



Mohammed Ahmad Musa Alwahish, PhD. Sc.

PhD. Inorganic and Materials Chemistry

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## •Education:

**PhD. in Inorganic and Materials Chemistry** 2017 - 2021

**University of Jordan**

**Supervisor:** Prof. Dr. Hamdallah A. Hodali and Prof. Dr. Firas Awwadi.

**Dissertation title:** Preparation and Evaluation of Ru(II) Complexes with Monomeric Bidentate Ligands and with Polymeric Multidentate Ligands for Solar Cell Applications.

**M. Sc. in Inorganic Chemistry** 2012 - 2016

**University of Jordan**

**Thesis advisor:** Prof. Dr. Hamdallah A. Hodali.

**Thesis title:** Preparation and Characterization of Some Ruthenium(II) Complexes with the Mixed-donor Ligands: N-P and N-S.

**B. Sc. in General Chemistry** 1997 - 2001

**University of Jordan**

## •Personal Informations:

**Date of Birth**

June 11<sup>th</sup>, 1979

**Place of Birth**

Kuwait

**Nationality**

Jordanian

## •Academic Experiences:

**Teaching (Lecturer)** 2022 - present

Department of Pharmacy/ Middle East University

**Teaching (Lecturer)/ Part time** 2022 - 2022

Department of Basic Sciences/ Philadelphia University

Department of Chemistry/ University of Jordan

**Teaching (Lecturer)** 2021 - 2022

Department of Basic science/ Prince Al-Hussein Bin Abdullah II Academy of Civil Protection

**Teaching Assistant** 2018 - 2019

Department of Chemistry/ University of Jordan

**Research Assistant** 2016 - 2017

Department of Chemistry/ University of Jordan

**Supervising General Chemistry Labs** 1998 - 2001

Department of Chemistry/ University of Jordan

• **Thorough knowledge of teaching the following courses:**

- Instrumental Analysis
- General Chemistry I
- General Chemistry II
- Practical General Chemistry
- Practical Organic Chemistry
- Pharmaceutical Calculations
- Perfumery and Essential Oils
- Inorganic Chemistry
- Analytical Chemistry
- Organic Chemistry (I)
- Organic Chemistry (II)
- Practical Instrumental Analysis
- Polymers and Material Sciences
- Disinfectants and Chemical Detergents

• **Field of Study:**

• **Coordination Chemistry of Ruthenium compounds with mixed-donor ligands.**

• **Chemistry of Ruthenium compounds with bipyridyl ligands.**

• **Ruthenium compounds as dye sensitizer in solar cells.**

• **Chemistry of hazardous materials and the chemistry of fire.**

• **Antimicrobial and Antibacterial Studies.**

## •Other Experiences:

<b>Assistant Professor in Chemistry</b> Middle East University, Faculty of Pharmacy.	<b>2022 - Present</b>
<b>Part-time Lecturer</b> Faculty of Pharmacy/ Middle East University Department of Basic Sciences/ Philadelphia University Department of Chemistry/ University of Jordan	<b>2022 - 2022</b>
<b>Assistant Professor in Chemistry</b> Prince Al-Hussein Bin Abdullah II Academy of Civil Protection/ Civil Defense, General Directorate of General Security.	<b>2021 - 2022</b>
<b>Head of Civil Defense Center</b> Prince Hamzah Hospital and Tareq.	<b>2020 - 2021</b>
<b>Operations Officer, Site Commander</b> Dealing with chemicals and hazardous materials accidents, Zarqa.	<b>2018 - 2020</b>
<b>Commander of Hazardous Materials Team</b> Dealing with hazardous materials accidents including; Amman, Madaba, Balqa/ Middle region.	<b>2011 - 2018</b>
<b>Hazardous Materials Officer</b> Supervising transportation of hazardous materials from Aqapa to Amman.	<b>2009 - 2011</b>
<b>Public Safety Officer</b> Dealing with several accidents including; First aid, Rescue, Fire fighting and dealing with chemicals and hazardous materials accidents.	<b>2004 - 2009</b>
<b>Joining the Civil Defense Directorate</b>	<b>2002 - 2004</b>

## •Publications:

- 5. Mohammad A. Al-Wahish**, Firas F. Awwadi and Hamdallah A. Hodali (2022). "Synthesis, Spectroscopic Properties and Single Crystal X-ray Structure of Dithiocyanato-N-bis[8-(diphenylphosphino)quinoline]ruthenium(II)" **Jordan Journal of Chemistry** .
- 4. Akel, S. Sharif, M. A. Al-Esseily, R. Mohammad A. Al-Wahish**, Hodali, H. A. Muller-Buschbaum, P. Schmidt-Mende, L. and Al-Hussein M. (2021), Photovoltaic Cells Based on Ternary P3HT:PCBM:Ruthenium(II) Complexes with 8-(diphenylphosphino)quinoline Active Layer. **Colloids and Surfaces A: Physicochemical and Engineering Aspects**, 622, 126685.
- 3. Mohammad A. Al-Wahish**, Firas F. Awwadi and Hamdallah A. Hodali (2021). "Synthesis, Characterization, Computational Studies and Single Crystal Structures of [Ru(N-P)<sub>2</sub>(O-O)] Complexes" **Journal of Structural Chemistry**.
- 2. Eyad S. M. Abu-Nameh, Naela Al Absi, Mohammad A. Al-Wahish**, Hamdallah A. Hodali and Mohammad F. Khanfar. " Electrochemical Detection of Tadalafil at Glassy Carbon Electrodes Modified with Ruthenium(II) Complex " **International Journal of Electrochemical Science**, 15 (2020) 6396 – 6404.
- 1. Mohammad A. Al-Wahish**, Firas F. Awwadi, Rasha K. Al-Shwieki & Hamdallah A. Hodali. " Ruthenium(II) Complexes with 8-(Diphenylphosphino)quinoline: Synthesis, Spectroscopic Properties and Single Crystal X-ray Structures" **Synthesis and Reactivity in Inorganic, Metal-Organic, and Nano-Metal Chemistry**, 47 (2016) 655 – 660.

## •Languages:

Arabic



English




## •Skills:


•Microsoft office tools (Word, Excell and PowerPoint).




•ChemOffice (ChemDrow Ultra 8.0, ...)




•WISER (Wireless Information System for Emergency Responders) Applications.



•HazMat ERG (Hazardous Materisls Emergency Response Guidebook) Applications.



•The CAMEO software suite (ALOHA, CAMEO Chemicals, CAMEO Data Manager and MARPLOT).



•E-learning Programs (Microsoft Teams and Zoom)



### **Local and International Conferences:**

- 1) Mohammad A. Al-Wahish, **Int. Conf. Chemistry and Biosciences**, Al al-Bayt University, **Mafraq, Jordan**. April 5-6, 2017.
- 2) Mohammad A. Al-Wahish, **Int. Conf. NANO-TECH**, Technische Universität Chemnitz, **German**. 2016.
- 3) Mohammad A. Al-Wahish, **Int. Conf. NANO-TECH, Hamdi Mango Center for Scientific Research**, University of Jordan, **Amman-Jordan**. 2016.

### **Official Posts:**

- Leadership for the hazardous materials team of the middle zone (Amman, Madaba, Zarqa and Balqa)/ 3 years.
- Leadership for the hazardous materials team of Aqaba/ 3 years.
- Preparing and offering training courses in hazardous materials.
- Supervising exercises to deal with hazardous materials accidents.

### **References:**

**Prof. Hamdallah Hodali**  
(Inorganic Chemistry and Materials Chemistry)  
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**Prof. Jalal Zahra**  
(organic Chemistry)  
University of Jordan, Amman  
Tel: +962791998431  
E-mail: *zahra@ju.edu.jo*

**Prof. Sharif Arar**  
(Analytical Chemistry)  
University of Jordan, Amman  
Tel: +962796142835  
E-mail: *s-arar@ju.edu.jo*

**Prof. Firas Awwadi**  
(Physical Chemistry)  
University of Jordan, Amman  
Tel: +962798137584  
E-mail: *Fawwadi@yahoo.com*