Mohamed Sobhy Gaber Ali

Ph.D. Student, Graduate Research Assistant
Department of Civil Engineering, University of North Dakota
Phone: (701) 610-3651; Email: mohamed.ali.4@und.edu

Education

Ph.D. Student	Department of Civil Engineering, University of North Dakota, ND, USA. **(Spring 2024 –Present)** **Area:** Environmental Engineering **Advisor:** Dr. Mahmut S. Ersan
Pre-doctoral	Inorganic Chemistry, Chemistry Department, Faculty of Science, Helwan University, Cairo, Egypt. **(2020- 2021)**
M.S.	Inorganic Chemistry, Chemistry Department, Faculty of Science, Helwan University, Cairo, Egypt. **(2018- 2020)** **Thesis title**: Removal of some transition elements from aqueous solutions using modified clay technologies. **Advisor:** Dr. Abdelhakim Taha Kandil
Pre-master	Chemistry, Chemistry Department, Faculty of Science, Helwan University, Cairo, Egypt. **(2017- 2018)**
B.S.	Special Chemistry, Chemistry Department, Faculty of Science, Helwan University, Cairo, Egypt. **(2011- 2015)**

Work Experiences

- **Graduate Research Assistant,** Department of Civil Engineering, University of North Dakota, USA **(2024, Present)**
- **Assistant Lecturer,** Chemistry Department, Faculty of Science, Helwan University, Cairo, Egypt **(2020 – Present)**
- **Demonstrator,** Chemistry Department, Faculty of Science, Helwan University, Cairo, Egypt **(2016 – 2019)**

Research Interests

Separation processes, including wastewater purification and remediation, pollution control, and resource recovery. Furthermore, he is interested in Advanced oxidation processes (AOPs), Electrochemical Advanced oxidation processes (EAOPs), Membrane Process, Adsorption Technique.

Awards

- Fellowship funded by USAID as an exchange student for four-month training at School of Sustainable Engineering and the Built Environment, Arizona State University, United States, 2022.
- The First Ranked B.Sc. Student, Chemistry Department, Faculty of Science, Helwan University, Cairo, Egypt, 2015.

Peer-Reviewed Publication

- Bahaa A. Salah, ***Mohamed S. Gaber*** and Abdel Hakim T. Kandil, **(2019).** The Removal of Uranium and Thorium from Their Aqueous Solutions by 8-Hydroxyquinoline Immobilized

Bentonite, Minerals, 9(10), 626, doi: 10.3390/min9100626

- ***Mohamed S. Gaber***, Bahaa A. Salah, and Abdel Hakim T. Kandil, **(2022).** Adsorption of Yttrium (III), Neodymium (III), Gadolinium (III), Samarium (III), and Lutetium (III) ions using 8-hydroxyquinoline intercalated bentonite, Desalination and Water Treatment, (2022) 1–12, doi: 10.5004/dwt.2023.29153.
- Gamze Ersan, ***Mohamed S. Gaber***, François Perrault, Sergi Garcia-Segura, (**2024).** Comparative study on electro-regeneration of antibiotic-laden activated carbons in brine water. Water Research (Under Review)

Conference Proceedings and Presentations

- ***Mohamed S. Gaber***, Gamze Ersan, François Perrault, Sergi Garcia-Segura, Mahmut S. Ersan (**2024).** Electro-assisted regeneration of organic contaminants-laden activated carbon. Red River ACS, February 2024, Bemidji, Minnesota, USA (Poster Presentation)

Research Experiences

Graduate Research Assistant (2024-Present), Department of Civil Engineering, University of North Dakota

Researcher (2015 –Present), Chemistry at the Chemistry Department, Faculty of Science, Helwan University, Cairo, Egypt

Responsibility:

- Preparing and synthesis of nanomaterials for use in environmental applications.
- Skillfully use latest water treatment technologies such as photo-degradation, UV-based AOPs, EAOPs, Membrane Separations, and Adsorption.
- Working on the latest laboratory equipment such as HPLC, IC analyzer, TOC analyzer, and UV-Visible Spectrophotometer.
- Participate in planning experiments and evaluating test results.
- Data recording, calculating, analyzing, preparing reports, and writing grant proposals.
- Furthermore, working closely with a team of researchers to learn the value of good lab practices.
- Strong computer and scientific skills with the ability to keep documents and reports organized and up-to date.

Teaching Experience

Member of the Teaching and Supervising Team for Technical Practical Courses for undergraduate students, Faculty of Science, Helwan University, Cairo, Egypt **(2015-present)**

- Advanced Nuclear chemistry
- Advanced Coordination Chemistry
- Advanced Environmental Chemistry
- Advanced Analytical Chemistry
- Advanced Instrumental Analysis
- Advanced Inorganic Chemistry
- Chromatographic Methods of Analysis
- Separation Techniques (Ion exchange, Adsorption, Solvent extraction, and Precipitation

Training & Workshop

- Member of the Finance Leadership Development Program team.
- Member of the National Authority for Quality Assurance and Accreditation of Education team.

- Training at Helwan Fertilizer Company.
- Training at the National Research Center.
- Training at Drinking Water and Sanitation Company.
- Training at Faculty and Leadership Development Center.
- Training at National Cancer Institute - Cairo University.
- Leader of the Chemistry Laboratories Development Project Group, Department of Chemistry, Faculty of Science, Helwan University.