

Yasmeen Hameed

EDUCATION

- **DOCTOR OF PHILOSOPHY in Chemistry, University of Ottawa, Ottawa, ON, Canada** 2019
- **MASTER OF SCIENCE in Chemistry, York University, Toronto, ON, Canada** 2013
- **BACHELOR OF SCIENCE in Chemistry, Umm al-Qura University, Mecca, Saudi Arabia** 2009

SPECIALIZATION IN EDUCATIONAL QUALIFICATIONS

- ✓ Doctorate in Chemistry. Thesis topic: Photocatalytic CO₂ Reduction.
- ✓ Master's Degree in Chemistry. Thesis topic: Dye-Sensitized Solar Cell (DSSC, DSC or DYSC).
- ✓ Bachelor's Degree in Chemistry with First Honors was from Faculty of Applied Science.

WORKING EXPERIENCE

- **ASSISTANT PROFESSOR in Chemistry, Northern Border University, Arar, Saudi Arabia 2021-to now**
- **TEACHING ASSISTANT in Chemistry, Umm Al-Qura University, Mecca, Saudi Arabia** 2009-2010

RELEVANT SKILLS

- ✓ Laboratory teacher in the Chemistry department laboratories at Umm Al-Qura University;
- ✓ General Chemistry Lab & Transition Metal Chemistry Lab & Organic Chemistry Lab,
- ✓ Teaching many of the curriculums for Chemistry in the university; gives many things such as leadership skills and good communication skills.

RESEARCH EXPERIENCE

- **RESEARCH ASSISTANT, PhD IN INORGANIC CHEMISTRY** 2014-2019
UNIVERSITY OF OTTAWA, OTTAWA, ONTARIO, CANADA
- **RESEARCH ASSISTANT, MASTER IN INORGANIC CHEMISTRY** 2011-2013
YORK UNIVERSITY, TORONTO, ONTARIO, CANADA

ACCOMPLISHMENTS

- ✓ Synthesize and characterize a new class of solar cell dyes, based on dicarboxylated terpyridine-type complexes that can serve as photo sensitizers.
- ✓ Design and characterize new catalysts that have high efficiency for the catalytic reduction of CO₂.
- ✓ Explore new ligand frameworks with a wide variety of heteroatom binding sites that have the ability for electro and photo-catalytic reduction of CO₂.
- ✓ Hands-on experience in a range of analytical/characterization techniques- NMR, UV-Vis, Mass Spectrometry, Infrared Spectroscopy, Liquid Chromatography-Mass Spectrometry (LC/MS), Gas Chromatography-Mass Spectrometry (GC/MS), and X-ray diffraction.
- ✓ Providing training to students in the Mawhiba Academic Enrichment Program.

SCHOLARSHIPS AND ACCOMPLISHMENTS

SCHOLARSHIPS

- **International Doctoral Scholarship, University of Ottawa** 2019
- **International Doctoral Scholarship, University of Ottawa** 2018
- **Scholarship of Custodian of the Two Holy Mosques, Saudi Arabia Ministry of Higher Education** 2014
- **Scholarship of Custodian of the Two Holy Mosques, Saudi Arabia Ministry of Higher Education** 2010

ACCOMPLISHMENTS

- Working on the initiative "Forming a supportive advisory group for the university from community members and university graduates" and the initiative code (1.3.2.2) at Northern Border University.
- Completion of the initiative "Study on the Establishment, Development, and Implementation of Between (1 to 3) Distinct Programs" and the initiative code (1.2.1.1) at Northern Border University.
- Contributing to some committees of the Faculty of Science at Northern Border University.
- Contributing to all committees of the Chemistry Department at Northern Border University.
- Contributing to the implementation committee of the initiative to support the practical and applied aspects of educational curricula at Northern Border University.
- Attending several training courses organized by the King Abdulaziz and His Companions Foundation.
- Attending several workshops organized by the King Saud University.
- Attend International Conference and Exhibition for Science (ICES 2023).
- Poster in 102nd Canadian Chemistry Conference and Exhibition (CSC 2019).
- Talk in 101st Canadian Chemistry Conference and Exhibition (CSC 2018).
- Poster in Undergraduate Research Opportunity Program (UROP 2017/2018/2019).
- Poster in 100th Canadian Chemistry Conference and Exhibition (CSC 2017).
- Talk in Centre for Catalysis Research and Innovation (CCRI 2017).
- Poster in 99th Canadian Chemistry Conference and Exhibition (CSC 2016).
- Poster in Ottawa-Carleton Chemistry Institute (OCCI 2015/2016/2017/2018).
- Poster in 98th Canadian Chemistry Conference and Exhibition (CSC 2015).

PUBLICATIONS

- ✓ "Novel amino-functionalized MOF-based sensor for zinc ion detection in water and blood serum samples" has been published at *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*. Y. Hameed, N. Alkhathami, R. Snari, A. Munshi, O. Alaysuy, M. Hadi, M. Alsharif, M. Khalil, and N. El-Metwaly. *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*, **2025**, 327, 125432. DOI: 10.1016/j.saa.2024.125432.
- ✓ "Green Synthesis and Antimicrobial Evaluation of Ag/TiO₂ and Ag/SeO₂ Core-Shell Nanocomposites Using *R. officinalis* Extract: A Combined Experimental and Docking Study" has been published at *Inorganica Chimica Acta*. Y. Hameed, A. Almahri, A. Alalawy, S. Ibarhiam, N. Alkhathami, H. Mattar, H. Mattar, W. Alamoudi, and N. El-Metwaly. *Inorganica Chimica Acta*, **2025**, 574, 122390. DOI: 10.1016/j.ica.2024.122390.
- ✓ "Microwave-assisted synthesis of SDS-functionalized maghemite nanoparticles with enhanced efficiency for the adsorptive removal of methylene blue dye" has been published at *Chemistry Africa*. Mogharbel, R., Tahar, L., Hameed, Y., Almutairi, A., Aldossari, S., & Hatshan, M. *Chemistry Africa*, **2024**, 7(10), 5429–5459. DOI:10.1007/s42250-024-01118-7.
- ✓ "Development of photoluminescent viscose fibers integrated with polymer containing lanthanide-doped phosphor" has been published at *Microscopy Research and Technique*. Y. Hameed, N. Alamrani, S. Sallam, S. Ibarhiam, A. Almahri, A. Alorabi, and N. El-Metwaly. *Microscopy Research and Technique Wiley*, **2023**, 1–11. DOI: 10.1002/jemt.24441.
- ✓ "Application of Metal-Organic Frameworks for Efficient Removal of Doxorubicin Hydrochloride: Removal Process Optimization and Biological Activity" has been published at *American Chemical Society ACS Omega*. K. Alkhamis, M. Aljohani, S. Ibarhiam, Y. Hameed, H. Abumelha, T. Habeebullah, and N. El-Metwaly. *ACS Omega*, **2023**, 8, 33, 30374–30388. DOI:10.1021/acsomega.3c03523.
- ✓ "Visible-Light Photocatalytic Reduction of CO₂ to Formic Acid with a Ru Catalyst Supported by N,N'-Bis(diphenylphosphino)-2,6-diaminopyridine Ligands" has been published at *ChemSusChem*. Y. Hameed, G. Rao, J. Ovens, B. Gabidullin, and D. S Richeson, *ChemSusChem*, **2019**. DOI: 10.1002/cssc.201901326.
- ✓ "An Integrated Re(I) Photocatalyst/Sensitizer that Activates the Formation of Formic Acid from Reduction of CO₂" has been published at *Chemical Communications*. Y. Hameed, P. Berro, B. Gabidullin, and D. S Richeson, *Chemical Communications*, **2019**. DOI: 10.1039/c9cc03943k.
- ✓ "Photocatalytic CO₂ Reduction with Manganese Complexes Bearing a κ^2 -PN Ligand: Breaking the α -Diimine Hold on Group 7 Catalysts and Switching Selectivity" has been published at *American Chemical Society journal Inorganic Chemistry*. Y. Hameed, B. Gabidullin, and D. S Richeson, *ACS Inorg. Chem*, **2018**, 57 (21), 13092–13096. DOI: 10.1021/acs.inorgchem.8b02719.
- ✓ "Dimers, monomers and pentacoordination in a series of earth-abundant transition metal dibromido complexes supported by a neutral SNS ligand framework" has been published at *Polyhedron*. Y. Hameed, S. Ouanounou, T. Jurca, B. Gabidullin, I. Korobkov, and D. S Richeson, *Polyhedron*, **2018**, 154, 252–258. DOI:10.1016/j.poly.2018.07.033.