europass

Md. Rubel Miah

ID: 9163974331 **Work permit:** Bangladeshi **Nationality:** Bangladeshi

Date of birth: 01/03/2000 **Place of birth:** Tangail, Bangladesh **Gender:** Male

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ABOUT ME

M.Sc. student in Chemical Engineering at BUET with hands-on industrial experience in operating and optimizing hydrogen peroxide production units. Strong foundation in mass transfer and diffusion modeling, environmental assessment, and plant troubleshooting. Skilled in Aspen HYSYS and MATLAB; currently developing expertise in Python, data handling (NumPy, pandas), and machine learning for environmental applications. Research interests include process modelling, environmental remediation, radiological risk analysis, and the use of machine learning to predict and map nitrate leaching from agricultural soils. Finalist, Nature-Based Future Challenge (2024). Seeking research-focused opportunities (Research Associate / Graduate Researcher) where process modelling, experimental design, and environmental risk assessment are key.

WORK EXPERIENCE

Tasnim Chemical Complex Ltd., MGI – Narayanganj, Bangladesh

City: Narayanganj | **Country:** Bangladesh

Assistant Engineer

[26/05/2024 – Current]

- Operated and optimized H_2O_2 production process
- Assisted in shutdown and turnaround maintenance; coordinated with mechanical & electrical teams.
- Reviewed P&IDs, enforced SOP compliance, and completed safety/process training programs.

EDUCATION AND TRAINING

MSc in Chemical Engineering

Bangladesh University of Engineering & Technology [01/04/2025 – Current]

City: Dhaka | **Country:** Bangladesh | **Website:** https://www.buet.ac.bd | **Level in EQF:** EQF level 7

BSc in Chemical Engineering

Khulna University of Engineering & Technology [01/02/2019 – 14/03/2024]

City: Khulna | **Country:** Bangladesh | **Website:** https://www.kuet.ac.bd | **Level in EQF:** EQF level 6

Higher Secondary Certificate (HSC)

St. Joseph Higher Secondary School, Dhaka Board [01/05/2016 – 01/03/2018]

City: Dhaka | **Country:** Bangladesh | **Level in EQF:** EQF level 4

Secondary School Certificate (SSC)

Nayankhan Memorial High School, Dhaka Board [01/01/2011 – 01/03/2016]

City: Tangail | **Country:** Bangladesh | **Level in EQF:** EQF level 3

PROJECTS

[01/11/2023 – 02/04/2024]

Design of 1000 TPD Ammonia Plant – Team Project, KUET

- Designed High-Temperature Shift (HTS) Reactor focusing on energy integration.
- Performed process simulation under varying feed conditions using Aspen HYSYS.
- Contributed to overall plant design, including mass and energy balances, PFDs, and P&IDs.
- Gained practical experience in process design, reactor modeling, and teamwork.

INTERNSHIPS

[23/02/2023 – 08/03/2023]

Chittagong Urea Fertilizer Ltd. – Industrial Training

- Plant operation exposure
- Process instrumentation

[19/08/2023 – 27/08/2023]

Karnaphuli Fertilizer Co. Ltd. – Industrial Training

Process walkthroughs, safety & maintenance practices

PUBLICATIONS

[2024]

Temporal assessment of water and soil quality near Barapukuria coal mine, Bangladesh

Conducted temporal assessment of water and soil quality near Barapukuria coal mine.
Evaluated environmental sustainability impacts and identified potential public health risks from heavy metal contamination.

Authors: Md Asif All Azad, Abu Bakker Chiddiq , Md Rubel Miah, Md Hafijur Rahman Sabbir | **Journal Name**: heliyon | **Volume, Issue and Pages**: Vol. 10 Issue 23, e40722 | **Publisher**: https://www.cell.com/

[1] M. A. A. Azad, A. B. Chiddiq, M. R. Miah, and M. H. R. Sabbir, “Temporal assessment of water and soil quality near Barapukuria coal mine, Bangladesh,” Heliyon, vol. 10, no. 23, Dec. 2024

[2023]

Water Quality Assessment in Different Areas Of Khulna City in Bangladesh

Conducted water quality analysis across multiple locations in Khulna City, Bangladesh.
Assessed parameters including pH, turbidity, dissolved oxygen (DO), and biochemical oxygen demand (BOD).
Identified areas with high turbidity levels, exceeding national safety standards.
Recommended improvements in water treatment and management strategies to address contamination issues.

Authors: Jarin Anan Ridika, Md Rubel Miah, MG Toufik Ahmed, Hashib Ahasanul Haque | **Journal Name**: Chemical Engineering Research Bulletin | **Volume, Issue and Pages**: Vol.23 Special Issue 2023 | **Publisher**: www.banglajol.info

J. A. Ridika, M. R. Mia, M. T. Ahmed, and A. H. Hashib, “Water Quality Assessment in Different Areas Of Khulna City in Bangladesh,” Chemical Engineering Research Bulletin, pp. 97–102, Dec. 2023

CONFERENCES AND SEMINARS

[12/12/2024 – 14/12/2024] Chittagong - 4349, Bangladesh

7th International Conference on Advances in Civil Engineering (ICACE 2024)

1. Assessment of Heavy Metal Levels on Fruit Surfaces: Implications for Public Health

7th Int. Conf. on Advances in Civil Engineering (ICACE 2024), Chittagong, Bangladesh

- Measured heavy metals (Ni, As, Pb, Cr, Cd) in dragon fruit & bananas; assessed health risks.
- Arsenic & chromium identified as significant hazards.
- DOI: 10.5281/zenodo.14206223

2. Radiological Consequence Assessment of a Hypothetical Accident at Rooppur NPP

7th Int. Conf. on Civil Engineering for Sustainable Development (ICCESD 2024), Khulna, Bangladesh

- Modeled radiological impacts using Hotspot software; visualized ground deposition & TEDE.
- Assessed effectiveness of core catcher method in VVER 1200 reactor.
- DOI: 10.5281/zenodo.11204883

Link: https://icace2024.cuet.ac.bd/

HONOURS AND AWARDS

[11/06/2024] Wageningen University & Research, Netherlands

Nature Based Future Challenge, 2024

Selected as a finalist among 700+ participants from 147 universities.

Developed and presented innovative nature-based solutions for climate resilience in Bangladesh.

SKILLS

process simulation / Aspen HYSYS / MATLAB / Python (NumPy, pandas — learning)

LANGUAGE SKILLS

Mother tongue(s): Bengali

Other language(s): English