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## EDUCATION

<b>Master of Science</b>	Department of Chemistry, Jahangirnagar University, Bangladesh GPA 3.23 (on a scale of 4.00)	2008
<b>Bachelor of Science (Honor's)</b>	Department of Chemistry, Jahangirnagar University, Bangladesh CGPA 3.34 (on a scale of 4.00)	2007

## RESEARCH INTEREST

Biopolymer Chemistry e.g. lignin, cellulose, chitin, chitosan, collagen and their applications; Deep Eutectic Solvents (DES) preparation and characterization, Bio plastics and Natural Products.

## PROFESSIONAL EXPERIENCES

- July 2021 – present**      **Scientific Officer** | Bangladesh Council of Scientific and Industrial Research (BCSIR)
- March 2016 – Jul 2021**    **Research Chemist** | Bangladesh Council of Scientific and Industrial Research (BCSIR)
- Dec 2010 – March 2013**    'O'- Level Chemistry Teacher (IGCSE curriculum)

## PUBLISHED PAPERS

**Hasan, M.R.**, Haque, M.M., Hoque, M.A., Sultana, S., Rahman, M.M., Shaikh, M.A.A. and Sarker, M.K.U., 2024. Antioxidant activity study and GC-MS profiling of *Camellia sinensis* Linn. *Heliyon*, 10(1).

<https://doi.org/10.1016/j.heliyon.2023.e23514>

Sarker, M.K.U., Haque, M.M., **Hasan, M.R.**, Sultana, S., Ray, S.K. and Shaikh, M.A.A., 2024. Utilization of factory tea (*Camellia sinensis*) wastes in eco-friendly dyeing of jute packaging fabrics. *Heliyon*, 10(10).

<https://doi.org/10.1016/j.heliyon.2024.e30948>

Islam, M.S., **Hasan, M.R.** and Islam, Z., 2023. Abundance, characteristics, and spatial-temporal distribution of microplastics in sea salts along the Cox's Bazar coastal area, Bangladesh. *Environmental Science and Pollution Research*, 30(8), pp.19994-20005. <https://doi.org/10.1007/s11356-022-23596-3>

Islam, M.S., Islam, Z. and **Hasan, M.R.**, 2022. Pervasiveness and characteristics of microplastics in surface water and sediment of the Buriganga River, Bangladesh. *Chemosphere*, 307, p.135945.

<https://doi.org/10.1016/j.chemosphere.2022.135945>

Islam, M.S., Islam, Z., **Hasan, R.** and Islam Molla Jamal, A.S., 2023. Acidic hydrolysis of recycled polyethylene terephthalate plastic for the production of its monomer terephthalic acid. *Progress in Rubber, Plastics and Recycling Technology*, 39(1), pp.12-25. <https://doi.org/10.1177/14777606221128038>

## PATENT

Swapan Kumer Ray, Riyadh Hossen Bhuiyan, Muhammad Saiful Islam, **Md. Rashed Hasan** and Zahidul Islam, "A new process for the construction of moisture and heat resistant rubberized bituminous pavement with waste

thermoplastic coated aggregates", submitted by the office of the Patents and Design and Trademarks, Motijheel, Dhaka, No. P/BD/2021/000233, Date: 19.07.2021.

#### CONFERENCE PROCEEDINGS

**Md. Rashed Hasan**, Md. Farid Ahmed, Mohammad Mahbubur Rahman, Mohammad Majedul Haque and Swapan K Ray. Production of nano-lignin from bagasse by a green chemical approach. *BCSIR Congress*, PP-315, Page-542

**Rashed Hasan**, Riyadh H Bhuiyan, Shamima Akter Eti, Shahin Sultana and Swapan K Ray (2022). Pretreatment of sugarcane bagasse by deep eutectic solvents: Isolation of lignin and characterization. *BCSIR Congress*, OP-C29, Page-253

#### SKILLS AND EXPERTISE

Organic chemistry, Biopolymer chemistry and Analytical Chemistry.

**Instrumental Skills** FT-IR, HPLC, GC-MS, Rheometer and Density meter

**Cross-functional** Strong understanding of good laboratory practice (GLP), goal-setting skills, Proposal writing and report presentation skills

**Computer skills** Windows XP operating system, Origin software, Chem draw, Mini tab software

**Linguistic** Bengali (native), English (fluent)  
IELTS: Overall band score: 6.0 (L: 6, R: 6, W: 6.5, S: 6)

#### TRAINING AND WORKSHOPS

2020	Training on 'Operating and maintenance of High-Performance Liquid Chromatography'	IFST, BCSIR, Dhaka
2023	Training on '48 <sup>th</sup> Understanding Training Course on ISO/IEC 17025:2017'	Bangladesh Accreditation Board (BAB)
2023	Hands-on training on 'Operation and maintenance of Simultaneous Thermal Analyzer'	IGCRT, BCSIR, Dhaka
2023	Training on 'Operation and maintenance of X-ray Diffractometer (XRD)'	IGCRT, BCSIR, Dhaka
2023	Learning Session on Patent Drafting & Industrial Process	BCSIR Laboratories, Dhaka