



# M Mohinur Rahman Rabby

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## ABOUT MYSELF

I am an engineering graduate aspiring to be a researcher and innovator. My undergraduate degree is in Chemical and Food Process Engineering, and I aim to pursue higher studies in nano materials and relevant fields. My interests lie in process development using clean energy and advanced sustainable technologies. I am an enthusiastic and fast learner, with a creative, problem-solving mindset. My goal is to apply my expertise in contributing towards a circular economy, while gathering valuable experience to foster professional growth.

## EDUCATION AND TRAINING

### B.Sc. in Chemical & Food Process Engineering

**Rajshahi University of Engineering & Technology (RUET)** [ 03/02/2019 – 14/05/2024 ]

City: Rajshahi | Country: Bangladesh | Website: <https://www.che.ruet.ac.bd/> | Final grade: 3.48 | Number of credits: 160.00

Equipment handling: Spectrophotometer, UV-Vis-NIR, FTIR-ATR, HPLC Apparatus, GC, Soxhlet apparatus,

## WORK EXPERIENCE

### **Rfl Industrial Park- Gazipur, Bangladesh**

Name of unit/department: Quality Assurance - Business/sector: Manufacturing

#### Assistant Manager

[ 13/08/2024 – Current ]

- Lead a team of 40 members
- Process optimization & adhere to sustainable development.
- Participated in R&D projects focused on product innovation and cost optimization
- Engaged in the Silicon rubber recycling & Inorganic color removal projects for plastics scarps.
- Data analysis and Reporting

### **Bangladesh Council of Scientific and Industrial Research- Rajshahi 6206, Bangladesh**

Name of unit/department: Biopolymers & Sustainable Environmental Research Lab

#### Research Associate

[ 13/11/2023 – 07/08/2024 ]

- Contributing to innovative solutions in the field of nano particles and wastewater treatment.
- Provided research support, including experimental design and data analysis.
- Engaged in wastewater treatment research in collaboration with international professors and BCSIR scientists.

### **Jamuna Fertilizer Company Limited (JFCL)- Jamalpur, Bangladesh**

## Intern

[ 27/03/2023 – 06/04/2023 ]

- Received in-depth training on the manufacturing process, stages and technologies involved
- Visited & observed the operations, gaining hands-on experience in industrial processes.
- Learned various plant processes which included drafted cooling tower

## ACADEMIC PROJECT

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**Design of 500 MTPD Caustic Soda Plant**

## UNDERGRADUATE THESIS

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**Textile wastewater treatment using activated charcoal derived from corn cob & saw dust: Characterization, and synergy study**

## PUBLICATIONS

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[2025]

**Isolation and characterization of CNC from waste maize cob available in Bangladesh as a potential candidate for the fabrication of multifunctional bio-nanocomposites: A new approach**

Authors: Shamim Dewan b , Md. Mahmudur Rahman a , Md. Ismail Hossain a , Bijoy Chandra Ghos a , M Mohinur Rahman Rabby b , Md. Abdul Gafur c , Md. Al-Amin a , Md. Ashraful Alam d | **Journal Name:** South African Journal of Chemical Engineering | **Volume, Issue and Pages:** Volume 51, January 2025, Pages 287-301 | **Publisher:** ELSEVIER

[2025]

**Production of CNC from agro-waste biomass (maize shells) as a potential reinforcement in bio-nanocomposites: Extraction, modification, and characterization study**

Authors: M Mohinur Rahman Rabby b, Md.Mahmudur Rahman a, Bijoy Chandra Ghos a, Md.Abdul Gafur c, Md. Al-Amin a, Shamim Dewan b, Md.Ashraful Alam d, Md.Ismail Hossain a | **Journal Name:** Carbohydrate Polymer Technologies and Applications | **Volume, Issue and Pages:** Volume 9, March 2025, 100671 | **Publisher:** ELSEVIER

[2025]

**Production of functionalized clay-CNC based biopolymeric nanocomposite from agro-waste biomass for bulky industrial wastewater treatment via continuous column adsorption study with mathematical modeling: A critical review**

Authors: Md. Mahmudur Rahman a, b\*, Songita Rani Adhikary b, M Mohinur Rahman Rabby d, Md. Mahafujul Hassan d, Salah Knani c, Syed Hasibul Akhfer b,e, Md. Khalid Al Zuhane d | **Journal Name:** Journal of Cleaner Production | **Volume, Issue and Pages:** Volume 518, 1 August 2025, 145883 | **Publisher:** ELSEVIER

## LIST OF SUBMITTED PAPERS

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**Removal of Methylene blue from wastewater by maize cob derived functionalized biochar as an adsorbent: Synthesis, characterization, and batch adsorption study**

**A comprehensive review focusing on the production technique of agrowaste derived CNC- MC based polyfunctional biopolymeric nanosorbents for wastewater purification: Extraction, characterization, modification, and continuous adsorption study**

**Production of CNC loaded functionalized biochar based nanoadsorbents for industrial wastewater treatment via fixed-bed column adsorption study with mathematical modelling: A critical review**

## LANGUAGE SKILLS

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**Mother tongue(s):** Bangla

**Other language(s):**

**English**

**LISTENING C1 READING C1 WRITING C1**

**SPOKEN PRODUCTION C1 SPOKEN INTERACTION C1**

*Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user*

## **COMMUNICATION AND INTERPERSONAL SKILLS**

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### **Presentation Skills**

Delivered compelling presentations in different organization including RFL, BCSIR .

## **TECHNICAL SKILLS**

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### **Modeling and Simulation**

OriginPro, Aspen Plus Basics

### **Molecular design and Particle size analysis**

Chem Draw, ImageJ

### **Others**

Microsoft Office Suite, Mendeley, Zoom

## **LEADERSHIP & EXTRACURRICULAR**

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### **Organizing Secretary**

Society Of Process Engineers, RUET (SPER), (2023-2024)

### **Assistant Librarian**

Society Of Process Engineers, RUET (SPER), (2022-2023)

## **HONOURS AND AWARDS**

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RUET

### **Technical Scholarship (with stipend)**

-Received for satisfactory academic performance from 2019 to 2024