**Mohanad Al-Azzawi**

108 Al-Sammod Street Avenue, Baquba, Diyala, Iraq

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**Education**

Youngstown State University Youngstown, Ohio

**Master of Science**, **Materials Science** Received: August, 2016

Cumulative GPA 3.89/4.0

Diyala University Baquba, Diyala, Iraq

**Bachelor of Science**, **Chemistry** December, 2008

Cumulative GPA 3.0/4.0

**Career-Related Experiences**

**Graduate Assistant**

Chemistry Department, Youngstown State University, Youngstown, Ohio, U.S.A Aug. 2014 - 2016

* Synthesized and determine structural characterization of new classes of inorganic solid state materials
* Synthetic approaches used in my research range from standard ceramic methods to various precursor routes, including synthesis highly thermal treatment air-sensitive materials
* Supervised Nursing, Nutrition and Chemistry majors as they conduct their lab experiments
* Managed lab waste disposal and order chemicals for labs
* Assisted professors in grading lab reports and proctored as well as tutored students in various fields of chemistry
* Looked at cobalt-based metal organic frameworks for gas absorption working with Prof.  [Lovelace-Cameron](https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=2ahUKEwju7s_h7bLdAhWGKVAKHTzZAl8QFjAAegQIBxAB&url=http%3A%2F%2Fchemistry.ysu.edu%2Fdr-lovelace-cameron%2F&usg=AOvVaw1nub4RCR9Zwf2rjiBp9Fzn)

**Skills**

**Materials Characterization**: A JEOL JIB-4500 Scanning Electron Microscopy/ Focused Ion Beam (FIB) equipped with an EDAX Apollo XV Energy-Dispersive Spectrometer (JOEl 4500 ), Transmission electron microscope (JEOL 2100) Optical Microscopy, Single-crystal X-ray Diffraction (Bruker D8 QUEST : high brightness Mo IµS), Powder X-ray Diffractometer ( Bruker-Nonius D8), Fourier Transform Infra-Red Spectroscopy (FTIR), Thermo Gravimetric Analysis (TGA), Ball Milling and High-Temperature Furnaces

**Additional Skills**

**Software:** Expert in SHELXTL suite of programs (XP program within SHELXTL, v. 6.14), Crystal Maker, 9.2.2, 645, Mercury software 9.2.2, 665, Matlab2016a.Ink, Chem3D 15.1, Avogadro software, 1.2.0, Microsoft Office: Word, Excel, and PowerPoint

* **Language:** Trilingual in English, Arabic and little bit of Kurkish

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**Significant Courses for Master’s Degree**

Advanced Inorganic Chemistry,

Analytical Chemistry, Physical Chemistry

Analytical methods for Material Science

Electron Microscopy

Renewable Energy Systems and Processes

Bioinorganic and Organic Chemistry

**Additional Work Experience**

**Volunteer**

Western Kentucky University, Bowling Green, Kentucky Spring, 2013 – Fall, 2013

Institute of Combustion Science and Environmental Technology,

* Analyzed samples to determine percentage of specific unknowns
* Used many techniques and procedures to determine the identity of incoming samples, such as FTIR, TGA
* Employed instruments to find mass percentages of certain samples

**Trainer and analyzer**

College of Medicine, Baghdad, Iraq Dec. 2011

* Analyzed incoming samples employing an electrophoretic apparatus.
* Trained groups of new users how to use an electrophoresis method.
* Prepared solutions used for measurements.

**Lab assistant,**

Baquba, Diyala, Iraq Jan. 2017 – present

* Supervise an undergraduate Chemistry major as they conducted their experiment
* Expose undergraduate Chemistry majors to industrial establishments, and was responsible for functional group activities, such as housekeeping, training.

**Honors and Awards**

* Have been granted  Graduate Teaching Assistantshipby Youngstown State University, Ohio, USA, 2015
* Have been granted  a scholarship by higher committee for education development in Iraq 2011
* An acknowledgment letter from Dean of College of Education, 2010
* An acknowledgment letter from President of Diyala University, 2009

**Publications**

* Mohanad A. Sultan, Ali E. Karim, Ahmed Kandory, Azza Al-metwali.( 2020). Synthesis and characterization of Al(III) complex with paracetamol. *International Journal of Drug Delivery Technology* ;10(1):156-159 .

DOI: 10.25258/ijddt.v10i1.23

* Ali Esmail Karim,, Mohanad Ali Sultan, Ahmed KANDORY, Azza Al-metwali **.**(2019)HPLC-UV method for the simultaneous determinations of ascorbic acid and dehydroascorbic acid in human plasma . *Journal of Pharmaceutical Science and Research*, J. Pharm. Sci. & Res. Vol. 11(3), , 896-900
* Al-Azzawi, M., Zeller, M., Li, D., & Wagner, T. R. (2017). Crystal chemistry of ordered rocksalt-type Ca 2 NF. *Journal of Solid State Chemistry,* *254*, 126-131. doi:10.1016/j.jssc.2017.07.017