

NASIM MIA

515 Queen St., Charlottetown, PE, Canada

 [Personal Website](#)  nmia@upei.ca  [LinkedIn](#)

EXPERTISE IN BRIEF

- Master's student in sustainable design engineering with extensive research in the **field of photocatalyst** for producing solar driven green hydrogen using water splitting method.
- Experienced in different semiconductor, metal, non-metal photocatalyst as well as **photocatalyst synthesis, modification**, photochemical reactions and phenomena.
- Ability to analyze crystal structure, surface morphology including specific surface area and porosity, elemental composition, absorption properties of materials by **XRD, SEM, TEM, XPS, UV-vis, BET** analysis.
- Hands on **statistical analyses by Origin Lab** and MS Excel and circuit simulation.
- Bachelors in electrical and electronic engineering with extensive research experience on thin film and **perovskite solar cells** as well as energy and electrochemistry.

ACADEMIC CREDENTIALS

University of Prince Edward Island, PE, Canada

Master of Science in Sustainable Design Engineering (December,2024)

CGPA: Enrolled

University of Dhaka, Dhaka, Bangladesh

Bachelor of Science in Electrical and Electronic Engineering (March,2021)

CGPA: 3.60/4.00

RESEARCH EXPERIENCE

• Publications (Partial list) , [Full List](#)

1. **Nasim Mia**, Singh, K., Polson, J. M., Lisi, L., None Evan Willemsen, & Hu, Y. (2023). A review of ZnIn_2S_4 -based photocatalysts for producing hydrogen by water splitting under visible light: Fundamentals and recent advancements. Canadian Journal of Chemical Engineering. <https://doi.org/10.1002/cjce.25078>
2. Yulin HU, Kang KANG, Iker Zulbaran ALVAREZ, **Nasim MIA**, Aadesh RAKHRA. Simulation of o2-blown co-gasification of wood chip and potato peel for producing syngas. Front. Agr. Sci. Eng., <https://doi.org/10.15302/J-FASE-2023490>
3. **Mia, N.**, Moyna, S. A., Alam, Md. M., & Hossain, M. (2021, September 1). A Numerical Study on Effects of Buffer Layers Electron Affinity on $\text{Cu}_2\text{ZnSnS}_4$ Based Solar Cell Using SCAPS-1D. IEEE Xplore. <https://doi.org/10.1109/ICECIT54077.2021.9641180>
4. **Mia, N.**, Hossain, M., Shoriful Islam, A. K. M., Rahman, S. F., Ahmed, N., Khan, S. E., & Yasmin, F. (2021, July 1). A Hypothetical Design of Small Hydro Power Plant Using Sewage Water In The Perspective Of Dhaka City. IEEE Xplore. <https://doi.org/10.1109/ICCCNT51525.2021.9579747>
5. **Mia, N.**, Das, S., Hossain, M., & Ahmed, N. (2020, December 1). A Review on Feasibility of Solar Based Renewable Energy: A Projection Up to 2050. IEEE Xplore. <https://doi.org/10.1109/TEMSMET51618.2020.9557402>
6. Das, S., Mazumder, D., **Mia, N.**, & Rahman, S. (2020). A Review on Power Generation from Wind Power Created By Fast Moving Train Perspective Bangladesh. 2020 IEEE International Conference on Technology, Engineering, Management for Societal Impact Using Marketing, Entrepreneurship and Talent (TEMSMET). <https://doi.org/10.1109/temsmet51618.2020.9557448>

RESEARCH INTEREST

- Biofuels,
- Photocatalyst,
- Thin Films,
- Electrochemistry,
- H_2 Generation
- Green Energy,
- System Dynamics,
- Semiconductor devices,

PROFESSIONAL EXPERIENCES	<p>2023</p> <ul style="list-style-type: none"> • Research Intern at Aspin Kemp % Associates- AKA Energy System (January 2023 – Present). • Graduate Research & Teaching Assistant at University of Prince Edward Island (January 2023 – Present). <p>2022</p> <ul style="list-style-type: none"> • Assistant Teacher at Iqra Model School & College, Bangladesh (September 2021 – December 2022). <p>2021</p> <ul style="list-style-type: none"> • Mathematics and ICT Instructor at Bicolpo Education, Dhaka, Bangladesh (November 2020 – August 2021). • Undergraduate Research Assistant at Alpha Science Lab (June 2016 – December 2017).
TECHNICAL SKILLS	<ul style="list-style-type: none"> • Programming – C/C++, HTML • Simulation – SCAPS-1D, wxAMPS, MatLab, Simulink • Plotting & Circuit Design – OriginLab, Minitab, P Spice • Others – LaTeX, Mendeley, Refworks, MS Office, MS Visio
TRAINING EXPERIENCES & CERTIFICATIONS	<ul style="list-style-type: none"> • Faculty development program on ‘Modern Trends in Manufacturing Process and Control Techniques in Renewable Energy System’ organized by National Institute of Technology, Delhi, India (November 2021). • 15 days Industrial training on ‘Operation & Electrical Maintenance of Power Plant’ at Ashuganj Power Station Company Ltd(APSCL). • 21 days Industrial training on ‘Industrial Technology on Electrical Engineering & Instrumentation’ at Training Institute for Chemical Industries (TICI).
TEST SCORES	<ul style="list-style-type: none"> • IELTS <ul style="list-style-type: none"> • Overall – 7.0 • Listening – 7.0 • Reading – 7.0 • Writing – 6.5 • Speaking – 7.0
PROJECTS & PRESENTATION	<ul style="list-style-type: none"> • Research talk at ‘Shad Program-2023’, Canada. • Participated in Inter-Department Project Competition in EEE Festival 2017 & 2019. • Poster Presentation on “Improvement of Efficiency of a Solar Panel” and “Producing Electricity from Noise” at “Technival-2018” organized BY Khulna University of Engineering and Technology. • Design and implementation of 3-phase transformer.
AWARDS & ECA	<ul style="list-style-type: none"> • ‘Climate Challenge Fund-2023’ winner by the Government of Prince Edward Island. • ‘Chinese Government Scholarship-2022’ awardee, China. • ‘Nankai University Graduate Scholarship-2022’ awardee, China. • ‘Merit based Scholarship – undergraduate’ awardee, 7 of 8 semesters. • ‘General Scholarship’ at higher secondary and secondary school level. • Former Campus Organizer, Mymensingh Zone at National Debate Federation Bangladesh. • Co-founder at Prodeep (Blood Donating Society, MEC). • Organizing Member at MEC Research Community. • Member of MEC EEE’8th Soccer Team (Runner Up 2016).
REFERENCES	<div> <div> <p>Dr. Yulin Hu</p> <p>Assistant Professor,</p> <p>Faculty of Sustainable Design Engineering,</p> <p>University of Prince Edward Island, PE, Canada.</p> <p>Email: yulinhu@upe.ca</p> </div> <div> <p>Dr. Nicholas Krouglicof</p> <p>A Professor,</p> <p>Faculty of Sustainable Design Engineering,</p> <p>University of Prince Edward Island, PE, Canada.</p> <p>Email: nkrouglicof@upe.ca</p> </div> </div>