

RESUME

Dr. Md. Razu Ahmed
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Ambition

Associate Professor of Chemistry with international research experience and expertise in nanocarbon-based photocatalysis, radical chemistry, and organic transformations. Passionate about advancing fundamental and applied research through innovative catalyst design, interdisciplinary collaboration, and international partnerships. Seeking opportunities to lead high-impact research projects, attract competitive funding, mentor young researchers, and contribute to scientific innovation with meaningful societal and environmental impact.

List of Publications

1. Fahmida Akter Sahara, Shishir Kumar Dey, Md. Arafat Ali, **Md. Razu Ahmed**, Md. Hridoy Ali, Zarin Tasnim Nijhum, Md. Khairul Amin, and Sagar Kumar Dutta, Tunable Bio-Derived Bimetallic Cu–Zn/2-AA Metal Organic Framework as an Efficient Electrode Modifier for Detection of Cadmium and Dopamine, *ChemElectroChem*, **2026**, e70237.
2. **Md Razu Ahmed** and Yuta Nishina, Carbon-based photocatalysis in organic transformation. *Bulletin of the Chemical Society of Japan*, **2026**, 99, 1.
3. **Md Razu Ahmed**, Israel Ortiz Anaya, and Yuta Nishina, Investigating the Radical Properties of Oxidized Carbon Materials Under Photo-Irradiation: Behavior of Carbon Radicals and Their Application in Catalytic Reactions. *Chemical Communications*, **2024**, 60, 10544–10547.
4. **Md Razu Ahmed**, Yi Kai Cheng, and Yuta Nishina, Synthesis of Visible-Light-Responsive Nanocarbon and Application for Photocatalytic Carbon–Carbon Bond Formation, *Industrial & Engineering Chemistry Research*, **2024**, 63, 7475–7480.
5. **Md Razu Ahmed** and Yuta Nishina, Photocatalytic Dehydrogenation of N-Heterocycles Promoted by Radicals from Graphene Oxide. *Bulletin of the Chemical Society of Japan*, **2023**, 96, 568–571.
6. Mst Marium Begum, Mohammad Abdul Alim, **Razu Ahmed**, Abdullah Al Mamun, Munny Das, Rayhana Begum, Azharul Islam, Marufur Rahman Moni, Sumiya Alam, Wahida Akter, Sohanur Rahman, Rudimentary Pharmacological Inspection of the

- Ethanollic Extract of *Grewia hirsute* Vhal. *Journal of Pharmaceutical Research International* (ISSN: 2456-9119), **2021**, 33, 10-26.
7. Nasiruddin, Md. Kamruzzaman, **Md. Razu Ahmed**, Md. Anwaruzzaman, Md. Lawshan Habib, Md. Abdul Mannan, Spectrofluorimetric Determination of Bovine Serum Albumin Using Enoxacin-Aluminium (III) as a Fluorescence Probe. *American Journal of Biochemistry*, **2018**, 8, 100-105.
 8. **Ahmed MR**, Nasiruddin N, Alim MA, Jaman N, Islam MA, Begum SA, Rahman MM, Ahmed MF and Mannan MA, Facile and Rapid Synthesis of Arylidene Derivatives by Microwave Assisted NH₄OAc Catalyzed under Solvent Free Condition, *Organic Chemistry: Current Research*, **2018**, 7, 3.
 9. Arifuzzaman Rajib, A.T.M. Saiful Islam, **Md. Razu Ahmed**, Md. Tariqur Rahman, Md. Atowar Rahman and Abu Bakar Md. Ismail, Detection of Chromium (Cr) using X-ray Fluorescence Technique and Investigation of Cr Propagation from Poultry Feeds to Egg and Chicken Flesh, *American Journal of Engineering Research*, **2016**, 5, 243-247.
 10. S.A. Begum, P. Paul, **M.R. Ahmed** and M.M. Rahman, Microwave Assisted Solvent Free Knoevenagel Condensation of Aromatic Aldehyde with Ethyl cyanoacetate Catalyzed by NH₄OAc, *Journal of Science and Technology*, **2015**, 51-55.

List of Conference Presentations

1. **Md. Razu Ahmed** and Yuta Nishina “Graphene Oxide Catalyzed Photo-Catalytic Dehydrogenation by Radical Intermediate Process”, **131st Symposium on Catalysis, Catalysis Society of Japan, Kanagawa University, March 2023 (Oral presentation).**
2. **Md. Razu Ahmed** and Yuta Nishina “Photocatalytic Dehydrogenation of N-Heterocycles Promoted by Radicals from Graphene Oxide”, **42nd Symposium on Catalytic Chemistry Involving Light, Okayama University, July 2023 (Poster presentation).**
3. **Md. Razu Ahmed** and Yuta Nishina, “Synthesis of Visible Light Responsive Nanocarbon and Investigation of Radical Mechanism in the Carbon-Carbon Coupling Reaction”, **International Symposium on Catalysis and Fine Chemicals, Catalysis Society of Japan Tokyo Metropolitan University, December 2023 (Poster presentation).**
4. **Md. Razu Ahmed** and Md. Mizanur Rahman “Facile and Rapid Synthesis of Arylidene Derivatives by Microwave Assisted NH₄OAc Catalyzed under Solvent Free, **Material Science and Bioorganic Chemistry 2013, Shahjalal University of Science & Technology, Sylhet-3114, Bangladesh (Oral presentation).**
5. **Md. Razu Ahmed** and Md. Mizanur Rahman “Microwave Assisted Solvent Free Knoevenagel Condensation of Aromatic Aldehydes with Ethylcyanoacetate Catalyzed By NH₄OAc”, **Hajee Mohammad Danesh Science & Technology University, Dinajpur, 15-16 January, 2014 (Poster presentation).**

Educational Profile

- **Doctor of Philosophy (PhD) in Applied Chemistry**

Faculty of Engineering

Okayama University, Japan, 2025

PhD Thesis Dissertation: Visible-Light-Responsive Nanocarbon Catalyst for Radical-Mediated Organic Transformations.

- **Masters of Science in Chemistry (M.Sc.)**

Faculty of Science

Shahjalal University of Science & Technology, Bangladesh, 2012

M.Sc. Thesis Dissertation: Facile and Rapid Synthesis of Arylidene Derivatives by Microwave Assisted NH₄OAc Catalyzed under Solvent Free Condition.

- **Bachelor of Science in Chemistry (B.Sc.)**

Faculty of Science

Shahjalal University of Science & Technology, Bangladesh, 2010

B.Sc. Research Project: Synthesis and Characterization of Pyrimidine and its Derivatives.

Research Experience

- ❖ Photocatalytic radical-mediated organic transformations.
- ❖ Synthesis and characterization of heterocyclic compounds.
- ❖ Microwave-assisted synthesis of arylidene derivatives.
- ❖ Study of antibacterial activity.
- ❖ Practical experience in spectrometric method of analysis and chromatographic method of analysis.

Training Experience

Conducted training in Training Institute for Chemical Industries (TICI), the central training institute of BCIC, Bangladesh.

Training course on: *“Chemical Analysis & Quality control”*

Department: Analytical Chemistry & Environmental Science.

Duration: Four (4) weeks.

Date of training: 05 January, 2013 ~ 31 January, 2013.

Relevant Coursework: Quality control & productivity, industrial application of classical analysis, analysis of industrial water, quality testing methods in food & pharmaceutical industries, spectrometric method of analysis, chromatographic method of analysis, quality analysis methods in process industries, unit operation in process industries, advanced process control (basic thought), safety measures in process industry.

Instrumental Knowledge

- UV-Vis Spectrophotometer
- FTIR Spectrometer
- Polarimeter
- GC, HPLC
- Densitometer, Sound Velocity, Analyzer and Viscometer
- XRD, SEM, ESR, XPS
- Cyclic Voltammetry
- TGA & DSC

Teaching Experience

More than ten years of full-time teaching experience as a faculty member in the Department of Chemistry, Gopalganj Science and Technology University, Gopalganj-8100, Bangladesh.

Non-Academic Experience

Institution	Position	From	To
Gopalganj Science and Technology University, Gopalganj-8100, Bangladesh	Assistant Proctor	07-02-2017	16-12-2017
Gopalganj Science and Technology University, Gopalganj-8100, Bangladesh	Assistant Provost (Sheikh Rehana Hall)	17-12-2017	16-12-2020

Computer Skills

- ❖ **Application software:** Microsoft Office, Adobe Photoshop, Adobe Illustrator, Sketch up
- ❖ **Operating system:** Windows 98, XP, 7, 8, 10

Language Proficiency

- ❖ **Bangla :** First language

- ❖ **English** : Medium of Instruction

Awards & Recognition

Received “**Exceptional Progress**” Scholarship for Achieving YGPA in (3rd and 4th Year) B.Sc (Hons.) Examination in Department of Chemistry, Shahjalal University of Science & Technology, Sylhet, 3114, Bangladesh.

Extracurricular Activities

- ❖ Adequate proficiency in Seminar and Conference arrangement
- ❖ Capability with Innovation and Quick Learning
- ❖ Involvement in Social Welfare activities
- ❖ Ex-Vice President of Chemistry Society in Department of Chemistry, 2012

Dr. MD. RAZU AHMED