

CURRICULUM VITAE

MARUFUZZAMAN

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Sex Male | **Date of Birth** 01/06/1997 | **Nationality** Bangladeshi



TECHNICAL EXPERIENCE

Catalyst design, Hydrogen production, Biomass gasification, Water electrolysis, Green energy technology, Environmental Science, Industrial Hazard and Waste Management, Pollution control Engineering, Process design, Process engineering, Corrosion Engineering, Chemical Engineering, Nanotechnology.

EDUCATION

June, 2019 – Jan, 2022 **Masters of Science in Applied Chemistry and Chemical Engineering (with Thesis on Polymer and Textile Engineering).**

University of Rajshahi (Rajshahi -6205, Bangladesh)

Result: 3.97 out of 4.00 (1st)

January, 2015 – May, 2019 **Bachelor of Science in Applied Chemistry and Chemical Engineering**

University of Rajshahi (Rajshahi-6205, Bangladesh)

Result: CGPA 3.58 out of 4.00 (4th)

May, 2012 – June, 2014 **Higher Secondary Certificate (HSC)**

Khan Saheb Kamaruddin College

Group: Science

Result: GPA 4.50 out of 5.00

January, 2007- April, 2012 **Secondary School Certificate (SSC)**

K.G.H.F. Moukhali United Academy

Group: Science

Result: GPA 5.00 out of 5.00

RESEARCH EXPERIENCE

Currently I'm working as a Research Fellow, Hydrogen Energy Laboratory, Bangladesh Council of Scientific and Industrial Research (BCSIR), Chattogram.

Now my research activities are likely:

| SL | Branch | Title | Status |
|----|-------------------------|--|------------------------|
| 1 | Computational Chemistry | “Reaction mechanism of X(Ni,Pd,Pt) doped Rutile supported catalyst to oxygen reduction reaction of PEMFC” | Paper submitted |
| 2 | Hydrogen Production | Techno-economic prospects of green hydrogen production | Book chapter published |

I Have completed my MSc Thesis in the **“Polymer & Textile Research Laboratory”** at the Department of Applied Chemistry and Chemical Engineering, University of Rajshahi (Rajshahi-6205, Bangladesh).

Thesis topic: My thesis work was **Study on Nanochitosan Coated Cotton Fibre (NCCF) for the Removal of Heavy Metal and Dyes from Industrial Effluents.**

under the supervision of **Dr. Md. Ibrahim H. Mondal** (Professor, Dept. of Applied Chemistry and Chemical Engineering, University of Rajshahi) & co-supervision of **Dr. Md. Ahsan Habib** (Professor, Dept. of Applied Chemistry and Chemical Engineering, University of Rajshahi)

Research Project: “Electronic waste management” (February, 2018- July, 2018)

It was a two credit project to fulfill my B.Sc. degree which was supervised by Dr. Md. Anwarul Karim (Associate Professor, Dept. of Applied Chemistry & Chemical Engineering, University of Rajshahi). This project report was submitted to the Examination Committee of Dept. of Applied Chemistry & Chemical Engineering, Faculty of Engineering, University of Rajshahi.

RESEARCH FUNDING

National Science and Technology (NST) Fellowship Award (2019-2020) from the Ministry of Science and Technology (MOST), Bangladesh.

Amount: BDT 54,000 tk

CONFERENCE ATTENDED

11-12 July, 2019
(2 days) **(IC⁴ME²-2019)**, International Conference on Computer, Communication, Chemical, Materials and Electronic Engineering

Organized By: Faculty of Engineering, University of Rajshahi.

9-10 November, 2019
(2 days) **Bangladesh Chemical Society Conference-2019**
Organized By: Department of Chemistry, University of Rajshahi

12-14 March, 2020
(3 days) **BCSIR Congress -2020**
Organized By: Bangladesh Council of Scientific and Industrial Research (BCSIR), Ministry of Science and Technology, Govt. of the People's Republic of Bangladesh.
During this conference gave a poster presentation among the national and international researchers.

1-3 December, 2022
(3 days)

BCSIR Congress -2022

Organized By: Bangladesh Council of Scientific and Industrial Research (BCSIR), Ministry of Science and Technology, Govt. of the People's Republic of Bangladesh.

During this conference gave a oral presentation among the national and international researchers.

STUDIED COURSES

Elements of Chemical Reaction Engineering, Materials and Energy Balance, Fluid mechanics, Chemical Engineering, Thermodynamics, Separation Process, Chemical Reaction Engineering and Reactor Design, Physical Chemistry, Advanced Inorganic chemistry, Organic chemistry, Environmental Chemistry, Chemical technology, Instrumental Method and Analysis, Polymer Science, Fuel and Energy Engineering, Petrochemical Engineering, Pharmaceutical chemistry, Material Engineering, Pyro and Hydro Metallurgy, Corrosion Engineering, Industrial Hazard and Waste Management, Nano-science and Technology and Practical Lab with related courses.

INSTRUMENTAL SKILLS

UV Visible Spectroscopy, FTIR, AAS, HPLC, GC, Hydrogen dispensing unit, hydrogen storage analyzer, CNHO Analyzer, oil analyzer, On site hydrogen production pilot plant and so on.

TRAINING & WORKSHOPS

December,2018 – **In-plant training on “Industrial Process, Unit Operation and Process Control Techniques” in Training Institute for Chemical Industries (TICI).**
January, 2019
(1 month)

Courses: Process Control, Symbols &Diagrams, Heat Exchanger, Pump, Water Treatment, Boiler, Mechanical Equipment, Compressor, Turbine, Lubrication, Sensors &Transmitters, Controllers &Control loops, Control valves, Sequential Logic Operation (SLO), Programmable logic operation (PLC), Spectrometry, Chromatography, Industrial Safety.

Result: A+ (4.00 on scale of 4.00)

03-09 January, 2023 – **In-plant training on “On site hydrogen production and dispensing unit” in Hydrogen Energy Laboratory, Bangladesh Council of Scientific and Industrial Research (BCSIR), Chattogram.**
(1 Week)

Topics: Hydrogen production by electrolysis of water, Purification of Hydrogen, Refill of hydrogen fuel cell car, Hydrogen Safety.

EXTRACURRICULAR ACTIVITIES

Computational Chemistry

- DFT Basics.
- Material Studio Software.
(Dmol3, CASTEP, Gaussian).
- Microsoft Visio software.

Basic Computer

National Basic Standard Course on “Microsoft Office and Database Programming”.

By this skill training I gathered knowledge about Microsoft Word, Excel, Access, PowerPoint, Visual Basic, and Programming.

Computer Skills

- Computer Programming: C (Basic)
- EndNote

REFERENCES

Dr. Md. Ibrahim Hossain Mondal

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University of Rajshahi, Bangladesh.

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Dr. Md. Ahsan Habib

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