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### **Dr. nat. Ismail Khalil Warad**

Ph.D in Organometalic chem.from Tuebingen University/Germany/ supervisor Prof. E. Lindner

#### *Post Address:*

Department of Chemistry, King Saud University, P. O. Box 2455, Riyadh 11451, Saudi Arabia.

**E-mail [warad@ksu.edu.sa](mailto:warad@ksu.edu.sa) recommended**

**[i.kh.warad@gmail.com](mailto:i.kh.warad@gmail.com)**

For more information please visit me at <http://faculty.ksu.edu.sa/73826/default.aspx>

- \* Associate Professor, Department of Chemistry College of Science, An-Najah National University, P.O box 7, Nablus, Palestine [warad@najah.edu](mailto:warad@najah.edu)
- \* Tübingen, Deutschland (GERMANY) Visiting researcher to Chemistry Department, Ioannina University, Ioannina, Greece
- \* Visiting researcher to Chemistry Department, Valencia polytechnic University, Valencia, Spain.
- \* Visiting researcher to Institute of Organic Chemistry, Auf der Morgenstelle 18, 72076

### **Publications: More than 100 papers**

1. **Ismail Warad**, Hanan Al-Hussen, Hamdah Alanazi, Refaat Mahfouz, Belkheir Hammouti, Mohammad A. Al-Dosari, Rawhi Al-Far, Taibi Ben Hadda, Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy xx (2012) xxx. Accepted.
2. Taibi Ben Hadda Rahima Mouhoub Rahul Jawarkar Vijay Masand **Ismail Warad**, Med. Chem. Res., (2012) DOI 10.1007/s00044-012-0238-0.
3. **Ismail Warad**, Hanan Al-Hussain, Rawhi Al-Far, Refaat Mahfouz, Belkheir Hammouti, Taibi Ben Hadda, Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy 95 (2012) 374.
4. **Ismail Warad**, Afaf Alruwaili, Saud I. Al-Resayes, M. Iqbal Choudhary and Sammer Yousuf, Acta Cryst. E68, (2012) o1786.

5. Mohammad Azam, **Ismail Warad**, Saud Al-Resayes, Mohammad Shakir, M. F. Ullah, Aamir Ahmad, Fazlul H. Sarkar, *Inorganic Chemistry Communications* 20, (2012) 252.
6. Mohammad Azam, Zahid Hussain, **Ismail Warad**, Saud I. Al-Resayes, Mohd. Shahnawaz Khan, Mohammad Shakir, Agata Trzesowska-Kruszynska and Rafal Kruszynski, *Dalton Trans.*, 41, (2012) 10854.
7. **Ismail Warad**, Omar Abd-Elkader H, Saud Al-Resayes, Ahmad Husein, Mohammed Al-Nuri, Ahmed Boshala, Nabil Al-Zaqri, and Taibi Ben Hadda, *Int. J. Mol. Sci.* 13, (2012) 6279.
8. **Ismail Warad**, *Acta Cryst. E*68, (2012) m563.
9. **Ismail Warad**, Abdullah S. Aldwayyan, Fahad M. Al-Jekhedab, M. Iqbal Choudhary and Sammer Yousuf, *Acta Cryst. E*68, (2012) m984.
10. Mohammad Azam, **Ismail Warad**, Saud Al-Resayes, Maryam Zahin, Iqbal Ahmad and Mohammad Shakir, *Z. Anorg. Allg. Chem.* 638 (2012), 1–7.
11. **Ismail Warad**, Maha Al-Ali, Belkheir Hammouti, Taibi Ben Hadda, Rami Shareiah, Mohamed Rzaigui, *Res Chem Intermed*, (2012) DOI 10.1007/s11164-012-0771-y.
12. A. Chetouani<sup>1</sup>, K. Medjahed, S.S. Al-Deyab, B. Hammouti<sup>1</sup>, I. Warad, A. Mansri, A. Aouniti, *Int. J. Electrochem. Sci.*, 7 (2012) 6025.
13. R.M. Mahfouz, Kh.M. Al-Khamis, M.R.H. Siddiqui, N.S. Al-Hokbany, **Ismail Warad** and N.M. Al-Andis, *Progress in Reaction Kinetics and Mechanism*, 37, (2012) 249.
14. A. Zarrouk, H. Zarrok, R. Salghi, B. Hammouti, S.S. Al-Deyab, R. Touzani<sup>1</sup>, M. Bouachrine, **Ismail Warad**, T. B. Hadda, *Int. J. Electrochem. Sci.*, 7 (2012) 6353.
15. Taibi Ben Hadda, Mohamed A. Ali, VijayMasand, Said Gharby, Teffaha Fergoug, **Ismail Warad**, *Med. Chem. Res*, (2012) DOI 10.1007/s00044-012-0143-6.
16. A. Zarrouk, B. Hammouti, H. Zarrok, S. S. Al-Deyab, **I. Warad**, *Res Chem Intermed*, (2012) online DOI 10.1007/s11164-012-0492-2.
17. Taibi Ben Hadda, Jihane Fathi, Imane Chafchaoui, Vijay Masand, Zoubida Charrouf, Zahid H. Chohan, Rahul Jawarkar, Teffaha Fergoug, **Ismail Warad**, *Med. Chem. Res.*, (2012) DOI 10.1007/s00044-012-0120-0.
18. **Ismail Warad** Maha Al-Ali Belkheir Hammouti Taibi Ben Hadda Rami Shareiah Mohamed Rzaigui, *Res Chem Intermed*, (2012) online, DOI 10.1007/s11164-012-0771-y.
19. **Ismail Warad**, *Res Chem Intermed*, (2012) online, DOI 10.1007/s11164-012-0706-7.
20. Taibi B. Hadda, Teffaha Fergoug, **Ismail Warad**, *Res. Chem. Intermed.*, (2012) online, DOI 10.1007/s11164-012-0729-0.
21. Taibi BenHadda, Teffaha Fergoug, **Ismail Warad** , VijayMasand, Javed Sheikh, *Res. Chem. Intermed.*, (2012) online, DOI 10.1007/s11164-012-0679-6.
22. **Ismail Warad**, Omar H. Abd-Elkader, Ahmed Boshala. Nabil Al-Zaqri, Belkheir Hammouti, Taibi Ben Hadda, *Res. Chem. Intermed.*, (2012) online, DOI 10.1007/s11164-012-0592-z.
23. A. Zarrouk, H. Zarrok, R. Salghi, B. Hammouti, R. Tourir, **Ismail Warad**, F. Bentiss , H. Abou El Makarim, N. Benchat, *Res. Chem. Intermed.*, (2012) online, DOI 10.1007/s11164-012-0684-9.
24. A. Ghazoui, R. Saddik, B. Hammouti, A. Zarrouk, N. Benchat, M. Guenbour, S. S. Al-Deyab, **Ismail Warad**, *Res. Chem. Intermed.*, (2012) online, DOI 10.1007/s11164-012-0763-y.
25. A. Mansri, B. Bouras, B. Hammouti, **Ismail Warad**, A. Chetouani, *Res. Chem. Intermed* (2012) online DOI 10.1007/s11164-012-0710-y.
26. A. Zarrouk, I. El Ouali, M. Bouachrine, B. Hammouti, Y. Ramli, E. M. Essassi, **Ismail Warad**, A. Aouniti, R. Salghi, *Res. Chem. Intermed.*, (2012) online,
27. N. S. Al-hokbanya, A. Dahyb, **Ismail Warad**, M. Abd El-Salam, S. T. Akriched, M. Rzaiguid, U. Karamaa, and R. M. Mahfouz, *E-Journal of Chemistry*, 9(4), (2012) 2191.
28. M. Rafiq H. Siddiqui, **Ismail Warad**, S. F. Adil, R. M. Mahfouz, Abdullah Al-arifi, *Oxidation Communications* 35 (2) (2012), 476.

29. Hanan Al-Hussain, **Ismail Warad**, Hamda Al-Enzi, Khalid Al-Farhan and Mohamed Ghazzali, Z. Kristallogr. NCS 227 (2012) 379.
30. **Ismail Warad**, Taibi Ben Hadda, Belkheir Hammouti and Salim F. Haddad, Acta Cryst. E68, (2012) o1259.
31. **Ismail Warad** Belkheir Hammouti Taibi Ben Hadda • Ahmed Boshala Salim F. Haddad, Res Chem Intermed, (2012) online, DOI 10.1007/s11164-012-0917-y.
32. Ahmad I. Husein, Mohammed A. Al-Nuri, Nidal A. Zatar, Waheed Jondi, Mohammed S. Ali-Shtayeh, **Ismail Warad**, IJRRAS 13 (2012) online.

### As supervisor

**I supervised until now 2 Ph.D students, 8 master students; I was also examiner for more 10 graduate students.**

### Workshops

- 1- Mobility and Accessibility Studies on Sol–Gel Processed Phosphines and Ru(II) Catalysts, *Workshop des Graduiertenkollegs „Chemie in Interphasen“*, Blaubeuren, Swezerland, November 2001.
- 2- Synthesis and Characteristic Diamine(phosphine)ruthenium(II) Complexes, "*Workshop des Graduiertenkollegs „Chemie in Interphasen“*", Blaubeuren, Swezerland, November 2002.
- 3- Transtion Metal Complexes as Catalysts in several fields. , *Workshop of Tuebingen, Tuebingen* , Germany, 2002.
- 4- Asymmetric Hydrogenation of an  $\alpha,\beta$ -Unsaturated Ketone by Diamine(ether-phosphine) ruthenium(II) Complex and Lipase-Catalyzed Kinetic Resolution: a consecutive approach, *Workshop des Graduiertenkollegs „Chemie in Interphasen“*, Blaubeuren, Swezerland, November 2002.
- 5- Hydrogenation of an  $\alpha,\beta$ -Unsaturated Ketone by Diamine(ether-phosphine) ruthenium(II):SCEM Screening During the Process to Discover the Relation Between the Electrochemical Behavior and Catalytic Activity, *Workshop of Overjoch „Chemie in Interphasen“*, Oberjoch, Germany, January 2003.
- 6- Modern NMR Techniques, *Workshop of Overjoch „Chemie in Interphasen“*, Overjoch, Germany, September 2003.
- 7- Techniques to Separate B- Carotene from Natural Products Using Fixed-bed Capillary Column- LC-NMR. *Workshop of Tuebingen, Tuebingen* , November, 2003.
- 8- Surface Modification and Sol- Gel Chemistry. *Workshop of Ioannina „Ioannina University*, Ioannina, Greece January 2004.
- 9- Problems and Techniques in HPLC Separation. *Workshop of Munch Technical University (MTU)* , Munch, Germany, February, 2004.
- 10- New Inorganic-Organic Hybrid Materials Ruthenium Complexes for follow up HPLC Separation and Catalysis, *Workshop of Lauterbad, compact seminar, Lautergad*, Germany, March 2004.
- 11- New Inorganic-Organic Hybrid Materials for HPLC Separation Obtained by Direct Synthesis using Several Cross-linkers in the Presence of a Surfactant *Workshop of EKA Chemical-Sweden, Tuebingen*, Germany, April 2004.
- 12- Develop of the Chemistry Department Website in KSU. *Workshop of King Saud University*, Riyadh, KSA, September, 2007.
- 13- End of *Graduiertenkollegs „Chemie in Interphasen*, Wiengarten, Bodensay, Germany, October 2007.

## ***Education***

### **Graduate**

1) B.Sc./Chemistry from An-Najah University –Nablus, June 1995 with very good average

### ***Post Graduate:***

2) Master/Physical Chemistry from An-Najah University –Nablus, March 1998 with excellent average entitle:

**Kinetics and Mechanism of Oxidation of Cysteine by Complexation Process Using Iron(III) and Nitrogen Chelate Organic Ligands DPKTH and Ferrozine**

3) Ph.D./Inorganic Chemistry (Catalysis) from Eberhard-Karls-Univ. Tuebingen 2003, Germany entitle:  
**Diamine(phosphine)ruthenium(II) Complexes and Their Application in The Catalytic Hydrogenation of  $\alpha,\beta$ -Unsaturated Ketones in Homogeneous and Heterogeneous Phase**

4) Post-doctoral position for one year in Institute Of Organic and Inorganic Chemistry, Tuebingen 2003-2005, Ak /Prof. K. Albert and E. Lindner.

**Hybrid Inorganic and Organic Material Mesoporous compound to be used Both in Catalysis and Chromatography**

5) Assistant professor at Department of Chemistry, Riyadh University, Saudi Arabia 2005-2006

6) Assistant professor at Department of Chemistry, Science College, King Saud University, Riyadh, Saudi Arabia 2006-2008.

**7) Associate professor at Department of Chemistry, Science College, King Saud University, Riyadh, Saudi Arabia 2008- now.**

### ***Specialization:***

Selective and enantioselective catalysts design, Hydrogenation, Solid state NMR, X-ray diffraction, Hybrid organic-inorganic material, Sol-gel immobilization of Gd-DOTA- complexes.

### ***Area of Research Interest:***

1. Ligand design and synthesis (chiral and achiral), asymmetric catalysts. Complexes (Kinetics, preparation and application, electrochemical studies that coupled with organometallic subjects.
2. Sol-Gel and surface modification immobilization.
3. Lipase-Metals coupling reaction.
4. HPLC chromatography packing and separation, Hybrid Inorganic and Organic Material to prepare novel RP-stationary phase, nanoparticle

### ***Languages:***

**Arabic:** Native language

**English:** V. Good in speaking, reading and writing

**German:** good

### ***Computer Knowledge:***

Microsoft office and most well-known programs in Chemistry and Internet. (diploma).

### ***Experiences:***

- 1) Teaching the chemistry laboratory courses of general chemistry in An-Najah Uni., 1996-1998.
- 2) Teaching chemistry subject in secondary schools, 1995-2000.
- 3) Supervisor of chemistry and technology in minister of education -Tolkarim, Palestine, 2000-2001.
- 4) Teaching the advance inorganic chemistry laboratories at Tübingen University, Germany 2001-2003.
- 5) Post-doc.: Hybrid Inorganic-Organic Material to be used for catalysts and HPLC- columns by Flow-Up reaction , at the organic and inorganic faculties- Tübingen- Germany, 2003-2005.

- 6) Assistant Professor, Department of Chemistry, Riyadh University, Saudi Arabia, 2005-2006.
- 6) Assistant professor at Department of Chemistry, Science College, King Saud University, Riyadh, Saudi Arabia 2006-2008.
- 7) Associate professor at Department of Chemistry, Science College, King Saud University, Riyadh, Saudi Arabia 2008- 2011.
- 7) Associate professor at Department of Chemistry, Science College, An-Najah National University, Nablus, Palestine, 2011.

### **Accomplishments**

- 1. Three years in Graduiertenkollegs,,Chemie in Interphasen Group (scholarships for specialists).**
- 2- Parallel Hydrogenation Technique Design and Application.**
- 3- Novel method to discover the relation between hydrogenation and electrochemical behavior of Ru(II) complexes the fastest method for synthesis.**
- 4- Two years postdoctoral position in Graduiertenkollegs,,Chemie in Interphasen Group.**
- 5- Solving several problems in field of complexation (inorganic) and phase separation (organic).**
- 6- Certificated of Analysis from the Standard Reference Material (ASRM).**
- 7- DAAD scholarship to teach and do research in Chemistry Department at Ioannina Uni. Greece.**

### **Fellowship Awarded:**

- Doctoral Research Work, from, the Inorganic Department, Tuebingen University Germany (2001-2003).
- Post-Doctoral Research Work, from, the Organic Department, Tuebingen University Germany (2003-2005).
- Research Advisor in EKA Chemical-Sweden company- project with Organic institute of Tuebingen University Germany (2003-2004).
- Study Visit from German Academic Exchange Service (DAAD), Ioannina University, Greece (Sep. 9, 2004-Nov. 11, 2004)
- Study Visit from DFG (German Research Establishment), Tuebingen University Germany (summer 2005).
- Study Visit from GK (Graduiertenkollegs), Weingarten, Germany ( summer 2007).

### **Skills**

Practice in the following instruments

- 1) X-ray diffraction
- 2) Liquid-NMR spectroscopy (Bruker DRX 250 Spectrometer).
- 3) CP/MAS solid-state NMR spectroscopy (Bruker DRX 200 and Bruker ASX 300 Spectrometer).
- 4) FTIR spectroscopy (Bruker IFS 48 FTIR Spectrometer).
- 5) Uv-visible spectrophotometer (2 year experience).
- 6) Autoclave and parallel autoclave hydrogenation reactors.
- 7) GC-MS and HPLC chromatography and columns packing techniques.

### **Professional Societies**

- 1- German Chemical Society.
- 2- Saudi Chemical Society.
- 3- Graduiertenkollegs -Chemie in Interphasen.

4- Palestinian Chemical Society.

### Referee of the following Journals

- 1- Spectro. Chem.. Acta.
- 2- Journal of Saudi Chemical Society.
- 3- Journal. King. Saud. Uni. Science 2.
- 4- SABIC evaluation Suported Chemical Projects.
- 5- 7th Saudi Engineering Conference (papers).
- 6- Two books in Chemistry
- 7- Arabian Journal of Chemistry

### References:-

- 1) Prof. Ekkehard Lindner, Inorganic Chemistry Eberhard-Karls-Univ. Tuebingen (**Germany**), [ekkehard.lindner@uni-tuebingen.de](mailto:ekkehard.lindner@uni-tuebingen.de)
- 2) Prof. Hermann Mayer, Inorganic Chemistry Eberhard-Karls-Univ. Tuebingen (**Germany**), [hermann.mayer@uni-tuebingen.de](mailto:hermann.mayer@uni-tuebingen.de)
- 3) Prof. Wolfgang Voelter, Organic Chemistry Eberhard-Karls-Univ. Tuebingen (**Germany**), [wolfgang.voelter@uni-tuebingen.de](mailto:wolfgang.voelter@uni-tuebingen.de)
- 4) Prof. Klaus Albert, Organic Chemistry Eberhard-Karls-Univ. Tübingen (**Germany**), [klaus.albert@uni-tuebingen.de](mailto:klaus.albert@uni-tuebingen.de)
- 5) Prof. Saud. Ibraheem Al-Resayes, Inorganic Chemistry, Chemistry Department, King Saud University, (**KSA**). [sreasyes@ksu.edu.sa](mailto:sreasyes@ksu.edu.sa)
- 6) Prof. Rajab Abu Elhalawa Organic Chemistry, Chemistry Department Al al-Bayt University, (**Jordan**) [halawarajab@yahoo.com](mailto:halawarajab@yahoo.com).
- 7) Prof. Avelino Corma Instituto de Tecnología Química, UPV-CSIC Universidad Politécnica de Valencia Avda. de los Naranjos s/n 46022Valencia – SPAIN.  
Tel.: 34 96 3877800, New Fax: 34 96 3879444, e-mail : [acorma@itq.upv.es](mailto:acorma@itq.upv.es)