



# MURAD HOSSAIN

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## EDUCATION

MS in Electrical & Electronic Engineering

Sep 2023 - Jun 2025

- University of Chittagong - CGPA: 3.53/4.00

BSc in Electrical & Electronic Engineering

Jan 2018 - Sep 2023

- University of Chittagong - CGPA: 3.27/4.00

## PUBLICATION

- M. A. Hossain, H. K. Rouf, **M. Hossain**, "Synthesis and Exploration of Structural, Optical, Magnetic & Electrical Properties of Ti doped Mn-Ni-Zn Ferrite," **AIP Advances**, ([DOI](#))
- R. Rubel, **M. Hossain**, J. U. Ahamed et al "Tuning Ti on Structural, Optical & Magnetic Properties of  $\text{Ba}_{0.8}\text{Sr}_{0.2}\text{Fe}_{12-x}\text{Ti}_x\text{O}_{19}$  for Magnetic Device Application" **Journal of Alloys and Compounds** ([DOI](#))
- **M. Hossain**, J. U. Ahamed, M. K. Alam, M. N. I. Khan, "Ultrahigh Resistivity and Low-Loss Mo Doped Ni-Zn Ferrites for 5G/6G High-Frequency Applications" **JMSC (Under Review)** ( [Preprint Link](#))
- J. U. Ahamed, **M. Hossain**, "Synergistic Enhancement of Magnetic and Dielectric Properties in Mn-Nb Co-doped  $\text{Ba}_{0.7}\text{Mg}_{0.3}\text{TiO}_3$  Perovskite Ceramics" **Ceramics International (Under Review)**

## PRESENTATION

- **M. Hossain**, Influence of Mo-Substitution on Structural and Optical Properties of Ni-Zn Ferrites by Solid State Reaction Method"(41<sup>st</sup> Bangladesh Chemical Society Annual [Conference](#), 2024).
- **M. Hossain**, "Properties Investigation of Mo-Substituted Ni-Zn Ferrites Using Solid-State Synthesis Techniques" (International [Conference](#) on Electronics and Informatics - 2024).

## RESEARCH EXPERIENCE

Graduate Research Assistant, Bangladesh Atomic Energy Center, Dhaka

Sep 2023- March 2025

- Worked on 4 ferrite/titanate projects for magnetic, dielectric, & 5G/6G device applications.
- Characterized using XRD, TEM, SEM, FTIR, UV-vis, DSC/TGA, Kerr Analyzer & VSM techniques.
- Supported experiments, analyzed data, and published findings on various properties.

Undergraduate Thesis (Unpublished)

Nov 2022- May 2023

- Designed MZI-based electro-optic switch in ANSYS Lumerical, optimizing efficiency & behavior.
- Analyzed results to enhance switch performance and documented vital findings.

## INDUSTRIAL EXPERIENCE

Executive Engineer, Product Development ([Meghna Group Bike Division](#))

Aug 2025 - Present

- Researching material and component compatibility for bikes, e-vehicles, per industry standards.
- Collaborate with cross-functional teams to resolve issues and ensure efficient product execution.

Co Founder & CMO, [Swojon](#)

Apr 2023 - Present

- Analyzed customer data to drive targeted strategies and boost engagement.

Trainee Engineer, General Electric Manufacturing Company Limited

Dec 2022 - Jan 2023

- Engaged in manufacturing processes & machinery operations to understand production workflows.

## RELEVANT ACADEMIC COURSES

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- CHEM 273 - Physical & Inorganic Chemistry
- EEE 413 - Solid State Physics
- EEE 619 - Material Engineering
- EEE 813 - VLSI Technology
- EEE 717 - Microelectronics & SC Technology
- EEE M207 - Characterization of SC & Materials-I
- EEE M301 - Material Structure Analysis
- EEE M305 - High-Speed NanoPhotonic Device

## STANDARDIZED TEST SCORE

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International English Language Testing System, (IELTS) Sep 2024 - Sep 2026

Overall : 6.5 (B2)      Listening 7.5      Reading 6.5      Writing 6.0      Speaking 6.5

## TECHNICAL SKILLS

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- **Simulation:** Material Studio, Ansys Lumerical, Pspice, Cisco, Proteus, AutoCAD
- **Data Visualization:** OriginPro, Excel, Powerpoint
- **Paper Formatting:** LaTeX, Microsoft Office, Google Docs
- **Programming:** MATLAB, C, HTML, CSS, JavaScript, Bootstrap
- **Operating System:** Windows, Linux

## COURSE CERTIFICATIONS

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Materials Science for Advanced Technological Applications Specialization, Arizona State University

1. Phase Diagrams, Grade-90%
2. Hardening, Polymers, Properties Grade-86%
3. Electrical Properties & SC Grade-87%
4. Ceramics and Composites, Grade-95%

Semiconductor Characterization Specialization, Arizona State University

1. Fundamentals of SC Characterization, Grade-100%
2. Electrical Characterization: Diodes, Grade-84%
3. Electrical Characterization: MOSFETs, Grade-100%
4. Ion & E-Beam Characterization, Grade-100%
5. Optical & X-Ray Characterization, Grade-100%

CAD and Digital Manufacturing Specialization, Autodesk

1. Intro to Digital Manufacturing with Autodesk
2. Autodesk Integrated CAD/CAM/CAE
3. 3D Model Creation with Autodesk
4. Engineering Design Process with Autodesk
5. Manufacturing Process with Autodesk

Density Functional Theory, Grade-100%, École Polytechnique

Professional Certificate in Google Project Management, Google

## EXTRA CURRICULAR ACTIVITIES

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- **Race Director:** CU Runners 10K 2025 organizing committee.
- **Active Blood Donor:** Donated blood numerous time to save life.
- **Triathlon Finisher (Wild 70.3):** Finisher (Swim-Bike-Run) in 7 hrs 21 min.
- **Channel Swimmer:** Recognized as the 243rd swimmer in the Bangla Channel record book.
- **Ultra Marathon Runner:** Finisher at Coastal Ultra 2025-100 Km, MDU & VDHM Ultra-2024.

## MENTORING & LEADERSHIP

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- **General Secretary** at Chittagong University Runners
- **Coach and Ex Caption** at EEE CU Football
- **Ex-Vice President** of Lakshmipur Zilla Students Association, University of Chittagong
- **Ex Cadet** at Bangladesh National Cadet Corps, Karnafully Regiment (Jan 2019- Mar 2020)