Sovendo Talapatra

Sovendo Talapatra sovendotalapatra.buet@gmail.com

ACADEMIC CREDENTIALS

Bangladesh University of Engineering and Technology (BUET) **Dhaka, Bangladesh**
Bachelor of Science (B.Sc.) in Materials and Metallurgical Engineering *2018 – 2023*
CGPA: 3.25 out of 4.00

RESEARCH INTEREST

- Photovoltaics
- Energy Materials
- Opto-electronic Materials
- Materials Characterization
- Thin Films
- Nanomaterials
- Computational Materials Science

RESEARCH EXPERIENCE AND PROJECTS

Undergraduate Thesis **2023**
Supervisor: Dr. Md. Muktadir Billah

- **Optostructural Characterization of Nd Doped CuO Thin Film via Sol-gel Spin Coating Route**
  - Optimizing Sol-gel spin coating parameters
  - Analyzing the structural, optical properties of these films
  - Identifying optimal dopant concentration for enhanced optical properties

Undergraduate Plant Design Project **2022**
Design of Urea Production Plant

- Mandatory project to complete MME 440 (Materials Processing Plant Design)
- Comprehensive design of ACES process based urea fertilizer based facility
- Cost analysis, raw materials calculation and environmental impact assessment
- Worked as a team to achieve project goals

ONGOING RESEARCH PROJECT

- Structural, Magnetic and Photocatalytic Properties of Nd Doped CuO Nanoparticles via Hydrothermal Process
- Developing a Cost-Effective Photocatalytic Water Splitting System

PUBLICATIONS

- **Sovendo Talapatra**, Utsha Das, Mohammad Galib, Md Jannatul Ferdous Anik, Samiya Rahman Mim, Hridoy Saha, Ankita Dastider, Md Shofiqul Islam, M. A. Gafur, and Md Muktadir Billah. **"Enhanced Opto-electronic Properties of Nd Doped CuO Thin Film."** *Ceramics International* (2024), (doi: 10.1016/j.ceramint.2024.05.067)
- Mohammad Galib, Utsha Das, **Sovendo Talapatra**, Md Jannatul Ferdous Anik, Samiya Rahman Mim, Md Muktadir Billah **"Effect of Process Parameters and Substrate Material on Opto-Structural Properties of CuO Thin Film Prepared Following Sol-gel Spin Coating Technique"**
  International Conference on Chemical Engineering, 2023
  Status– Accepted
- Hridoy Saha, Ankita Dastider, Md Jannatul Ferdous Anik, **Sovendo Talapatra**, Utsha Das, Moniruzzaman Jamal, Md Muktadir Billah **"Photocatalytic Performance of CuO NPs: Process Parameter Optimization for Rh B Dye"**
  Status– Submitted in Journal

TEST SCORES

GRE **September 6, 2023**
Overall-316, Quant-162, Verbal-154, AWA-3

TOEFL **October 4, 2023**
Overall-94, Reading-20, Listening-28, Speaking-24, Writing-22

SKILLS

- **Characterization Techniques:** XRD, UV-visible spectroscopy, SEM, AFM, Hall measurement, DSC, FTIR, VSM
- **Programming Languages:** C++, Python
- **Data Analysis and Graphing tools:** OriginPro
- **CAD Tools:** AutoCAD, Solidworks
- **Scripting:** MS Word, MS Excel, MS Powerpoint, LaTeX
- **Programming Platform:** Matlab

INDUSTRIAL EXPERIENCE

Trainee **April, 2022**
Abul Khair Steel **(*AKS*)**, *Training Complex* *Chattogram*

- Worked as a trainee, where I got practical experience in steel making from scrap metal via Electric Arc Furnace (EAF), Ladle Refining, Continuous Casting, and Rolling. During this industrial attachment at AKS, Chattogram, I also learned about sheet metal forming process to produce corrugated sheets from cold-worked sheet metal.

Visitor **July, 2023**
Star Particle Board Mills Limited *Narayanganj*

- Explored their plants, research and development wing, product design and engineering section to gain insight into the industrial production of particle board.

SCHOLARSHIP & ACHIEVEMENTS

- **Technical Scholarship:** Scholarship Provided by BUET *2018 – 2022*
- **Board General (SSC):** Scholarship provided by Bangladesh Government *2015 – 2016*

EXTRACURRICULAR ACTIVITIES

BADHAN, BUET Zone **BUET, Dhaka**
Executive *2018 – 2023*

Material Advantage Society **BUET, Dhaka**
Member *2019 – 2021*

Students Association of Materials and Metallurgical Engineering(SAMME) **BUET, Dhaka**
Publication Secretary *2020 – 2021*

NOTABLE ONLINE COURSES

- Completed *Density Functional Theory* at Coursera. *November, 2023*
- Completed *Introduction to Programming with MATLAB* at Coursera. *July, 2020*
- Completed *Python Data Structures* at Coursera. *May, 2020*
- Completed *Programming for Everybody(Getting Started with Python)* at Coursera. *May, 2020*