

## Curriculum vita

**Dr. Mousa Al-Noaimi**

### **Personal information:**

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The Hashemite University-Zarqa 13133, Jordan  
Nationality: Jordanian  
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### **Education**

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- **Ph.D.**, inorganic chemistry , Carleton university, Ottawa, Canada, 2004  
*Ph.D. Thesis:* Inner and Outer Sphere Perturbation of Strongly Coupled Class (III) Mixed-Valence Complexes
- **M.Sc.**, inorganic Chemistry, Yarmouk University, Irbid, 1998  
*M.Sc. Thesis:* The effect of acid and thermal pretreatment on the catalytic activity of Jordanian bentonite
- **B.Sc.**, Chemistry, Yarmouk University, Irbid, Jordan, 1993

### **Skills**

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- Coordination Chemistry and Metal Complexes
- Density Functional Theory
- Catalysis
- Organic Synthesis
- Schlenk and glove box techniques
- Multinuclear NMR Spectroscopy: Bruker 400, Varian 200, 300
- FT-IR Spectroscopy
- Gas Chromatography
- UV-Vis Spectroscopy
- electrochemistry and spectroelectrochemistry techniques
- Manipulation of air/moisture sensitive materials

### **Computer skills**

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PC and Macintosh, including MS Word, Excel, Chem. Office , Chem. Draw and DFT calculation

## **Work Experience**

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**9-11-2015-now:** Full Professor, Chemistry Department, Hashemite University, Zarqa, Jordan

**2012- Now:** Associate professor, Chemistry Department, Hashemite University, Zarqa, Jordan

**2010- 2012:** Associate professor, Department of Chemistry, King Abdulaziz University, Saudi Arabia.

**2009-2010:** Associate professor, Chemistry Department, Hashemite University, Zarqa, Jordan.

**2004- 2009:** Assistant Professor, Chemistry Department, Hashemite University, Zarqa, Jordan.

**2000-2003:** Teaching Assistant, Chemistry Department, Carleton University, Ottawa, Canada.

**1994-2000:** teacher, Ministry of Education, Jordan

**1993-1994:** Researcher (R&D), Dar aldawa and Al-Hkma Pharmaceutical Manufacturing Company, Naor-Jordan.

## **Fellowships and Awards:**

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- Certificate of recognition for excellence in research, Hashemite University, Jordan.
- Certificate of recognition for excellence in research, Hashemite University, Jordan.
- Teaching Fellowship, Carleton University, Ottawa, Canada (2000-2003)
- Three month research visit, Prof. Robert J. Crutchley group, Carleton University, Ottawa, Canada ,2004, 2005, 2006, 2007
  
- Scholarship from the Hashemite University to pursue higher studies (Ph.D.) at Carleton University, Ottawa, Canada

## **Teaching Experience:**

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- General Chemistry
- Organometallic
- Group theory
- Instrumental
- Inorganic chemistry
- Physical –inorganic chemistry
- Experimental inorganic Chemistry
- Industrial inorganic chemistry

## **Research Interests:**

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- Synthesis and physical characterization of organometallic metal complexes

- Design complexes with suitable oxidation potential to oxidize some organic substrates.
- Investigate the intervalence charge transfer and electron processes between two metal centers in dinuclear complexes.
- Design metal complexes which exhibit luminescent properties at room temperature.
- Density Functional Theory for metal complexes

### Conferences:

1. The Fifth Saudi Science Conference held on 16-18/04/2012 AD, King Abdul Aziz Hall, Umm Al Qura University Saudi Arabia
2. Mohamed E. El-Hefnawy, Samir A. Senior, Mousa Al-Noaimi, Abdel Moneim El Massry, Magdy D. Madbouly and R. Tanakab, Apparent dipole Moments and excess volumes of Oligo (oxyethylene glycol) monodecyl ethers in n-alkanes at T = 298.15 K, The Fourth International Chemistry Conference Organized by Saudi Chemical Society and Chemistry Department, King Saud University Riyadh, Saudi Arabia Nov./19-21/2011
3. Mousa Al-Noaimi, Adnan S. Abu-Surrah and Lubna Tahtamouni Palladium(II) Complexes Incorporating Phenylazophenylmethine Ancillary Ligands: Synthesis, Spectral, Redox Properties and Antitumor Activity, 2nd International Conference on Chemistry and Chemical Process, Kuala Lumpur, Malaysia. May 5-6, 2012
4. Al-Noaimi, M., El-khateeb, M., Haddad, S., Sunjuk M., Crutchley, R. J, Mixed ligand ruthenium complexes: synthesis, spectroscopic, electron transfer properties and catalytic activity for oxidation of water to dioxygen, The 5<sup>th</sup> Jordanian International Conference of Chemistry 17-19 June 2008, Yarmouk University, Jordan.
5. Al-Noaimi, M., El-Barghouthi, M., El-khateeb, M., Abdel-Rahman, O., Göröls, H., Crutchley, R. J., Synthesis and characterization of ruthenium(II) azoimine-diphosphine mixed-ligand complexes. The 5<sup>th</sup> Jordanian International Conference of Chemistry 17-19 June 2008, Yarmouk University, Jordan.
6. Abdel-Jalil, R., Al-Noaimi, M., Al-Gharabli, S. Copper Chloride - Assisted Oxidative Cyclization of Amidrazones Derivatives, 16 November 2006 Franciscan C (Hilton San Francisco), USA
7. Al-Noaimi, M., Crutchley, R., Inner and outer-sphere perturbation for strongly coupled mixed-valence complex. A. 6th First Chemical Scientific Day, April 26, 2006. Mu'tah University, Jordan.
8. El-khateeb, M., Al-Noaimi, M., Harb, M., Göröls, H., Weigand, W. Half-sandwich Ruthenium Complexes of Heterocyclic-dithiocarboxylato Ligands,

The 8th Jordanian Chemical Conference, 21 April 2008, Petra University, Jordan.

9. The third Jordanian International Conference of Chemistry, 22-26 April 2004, Yarmouk University, Jordan.
10. Academia and industrial conference, 1 December, 2005, University of Jordan, Jordan.
11. Graduate Chemistry Conference 8 May 2007 Jordan University of Science and Technology, Jordan.
12. A. 6<sup>th</sup> Jordanian Chemical Conference, 12 December 2005, the Hashemite University, Jordan.
13. A. 7<sup>th</sup> Jordanian Chemical Conference, 1 March 2007, Al al-Bayt University, Jordan.

### **List of projects**

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1. Synthesis, X-ray structure, spectroscopic, DFT study and catalytic activity of [Ru(Y)(L)X<sub>2</sub>] complexes (Y= PPh<sub>3</sub>, AsPh<sub>3</sub>, SbPh<sub>3</sub>, DMF, Acetonitrile, aniline derivatives) and L = NN'S thioether azoimine tridentate ligands, **159700** J.D, The Hashemite University
2. Mixed ligands Ruthenium (II) complexes build from tridentate (NN'N") azoimine and XPh<sub>3</sub> where Y=P, As, Sb: synthesis, spectral characterization, electrochemical properties, DFT calculation, and catalytic activity. 10000 J.D, The Hashemite University
3. Ruthenium(II) diamine complexes incorporating azoimine ancillary ligands. Synthesis, spectral, crystal structure and DFT calculations and catalytic activity in the hydrogenation of  $\alpha,\beta$ -unsaturated aldehyde, 18000 J.D., Scientific Research Support Fund
4. Ruthenium(II) diamine complexes bearing azoimine bidentate ligands: An experimental and theoretical study, 5500 J.D, The Hashemite University
5. Ruthenium (II) complexes of tridentate azoimine-quinoline ligands: synthesis, spectral characterization, electrochemical properties and catalytic properties, 5000 J.D, The Hashemite University.
6. Employment of electroanalytical methods for identification, quantification, and characterization of redox active inorganic, organic and biochemical species using potentiostat coupled with various electrochemical cells. , 58000 J.D, The Hashemite University

7. Synthesis and structural characterization asymmetric mononuclear ruthenium (II) complexes derived from 2-(1,2,3-thiadiazol-4-yl)pyridine and azoimine ligands, 2800, The Hashemite University
8. Ruthenium complexes incorporating azoimine and  $\alpha$ -diamine based ligands: Synthesis, crystal structure, electrochemistry and DFT calculation , Deanship of Scientific Research (DSR), King Abdulaziz University, Jeddah, under Grant No. (2- 662-D1432).
9. Asymmetric Mononuclear ruthenium(II) complexes build from  $\alpha$ -diamine and azoimine ligands as a monomer to build a conducting polymer. Synthesis, spectroscopic and electron-transfer properties Deanship of Scientific Research (DSR), King Abdulaziz University, Jeddah, under Grant No. (2- 652-D1421).
10. Ruthenium complexes of 4,4'-bi-1,2,3-thiadiazole and azoimine ligands: Syntheses, Crystallography and electrochemical Studies, King Abdulaziz University, Jeddah,
11. Weakly coupled mixed-valence complexes for non-linear optical, 30/6/2004, 3700 JD, The Hashemite University.
12. Azo-imine as new bidentate ligand for trans-dichlororuthenium complexes to be used as precursors for conducting polymer.16/1/2006, 3400 JD, The Hashemite University.
13. Mixed ligand ruthenium complexes: synthesis, spectroscopic, electron transfer properties and catalytic activity for oxidation of water to dioxygen 23/4/2007, 3400 JD, The Hashemite University.
14. Synthesis, spectroscopic characterization and DFT calculations of new neutral cis-ruthenium(II) dichloride- azomethine – complexes with 1,2-(diphenylphosphino)ethane ligand, 26/12/2007, 3400 JD, The Hashemite University. 3400 JD, the Hashemite University.
15. Ruthenium complexes build from 2,2'-bipyridine and ortho-thiophenoxy modified azomethine ligands: Synthesis, physical characterization and catalytic property toward olefin polymerization, 26/5/2009, 3400 JD, The Hashemite University. 3400 JD, the Hashemite University.

### Taught courses

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1. general chemistry 101
2. General chemistry for engineering
3. Inorganic chemistry 1
4. coordination chemistry
5. practical inorganic chemistry

6. physical-inorganic chemistry
7. inorganic chemistry 3
8. group theory
9. organometallic
10. advance inorganic chemistry
11. research method
12. analytical chemistry
13. instrumental chemistry
14. Chromatography.
15. practical analytical chemistry

### **M.Sc. Thesis Supervision:**

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1. Synthesis, characterization and DFT calculations of Ruthenium(II) Azoimine-Diphosphine Mixed-Ligand Complexes. Obada Sobhi. Institution(s): Hashemite university
2. Azoimine-Diphosphine Mixed-Ligand Ruthenium (II) Complexes: Synthesis, Characterization, Spectroscopic, Redox Properties and X-ray Structures, Ala'a Salah Hamdi Haniyeh, Institution. Hashemite university
3. Selective Hydrogenation of Cinnamaldehyde using Ruthenium Complexes, Hanan Ahmed Ali, Institution: Hashemite university
4. Ruthenium(II) complexes of  $\alpha$ -diimines: synthesis, DFT calculation , spectral characterization, electrochemical properties and single-crystal X-ray structure of 1-(quinolineimino)-1-(phenylhydrazono)-propan-2-one, Abdellah Fiomi, Institution. Hashemite university
5. Mixed-ligands Ruthenium Azoimine Complexes with Pyridine and Phosphine-type ligands: Spectroscopic, Electrochemical Properties, Structure, DFT studies and Catalytic Activity, Ahmed Al-Mensi, Institution.Hashemite university
6. Mixed-ligand Ruthenium (II) Complexes build from Azoimine and Pyridine oxime-type ligands: Spectroscopic, Electrochemical Properties, Structure, DFT studies and Catalytic Activity, Sali Abo-hamida , Institution: Hashemite university
7. Ruthenium(II) bipyrdine complexes incorporating (NN'S) azoimine ancillary ligands. Synthesis, spectral, crystal structure and DFT calculations and catalytic activity for the hydrogenation of  $\alpha,\beta$ -unsaturated aldehyde-Bara Ata allah , Institution. Hashemite university
8. Ruthenium(II) complexes bearing quinoline-azoimine (NN'N") and bearing PPh<sub>3</sub>/AsPh<sub>3</sub> coligand: Synthesis, structure and catalytic activity for the

hydrogenation of  $\alpha,\beta$ -unsaturated aldehyde, Raja ahmad Institution. Hashemite university

### **Examination of Theses**

Member in examining committees for more than 30 students at Saudi Arabia and other Universities in Jordan

### **University Committees Workshops, Training and Community Service**

- **Developing and Implementing of Quality Assurance in Higher Education** Workshop (Amman 7-10/1/2008). Organized by the British Council/Amman and Jordan University of Science and Technology and carried out by Professor Bahram Bekhradnia, Director, Higher Education Policy Institute and other experts in Higher Education Development from UK.

### **Memberships and Activities**

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- American Chemical Society, member since January 1992.
- Inorganic Division-ACS, member since 1992.
- Jordanian Environmental Society, member since 1999.
- Jordanian Chemical Society, member since 2001.
- Member in the Scientific and Organizing Committees for many national and international scientific conferences.

### **Research statement**

At moment, Research in my laboratory focuses three current areas. The first involves the design and development of new coordination and organometallic metal complexes starting from new ligands made in our lab. This research involves synthesis, spectroscopic characterization and electrochemistry investigation. The second involves design complexes with suitable oxidation potential to oxidize some or reduce organic substrates. The third one is to investigate the intervalence charge transfer and electron processes between two metal centers in dinuclear complexes. Also design metal complexes which exhibit luminescent properties at room temperature. Finally, we use Density Functional Theory to understand the experimental results and to make a correlation between what we found experimentally with the calculated values. Within our laboratory and in our field of research studies, the students will learn many skills such as learn how to use Density Functional Theory, using reactors and Gas Chromatography to test the complexes as a catalyst, Organic Synthesis, Schlenk and glove box techniques, Multinuclear NMR Spectroscopy, FT-IR Spectroscopy and UV-Vis Spectroscopy, electrochemistry and spectroelectrochemistry techniques, Manipulation of air/moisture sensitive materials.

I believe as the time pass by, I will become interested in using these Metal complexes as dyes for optical data storage, electrochromic materials or Light-emitting diode

### **Teaching statement**

As you know, knowledge is far more valuable when shared. I can still remember that I started enjoying "teaching" at a young age. After I had learned something new, I was always sharing my new discovery with my companions. While growing up I have always admired those school teachers and university professors who excelled at conveying their knowledge to me. My teaching experiences in university have not only helped me to improve my teaching skills, but also have encouraged me to pursue a life-long career in teaching and research. Now that I am equipped with the knowledge of fundamental chemistry as well as research experience at the frontier of materials science,

In my view, a great teacher is like a great artist who uses basic tools to transform raw materials into valuable assets of society. Great teachers are not just ones who transmit information, teach skills, and help students earn the best grades. They are those who share their knowledge with their students, inspire the students' creativity, develop their critical thinking ability, and prepare them for the complex world they will face after stepping off campus. Based on my own experiences of being a student and an instructor, I think the following "principles" are the most noteworthy ones in good teaching. Teacher should encourage critical thinking and should always strive to be respectful of different opinions. Students, on the other hand, should learn to think independently, not merely accept the teacher's opinions. A teacher should be prepared to challenge and be challenged by the students as every student possesses unique perspectives, and they should be supportive when considering their different perspectives.

Course materials should be presented in an interesting and interactive environment, which will make the student want to learn and retain more information. For this reason, I believe that using computer based technology such as multimedia, slides, and the Internet, is an effective way to complement traditional lectures.

In the classroom, my efforts are directed primarily towards chemical education in the broadest sense, with special emphasis on transmitting the enabling skills and knowledge that would permit each student to enter the larger world equipped with an informed view of the role of chemistry/science in the life.



## Publications:

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1. Tahar Douadi; Nadjib Chafai, **Mousa Al-Noaimi**, Salah Chafaa, The inhibition activity of 1,10 - bis(2-formylphenyl)-1,4,7,10- tetraoxadecane (Al ) and its Schiff base 1,18-diaza-(3,4;15,16;-dibenzo)-19,27-oxydianiline-5,8,11,14-tetra oxa cycloheptacosine-1,17-diene(L) on the corrosion of XC48 carbon steel in HCl: Experimental and theoretical studies. submitted to Electroanalytical Chemistry
2. **Mousa Al-Noaimi**, Ayman Hammoudeh, Firas F. Awwadi, Raja Bader, Amal Mahmoud, Synthesis, X-ray structure, Spectroscopic , DFT Study and Catalytic Activity of cis-[Ru(EPh<sub>3</sub>)(L)Cl<sub>2</sub>] Complexes (E = P, As, Sb; L = NN'N" Tridentate Azoimine-Quinoline Ligands), *inorganica chimica, acta* , accepted 29-10-2017
3. Hanane Hamani , Tahar Douadi , Djamel Daoud , **Mousa Al-Noaimi** , Rahma Amina Rikkouh , Salah Chafa 1-(4-Nitrophenyl-imino)-1-(phenylhydrazono)-propan-2-one as corrosion inhibitor for mild steel in 1 M HCl solution: Weight loss, electrochemical, thermodynamic and quantum chemical studies, *Journal of Electroanalytical Chemistry*, 801 (2017) 425–438
4. Deeb Taher, Firas F. Awwadi, J. Matthäus Speck, Marcus Korb, Emad M. Hamed, **Mousa Al-Noaimi**, Almeqdad Y. Habashneh, Mohammad El-khateeb, Sultan T. Abu-Orabi, Kurt Merzweiler, Heinrich Lang, Ferrocenyl thiocarboxylates: Synthesis, solid-state structure and electrochemical investigations, *Journal of Organometallic Chemistry* 847(2017) 59-67
5. Deeb Taher, Firas F. Awwadi, J. Matthäus Speck, Marcus Korb, Dieter Schaarschmidt, Saddam Weheabby, Almeqdad Y. Habashneh, **Mousa Al-Noaimi**, Mohammad El-Khateeb, Sultan T. Abu-Orabi, Heinrich Lang Heterocyclic-based ferrocenyl carboselenolates: Synthesis, solid-state structure and electrochemical investigations, *Journal of Organometallic Chemistry*, 845 (2017) 55 – 62
6. Tahar Douadi, Hanane Hamani, Djamel Daoud, **Mousa Al-Noaimi**, Salah Chafaa Effect of temperature and hydrodynamic conditions on corrosion inhibition of an azomethine compounds for mild steel in 1M HCl solution, *Journal of the Taiwan Institute of Chemical Engineers*, 71 (2017) 388-404
7. **Mousa Al-Noaimi**, Firas F. Awwadi, Bara Atallah, Deeb Taher, Ayman Hammoudeh, Heinrich Lang, Tobias Rüffer, Ruthenium(II) bipyridine complexes incorporating (NN'S) azoimine ancillary ligands. Synthesis, spectroscopy, solid state structure and DFT calculations, 123 (2017) 47-55
8. **Mousa Al-Noaimi**, Ayman Hammoudeh, Mohammad El-khateeb, Firas F. Awwadi, Deeb Taher, Ahmad Mansi, Obadah S. Abdel-Rahman Keto–enol tautomers of mixed-ligand ruthenium(II) complexes containing  $\alpha$ -diamine and azoimine bearing alkyne group ligands, *inorganic chemical acta*, 454 (2017) 222 -228

9. Fatima Abu Saleemh, Sharif Musameh, Ashraf Sawafta, Paula Brandao, Carlos Jose Tavares, Stanislav Ferdov, Assem Barakat, Anas Al Ali, **Mousa Al-Noaimi**, Ismail Warad Diethylenetriamine/diamines/copper (II) complexes [Cu(dien)(NN)]Br<sub>2</sub>: Synthesis, solvatochromism, thermal, electrochemistry, single crystal, Hirshfeld surface analysis and antibacterial activity , Arabian Journal of Chemistry, In Press, Corrected Proof, Available online 21 October 2016
10. Hanane Hamani, Tahar Douadi, Djamel Daoud, , **Mousa Al-Noaimi**, Salah Chafaa, Corrosion inhibition efficiency and adsorption behavior of azomethine compounds at mild steel /hydrochloric acid interface, Measurement 94 (837-846) 2016
11. **Mousa Al-Noaimi**, Firas F. Awwadi, Raiid Al-Razagg, Fatima T. Esmadi, Synthesis, Crystal Structure and Properties of a New 3D Supramolecular Unsymmetrical Tetradentate Schiff Bases, Journal of Molecular Structure, 1125( 2016) 464–469
12. **Mousa Al-Noaimi**, Ismail I. Fasfous, Firas F. Awwadi, Deeb Taher, Abdallah Alfayyoubi, Obadah S. Abdel-Rahmand Ruthenium(II) complexes of azoimine and  $\alpha$ -diimine ligands: synthesis, spectroscopic and electrochemical properties, crystal structures and DFT calculations transition metal chemistry 41 (795–805) 2016
13. **Mousa Al-Noaimi**, Adnan S. Abu-Surrah, Lubna Tahtamouni, Palladium(II) complexes incorporating phenylazophenylmethine ancillary ligands: synthesis, spectral, redox properties and antitumor activity, Arabian Journal of Chemistry, (2016) 9, S1503–S1509
14. Salem Atia, Tahar Douadi, Ali Douadi, Touhami Lanez and **Mousa Al-Noaimi**, Synthesis, spectroscopic studies of new Azo ligands Schiff base and amines derived of 5-phenylazo-2-hydroxybenzaldehyde, Journal of Chemical and Pharmaceutical Research, 2015 7(4):692-696
15. S. Al-Omari, A. A. Mubarak, **M. Al-Noaimi**, F. Afaneh, A. Aqili, I. Hamarneh, N. Mustapha Multielemental analysis of pharmaceuticals derived from plant seeds by energy dispersive X-ray fluorescence spectrometry Instrumentation Science & Technology 44 (2015) 98 - 113
16. Hanan A. Ali, **Mousa Z. Al-Noaimi**, Sabri S. Mahmoud, Ayman Y. Hammoudeh, Selective Hydrogenation of Cinnamaldehyde Catalyzed by Ruthenium (II) Complexes Based on Azoimine Ligands, Jordan Journal of Chemistry 10 (1), 2015, 58-68
17. Djamel Daoud , Tahar Douadi, Hanane Hamani, Salah Chafaa, **Mousa Al-Noaimi** Corrosion inhibition of mild steel by two new S-heterocyclic compounds, in 1 M HCl: Experimental and computational study. Corrosion Science, Corrosion Science, Volume 94, 2015, 21-37
18. Mohommad Choudhuri,; mahdi Behzad, **Mousa Al-Noaimi**; Glenn Yap; Wolfgang Kaim, Biprajit Sarkar, Robert Crutchley, Variable Non-Innocence of Substituted

Azodiphenylcyanamido Diruthenium Complexes, *Inorganic Chemistry*, 2015, 54 (4), 1508–1517

19. **Mousa Al-Noaimi**, Firas F. Awwadi, Salim F. Haddad, Wamidh H. Talib, Shehdeh Jodeh, Smaail Radi, Taibi Ben Hadda, Muneer Abdoh, S. Naveen, N. K. Lokanath, Ismail Warad, Synthesis, spectral, X-ray single structure, DFT Calculations and Antimicrobial Activities of  $[\text{Co(II)X}_2(\text{dmphen})]$  ( $\text{X} = \text{Br}$  and  $\text{SCN}^-$ ), *Journal of molecular structure*, 1086 (2015) 153–160
20. **Mousa Z Al-Noaimi**, Hany W. Darwish, Mohammed Suleiman, Ahmed H. Bakheit, Muneer Abdoh, Iyad Saadeddin, Naveen S, Neartur Krishnappagowda Lokanath, Odey Bsharat, Assem Barakat, Ismail Warad, DNA Binding test, X-Ray Crystal Structure, Spectral, TG-DTA, and Electrochemistry of  $[\text{CoX}_2(\text{dmdphphen})]$  (dmdphphen is 2,9-dimethyl-4,7-diphenyl-1,10-phenanthroline,  $\text{X} = \text{Cl}$  and  $\text{NCS}$ ) Complexes, *Bioinorganic Chemistry and Applications*, 2014(2014) 1-7
21. Abdulhakem Betrow, Usama Karama, **Mousa Al-Noaimi**, Firas Awwadi, Belkheir Hammouti, Smaail Radi, Taibi Ben Hadda, Ismail Warad, Crystal structure of 3-(pyrazin-2-ylamino)-2-benzofuran-1(3H)-one,  $\text{C}_{12}\text{H}_9\text{N}_3\text{O}_2$ , *Zeitschrift für Kristallographie* 229 (2014) 385-386
22. Ismail Warad, Mohammad Azam, Saud I. Al-Resayes, Mohd Shahnawaz Khan, Pervez Ahmad, Mohammed Al-Nuri, Shehdeh Jodeh, Ahmad Husein, Salim F. Haddad, Belkheir Hammouti, **Mousa Al-Noaimi** Cis- & trans- isomerism in  $[\text{Cl}_2\text{Ru}(\text{dppb})\text{N-N}]$  complexes: Synthesis, Structural Characterization and X-ray crystal structure of dichloromethane solvated cis-diaminebis(diphenylphosphinobutane)ruthenium(II) complex *Journal of molecular structure*, 2014 (1076) 724–729
23. Hanane Hamani, Tahar Douadi, **Mousa Al-Noaimi**, Saifi Issaadi, Djamel Daoud, Salah Chafaa, Electrochemical and quantum chemical studies of some azomethine compounds as corrosion inhibitors for mild steel in 1 M hydrochloric acid, *Corrosion Science* 88 (2014) 234–245
24. **Mousa Al-Noaimi**, Firas F. Awwadi, Ahmad Mansi, Obadah S. Abdel-Rahman, Ayman Hammoudeh, Ismail Warad, Ruthenium(II) bipyridine Complexes Bearing New Keto-enol Azoimine Ligands: Synthesis, Structure, Electrochemistry and DFT Calculations. *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy* 135 (2015) 828–839
25. Mohammad El-khateeb, Khalil J. Asali, **Mousa Al-Noaimi**, Enas Al-Rabae, Firas F. Awwadi, Deeb Taher, Marcus Korb, Heinrich Lang, Thio- and Selenosulfonato Complexes of Iron Bearing Aromatic and Heterocyclic Groups, *Inorganica Chimica Acta*, 421 (2014) 553–558
26. Assem Barakat, Hany Darwish, Ayman Nafady, Mohammed Suleiman, **Mousa Al-Noaimi**, Belkheir Hammouti, Smaail Radi, Taibi Ben Hadda, Ahmad Abu-Obaid, Mohammad Mubarak, Ismail Warad, Design, Synthesis, Characterization of Novel Ruthenium(II) Catalysts: Highly Efficient and Selective Hydrogenation of Cinnamaldehyde to (E)-3-Phenylprop-2-en-1-ol, *Molecules*, 19 (2014) 5965-5980
27. Saleh Al-Omari, Nawash Alghezawi, **Mousa Al-Noaimi**, Akram Aqili, Ibrahim F. Al-Hamarneh, Mohammad Marashdeh Observation on Symmetry Properties of Sodium

Zinc(II)-2,9,16,23-phthalocyanine Tetracarboxylate in Water:NaOH Solution. *Journal of Fluorescence*, 24 (2014) 835-839

28. I. Warad, M. Azam, S. I. Al-Resayes, M. S. Khan, P. Ahmad, , M. Al-Nuri, S. Jodeh, A. Husein, S. F.Haddad, B. Hammouti, **M. Al-Noaimi** Structural studies on Cd(II) complexes incorporating di-2-pyridyl ligand and the X-ray crystal structure of the chloroform solvated DPMNPH/CdI<sub>2</sub> complex, *Inorganic Chemistry Communications*, 43 (2014) 155–161
29. **Mousa AL-Noaimi**, Mohammad I. Choudhary, Firas F. Awwadi, Wamidh H. Talib, Taibi Ben Hadda, Sammer Yousuf, Ashraf Sawafta, Ismail Warad, Characterization and biological activities of two copper(II) complexes with dipropylenetriamine and diamine as ligands, *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*, 127(5) (2014) 225–230
30. **Mousa Al-Noaimi**, Obadah S. Abdel-Rahman, Ismail I. Fasfous , Mohammad El-khateeb, Firas F. Awwadi, Ismail Warad Ruthenium(II) bipyridine complexes bearing quinoline-azoimine (NN'N'') tridentate ligands: synthesis, spectral characterization, electrochemical properties and single-crystal X-ray structure analysis, *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy* 125( 2014) 375-383
31. Ismail Warad, Salim F. Haddad, **Mousa Al-Noaimi**, Mohammed A Al-Nuri, Belkheir Hammouti, Taibi B. Hadda, Ahmed Boshala Synthesis, NMR and Single Crystal analysis of Novel 2,9-dimethyl-4,7-diphenyl[1,10]phenanthroline diium J. Mater. Environ. Sci. 5 (2) (2014) 470-475
32. Assem Barakat, Mohammed Suleiman, Abdullah S. Aldwayyan, Belkheir Hammouti 4, Taibi Ben Hadda, **Mousa Al-Noaimi**, Salim F. Haddad, Ahmed Boshala and Ismail Warad One Step Synthesis of NiO Nanoparticles via Solid-State Thermal Decomposition at Low-Temperature of Novel Aqua(2,9-dimethyl-1,10-phenanthroline)NiCl<sub>2</sub> Complex *International Journal of Molecular Sciences*, 14(2013) 23941-23954
33. Mohammed Suleiman, **Mousa Al-Noaimi**, Belkheir Hammouti, Smaail Radi, Taibi Ben Hadda, Ahmed Boshala and Ismail Warad Synthesis, Identification and NMR of New Trans-dichloro-piperazine bis(ether-phosphine)ruthenium(II) Complex, *Mor. J. Chem.* 1(2) (2013) 29-32
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