

Rashedul Islam

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Research Interest

- Soil nutrient (e.g., P, Si, C, Fe) dynamics under variable environmental conditions
- Extraction of environmentally friendly biodegradable polymers from natural resources and their applications
- Hydrogen purification by using carbon nanotube-based membrane for fuel use

Education

- Masters of Science (MSc) in Chemistry (Inorganic branch) | | 2019
Department of Chemistry, Jahangirnagar University, Bangladesh
Thesis title: Effects of salinity on the coupled cycling of iron and phosphorous in coastal saline soil
Result: 3.85 (out of 4.00) (3rd in order of merit)
- Bachelor of Science (BSc) in Chemistry | | 2018
Department of Chemistry, Jahangirnagar University, Bangladesh
Result: 3.66 (out of 4.00) (7th in order of merit)

Work experiences

- Scientific officer, Hydrogen Energy Laboratory (September 2023 to present)
Bangladesh Council of Scientific and Industrial Research, Bangladesh
- Research chemist, Synthesis Laboratory (November 2021 to August 2023)
Bangladesh Council of Scientific and Industrial Research, Bangladesh
- Research assistant (January 2020 to October 2021)
Geochemistry research group
Department of Chemistry, Jahangirnagar University, Bangladesh
- MSc thesis, (January 2018 to December 2019)
Department of Chemistry, Jahangirnagar University, Bangladesh
- Industrial training, September 2017
Bangladesh Council of Scientific and Industrial Research. Dhaka-1205
Work involved: Water quality analysis (physical and chemical method)

Scientific publications

1. **Islam, R.**, Barman, D. K., Kabir, M., & Sabur, M. A. (2023). Salinity-Induced Phosphate Binding to Soil Particles: Effects of Divalent Cations. *Water, Air, & Soil Pollution*, 234(11), 697.
2. Asif, M. N. M., **Islam, R.**, Goni, M. A., Ganguli, S., Chakraborty, A. K., Kabir, M., & Sabur, M. A. (2023). Speciation of Cr(III) and Cr(VI) in Aqueous Solution and their Removal by Oyster Mushroom Biomass. *Bangladesh Academy of Sciences (JBAS)*, 47(2).
3. Islam, M.M., **Islam, R.**, Mahmudul Hassan, S.M., Karim, M.R., Rahman, M.M., Rahman, S., Nur Hossain, M., Islam, D., Aftab Ali Shaikh, M., Georghiou, P.E., 2023. Carboxymethyl chitin and chitosan derivatives: Synthesis, characterization and antibacterial activity. *Carbohydr. Polym. Technol. Appl.* 5, 100283.
4. Islam, M., Shahin Ahmed, K., Karim, R., Nath, B.D., Prosad Moulick, S., **Islam, R.**, Mahmudul Hassan, S.M., Hossain, H., Moniruzzaman, M., Jahan, M.S. and Ali Shaikh, A., 2022. Alcohol-based Hand Sanitizers amid COVID-19: Chemical Formulation, Analysis, Safety. *ChemistrySelect*, 7(45), p.e202203290.
5. Sultana, M., **Islam, R.**, & Sabur, M. A. (2021), The role of phosphorus in agricultural production and its future crisis, About Arsenic Pollution, Jahangirnagar University Chemical Review, 25, 37-50 (Article in Bangla)

Conference presentation

1. “Effects of salinity on the mobility of phosphate and iron at the soil water interface” **Rashedul Islam**, Debashis Kumar Barman, Mahbub Kabir, and Md Abdus Sabur* An **oral** presentation at the GOLDSCHMIDT_ 2023 Place: Lyon, France. (9-14) July 2023.
2. “Synthesis, characterization, and antimicrobial study of water-soluble chitosan derivatives” **Rashedul Islam**, Md. Rezaul Karim and Md. Monarul Islam, An **oral** presentation at the BCSIR Congress – 2022, BCSIR, Dhaka (December 2022).
3. “Iron cycling in coastal agricultural soil: effects of salinity and redox conditions” **Rashedul Islam**, Debashis Kumar Barman, Gautam Kumar Dash, Mahbub Kabir, An **oral** presentation at the International Conference on Environmental Protection for Sustainable Development (ICEPSD-2022), CIRDAP, Dhaka (September 2022)
4. “Determination of aqueous phosphate in the presence of various silicate concentrations” Debashis Kumar Barman, **Rashedul Islam**, and Md Abdus Sabur, A **poster** at the International Conference on Science and Technology for Celebrating the Birth Centenary of Bangabandhu (ICSTB-2021), BCSIR, Dhaka (March 2021)

Technical skills

- Operational experience with UV-VIS, FTIR, Fluorescence, and GC-FID instruments
- Comfortable with OriginLab, Microsoft Office, Google Meet, Team, and Google Classroom software

Scholarships and grants

- Goldschmidt 2023 conference grants on abstract fees and registration
- NST Fellowship based on MSc thesis, 2022 (under Ministry of Science and Technology, Bangladesh) (completed)
- University grant commission scholarship for the Result of BSc (Honors) Examination, Jahangirnagar University, 2018
- Merit scholarship, Jahangirnagar University, 2015-2017
- Entrance scholarship, Jahangirnagar University, 2015

Professional membership

- Student member, European Association of Geochemistry (2023-2024)
- Member, Scientist Association of BCSIR, Bangladesh (2021 to present)