د. نوف بنت حمود السريعي
Dr. Nouf Alsiraey

+966555341326
Nouf.Alsiray@nbu.edu.sa
ORCiD: 0000-0001-9796-6642

Academic Profile

Ph.D. graduate in Chemistry with expertise in inorganic and bioorganic chemistry. Skilled in independent research, NMR, IR, and potentiostat techniques, data analysis, and scientific publication. Experienced in mentoring and collaborating in multidisciplinary academic teams.

EDUCATION

Ph.D. in Chemistry

May 2025
Department of chemistry, University of Ohio. Athens, Ohio, USA

Dissertation Title:
Measuring Nitric Oxide/Peroxynitrite in Function/Dysfunction of Neuronal Nitric Oxide Synthase Using Metalloporphyrin Nanosensors – Implications for Neurodegenerative Diseases

Master of Art in Chemistry:

May 2017
Department of chemistry, Ball State University. Muncie, IN, USA

Thesis Title:

"*Effect of Ligand-to-Gold Ratio on the Size of Gold Nanoparticles*"

Bachelor of Chemistry:

July 2011
College of Education in Duba, University of Tabuk. Tabuk. Saudi Arabia

TEACHING EXPERIENCE:

I have been a member of chemistry faculties at the Northern Border University since 2012: Lab instructor for the inorganic, analytical, and general chemistry courses at the Northern Border University of Ar'ar, Saudi Arabia.

AWARDS & FUNDING:

- **Prince Fahd Bin Sultan Scientific Excellence Award**. 2012
- **Outstanding Publication Award**, University Scholars, Northern Borders University 2025
- **Donald R. Clippinger Department of Chemistry Research Award** (Honorable Research Award) 2025

OTHER SKILLS:

Experimental & Analytical Techniques:

Nuclear Magnetic Resonance spectroscopy (NMR), IR, UV–Visible spectroscopy, electrochemical characterization using a potentiostat (cyclic voltammetry and current–potential measurements), Transmission Electron Microscopy (TEM), Glovebox and Schlenk line techniques (air- and moisture-sensitive chemistry), basic MADLI-TOF mass spectrometry, ELISA, and Western blotting, In vitro cell culture techniques**,** Cryogenic and gas-handling techniques: safe handling and use of liquid nitrogen, nitrogen gas cylinders, and associated regulators for sample cooling, storage, and inert-atmosphere applications; with experience in data analysis, method optimization, and scientific reporting.

Languages:

- English
- Arabic

Publications:

1: Hosseini, S., Alsiraey, N., Riley, A. J., Zubkov, T., Closson, T., Tye, J., ... & Li, Z. (2018). Variable growth and characterizations of monolayer-protected gold nanoparticles based on molar ratio of gold and capping ligands. *Langmuir*, *34*(50), 15517-15525.

2: Alsiraey, N., Malinski, T., & Dewald, H. D. (2024). Using metalloporphyrin nanosensors for in situ monitoring and measurement of nitric oxide and peroxynitrite in a single human neural progenitor cell. *ACS sensors*, *9*(6), 3037-3047.

3: Alsiraey, N., & Dewald, H. D. (2025). Nitroxidative stress in human neural progenitor cells: In situ measurement of nitric oxide/peroxynitrite imbalance using metalloporphyrin nanosensors. *Journal of Inorganic Biochemistry*, *263*, 112785.

4: Alsiraey, N., & Dewald, H. D. (2025). Restoring nitric oxide/Peroxynitrite equilibrium in impaired human neural progenitor cells: Nanomedical approaches and their potential impact on neurodegenerative disease treatment. Journal of Inorganic Biochemistry, 113073.

CONFERENCES ATTENDED:

- Participant, *International Conference and Exhibition on Polymer Chemistry*, Conference Series LLC, Atlanta, USA, 14–16 November 2016.

- Listener, *International Conference on Nanomaterials and Biomaterials (EUICNB)*, Eurasia Web, Louisville, United States, 19–20 February 2023.