts, Silicates, V2O5, SeO2, and Titanium Carbide)**

 **Photocatalytic Reactions (Photocatalytic Reduction of CO2 to CO by Re Complexes)**

 **Electrocatalytic Reduction of CO2 to CO by Ru(II)-Polypyridyl Complexes**

**Solid-state Luminescence**

 **Nanoparticles and Nanocatalysts**

***IV-Research Publications***

***Books:***

##  Essentials of Inorganic Chemistry 2 ( In FARSI)

##  Chemical Instrumentation (In FARSI)

## Electrochemical Techniques for Inorganic Chemists

## Inorganic Chemistry II (In FARSI)

## Inorganic Chemistry III (In FARSI)

***Published Papers:***

1- Electrocatalytic and photocatalytic activity of a nickel (II) quinacridone complex. In Materials Chemistry and Physics (Vol. 303, p. 127823). *Elsevier BV*. <https://doi.org/10.1016/j.matchemphys.2023.127823>

2- Simultaneous Immunomodulation and Tissue Protection on the Rheumatoid Arthritis Models Using a Tragacanth Frankincense-Based Core–Shell Nanostructure. In ACS Applied Nano Materials (Vol. 6, Issue 4, pp. 2741–2754). *American Chemical Society (ACS).* <https://doi.org/10.1021/acsanm.2c05135>

3- Evaluation of HER and OER electrocatalytic activity over RuO2–Fe2O3 nanocomposite deposited on HrGO nanosheets. In International Journal of Hydrogen Energy (Vol. 48, Issue 5, pp. 1813–1830). *Elsevier BV.* <https://doi.org/10.1016/j.ijhydene.2022.10.026>

4- Ruthenium (III)–Indigo Complex Loaded on the Salep Hydrogel as an Anti-inflammatory and Antioxidant Nanocomposite. In *ACS Applied Nano Materials* (Vol. 6, Issue 2, pp. 1261–1271). American Chemical Society (ACS). <https://doi.org/10.1021/acsanm.2c04866>

5- A combined experimental and theoretical study of RuO2/TiO2 heterostructures as a photoelectrocatalyst for hydrogen evolution. In *Dalton Transactions* (Vol. 52, Issue 11, pp. 3472–3481). Royal Society of Chemistry (RSC). <https://doi.org/10.1039/d2dt04123e>

6- Synthesis of quinacridone derivative supported on ZnO hexagonal as a new electrocatalyst for hydrogen evolution reaction. In *Journal of Electroanalytical Chemistry* (Vol. 928, p. 117029). Elsevier BV. <https://doi.org/10.1016/j.jelechem.2022.117029>

7- Improving thermal and mechanical properties of concrete by using ceramic electrical insulator waste as aggregates. In *Construction and Building Materials* (Vol. 338, p. 127647). Elsevier BV. <https://doi.org/10.1016/j.conbuildmat.2022.127647>

8- The molecular dynamics study of atomic compound and functional groups effects on the atomic/thermal behavior of polyethylene glycol/graphite-based matrixes. In *International Communications in Heat and Mass Transfer* (Vol. 136, p. 106219). Elsevier BV. <https://doi.org/10.1016/j.icheatmasstransfer.2022.106219>

9- Thermal conductivity enhancement of shape-stabilized phase change nanocomposites via synergistic effects of electrospun carbon nanofiber and reduced graphite oxide nanoparticles. In *Journal of Energy Storage* (Vol. 51, p. 104521). Elsevier BV. <https://doi.org/10.1016/j.est.2022.104521>

10- Theoretical study of the mechanism of Te (g) + 3F2 (g)→TeF6 (g). In *Molecular Physics* (Vol. 120, Issue 10). Informa UK Limited. <https://doi.org/10.1080/00268976.2022.2059411>

11- [Ru(tmphen)3]2[Fe(CN)6] and [Ru(phen)3][Fe(CN)5(NO)] complexes and formation of a heterostructured RuO2–Fe2O3 nanocomposite as an efficient alkaline HER and OER electrocatalyst. In *Dalton Transactions* (Vol. 51, Issue 16, pp. 6314–6331). Royal Society of Chemistry (RSC). <https://doi.org/10.1039/d2dt00398h>

12- Evaluation of HER and OER electrocatalytic activity over RuO2–Fe2O3 nanocomposite deposited on HrGO nanosheets. In *International Journal of Hydrogen Energy* (Vol. 48, Issue 5, pp. 1813–1830). Elsevier BV. <https://doi.org/10.1016/j.ijhydene.2022.10.026>

13- [Ru(tmphen)3]2[Fe(CN)6] and [Ru(phen)3][Fe(CN)5(NO)] complexes and formation of a heterostructured RuO2–Fe2O3 nanocomposite as an efficient alkaline HER and OER electrocatalyst. In *Dalton Transactions* (Vol. 51, Issue 16, pp. 6314–6331). Royal Society of Chemistry (RSC). <https://doi.org/10.1039/d2dt00398h>

14- Electrocatalytic cleavage of a carbon–chlorine bond by Re(IV)–chloro complex: a mechanistic insight from DFT. In *Journal of Applied Electrochemistry* (Vol. 51, Issue 12, pp. 1689–1703). Springer Science and Business Media LLC. <https://doi.org/10.1007/s10800-021-01607-4>

15- Enhancement of photocatalytic oxidation of benzyl alcohol by edge-functionalized modified carbon nitride: A DFT evaluation. In *Journal of Photochemistry and Photobiology* *A: Chemistry* (Vol. 419, p. 113452). Elsevier BV. <https://doi.org/10.1016/j.jphotochem.2021.113452>

16- Methane carbonylation to light olefins and alcohols over carbon–based iron– and cobalt–oxide catalysts. In *Journal of the Taiwan Institute of Chemical Engineers* (Vol. 122, pp. 127–135). Elsevier BV. <https://doi.org/10.1016/j.jtice.2021.04.043>

17- Water-vapochromic behavior of a mononuclear Pd(II) complex of piroxicam: A DFT and TD-DFT study. In *Journal of Molecular Graphics and Modelling* (Vol. 102, p. 107773). Elsevier BV. <https://doi.org/10.1016/j.jmgm.2020.107773>

18- Reduced graphene oxide and carbon nanotubes composite functionalized by azobenzene, characterization and its potential as a curcumin electrochemical sensor. In *Journal of Electroanalytical Chemistry* (Vol. 873, p. 114418). Elsevier BV. <https://doi.org/10.1016/j.jelechem.2020.114418>

19- Electron affinities of X12O12 (X = Be, Mg, and Ca), X12N12 (X = B, Al, and Ga), and X12P12 (X = B, Al, and Ga) nanocages: NBO calculations and energy decomposition analysis. In The *European Physical Journal Plus* (Vol. 135, Issue 9). Springer Science and Business Media LLC. <https://doi.org/10.1140/epjp/s13360-020-00727-8>

20- Theoretical insights into the electron affinity of manganese superhalogen compounds; NBO, QTAIM and energy decomposition analysis. In *Molecular Physics* (Vol. 118, Issue 15, p. e1718791). Informa UK Limited. <https://doi.org/10.1080/00268976.2020.1718791>

21- New dendrimers containing ruthenium nanoparticles as catalysts for hydrogenation of citral to 3,7-dimethyloctanol. In *Materials Chemistry and Physics* (Vol. 249, p. 122962). Elsevier BV. <https://doi.org/10.1016/j.matchemphys.2020.122962>

22- Selective Photocatalytic Oxidation of Benzyl Alcohol at Ambient Conditions using Spray-Dried g-C3N4/TiO2 Granules. In *Molecular Catalysis* (Vol. 490, p. 110927). Elsevier BV. <https://doi.org/10.1016/j.mcat.2020.110927>

23- New Erbium(ΙΙΙ) Complexes as Mordants for Natural Dyeing of Silk. *Inorganic Chemistry Research,* 4(1). <https://doi.org/10.22036/icr.2020.232737.1061>

24- Effects of boron oxide composition, structure, and morphology on B4C formation via the SHS process in the B2O3–Mg – C ternary system. In *Ceramics International* (Vol. 46, Issue 6, pp. 7223–7234). Elsevier BV. <https://doi.org/10.1016/j.ceramint.2019.11.217>

25- The Role of Delocalization Energy on Superhalogen Property: The Electron Affinity of , , and (X=O, S, and Se). In *ChemistrySelect* (Vol. 5, Issue 13, pp. 3859–3873). Wiley. <https://doi.org/10.1002/slct.202000449>

26- Aptamer/magnetic nanoparticles decorated with fluorescent gold nanoclusters for selective detection and collection of human promyelocytic leukemia (HL-60) cells from a mixture. In *Nanotechnology* (Vol. 31, Issue 2, p. 025605). IOP Publishing. <https://doi.org/10.1088/1361-6528/ab484a>

27- Design and Synthesis of Gatekeeper Coated Dendritic Silica/Titania Mesoporous Nanoparticles with Sustained and Controlled Drug Release Properties for Targeted Synergetic Chemo-Sonodynamic Therapy. In *ACS Biomaterials Science &amp; Engineering* (Vol. 5, Issue 9, pp. 4405–4415). American Chemical Society (ACS). <https://doi.org/10.1021/acsbiomaterials.9b00237>

28- A comparative study of the counterion effect on the perrhenate-catalyzed deoxydehydration reaction. In *Molecular Catalysis* (Vol. 471, pp. 27–37). Elsevier BV. <https://doi.org/10.1016/j.mcat.2019.04.014>

29- Selective chemotherapy and imaging of colorectal and breast cancer cells by a modified MUC-1 aptamer conjugated to a poly(ethylene glycol)-dimethacrylate coated Fe3O4–AuNCs nanocomposite. In *New Journal of Chemistry* (Vol. 43, Issue 1, pp. 238–248). Royal Society of Chemistry (RSC). <https://doi.org/10.1039/c8nj04236e>

30- Utilization of CO2 as a carbon source for production of CO and syngas using a ruthenium(II) electrocatalyst. In *Journal of CO2 Utilization* (Vol. 26, pp. 612–622). Elsevier BV. <https://doi.org/10.1016/j.jcou.2018.06.018>

31- Preparation of folic acid-conjugated dendritic mesoporous silica nanoparticles for pH-controlled release and targeted delivery of a cyclometallated gold(III) complex as an antitumor agent. In *Journal of Molecular Liquids* (Vol. 265, pp. 797–806). Elsevier BV. <https://doi.org/10.1016/j.molliq.2018.07.024>

32- Perrhenate-Catalyzed Deoxydehydration of a Vicinal Diol: A Comparative Density Functional Theory Study. In The *Journal of Physical Chemistry A* (Vol. 121, Issue 45, pp. 8688–8696). American Chemical Society (ACS). <https://doi.org/10.1021/acs.jpca.7b08884>

33- Immobilization of gold nanoparticles on folate-conjugated dendritic mesoporous silica-coated reduced graphene oxide nanosheets: a new nanoplatform for curcumin pH-controlled and targeted delivery. In *Soft Matter* (Vol. 14, Issue 12, pp. 2400–2410). Royal Society of Chemistry (RSC). <https://doi.org/10.1039/c7sm02248d>

34- Stabilization of DOPA Zwitterions on Laser-Generated Gold Nanoparticles: ONIOM Computational Study of the Charge-Dependent Structural and Electronic Changes of DOPA Adsorbed on the Gold Nanosurface. In The *Journal of Physical Chemistry C* (Vol. 122, Issue 15, pp. 8680–8692). American Chemical Society (ACS). <https://doi.org/10.1021/acs.jpcc.8b02366>

35- A nanocomplex of Cu(II) with theophylline drug; synthesis, characterization, and anticancer activity against K562 cell line. In *Journal of Molecular Structure* (Vol. 1155, pp. 450–456). Elsevier BV. <https://doi.org/10.1016/j.molstruc.2017.11.029>

36- van der Waals DFT ONIOM study of the adsorption of DNA bases on the Cu(111) nanosurface. In *Applied Surface Science* (Vol. 422, pp. 372–387). Elsevier BV. <https://doi.org/10.1016/j.apsusc.2017.06.042>

37- Combined Experimental and Computational Study of the In Situ Adsorption of Piroxicam Anions on the Laser-Generated Gold Nanoparticles. In The *Journal of Physical Chemistry C* (Vol. 121, Issue 15, pp. 8589–8600). American Chemical Society (ACS). <https://doi.org/10.1021/acs.jpcc.6b12962>

## 38- Synthesis, structure, DNA/protein binding, and cytotoxic activity of a rhodium(III) complex with 2,6-bis(2-benzimidazolyl)pyridine. In *European Journal of Medicinal Chemistry* (Vol. 127, pp. 958–971). Elsevier BV. <https://doi.org/10.1016/j.ejmech.2016.11.005>

## 39- A mononuclear Ru(II) complex with meloxicam: DNA- and BSA-binding, molecular modeling and anticancer activity against human carcinoma cell lines. In *Inorganica Chimica Acta* (Vol. 454, pp. 184–196). Elsevier BV. <https://doi.org/10.1016/j.ica.2016.04.037>

## 40- Electrocatalytic reduction of CO2 to CO in the presence of a mononuclear polypyridyl ruthenium(II) complex. In *Journal of CO2 Utilization* (Vol. 17, pp. 80–89). Elsevier BV. <https://doi.org/10.1016/j.jcou.2016.11.009>

## 41- Single-phase hematite nanoparticles: Non-alkoxide sol–gel based preparation, modification and characterization. In *Ceramics International* (Vol. 42, Issue 16, pp. 19336–19342). Elsevier BV. <https://doi.org/10.1016/j.ceramint.2016.09.104>

## 42- Electrocatalytic activity of a mononuclear yttrium(III)–methyl orange complex and Y2O2SO4 nanoparticles for adsorption/desorption of hydrogen. In *Materials Chemistry and Physics* (Vol. 184, pp. 222–232). Elsevier BV. <https://doi.org/10.1016/j.matchemphys.2016.09.045>

43- [ReCl(CO)3(phen-dione)] as a homogeneous and heterogeneous electrocatalyst for the reduction of carbon dioxide. In *Journal of CO2 Utilization* (Vol. 16, pp. 354–360). Elsevier BV. <https://doi.org/10.1016/j.jcou.2016.09.004>

44- Experimental and ONIOM computational evaluation of DNA- and BSA-binding and cytotoxic activity of a mononuclear Pd(II) complex with piroxicam. In *Inorganica Chimica Acta* (Vol. 453, pp. 415–429). Elsevier BV. <https://doi.org/10.1016/j.ica.2016.08.051>

45- The effect of the nano-structured aerogel powder on the structural parameters, water repellency, and water vapor/air permeability of a fibrous polyester material. In *Materials Chemistry and Physics* (Vol. 177, pp. 99–111). Elsevier BV. <https://doi.org/10.1016/j.matchemphys.2016.04.002>

46- In situ generation of the gold nanoparticles–bovine serum albumin (AuNPs–BSA) bioconjugated system using pulsed-laser ablation (PLA). In *Materials Chemistry and Physics* (Vol. 177, pp. 360–370). Elsevier BV. <https://doi.org/10.1016/j.matchemphys.2016.04.040>

47- Sensitive spectrophotometric determination of Co(II) using dispersive liquid-liquid micro-extraction method in soil samples. In *Environmental Monitoring and Assessment* (Vol. 188, Issue 5). Springer Science and Business Media LLC. <https://doi.org/10.1007/s10661-016-5263-x>

48- Changes in the chemical properties and swelling coefficient of alfalfa root cell walls in the presence of toluene as a toxic agent. In *Environmental Science and Pollution Research* (Vol. 23, Issue 7, pp. 7022–7031). Springer Science and Business Media LLC. <https://doi.org/10.1007/s11356-015-6008-z>

49- Electrocatalytic reduction of CO2 to CO by Gd(III) and Dy(III) complexes; and M2O3 nanoparticles (M = Gd and Dy). In *Journal of CO2 Utilization* (Vol. 13, pp. 61–70). Elsevier BV. <https://doi.org/10.1016/j.jcou.2015.12.005>

50- Thermal Treatment Method for Synthesis and Characterization of the Octahedral Magnetic Nanostructures of Co3O4 from a New Precursor. In *High Temperature Materials and Processes* (Vol. 35, Issue 7, pp. 723–728). Walter de Gruyter GmbH. <https://doi.org/10.1515/htmp-2015-0078>

51- NiCo 2 O 4 nanospinel and its catalytic activity for oxidation of Rhodamine B at ambient conditions. In *Materials Chemistry and Physics* (Vol. 170, pp. 62–70). Elsevier BV. <https://doi.org/10.1016/j.matchemphys.2015.12.019>

52- A water-soluble Pd(II) complex with a terpyridine ligand: experimental and molecular modeling studies of the interaction with DNA and BSA; and in vitro cytotoxicity investigations against five human cancer cell lines. In *New Journal of Chemistry* (Vol. 40, Issue 11, pp. 9081–9097). Royal Society of Chemistry (RSC). <https://doi.org/10.1039/c6nj01880g>

53- Investigation of the in situ generation of oxide-free copper nanoparticles using pulsed-laser ablation of bulk copper in aqueous solutions of DNA bases. In *RSC Advances* (Vol. 6, Issue 111, pp. 109885–109896). Royal Society of Chemistry (RSC). <https://doi.org/10.1039/c6ra22038j>

54- Electrocatalytic reduction of CO2 to CO by a mononuclear ruthenium(II) complex. In *New Journal of Chemistry* (Vol. 40, Issue 7, pp. 6347–6357). Royal Society of Chemistry (RSC). <https://doi.org/10.1039/c5nj03600c>

55- An experimental and quantum chemical study on the non-covalent interactions of a cyclometallated Rh(III) complex with DNA and BSA. In *RSC Advances* (Vol. 6, Issue 28, pp. 23913–23929). Royal Society of Chemistry (RSC). <https://doi.org/10.1039/c5ra24540k>

56- Simultaneous electrochemical determination of ascorbic acid, epinephrine, and uric acid using a polymer film-modified electrode based on Au nanoparticles/poly(3,3′,5,5′-tetrabromo-m-cresolsulfonphthalein). In *Ionics* (Vol. 21, Issue 12, pp. 3267–3278). Springer Science and Business Media LLC. <https://doi.org/10.1007/s11581-015-1515-y>

57- Electrocatalytic reduction of CO2 using the dinuclear rhenium(I) complex [ReCl(CO)3(μ-tptzH)Re(CO)3]. In *Polyhedron* (Vol. 101, pp. 160–164). Elsevier BV. <https://doi.org/10.1016/j.poly.2015.08.014>

58- Spectroscopic, biological, and molecular modeling studies on the interactions of [Fe(III)-meloxicam] with G-quadruplex DNA and investigation of its release from bovine serum albumin (BSA) nanoparticles. *In Journal of Biomolecular Structure and Dynamics* (Vol. 33, Issue 11, pp. 2316–2329). Informa UK Limited. <https://doi.org/10.1080/07391102.2014.1003195>

59- Green synthesis of nanosilica by thermal decomposition of pine cones and pine needles. In *Advanced Powder Technology* (Vol. 26, Issue 6, pp. 1583–1589). Elsevier BV. <https://doi.org/10.1016/j.apt.2015.09.004>

60- A new lanthanum(III) complex, [La(MO)3(DMF)3(H2O)2] (MO = methyl orange), and La2O2SO4 nanoparticles; electrocatalytic activity for adsorption/desorption/evolution of hydrogen. In Polyhedron (Vol. 99, pp. 186–197). Elsevier BV. <https://doi.org/10.1016/j.poly.2015.07.018>

## 61- Photoreduction of CO2 to CO by a mononuclear Re(I) complex and DFT evaluation of the photocatalytic mechanism ***, RSC Adv.***, 2015,**5**, 41125-41134, **DOI:** 10.1039/C5RA02002F

## 62- Synthesis and performance evaluation of the aerogel-filled PET nanofiber assemblies prepared by electro-spinning, *RSC Adv.*, 2015, 5, 12830-12842, DOI: 10.1039/C4RA15297B

63- A new precursor for preparation of magnetite (Fe3O4) nanoparticles, *Journal of Particle Science and Technology* 1, 2015, 65-72.

64- A Voltammetric Sensor Based on Multiwalled Carbon Nanotubes and a New Azoferrocene Derivative for Determination of Glutathione, [Sensors Journal, IEEE](http://ieeexplore.ieee.org/xpl/RecentIssue.jsp?punumber=7361)  (Volume:15,  [Issue: 8](http://ieeexplore.ieee.org/xpl/tocresult.jsp?isnumber=7120211), 2015, 4472 – 4479, DOI:[10.1109/JSEN.2015.2423325](http://dx.doi.org/10.1109/JSEN.2015.2423325)

65- A mononuclear Cu(II) complex with 5,6-diphenyl-3-(2-pyridyl)-1,2,4-triazine: Synthesis, crystal structure, DNA- and BSA-binding, molecular modeling, and anticancer activity against MCF-7, A- 549, and HT-29 cell lines, [European Journal of Medicinal Chemistry](http://www.sciencedirect.com/science/journal/02235234), [Volume 96](http://www.sciencedirect.com/science/journal/02235234/96/supp/C), 26, 2015, 66–82. [doi:10.1016/j.ejmech.2015.04.020](http://dx.doi.org/10.1016/j.ejmech.2015.04.020)

66- Nickel-phendione complex covalently attached onto carbon nanotube/cross linked glucose dehydrogenase as bioanode for glucose/oxygen compartment-less biofuel cell, [Journal of Power Sources](http://www.sciencedirect.com/science/journal/03787753), [Volume 282](http://www.sciencedirect.com/science/journal/03787753/282/supp/C), 2015, 586–595. [doi:10.1016/j.jpowsour.2015.02.009](http://dx.doi.org/10.1016/j.jpowsour.2015.02.009)

67- Preparation of new fluorophore lanthanide complexes-Cloisite nanohybrids using the tricationic Pr(III), Gd(III) and Dy(III) complexes with 9,10-phenanthrenequinone, [*Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*](http://www.sciencedirect.com/science/journal/13861425), [Volume 137](http://www.sciencedirect.com/science/journal/13861425/137/supp/C), 2015, 1206–1212. [doi:10.1016/j.saa.2014.08.136](http://dx.doi.org/10.1016/j.saa.2014.08.136)

68- Antiproliferative effects of copper(II)–polypyridyl complexes in breast cancer cells through inducing apoptosis , [*BioMetals*](http://link.springer.com/journal/10534) , 2015, Volume 28, , 267-278, DOI 10.1007/s10534-015-9820-5

# 69- Spectroscopic, biological, and molecular modeling studies on the interactions of [Fe(III)-meloxicam] with G-quadruplex DNA and investigation of its release from bovine serum albumin (BSA) nanoparticles, *Journal of Biomolecular Structure and Dynamics*, 2015, DOI:10.1080/07391102.2014.1003195

# 70- A mononuclear Ni(II) complex with 5,6-diphenyl-3-(2-pyridyl)-1,2,4-triazine: DNA- and BSA-binding and anticancer activity against human breast carcinoma cells

[*Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*](http://www.sciencedirect.com/science/journal/13861425), [Volume 136, Part B](http://www.sciencedirect.com/science/journal/13861425/136/supp/PB), 2015, 205–215, [doi:10.1016/j.saa.2014.09.016](http://dx.doi.org/10.1016/j.saa.2014.09.016)

# 71- A mononuclear zinc(II) complex with piroxicam: Crystal structure, DNA- and BSA-binding studies; in vitro cell cytotoxicity and molecular modeling of oxicam complexes

[*Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*](http://www.sciencedirect.com/science/journal/13861425), [Volume 136, Part B](http://www.sciencedirect.com/science/journal/13861425/136/supp/PB" \o "Go to table of contents for this volume/issue), 2015, Pages 1119–1133. [doi:10.1016/j.saa.2014.09.136](http://dx.doi.org/10.1016/j.saa.2014.09.136)

# 72- Preparation of Honeycomb Magnetic Co3O4 Nanostructures from *Trans, Trans, Trans-[Co(py)2(H2O)2(SCN)2]* as a New Precursor

## Synthesis and Reactivity in Inorganic, Metal-Organic, and Nano-Metal Chemistry

[Volume 45](http://www.tandfonline.com/loi/lsrt20?open=45#vol_45), [Issue 1](http://www.tandfonline.com/toc/lsrt20/45/1), 2015, DOI:10.1080/15533174.2013.818035

# 73- A Differential Pulse Voltammetric Sensor for Determination of Glutathione in Real Samples Using a Trichloro(terpyridine)ruthenium(III)/Multiwall Carbon Nanotubes Modified Paste Electrode [Sensors Journal, IEEE,](http://ieeexplore.ieee.org/xpl/RecentIssue.jsp?punumber=7361)  15 ,  [Issue: 1,](http://ieeexplore.ieee.org/xpl/tocresult.jsp?isnumber=6945920) 2015, 483 – 490, DOI:[10.1109/JSEN.2014.2343152](http://dx.doi.org/10.1109/JSEN.2014.2343152)

# 74- Characterization, photocleavage, molecular modeling, and DNA- and BSA-binding studies of Cu(II) and Ni(II) complexes with the non-steroidal anti-inflammatory drug meloxicam

[Inorganica Chimica Acta](http://www.sciencedirect.com/science/journal/00201693), [Volume 423, Part B](http://www.sciencedirect.com/science/journal/00201693/423/supp/PB), 2014, 256–272, [doi:10.1016/j.ica.2014.08.060](http://dx.doi.org/10.1016/j.ica.2014.08.060)

# 75- Simultaneous determination of epinephrine, acetaminophen, and tryptophan using Fe2O3(0.5)/SnO2(0.5) nanocomposite sensor

## [*Journal of Applied Electrochemistry*](http://www.scopus.com/source/sourceInfo.url?sourceId=25194&origin=recordpage), Volume 45, Issue 2, 2014, Pages 185-195, ****DOI:**** 10.1007/s10800-014-0756-1

# 76- Preparation, characterization and solid-state emission of metal complex-Cloisite nanohybrids (MC-C, M∈=∈Ru (II) and Cu (II))Bottom of Form

## [*Journal of Fluorescence*](http://www.scopus.com/source/sourceInfo.url?sourceId=25282&origin=recordpage) ,Volume 24, Issue 6, 2014, Pages 1841-1848, ****DOI:**** 10.1007/s10895-014-1472-2

77- Computational and experimental study on the electrocatalytic reduction of CO2 to CO by a new mononuclear ruthenium(II) complex, *Dalton Transactions*, 2014, 43, pp. 11317-11332.

78- Photocatalytic reduction of CO2 to CO by a dinuclear carbonyl polypyridyl rhenium(I) complex, *Polyhedron*, 2014, 78, pp. 112-122.

79- DNA- and BSA-binding studies and anticancer activity against human breast cancer cells (MCF-7) of the zinc(II) complex coordinated by 5,6-diphenyl-3-(2-pyridyl)-1,2,4-triazine, *Spectrochimica**Acta Part A: Molecular and Biomolecular Spectroscopy*, 2014, 127, pp. 511-520.

80- Mono- and polynuclear copper(II) complexes based on 2,4,6-tris(2-pyridyl)-1,3,5-triazine and its hydrolyzed form, *Inorganica Chimica Acta*, 2014, 416, 109-121.

81- Theoretical and experimental study of the protonated 2,4,6-tris(2-pyridyl)-1,3,5-trazine [TPTZH]2+, *Monatshefte fur Chemie - Chemical Monthly* , 2014, 145, 593-603.

82- The piroxicam complex of cobalt(II); synthesis in two different ionic liquids, structure, DNA- and BSA interaction and molecular modeling, *Inorganica Chimica Acta*, 2014, 409, pp. 379-389.

83- The meloxicam complexes of Co(II) and Zn(II); synthesis, crystal structures, photocleavage and in vitro DNA-binding, *Journal of Molecular Structure*, 2013, 1049, pp. 336-344.

84- Experimental and molecular modeling studies on the interaction of the Ru(II)- piroxicam complex with DNA and BSA, *European Journal of Medicinal Chemistry*, 2013, 69, pp. 577-590.

85– Polypyridyl Ni(II) complex, [Ni(tppz)2]2+: structure, DNA– and BSA-binding and molecular modeling, *Polyhedron*, 65, 2013, pp. 16-30.

86- Electrocatalytic and Simultaneous Determination of Ascorbic Acid, Nicotinamide Adenine Dinucleotide and Folic Acid at Ruthenium(II) Complex-ZnO/CNTs Nanocomposite Modified Carbon Paste Electrode, *Electroanalysis*, 2014, 26, 962-970.

 87- ZnO nanoparticle-modified ionic liquid-carbon paste electrode for voltammetric determination of folic acid in food and pharmaceutical samples, *Ionics*, 2014, 20, pp. 421-429.

88– Zinc-amino acid complexes are more stable than free amino acids in saline and washed soils, *Soil Biology and Biochemistry*, 2013, 63, pp. 73-79.

89-[Bis-andtris(2,3-dihydro-4a,12b-(epoxyethanooxy)[1,4]dioxino[2,3f][1,10]phenanthroline) complexes of Ru(II): Synthesis, structure and DNA binding properties](http://www-scopus-com.myaccess.library.utoronto.ca/record/display.url?eid=2-s2.0-84875311458&origin=resultslist&sort=plf-f&src=s&st1=hadadzadeh&sid=3E9538DA91EA2FF71DC2CEF852F87636.WeLimyRvBMk2ky9SFKc8Q%3a20&sot=b&sdt=b&sl=23&s=AUTHOR-NAME%28hadadzadeh%29&relpos=0&relpos=0&searchTerm=AUTHOR-NAME%28hadadzadeh%29), [*Journal of Molecular*](http://www-scopus-com.myaccess.library.utoronto.ca/source/sourceInfo.url?sourceId=24642&origin=resultslist)

[*Structure*](http://www-scopus-com.myaccess.library.utoronto.ca/source/sourceInfo.url?sourceId=24642&origin=resultslist)*,* 2013, 1040, pp. 98-111.

90- [Interaction of mononuclear nickel(II) enantiomers, Δ- and Λ-bis(1,10-phenanthroline) (dipyrido[3,2-a:2',3'-c]phenazine)nickel(II) chloride, with calf thymus DNA](http://www-scopus-com.myaccess.library.utoronto.ca/record/display.url?eid=2-s2.0-84875388488&origin=resultslist&sort=plf-f&src=s&st1=hadadzadeh&sid=3E9538DA91EA2FF71DC2CEF852F87636.WeLimyRvBMk2ky9SFKc8Q%3a20&sot=b&sdt=b&sl=23&s=AUTHOR-NAME%28hadadzadeh%29&relpos=1&relpos=1&searchTerm=AUTHOR-NAME%28hadadzadeh%29), [*Inorganica Chimica Acta*](http://www-scopus-com.myaccess.library.utoronto.ca/source/sourceInfo.url?sourceId=25270&origin=resultslist)*,* 2013, 400, pp. 82-90.

91- [Complex conversion of the redox pair CoIII-NO2 to CoII-NO3: Synthesis, crystal structure and DNA-binding of trans,trans,trans-[Co(py)2(H2O)2(NO3)2]](http://www-scopus-com.myaccess.library.utoronto.ca/record/display.url?eid=2-s2.0-84875469264&origin=resultslist&sort=plf-f&src=s&st1=hadadzadeh&sid=3E9538DA91EA2FF71DC2CEF852F87636.WeLimyRvBMk2ky9SFKc8Q%3a20&sot=b&sdt=b&sl=23&s=AUTHOR-NAME%28hadadzadeh%29&relpos=3&relpos=3&searchTerm=AUTHOR-NAME%28hadadzadeh%29), [*Polyhedron*](http://www-scopus-com.myaccess.library.utoronto.ca/source/sourceInfo.url?sourceId=25303&origin=resultslist), 2013, 53, pp. 179-186.

92- [The effectiveness of foliar applications of synthesized zinc-amino acid chelates in comparison with zinc sulfate to increase yield and grain nutritional quality of wheat](http://www-scopus-com.myaccess.library.utoronto.ca/record/display.url?eid=2-s2.0-84870488265&origin=resultslist&sort=plf-f&src=s&st1=hadadzadeh&sid=3E9538DA91EA2FF71DC2CEF852F87636.WeLimyRvBMk2ky9SFKc8Q%3a20&sot=b&sdt=b&sl=23&s=AUTHOR-NAME%28hadadzadeh%29&relpos=4&relpos=4&searchTerm=AUTHOR-NAME%28hadadzadeh%29), [*European Journal of Agronomy*](http://www-scopus-com.myaccess.library.utoronto.ca/source/sourceInfo.url?sourceId=59988&origin=resultslist), 45, 2013, pp. 68-74.

93- [Insertion of fluorophore dyes between Cloisite Na+ layered for preparation of novel organoclays](http://www-scopus-com.myaccess.library.utoronto.ca/record/display.url?eid=2-s2.0-84870789397&origin=resultslist&sort=plf-f&src=s&st1=hadadzadeh&sid=3E9538DA91EA2FF71DC2CEF852F87636.WeLimyRvBMk2ky9SFKc8Q%3a20&sot=b&sdt=b&sl=23&s=AUTHOR-NAME%28hadadzadeh%29&relpos=5&relpos=5&searchTerm=AUTHOR-NAME%28hadadzadeh%29), [*Journal of Inclusion Phenomena and Macrocyclic Chemistry*](http://www-scopus-com.myaccess.library.utoronto.ca/source/sourceInfo.url?sourceId=51064&origin=resultslist), 2013, *77, pp. 463-470.*

94- [Synthesis, Characterization, and Theoretical and Experimental Investigations of Zinc(II)-Amino Acid Complexes as Ecofriendly Plant Growth Promoters and Highly Bioavailable Sources of Zinc](http://www-scopus-com.myaccess.library.utoronto.ca/record/display.url?eid=2-s2.0-84866855508&origin=resultslist&sort=plf-f&src=s&st1=hadadzadeh&sid=3E9538DA91EA2FF71DC2CEF852F87636.WeLimyRvBMk2ky9SFKc8Q%3a20&sot=b&sdt=b&sl=23&s=AUTHOR-NAME%28hadadzadeh%29&relpos=8&relpos=8&searchTerm=AUTHOR-NAME%28hadadzadeh%29), [*Journal of Plant Growth Regulation*](http://www-scopus-com.myaccess.library.utoronto.ca/source/sourceInfo.url?sourceId=19232&origin=resultslist), 2013, *32, pp. 315-323*.

95- [Mononuclear Co(III) and Ni(II) Complexes with Polypyridyl Ligands, [Co(phen)2(taptp)]3+ and [Ni(phen)2(taptp)]2+: Synthesis, Photocleavage and DNA-binding](http://www-scopus-com.myaccess.library.utoronto.ca/record/display.url?eid=2-s2.0-84868224150&origin=resultslist&sort=plf-f&src=s&st1=hadadzadeh&sid=3E9538DA91EA2FF71DC2CEF852F87636.WeLimyRvBMk2ky9SFKc8Q%3a20&sot=b&sdt=b&sl=23&s=AUTHOR-NAME%28hadadzadeh%29&relpos=7&relpos=7&searchTerm=AUTHOR-NAME%28hadadzadeh%29), [*Journal of Fluorescence*](http://www-scopus-com.myaccess.library.utoronto.ca/source/sourceInfo.url?sourceId=25282&origin=resultslist), 2012, *23, pp. 259-264.*

96- [Synthesis of Iron-Amino Acid Chelates and Evaluation of Their Efficacy as Iron Source and Growth Stimulator for Tomato in Nutrient Solution Culture](http://www-scopus-com.myaccess.library.utoronto.ca/record/display.url?eid=2-s2.0-84868340719&origin=resultslist&sort=plf-f&src=s&st1=hadadzadeh&sid=3E9538DA91EA2FF71DC2CEF852F87636.WeLimyRvBMk2ky9SFKc8Q%3a20&sot=b&sdt=b&sl=23&s=AUTHOR-NAME%28hadadzadeh%29&relpos=6&relpos=6&searchTerm=AUTHOR-NAME%28hadadzadeh%29), [*Journal of Plant Growth Regulation*](http://www-scopus-com.myaccess.library.utoronto.ca/source/sourceInfo.url?sourceId=19232&origin=resultslist), 2012, 31(4), pp. 498-508.

97- [A mononuclear copper(II) complex based on the polypyridyl ligand 2,4,6-tris(2-pyridyl)-1,3,5-triazine (tptz), [Cu(tptz)2]2+: X-ray crystal structure, DNA binding and in vitro cell cytotoxicity](http://www-scopus-com.myaccess.library.utoronto.ca/record/display.url?eid=2-s2.0-84864947301&origin=resultslist&sort=plf-f&src=s&st1=hadadzadeh&sid=3E9538DA91EA2FF71DC2CEF852F87636.WeLimyRvBMk2ky9SFKc8Q%3a20&sot=b&sdt=b&sl=23&s=AUTHOR-NAME%28hadadzadeh%29&relpos=9&relpos=9&searchTerm=AUTHOR-NAME%28hadadzadeh%29), [*Polyhedron*](http://www-scopus-com.myaccess.library.utoronto.ca/source/sourceInfo.url?sourceId=25303&origin=resultslist), 2012, 44 (1), pp. 101-112.

98- [The piroxicam complex of copper(II), trans-[Cu(Pir)2(THF)2], and its interaction with DNA](http://www-scopus-com.myaccess.library.utoronto.ca/record/display.url?eid=2-s2.0-84864202829&origin=resultslist&sort=plf-f&src=s&st1=hadadzadeh&sid=3E9538DA91EA2FF71DC2CEF852F87636.WeLimyRvBMk2ky9SFKc8Q%3a20&sot=b&sdt=b&sl=23&s=AUTHOR-NAME%28hadadzadeh%29&relpos=10&relpos=10&searchTerm=AUTHOR-NAME%28hadadzadeh%29), [*Journal of Molecular Structure*](http://www-scopus-com.myaccess.library.utoronto.ca/source/sourceInfo.url?sourceId=24642&origin=resultslist), 2012, 1022, pp. 172-180.

99- [Unusual condensation of ethylene glycol with coordinated 1,10-phenanthroline-5,6-dione in [Ru(phen-dione)2Cl2] and its cyclometallated complex, [Ru(phpy-*κ2N,C2′*)(phen-diox)2](PF6)](http://www-scopus-com.myaccess.library.utoronto.ca/record/display.url?eid=2-s2.0-84864281392&origin=resultslist&sort=plf-f&src=s&st1=hadadzadeh&sid=3E9538DA91EA2FF71DC2CEF852F87636.WeLimyRvBMk2ky9SFKc8Q%3a20&sot=b&sdt=b&sl=23&s=AUTHOR-NAME%28hadadzadeh%29&relpos=11&relpos=11&searchTerm=AUTHOR-NAME%28hadadzadeh%29), [*Polyhedron*](http://www-scopus-com.myaccess.library.utoronto.ca/source/sourceInfo.url?sourceId=25303&origin=resultslist)*,* 2012, 43 (1), pp. 114-122.

100- [Fabrication of an optical sensor based on the immobilization of qsal on the plasticized PVC membrane for the determination of copper(II)](http://www-scopus-com.myaccess.library.utoronto.ca/record/display.url?eid=2-s2.0-84864610125&origin=resultslist&sort=plf-f&src=s&st1=hadadzadeh&sid=3E9538DA91EA2FF71DC2CEF852F87636.WeLimyRvBMk2ky9SFKc8Q%3a20&sot=b&sdt=b&sl=23&s=AUTHOR-NAME%28hadadzadeh%29&relpos=12&relpos=12&searchTerm=AUTHOR-NAME%28hadadzadeh%29), [*Journal of Analytical Chemistry*](http://www-scopus-com.myaccess.library.utoronto.ca/source/sourceInfo.url?sourceId=24018&origin=resultslist), 2012, 67 (8), pp. 687-693. 69-[Nickel(II) polypyridyl complexes of 2,4,6-Tris(2-pyridyl)-1,3,5-triazine](http://www-scopus-com.myaccess.library.utoronto.ca/record/display.url?eid=2-s2.0-84864856150&origin=resultslist&sort=plf-f&src=s&st1=hadadzadeh&sid=3E9538DA91EA2FF71DC2CEF852F87636.WeLimyRvBMk2ky9SFKc8Q%3a20&sot=b&sdt=b&sl=23&s=AUTHOR-NAME%28hadadzadeh%29&relpos=13&relpos=13&searchTerm=AUTHOR-NAME%28hadadzadeh%29), [*Journal of Chemical Crystallography*](http://www-scopus-com.myaccess.library.utoronto.ca/source/sourceInfo.url?sourceId=24701&origin=resultslist), 2012, 42 (7), pp. 656-667.

101- [Bis(triethylammonium) tetrachlorido-cobaltate(II)](http://www-scopus-com.myaccess.library.utoronto.ca/record/display.url?eid=2-s2.0-84862278338&origin=resultslist&sort=plf-f&src=s&st1=hadadzadeh&sid=3E9538DA91EA2FF71DC2CEF852F87636.WeLimyRvBMk2ky9SFKc8Q%3a20&sot=b&sdt=b&sl=23&s=AUTHOR-NAME%28hadadzadeh%29&relpos=14&relpos=14&searchTerm=AUTHOR-NAME%28hadadzadeh%29), [*Acta Crystallographica Section E: Structure Reports Online*](http://www-scopus-com.myaccess.library.utoronto.ca/source/sourceInfo.url?sourceId=144910&origin=resultslist), 2012, 68 (6), pp. m859.

102- [A novel 1:1 co-crystal of bis(1,10-phenanthroline)(1,10-phenanthroline-5, 6-dione)nickel(II) hexafluorophosphate and tris(1,10-phenanthroline)nickel(II) hexafluorophosphate complexes, [Ni(phen)2(phen-dione)][Ni(phen)3](PF6)4](http://www-scopus-com.myaccess.library.utoronto.ca/record/display.url?eid=2-s2.0-84861348408&origin=resultslist&sort=plf-f&src=s&st1=hadadzadeh&sid=3E9538DA91EA2FF71DC2CEF852F87636.WeLimyRvBMk2ky9SFKc8Q%3a20&sot=b&sdt=b&sl=23&s=AUTHOR-NAME%28hadadzadeh%29&relpos=16&relpos=16&searchTerm=AUTHOR-NAME%28hadadzadeh%29), [*Journal of Chemical Crystallography*](http://www-scopus-com.myaccess.library.utoronto.ca/source/sourceInfo.url?sourceId=24701&origin=resultslist), 2012, 42 (5), pp. 486-493.

103- [Theoretical and experimental investigation of a fast Eu-PVC sensor and its interaction with 4-methylphenylisothiocyanate](http://www-scopus-com.myaccess.library.utoronto.ca/record/display.url?eid=2-s2.0-84859805040&origin=resultslist&sort=plf-f&src=s&st1=hadadzadeh&sid=3E9538DA91EA2FF71DC2CEF852F87636.WeLimyRvBMk2ky9SFKc8Q%3a20&sot=b&sdt=b&sl=23&s=AUTHOR-NAME%28hadadzadeh%29&relpos=17&relpos=17&searchTerm=AUTHOR-NAME%28hadadzadeh%29), [*IEEE Sensors Journal*](http://www-scopus-com.myaccess.library.utoronto.ca/source/sourceInfo.url?sourceId=15047&origin=resultslist), 2012, 12 (5), art. no. 5993489, pp. 914-921.

104- [Mononuclear copper(II) complex with terpyridine and an extended phenanthroline base, [Cu(tpy)(dppz)]2+: Synthesis, crystal structure, DNA binding and cytotoxicity activity](http://www-scopus-com.myaccess.library.utoronto.ca/record/display.url?eid=2-s2.0-84155167959&origin=resultslist&sort=plf-f&src=s&st1=hadadzadeh&sid=3E9538DA91EA2FF71DC2CEF852F87636.WeLimyRvBMk2ky9SFKc8Q%3a20&sot=b&sdt=b&sl=23&s=AUTHOR-NAME%28hadadzadeh%29&relpos=18&relpos=18&searchTerm=AUTHOR-NAME%28hadadzadeh%29), [*Polyhedron*](http://www-scopus-com.myaccess.library.utoronto.ca/source/sourceInfo.url?sourceId=25303&origin=resultslist), 2012, 31 (1), pp. 638-648.

105- [Mononuclear nickel(II) complexes coordinated by polypyridyl ligands](http://www.scopus.com/record/display.url?eid=2-s2.0-80052269823&origin=resultslist&sort=plf-f&src=s&st1=Hadadzadeh&sid=O0nler8kFw6NFrO9JFbUYCn%3a30&sot=b&sdt=b&sl=23&s=AUTHOR-NAME%28Hadadzadeh%29&relpos=4&relpos=4&searchTerm=AUTHOR-NAME(Hadadzadeh)), Polyhedron,2011, 30(15), pp. 2535-2543.

106 - [Experimental and semiempirical investigation of interaction between fast Sm membrane sensor and 1, 3-Di(Thiophene imino) benzoic acid](http://www.scopus.com/record/display.url?eid=2-s2.0-80051538670&origin=resultslist&sort=plf-f&src=s&st1=Hadadzadeh&sid=O0nler8kFw6NFrO9JFbUYCn%3a30&sot=b&sdt=b&sl=23&s=AUTHOR-NAME%28Hadadzadeh%29&relpos=6&relpos=6&searchTerm=AUTHOR-NAME(Hadadzadeh)) , IEEE Sensors Journal, 2011,11 (9) , pp. 2077-2083.

107- [Experimental and PM6/SPARKLE Semiempirical Study of Interaction between 4-Methoxyphenylcyanamide and Gadolinium(III) as a Fast Polymeric Membrane Sensor](http://www.scopus.com/record/display.url?eid=2-s2.0-79953269939&origin=resultslist&sort=plf-f&src=s&st1=Hadadzadeh&sid=O0nler8kFw6NFrO9JFbUYCn%3a30&sot=b&sdt=b&sl=23&s=AUTHOR-NAME%28Hadadzadeh%29&relpos=7&relpos=7&searchTerm=AUTHOR-NAME(Hadadzadeh)) , Electroanalysis, 2011, 23 (4) , pp. 1029-1037.

108- [Investigation of Yb(III)-PVC membrane interfacial interaction by semiempirical PM6/SPARKLE method based on 1,10-phenanthroline-5,6-dione as a suitable neutral ionophore](http://www.scopus.com/record/display.url?eid=2-s2.0-78650175489&origin=resultslist&sort=plf-f&src=s&st1=Hadadzadeh&sid=O0nler8kFw6NFrO9JFbUYCn%3a30&sot=b&sdt=b&sl=23&s=AUTHOR-NAME%28Hadadzadeh%29&relpos=8&relpos=8&searchTerm=AUTHOR-NAME(Hadadzadeh)), [*Journal of Colloid and Interface Science*](http://www.scopus.com/source/sourceInfo.url?sourceId=26950&origin=resultslist) , 2011, 354 (1) , pp. 268-274 .

109- [Synthesis, crystal structure, electrochemical and fluorescence studies of a novel Zn(II)-Fluorophore, 1,10-phenanthroline-5,6-dione (phen-dione)](http://www.scopus.com/record/display.url?eid=2-s2.0-78649592859&origin=resultslist&sort=plf-f&src=s&st1=Hadadzadeh&sid=O0nler8kFw6NFrO9JFbUYCn%3a30&sot=b&sdt=b&sl=23&s=AUTHOR-NAME%28Hadadzadeh%29&relpos=13&relpos=13&searchTerm=AUTHOR-NAME(Hadadzadeh)), JICS, 2010, 7(4), pp. 825-833 .

110- [Synthesis, characterization, and X-ray crystal structure of the manganese(III) complex Mn(Sal2hn)(CH3OH)(N3) [Sal2hn = N,N'-bis(salicylidene)-1,2-hexanediamine]](http://www.scopus.com/record/display.url?eid=2-s2.0-78449306044&origin=resultslist&sort=plf-f&src=s&st1=Hadadzade&sid=O0nler8kFw6NFrO9JFbUYCn%3a60&sot=b&sdt=b&sl=22&s=AUTHOR-NAME%28Hadadzade%29&relpos=0&relpos=0&searchTerm=AUTHOR-NAME(Hadadzade)), [*Russian Journal of Coordination Chemistry*](http://www.scopus.com/source/sourceInfo.url?sourceId=21523&origin=resultslist), 2010, 36 (8) , pp. 618-621.

111- [Deposition of α- SiΜο12Ο40 4--[Ru(bipyridine) (terpyridine)Cl]+ multilayer film on single wall carbon nanotube modified glassy carbon electrode: Improvement of the electrochemical properties and chemical stability](http://www.scopus.com/record/display.url?eid=2-s2.0-77955661114&origin=resultslist&sort=plf-f&src=s&st1=Hadadzadeh&sid=O0nler8kFw6NFrO9JFbUYCn%3a30&sot=b&sdt=b&sl=23&s=AUTHOR-NAME%28Hadadzadeh%29&relpos=14&relpos=14&searchTerm=AUTHOR-NAME(Hadadzadeh)), [*Thin Solid Films*](http://www.scopus.com/source/sourceInfo.url?sourceId=12347&origin=resultslist), 2010, 518 (18) , pp. 5304-5310 .

112- [Metal-dependent assembly of a tetranuclear copper(II) complex versus a 1D chain](http://www.scopus.com/record/display.url?eid=2-s2.0-74049129008&origin=resultslist&sort=plf-f&src=s&st1=Hadadzadeh&sid=O0nler8kFw6NFrO9JFbUYCn%3a30&sot=b&sdt=b&sl=23&s=AUTHOR-NAME%28Hadadzadeh%29&relpos=15&relpos=15&searchTerm=AUTHOR-NAME(Hadadzadeh))

[coordination polymer of cobalt(III) complex with N2O2-chelating Schiff-base ligand:](http://www.scopus.com/record/display.url?eid=2-s2.0-74049129008&origin=resultslist&sort=plf-f&src=s&st1=Hadadzadeh&sid=O0nler8kFw6NFrO9JFbUYCn%3a30&sot=b&sdt=b&sl=23&s=AUTHOR-NAME%28Hadadzadeh%29&relpos=15&relpos=15&searchTerm=AUTHOR-NAME(Hadadzadeh))

[Synthesis, characterization and crystal structures](http://www.scopus.com/record/display.url?eid=2-s2.0-74049129008&origin=resultslist&sort=plf-f&src=s&st1=Hadadzadeh&sid=O0nler8kFw6NFrO9JFbUYCn%3a30&sot=b&sdt=b&sl=23&s=AUTHOR-NAME%28Hadadzadeh%29&relpos=15&relpos=15&searchTerm=AUTHOR-NAME(Hadadzadeh)), *Polyhedron*, 2010, 29 (2) , pp. 807-812 .

113- [Pyridine-2,6-dicarboxylic acid (dipic): Crystal structure from co-crystal to a mixed ligand nickel(II) complex](http://www.scopus.com/record/display.url?eid=2-s2.0-73349122597&origin=resultslist&sort=plf-f&src=s&st1=Hadadzadeh&sid=O0nler8kFw6NFrO9JFbUYCn%3a30&sot=b&sdt=b&sl=23&s=AUTHOR-NAME%28Hadadzadeh%29&relpos=16&relpos=16&searchTerm=AUTHOR-NAME(Hadadzadeh)), [*Journal of Chemical Crystallography*](http://www.scopus.com/source/sourceInfo.url?sourceId=24701&origin=resultslist) , 2010, 40 (1) , pp. 48-57.

114- [The effect of H2S on the selectivity of light alkenes in the FE-Mn-catalyzed Fischer-](http://www.scopus.com/record/display.url?eid=2-s2.0-76649117431&origin=resultslist&sort=plf-f&src=s&st1=Hadadzadeh&sid=O0nler8kFw6NFrO9JFbUYCn%3a30&sot=b&sdt=b&sl=23&s=AUTHOR-NAME%28Hadadzadeh%29&relpos=17&relpos=17&searchTerm=AUTHOR-NAME(Hadadzadeh))

[Tropsch synthesis](http://www.scopus.com/record/display.url?eid=2-s2.0-76649117431&origin=resultslist&sort=plf-f&src=s&st1=Hadadzadeh&sid=O0nler8kFw6NFrO9JFbUYCn%3a30&sot=b&sdt=b&sl=23&s=AUTHOR-NAME%28Hadadzadeh%29&relpos=17&relpos=17&searchTerm=AUTHOR-NAME(Hadadzadeh)), Petroleum Chemistry, 2010, 50(1), pp. 78-86.

115- [Two different 1D-chains in the structures of the copper(I) coordination polymers based on bidentate Schiff-base building units and thiocyanate anions as bridging ligands](http://www.scopus.com/record/display.url?eid=2-s2.0-70349229208&origin=resultslist&sort=plf-f&src=s&st1=Hadadzadeh&sid=O0nler8kFw6NFrO9JFbUYCn%3a30&sot=b&sdt=b&sl=23&s=AUTHOR-NAME%28Hadadzadeh%29&relpos=18&relpos=18&searchTerm=AUTHOR-NAME(Hadadzadeh)), Inorganica Chimica Acta, 2009, 362 (13) , pp. 4837-4842.

116- [Synthesis, Electrochemical Properties and Spectroscopic Studies of Mono and Dinuclear Zn(II) Polypyridyl Complexes with Phenylcyanamide ligands, IJCCE, 2009, 28(1) , pp.63-70.](javascript:;)

117- [The mononuclear ruthenium(III)-2,3,5,6-tetrakis(2-pyridyl)pyrazine complex [Ru(bpy)](http://www.scopus.com/record/display.url?eid=2-s2.0-73349130417&origin=resultslist&sort=plf-f&src=s&st1=Hadadzadeh&sid=O0nler8kFw6NFrO9JFbUYCn%3a30&sot=b&sdt=b&sl=23&s=AUTHOR-NAME%28Hadadzadeh%29&relpos=19&relpos=19&searchTerm=AUTHOR-NAME(Hadadzadeh))

[(tppz)Cl][PF6]2: Synthesis, crystal structure, electrochemical, and spectroelectrochemical](http://www.scopus.com/record/display.url?eid=2-s2.0-73349130417&origin=resultslist&sort=plf-f&src=s&st1=Hadadzadeh&sid=O0nler8kFw6NFrO9JFbUYCn%3a30&sot=b&sdt=b&sl=23&s=AUTHOR-NAME%28Hadadzadeh%29&relpos=19&relpos=19&searchTerm=AUTHOR-NAME(Hadadzadeh))

[studies](http://www.scopus.com/record/display.url?eid=2-s2.0-73349130417&origin=resultslist&sort=plf-f&src=s&st1=Hadadzadeh&sid=O0nler8kFw6NFrO9JFbUYCn%3a30&sot=b&sdt=b&sl=23&s=AUTHOR-NAME%28Hadadzadeh%29&relpos=19&relpos=19&searchTerm=AUTHOR-NAME(Hadadzadeh)), Transition Metal Chemistry, 2009, 34(7), pp. 779-786.

118- [Rhodium(III) and cadmium(II) complexes based on the polypyridyl ligand 2,3,5,6-tetrakis](http://www.scopus.com/record/display.url?eid=2-s2.0-68349127002&origin=resultslist&sort=plf-f&src=s&st1=Hadadzadeh&nlo=&nlr=&nls=&sid=O0nler8kFw6NFrO9JFbUYCn%3a140&sot=b&sdt=b&sl=23&s=AUTHOR-NAME%28Hadadzadeh%29&relpos=20&relpos=0&searchTerm=AUTHOR-NAME(Hadadzadeh)) [(2-pyridyl)pyrazine (tppz)](http://www.scopus.com/record/display.url?eid=2-s2.0-68349127002&origin=resultslist&sort=plf-f&src=s&st1=Hadadzadeh&nlo=&nlr=&nls=&sid=O0nler8kFw6NFrO9JFbUYCn%3a140&sot=b&sdt=b&sl=23&s=AUTHOR-NAME%28Hadadzadeh%29&relpos=20&relpos=0&searchTerm=AUTHOR-NAME(Hadadzadeh)), Polyhedron, 2009, 28(13), pp. 2776-2784.

119- [Bis[4-(2-benzyl-idenepropyl-idene-amino)phen-yl] ether](http://www.scopus.com/record/display.url?eid=2-s2.0-62149111122&origin=resultslist&sort=plf-f&src=s&st1=Hadadzadeh&nlo=&nlr=&nls=&sid=O0nler8kFw6NFrO9JFbUYCn%3a140&sot=b&sdt=b&sl=23&s=AUTHOR-NAME%28Hadadzadeh%29&relpos=21&relpos=1&searchTerm=AUTHOR-NAME(Hadadzadeh)), [*Acta Crystallographica Section E, 2009,*](http://www.scopus.com/source/sourceInfo.url?sourceId=144910&origin=resultslist)  65 (3) , pp. o538.

120- [Immobilization of [Cu(bpy)2]Br2 complex onto a glassy carbon electrode modified with α-SiMo12O40 4- and single walled carbon nanotubes: Application to nanomolar detection of hydrogen peroxide and bromate](http://www.scopus.com/record/display.url?eid=2-s2.0-59049087319&origin=resultslist&sort=plf-f&src=s&st1=Hadadzadeh&nlo=&nlr=&nls=&sid=O0nler8kFw6NFrO9JFbUYCn%3a140&sot=b&sdt=b&sl=23&s=AUTHOR-NAME%28Hadadzadeh%29&relpos=22&relpos=2&searchTerm=AUTHOR-NAME(Hadadzadeh)), Analytica Chimica Acta, 2009, 635(1), pp. 63-70.

121- [Synthesis of titanium carbide by the combustion of TiO2-2Mg-C and 3TiO2-4Al-3C systems in a tubular furnace](http://www.scopus.com/record/display.url?eid=2-s2.0-69549106562&origin=resultslist&sort=plf-f&src=s&st1=Hadadzadeh&nlo=&nlr=&nls=&sid=O0nler8kFw6NFrO9JFbUYCn%3a140&sot=b&sdt=b&sl=23&s=AUTHOR-NAME%28Hadadzadeh%29&relpos=23&relpos=3&searchTerm=AUTHOR-NAME(Hadadzadeh)), IJCCE, 2009, 28(1), pp. 71-76.

122- Electrocatalytic reduction of NAD+ at glassy carbon electrode modified with single-walled carbon nanotubes and Ru(III) complexes, *Journal of Solid State Electrochemistry*, 2009, 13(3), pp. 485-496.

123- [Synthesis and crystal structure of bis(1,10-phenanthroline-5,6-dione)rhodium(I)hexafluoro](http://www.scopus.com/record/display.url?eid=2-s2.0-70549111355&origin=resultslist&sort=plf-f&src=s&st1=Hadadzadeh&nlo=&nlr=&nls=&sid=O0nler8kFw6NFrO9JFbUYCn%3a140&sot=b&sdt=b&sl=23&s=AUTHOR-NAME%28Hadadzadeh%29&relpos=25&relpos=5&searchTerm=AUTHOR-NAME(Hadadzadeh)) [phosphate, [Rh(phen-dione)2]PF6](http://www.scopus.com/record/display.url?eid=2-s2.0-70549111355&origin=resultslist&sort=plf-f&src=s&st1=Hadadzadeh&nlo=&nlr=&nls=&sid=O0nler8kFw6NFrO9JFbUYCn%3a140&sot=b&sdt=b&sl=23&s=AUTHOR-NAME%28Hadadzadeh%29&relpos=25&relpos=5&searchTerm=AUTHOR-NAME(Hadadzadeh)), Analytical Sciences, 2008, 24(12), pp. x287-x288.

124- [Catena-poly[[[N,N′-bis-(3-methoxy-benzyl-idene)ethyl-enediamine] copper(I)]-μ-thio-](http://www.scopus.com/record/display.url?eid=2-s2.0-58149468054&origin=resultslist&sort=plf-f&src=s&st1=Hadadzadeh&nlo=&nlr=&nls=&sid=O0nler8kFw6NFrO9JFbUYCn%3a140&sot=b&sdt=b&sl=23&s=AUTHOR-NAME%28Hadadzadeh%29&relpos=26&relpos=6&searchTerm=AUTHOR-NAME(Hadadzadeh)) [cyanato-k2 N:S]](http://www.scopus.com/record/display.url?eid=2-s2.0-58149468054&origin=resultslist&sort=plf-f&src=s&st1=Hadadzadeh&nlo=&nlr=&nls=&sid=O0nler8kFw6NFrO9JFbUYCn%3a140&sot=b&sdt=b&sl=23&s=AUTHOR-NAME%28Hadadzadeh%29&relpos=26&relpos=6&searchTerm=AUTHOR-NAME(Hadadzadeh)), [Acta Crystallographica Section E, 2008,](http://www.scopus.com/source/sourceInfo.url?sourceId=144910&origin=resultslist)  65 (1) , pp. m70.

125- Dinuclear copper complexes with cyanamide derivatives as bridging ligands, *Polyhedron, 2008,* 27 (6), pp. 1809-1817.

126- Synthesis, structure, spectroscopic, magnetic and electrochemical studies of a rare *syn-anti* acetate-bridged copper(II) complex, *Polyhedron,*2008, 27 (1), pp. 249-254.

127- A novel method for preparation of alumina-supported rhenium-cesium catalyst, Re-Cs/γ-Al2O3, IJCCE, 2008, 27(3), 37-43.

128-An investigation of Z-in distortion in mononuclear Cu(II) complex with terpyridine ligands, [Cu(terpy)2](PF6)2, *IJCCE, 2007,* 26 (3), pp. 103-110.

129- Cyclometalated rhodium(III) complex with phen-dione ligand , *Journal of Organometallic Chemistry, 2007,* 692 (17), pp. 3810-3815.

130- Synthesis and crystal structure of (carbonato)bis(1,10-phenanthroline) cobalt(III) nitrate, Analytical Sciences, 2007, 23, 101-102.

131-Crystal structure, magnetic and electrochemical properties of five-coordinate copper (II) complexes with 1,10-phenanthroline-5,6-dione, *Inorganica Chimica Acta, 2007,*  360 (8), pp. 2829-2834.

132- Synthesis and characterization of the novel Cu(II) and Zn(II) azo pigments, NSMSI, 2007, 26(2), 93-102.

133-*Cis,cis*-μ-2,3,5,6-Tetra-2-pyridylpyrazine-κ3N 1,N2,N6:κ3N3,N 4,N5-bis[dichloro(dimethyl sulfoxide-κS) ruthenium(II)] dihydrate acetone disolvate, *ActaCrystallographica Section E , 2006,* 62 (8), pp. m2002-m2004.

134-Efficient chemoselective mild deprotection of S,S-and S,O-acetals and ketals with electrophilic halogens, *Phosphorus, Sulfur and Silicon and the Related Elements, 2006,* 181(5), pp. 1059-1071.

135-Synthesis and characterization of tetraphenylporphyrin iron(III) complexes with substituted phenylcyanamide ligands, *Inorganica Chimica Acta, 2006,*  359 (7), pp. 2101-2106.

136- Synthesis, structure, spectroscopic, magnetic and electrochemical studies of NiII phen-dione complex, *Inorganica Chimica Acta* , 2006, 359 (7), pp. 2154-2158.

137- A novel economical method for production of soluble alkaline silicate from quartz, NSMSI, 2006, 25 (2),pp. 1-8.

138- Renewable surface sol-gel derived carbon ceramic electrode modified with [Ru(NH3)5Cl](PF6)2 complex: Application to amperometric detection of Chlorate, *Electroanalysis, 2005,*  17 (24), pp. 2273 -2280.

139- Synthesis and characterization of tetraphenylporphyrin manganese(III) complexes of phenylcyanamide ligands, *Inorganica Chimica Acta, 2005,* 358(11), pp. 2967-2974.

140- Synthesis, complexes containing phenylcyanamide ligands and effect of the inner- sphere on the Ru-NCN chromophore, *IJCCE* , 2005, 24 (2), pp. 21-30.

141- The study of electrochemical behavior of mono and dinuclear Co(III) complexes, trans-[pyCo((DO)(DOH)pn)(L)]PF6 and [{pyCo((DO)(DOH)pn)} 2(μ-dicyd)](PF6)2, *IJCCE*, 2005, 24 (2), pp. 17-20.

142- Synthesis, structure and spectroscopic study of RhIII polypyridine complexes with phenylcyanamide derivative ligands, *Journal of Molecular Structure* , 2005, 740 (1-3), pp. 165-168.

143- Dinuclear copper(II) chloro complex of the ligand 2,3,5,6-tetra(2-pyridyl)Pyrazine, *Inorganica Chimica Acta, 2005,*  358 (4), pp. 1289-1292.

144- The first use of a Rh(III) complex as a novel ionophore for thiocyanate- selective polymeric membrane electrodes, *Talanta* , 2005, 65 (4), pp. 991-997.

145- Renewable surface sol-gel derived carbon ceramic electrode modified with copper complex and its application as an amperometric sensor for bromate detection, *Electroanalysis* , 2004, 16 (23), pp. 1984-1991.

146- Sol-gel derived carbon ceramic composite electrode containing a ruthenium complex for amperometric detection of insulin at physiological pH, *Journal of Electroanalytical Chemistry,2003,* 542, pp. 39-49.

147-Cyclometalated ruthenium chloro and nitrosyl complexes , *Inorganic Chemistry* , 2002, 41 (24), pp. 6521-6526.

148- The electrochemical and spectroscopic studies of *trans*- [LCo((DO)(DOH)pn)L′] complexes, *IJCCE, 2002,* 21 (1), pp. 21-27.

149- Structure and spectroscopic studies of cis-bis(bipyridine) cobalt(III) complexes of phenylcyanamide ligands, *Inorganica Chimica Acta* , 2002, 336, pp. 125-130.

150- Synthesis of novel mononuclear and dinuclear cobalt(III) complexes with cyanamide derivative ligands, *Journal of Chemical Research - Part S* , 2002, (3), pp. 139-141.

151- Electrocatalytic activity of cobaloxime complexes adsorbed on glassy carbon electrodes toward the reduction of dioxygen, *Journal of Electroanalytical Chemistry* , 2001, 517 (1-2), pp. 37-44.

characterization, electrochemical and spectroelectrochemical properties of ruthenium(II)

***V- Teaching Experiences***

 [Multi-Nuclear NMR](http://ivut.iut.ac.ir/bounce.php?course=626)

 [Advanced Organometallic Chemistry](http://ivut.iut.ac.ir/bounce.php?course=629)

 [Chemical Structure and Bonding](http://ivut.iut.ac.ir/bounce.php?course=628)

 [Inorganic Electrochemistry](http://ivut.iut.ac.ir/bounce.php?course=627)

 [Corrosion](http://ivut.iut.ac.ir/bounce.php?course=630)

 **Bioinorganic Chemistry**

 **Inorganic Chemistry I**

 **Inorganic Chemistry II**

 **Organometallic Chemistry**

 **Inorganic Spectroscopy**

 **Kinetics and Mechanism of Reactions of Transition Metal Complexes**

 **General Chemistry I**

 **Advanced Inorganic Chemistry**

 **Group Theory**

 **Industrials Inorganic Chemistry**

 **Scientific English for Chemistry Students**

**Supramolecular Chemistry**

**CHEMISTRY- FROM LAB TO INDUSTRY**

**The Chemistry of Excited States and Reactive Intermediates**

VI- ***Computer Skills***

**Software Programs:** Gaussian, MOPAC, HYPERCHEM**,** SigmaPlot, AutoDock.

 VII- ***Projects with Industry:***

**Atomic Energy Organization:**

**-** Synthesis of zirconium carboxylate compounds and their application in oil based paints as a siccative agent.

- Controlled fabrication of α-zirconium hydrogen phosphate nanoplatelets;Synthesis and characterization of C3N4/ZrP/TiO2 nanocomposite for catalytic application in glycerol acetalization reaction and preparation of solketal

- Controlled fabrication of zirconium sulfate; Synthesis and characterization of SO4/ZrO2@g-C3N4 nanocomposite for photocatalytic application in oxidation of benzyl alcohol to benzaldehyde.

**Delijan** **Poudr Company:**

Synthesis of iron pigments

**Shahr-e Kord Gas Company:**

Investigation and possible application of herbal fragrances to eliminate the negative effects of chemical odorants

**Isfahan Gas Company:**

Application of thermal insulation coatings in the gas industries

**National Iranian Copper Industries Company (NICIC), Sarcheshmeh Copper Complex:**

Separation of selenium from the Sarcheshmeh copper anode slimes and optimization process without any degradation in the nature of gold and silver metals

**Science and Technology Vice-Presidency:**

Synthesis and Application of organic polyelectrolytes in water treatment as a coagulant agent