

DR. MOHAMMAD MAJEDUL HAQUE

Fibre & Polymer Research Division, BCSIR Dhaka Laboratories
Bangladesh Council of Scientific and Industrial Research (BCSIR)
Dr. Kudrat-I-Khuda Road, Dhanmondi, Dhaka-1205, Bangladesh
Phone :+8801914113880, E-mail: majedulbcsir@gmail.com

Education:

- ❑ **Doctor of Philosophy (PhD):**
Department of Chemistry
Jahangirnagar University
Savar, Dhaka, Bangladesh
Year of Completion-2018
- ❑ **Master of Science (MSc):**
Department of Chemistry
National University (Anandamohan College)
Year of passing-2003 (held in December 2005-March 2006)
- ❑ **Bachelor of Science (BSc Hons):**
Department of chemistry
National University (Anandamohan College)
Year of passing-2002 (held in 2003)
- ❑ **Higher secondary certificate (HSC):**
Science group
Dhaka Board
Nasirabad College, Mymensingh
Year of passing –1999
- ❑ **Secondary School Certificate (SSC):**
Science group
Dhaka Board
Bangladesh Railway Govt. High School, Mymensingh
Year of passing –1996

Job Experience:

Bangladesh Council of Scientific and Industrial Research (**BCSIR**)
Ministry of Science and Technology
Government of People's Republic of Bangladesh

- ❑ July 2017- present: **Senior Scientific officer**, Fibre & Polymer Research Division (F&PRD), BCSIR Dhaka Laboratories.
- ❑ July 2011- July 2017: **Scientific officer**, Former Analytical Research Division (ARD) and now Institute of National Analytical Research and Service (INARS), BCSIR, Dhaka.
- ❑ August 2007 – July 2011: **Research Chemist**, Analytical Research Division (ARD), BCSIR Dhaka Laboratories.

- June 2006 – August 2007: **Research Chemist**, Chemical Research Division (CRD), BCSIR Dhaka Laboratories.

Professional Trainings:

1. Obtained Training on “PPR-2025 in Scientific Procurement and Application of E-GP” held on 21 January, 2026 at BCSIR Dhaka Laboratories, BCSIR, Bangladesh
2. Obtained Training on “Understanding of ISO 17025:2017-for Laboratory Accreditation” held on 27 May, 2025 at BCSIR Dhaka Laboratories, BCSIR, Bangladesh
3. Conducted Training on “Unsaponifiable Matter and Oil Content Test of Jute Products” held on 16-20 February, 2025 at Fiber and Polymer Research Division, BCSIR Laboratories Dhaka, BCSIR, Bangladesh
4. Obtained Training on “Ethics in conducting research & development activities” held on 07 November, 2022 at BCSIR Laboratories Dhaka, BCSIR, Bangladesh
5. Obtained Training on “Public Awareness of Right to Information” held on 27 September, 2022 at BCSIR Laboratories Dhaka, BCSIR, Bangladesh.
6. Obtained Training on “Method Validation for ISO 17025/2017” held on 31 August, 2021 at BCSIR Laboratories Dhaka, BCSIR, Bangladesh.
7. Obtained Training on “Operation and maintenance of Gas Chromatography (GC)” held on 22-26 August, 2021 at BCSIR, Dhaka, Bangladesh.
8. Obtained Training on “Comprehensive Environmental Sampling Technique” held on 22 June, 2021 at BCSIR Laboratories Dhaka, BCSIR, Bangladesh.
9. Obtained Training on “Fiber Quality Analyzer (FQA)” held on 15 June, 2021 at BCSIR Laboratories Dhaka, BCSIR, Bangladesh.
10. Obtained Training on “Annual Budget Distribution according to PPR-2008 & Discussion on basic software tools (OriginLab & Turnitin)” held on 16 November, 2020 at BCSIR Laboratories Dhaka, BCSIR, Bangladesh
11. Obtained Training on “ISO 17025 for Accreditation of Testing Parameter” held on 02-04 February, 2020 at BCSIR Laboratories Dhaka, BCSIR, Bangladesh
12. Obtained Training on “Operating system and maintenance of Protein Analyzer” held on 11-15 November, 2018 at BCSIR, Dhaka, Bangladesh.
13. Obtained Training on Basic Ion Chromatography from Thermo Fisher Scientific, Asia Pacific Centre of Excellence, Bangkok, Thailand.
14. Obtained four Online Training on-
 - a. Care and Feeding of a Laboratory Quality System.
 - b. Investigation of Non-Conformances Through Root Cause Analysis.
 - c. Explain Uncertainty to my Clients.
 - d. Laboratory Internal Calibration.From CANADIAN ASSOCIATION FOR ENVIRONMENTAL ANALYTICAL LABORATORIES (INC.)

15. Obtained Training on Laboratory Accreditation & ISO 17025 Requirements from BANGLADESH ACCREDITATION BOARD (BAB).
16. Obtained Training on LC-MS, LC-MS-MS, AAS and XRD from BANGLADESH COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH (BCSIR).
17. Conducted Training on HPLC among participants from various universities and research institutes under 42nd training programme of NITUB.
18. Obtained “1st Special Foundation Training Course for the BCSIR Officials”

Publications:

1. Shahin Sultana, Zahidul Islam, Md Khabir Uddin Sarker, Shamima Akther Eti, Swapan Kumer Ray, **Mohammad Majedul Haque** and Samia Tabassum: Development and evaluation of urea formaldehyde resin-modified poly (vinyl alcohol)-based biocomposites reinforced with *Corchorus olitorius* cellulose microfiber. *Smart Materials in Manufacturing*, 3 (2025) 100074, <https://doi.org/10.1016/j.smmf.2025.100074>
2. Md Khabir Uddin Sarker, **Mohammad Majedul Haque**, Md Rashed Hasan, Shahin Sultana, Swapan Kumer Ray and Md Aftab Ali Shaikh: Utilization of factory tea (*Camellia sinensis*) wastes in eco-friendly dyeing of jute packaging fabrics. *Heliyon*, 2024, <https://doi.org/10.1016/j.heliyon.2024.e30948>
3. Md. Rashed Hasan, **Mohammad Majedul Haque**, Md. Amirul Hoque, Shahin Sultana, Mohammad Mahbubur Rahman, Md. Aftab Ali Shaikh and Md. Khabir Uddin Sarker: Antioxidant activity study and GC-MS profiling of *Camellia sinensis* Linn, 2024, *Heliyon*, <https://doi.org/10.1016/j.heliyon.2023.e23514>
4. Mohammad Nazrul Islam Bhuiyan, Kazi Asma Ahmed Shamima, Meher Nahid, Sadia Afrin, Mohammad Amirul Hoque, **Mohammad Majedul Haque**, Md. Khabir Uddin Sarker, Md. Abdus Satter Miah and Md. Aftab Ali Shaikh: Decolorization of *Stevia rebaudiana* (Bert.) leaf extracts with activated charcoal and qualitative analysis of stevioside using chromatographic methods, *J. Chromatogr Sep Tech.*, 2023, DOI:10.35248/2157-7064.23.14.513.
5. Shahin Sultana, Khaleda Akter, Md. Khabir Uddin Sarker, Riyadh Hossen Bhuiyan, **Mohammad Majedul Haque** and Md. Rafiqul Islam: Color Fastness and Tensile

Properties of Cotton Fabric Dyed with Extract from *Albizia Procera* Sawdust. *Fibers and Polymers*, 2022, DOI: 10.1007/s12221-022-4707-x.

6. Lutfun Naher Hilary, Shahin Sultana, Zahidul Islam, Md. Khabir Uddin Sarker, Md. Jaynal Abedin and **Mohammad Majedul Haque**: Recycling of waste poly (vinyl chloride) fill materials to produce new polymer composites with propylene glycol plasticizer and waste sawdust of *Albizia lebbeck* wood. *Current Research in Green and Sustainable Chemistry* 4 (2021) 100221, <https://doi.org/10.1016/j.crgsc.2021.100221>.
7. **M. M. Haque**, N. Sultana, S. M. T. Abedin, N. Hossain and S. E. Kabir: Fatty acid analysis, cytotoxicity, antimicrobial and antioxidant activities of different extracts of the flowers of *Nyctanthes arbor-tristis* L. *Bangladesh J. Sci. and Ind. Res.*, Vol. 55(3), pp. 207-214, 2020.
8. **M. M. Haque**, N. Sultana, S. M. T. Abedin and S. E. Kabir: Phytochemical screening and determination of minerals and heavy metals in the flowers of *Nyctanthes arbor-tristis* L. *Bangladesh J. Sci. and Ind. Res.*, Vol. 54(4), pp. 321-328, 2019.
9. **M. M. Haque**, N. Sultana, S. M. T. Abedin and S. E. Kabir: Stigmasterol, renygolone, 2-phenylethyl β -D-glucopyranoside and n-tetradecyl- β -D-glucopyranoside from the flowers of *Nyctanthes arbor-tristis* Linn. *Bangladesh J. Sci. and Ind. Res.*, Vol. 54(3), pp. 275-282, 2019.
10. **Mohammad Majedul Haque**, Md. Rashed Hasan, Shakila Akter, Md. Khabir Uddin Sarker, Shamima Akther Eti and Shahin Sultana: Phytochemical Screening, Proximate Composition and Heavy Metals of *Camellia sinensis* Leaves. *Int. J. Adv. Res.*, Vol. 7(7), pp. 195-201, 2019.
11. Shakila Akter, Nasim Sultana, Md. Aminul Ahsan, Shamim Ahmed, Md. Ahedul Akbor, **Md. Majedul Haque**, Md. N. Ahmed, Md. Shariful Islam and Md. Nur Hossain: Seasonal Variations of Some Physicochemical Properties of River Water around Dhaka City. *Jahangirnagar University Journal of Science*, Vol. 36(2), pp. 93-104, 2013.
12. **M. M. Haque**, M. A. Ahsan, M. A. Akbor, M. M. Rashid and N Sultana: Phytochemical Screening of Some Bangladeshi Medicinal Plants. *Bangladesh J. Sci. and Ind. Res.* Vol. 48(3), pp. 193-196, 2013.

13. Monirul Islam, Md. Al-Amin, M. Mahboob Ali Siddiqi, Shakila Akter, **Mohammad Majedul Haque**, Nasim Sultana and A. M. Sarwaruddin Chowdhury: Isolation of Quercetin-3-o-beta-d-glucopyranoside from the Leaves of *Azadirachta Indica* and Antimicrobial and Cytotoxic screening of the Crude Extracts. *Dhaka University Journal of Science*, Vol. 60(1), pp. 11-14, 2012.
14. Md. Al-Amin, Monirul Islam, M. Mahboob Ali Siddiqi, Shakila Akter, Shamim Ahmed, **Mohammad Majedul Haque**, Nasim Sultana and A. M. Sarwaruddin Chowdhury: Neoandrographolide Isolated from Leaves of *Adhatoda vasica* Nees. *Dhaka University Journal of Science*, Vol. 60(1), pp. 1-3, 2012.
15. N Sultana, M M Rahman, S Ahmed, S Akter, **M M Haque**, S Parveen and S M I Moize: Antimicrobial Compounds from the Rhizomes of *Sansevieria hyacinthoides*. *Bangladesh J. Sci. and Ind. Res.* Vol. 46(3), pp. 329-332, 2011.

Process accepted by BCSIR:

1. Md. Asaduzzaman, Sudhangshu Kumar Roy, Fazilatun Nessa, Mosharof Hossain, **Mohammad Majedul Haque**: A Process for producing of Chitosan from shrimp shell waste.

Ref: [সচি/গউবি/62-581/2007/693 Dated: 15.07.2007](#)

Conferences / Workshops attended:

1. Attended International Conference on Science and Technology, 11-13 March 2021, BCSIR, Dhaka, Bangladesh.
2. Attended 33rd and 34th annual conference of Bangladesh chemical society.
3. Attended Agilent Technologies LC/MS Workshop 2010.
4. Attended 3rd ANRAP Workshop on CHEMICAL STUDIES AND BIOASSAY OF ANTIDIABETIC PLANT MATERIALS.

Laboratory Experience:

1. Analyze commercial samples (routine type and research type) like chemicals, different kind of fibre and polymer samples, different kind of resins, different kind of plastics, textile fabrics, different kind of dyes, yarns, pigments, inks, jute products and masterbatches.
2. Analysis of various samples by using HPLC, LC-MS, UV, NMR, IC, Ion meter, FTIR, LC-MS, GC, GC-MS, UV-visible spectrophotometer and TOC Analyzer.

3. Analysis of reflectance, transmittance and absorbance by UV-visible spectrophotometer.
4. Analysis of Phenolic compounds and Boron in water by UV-visible spectrophotometer.
5. Analysis of TOC, TC and IC in water by TOC (Total organic carbon) Analyzer.
6. Analysis Alkalinity, Hardness, Acidity, Available Chlorine, Free Carbon dioxide, Bound Carbon dioxide, Carbonate, Bicarbonate, Chloride in water by titrimetric method.
7. Analysis of P^H using P^H meter or multimeter or Ion meter.
8. TSS, TDS, TS in water by gravimetric method.
9. Analysis of Anions (Fluoride, Chloride, Bromide, Sulphate, Nitrate, Nitrite etc) by Ion Chromatography (IC).
10. Analysis of different parameters of oils (such as Saponification value, Unsaponification value, moisture, Acid value, Boiling point and others).
11. Separation and purification of compounds from different extracts by TLC, Column chromatography, Rotary evaporator, HPLC.
12. Extraction, separation, purification and structure elucidation of natural organic compounds.
13. Moreover much kind of chemicals (such as medicine, pesticides, melamine, and natural products) are also analyzed by HPLC & LC-MS.
14. Analysis of Antioxidant activity of various plant extracts as well as plant products by UV-visible spectrophotometer.
15. Melting point analysis of different samples by Melting point apparatus, Electrothermal.
16. Analysis of Flammability of different fabrics using 45° Flammability tester.
17. Elemental analysis of different samples by CHNS analyzer.
18. Metal analysis in various matrixes by Atomic absorption Spectrophotometer (AAS).

Current Research:

1. Development of bio-based polyurethane resin. Duration of the R & D Project: July 2025-June 2027. (Fiber and Polymer Research Division, BCSIR Dhaka Laboratories, BCSIR, Bangladesh)
2. Extraction and characterization of biopolymer from shrimp shell waste using green solvents. Duration of the R & D Project: July 2025-December 2026. (Fiber and Polymer Research Division, BCSIR Dhaka Laboratories, BCSIR, Bangladesh)
3. Development of Deep Eutectic Solvents (DES) based biorefinery system. Duration : July 2024-December 2026. (Fiber and Polymer Research Division, BCSIR Dhaka Laboratories, BCSIR, Bangladesh)
4. Development of phosphorus based bio-polymer flame retardant for composites and plastic materials. Duration of the R & D Project: July 2020-June 2022. (Fiber and Polymer Research Division, BCSIR Dhaka Laboratories, BCSIR, Bangladesh)

5. Synthesis of thermoset polyester for preparation of filler and composite materials.
Duration of the R & D Project: July 2020-June 2023. (Fiber and Polymer Research Division, BCSIR Dhaka Laboratories, BCSIR, Bangladesh)
6. Utilization of waste polyvinyl chloride (PVC) cooling tower fills and natural waste fibers to produce new composite materials.

Research Interest:

1. Different kinds of plastics
2. Value added products from biopolymers
3. Different kind of resins
4. Bioassay-guided isolation and pharmacological assessment of medicinal plants and natural products.
5. Natural dyes, pigments and rubber research.
6. Quality and safety assessments of food grade plastics and food dyes.
7. Analytical Chemistry

Last Updated: February, 2026