

### **CAREER OBJECTIVE**

Motivated Ph.D. student in the Wang Materials Group at UT Austin specializing in computational materials science, aiming to advance data-driven discovery of next-generation materials. I seek to contribute impactful research at the intersection of simulation, theory, and materials innovation.

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### **RESEARCH INTERESTS**

2D Materials | Electrochemistry | Quantum Computing

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### **EDUCATION**

**M.Sc. in Materials Science and Engineering (Ongoing) | GPA 3.86/4.00** *January 2025 – Present*  
University of Texas at Austin, USA

**Courses Taken:**

- Introduction to Solid State Properties of Materials
- Computational Materials Science & Engineering
- Additive Manufacturing
- Introduction to Thermodynamics of Materials
- Structure of Materials
- Introduction to Phase Transformations
- Quantum Mechanics I

**B.Sc. in Materials Science and Engineering | CGPA 3.25/4.00** *Awarded March 2022*  
Khulna University of Engineering and Technology, Khulna, Bangladesh

**Thesis:** Organic Photovoltaic Simulation using GPVDM

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### **RESEARCH EXPERIENCE**

**Graduate Research Assistant** *January 2026 – Present*

- Focusing on defect physics and materials design in TMDs and other two-dimensional materials using computational methods.

**Supervisor:** Dr Wennie Wang,  
Assistant Professor, McKetta Department of Chemical Engineering, UT Austin

**Co-Supervisor:** Dr Deji Akinwande,  
Professor, Chandra Department of ECE, UT Austin

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**Volunteer Researcher** *September 2024*

#### **Integrated Nano Computing (INC) Laboratory**

- Helped in the project of **Magnetic Tunnel Junctions** with **anti-ferromagnetic materials**, working in the clean room of the Microelectronics Research Centre

**Principal Investigator:** Dr Jean Anne Incorvia,  
Associate Professor, Chandra Department of ECE, UT Austin

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**Undergraduate Research Assistant** *January 2020 – December 2021*

The Photonics Research Group ([Website](#))

Department of Electrical and Electronics Engineering (EEE),  
Khulna University of Engineering and Technology, Khulna, Bangladesh

**Research Supervisor:** Prof. Md. Jahirul Islam, Department of EEE, KUET.

**Project(s) Completed:** Performance of Organic Photovoltaic Cells incorporating different interlayers  
[[Publication](#)]

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### **PUBLICATIONS**

#### **Conference Proceedings**

- Zarin Tasnim, Md Jahirul Islam, Md Rejvi Kaysir (2021). Effect of Interlayers on the Performance of Organic Photovoltaic Cells. Published in: *2021 5<sup>th</sup> International Conference on Electrical Information and Communication Technology (EICT)*, 17-19 December 2021, INSPEC Accession Number: 21682837, Electronic ISBN: 978-1-6654-0906-3, **DOI:** 10.1109/EICT54103.2021.9733519

**Thesis**

- Zarin Tasnim (2022). Effect of Interlayers on the Performance of Organic Solar Cells. BSc thesis, Khulna University of Engineering and Technology (KUET), Khulna-1000.

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## TECHNICAL SKILLS

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### Simulation and Analysis

- Visualization for Electronic and Structural Analysis (VESTA)
- HighScore Plus - XRD Analysis Software (A comprehensive tool for crystallographic analysis)
- LAMMPS Molecular Dynamics Simulator
- VASP (Vienna Ab initio Simulation Package)
- Quantum Espresso
- OVITO

### Programming

- Python
- C
- C++

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## ACHIEVEMENTS

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### 2nd Runner-up

At the National level, the Speak Out for Engineering (SOFE) competition, arranged by the Institution of Mechanical Engineers, IMechE.

### 1st Runner-up

Engineering Poster Presentation Competition, Technival, Inter-University Tech Competition, arranged by the Department of Electronics and Communication Engineering, KUET.

### 2nd Runner-up

Engineering Poster Presentation Competition, IGNITION-Inter University Tech Competition, arranged by the Department of Mechanical Engineering, KUET.

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## INDUSTRY AND LEADERSHIP EXPERIENCES

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### Ethics and Compliance Expert

Grameenphone, Dhaka, Bangladesh

*August 2023 –  
July 2024*

- Maintained regulatory compliance of all the stakeholders and business partners of Grameenphone, and managed the relevant policies of the company

### Cluster Manager

Grameenphone, Dhaka, Bangladesh

*Nov 2022 – July  
2023*

- Looked over a business cluster consisting of two distribution houses and managed a team of 30 field forces with a business volume of 3 crore BDT per month

### Management Trainee – Next Business Leader

Grameenphone, Dhaka, Bangladesh

*Dec 2021 – Oct  
2022*

- Looked over a business territory consisting of 20 field forces with a business volume of 1.9 crore BDT per month

### Community Development Executive (Part-time)

Agami Limited, Dhaka, Bangladesh

*April 2021 – Nov  
2021*

- Created a loyalty-based platform for a retail-based e-commerce to keep customers loyal to the platform

### Intern

British American Tobacco (BAT) Bangladesh, Dhaka, Bangladesh

*Oct 2020 – Mar  
2021*

- Worked for the new e-commerce venture of BAT Bangladesh

### General Secretary | KUET Career Club

Khulna University of Engineering and Technology, Khulna, Bangladesh

*Session 2020-21*

- Organized more than 20 career counselling and skill development workshops related to engineering job sectors and higher studies