Mohanad Al-Azzawi

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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

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,	Electron Microscopy
Analytical Chemistry, Physical Chemistry	Renewable Energy Systems and Processes
Analytical methods for Material Science	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 Assistantship by 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