

Dr. PRIYANKA KALITA

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Personal Details

Date of Birth: 01-03-1994
Sex: Female
Nationality: Indian
Marital status: Unmarried
Permanent address: Majorkuri (Ramdia), P.O-Majorkuri, P.S-Hajo
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Present address: Department of Chemistry,
Bhawanipur Anchalik College, Bhawanipur
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Academic Qualification

<u><i>Examination</i></u>	<u><i>Year</i></u>	<u><i>Name of the Institute</i></u>	<u><i>University/Board</i></u>
Ph.D	2022	Department of Chemistry, Gauhati University	Gauhati University
M.Sc (Chemistry)	2017	Department of Chemistry, Gauhati University	Gauhati University
B.Sc (Chemistry)	2015	B. Borooah College	Gauhati University
H.S (Science)	2011	Cotton College	AHSEC
HSLC	2009	Sankardev Vidya Niketon Ramdia	SEBA

Professional Research Experience:

Research Associate at CSIR-IICT Hyderabad under the supervision of Dr. John Mondal for the duration of May 2022 to May 2023.

Academic Achievements

- Qualified *CSIR-UGC National Eligibility Test (NET)* organized by Council of Scientific & Industrial Research, Govt. of India. [December, 2017]
- Qualified **NE-SLET** in 2018.

Practical Experiences

- Trainee at the Scheme India Programme held at **CSIR-Indian Institute of Chemical Technology, Hyderabad** from 30 Aug, 2017 to 30 Nov, 2017.
- **M.Sc. Project (2017)**, “Adsorptive Removal Of Methylene Blue From Aqueous Solution By Modified Mesoporous Silica MCM-41” Under the supervision of Prof. Anup Kumar Talukdar, Professor, Dept. Of Chemistry, Gauhati University.
- **B.Sc. Project (2015)**, “Microwave Assisted N-formylation of Aliphatic Amines”, under the supervision of Dr. Diganta Choudhury, Asst. Professor, Dept .of Chemistry, B. Borooah College.
- **Summer Project (2015)**, “Synthesis of various peptides relevant to Alzheimer disease”, under the supervision of Prof. Bhubaneswar Mondal, Professor, Dept of Chemistry, IIT Guwahati.

Awards

1st Best Poster Presentation Award in International conference **NANO-SA-2023**, organized by ICT, Mumbai Marathwada Campus, Jalna.

Research Interest

- **Porous Materials:**
 - Design and development of Microporous, Mesoporous materials, Composite of microporous-mesoporous materials, Porous Organic Polymers (POPs) and their composite materials.
- **Heterogeneous Catalysis (Thermal and Photochemical):**
 - Thermal oxidation reactions.
 - Multicomponent reaction to produce valuable chemicals.
 - Thermal detoxification of sulfur mustards.
 - Photochemical detoxification of sulfur mustards.
 - Photochemical CO₂-reduction to value-added chemicals.

Research Experience

- **Ph.D:**

Title: Architectural Modification of Porous Materials and Catalytic Applications in Organic Reactions

Supervisor: Prof. Anup Kumar Talukdar

Institution: Department of Chemistry, Gauhati University

- **PostDoc:**

Project Title: Presenting Metalated Porous-Organic-Polymer as Next Generation Photocatalyst for Solar-Fuel Production.

Supervisor: Dr. John Mondal

Institution: CSIR-Indian Institute of Chemical Technology, Hyderabad.

Funding Agency: Council of Scientific & Industrial Research (CSIR), India.

Instrumentation and Data Analysis

- **Hands on expertise of Instruments**

- Muffle Furnace
- Thermo-Gravimetric Analysis (TGA)
- GAS Chromatography Mass Spectrometry (GC-MS)
- GAS Chromatography
- BET surface area analyser
- FT-IR analysis
- Photochemical Reactor with UV and Visible light irradiation
- UV-Visible Spectroscopy

- **Familiar with Instruments**

- X-ray Photoelectron Spectroscopy (XPS)
- Thermogravimetric Analysis (TGA)
- Powder X-ray Diffraction (PXRD)
- N₂-Adsorption/Desorption and BET analysis
- NMR Spectroscopy
- Transmission Electron Microscopy (TEM)
- Field Emission Scanning Electron Microscopy (FE-SEM)

- **Data analysis in various Software's**

- XPS data analysis using XPS Peak Fit software
- NMR data analysis with MestreNova software
- Data plotting and analysis in Origin software
- Chemical structure drawing in ChemDraw Professional software

Mentorship & Teaching Experience

M.Sc student instructor: *Department of Chemistry, Gauhati University, Assam, India*

Mentored 6 master students in research laboratories to complete their M.Sc projects.

Teaching experience: Guest Faculty at Handique Girls' College.

Conference and Symposium

- Poster presentation in International conference on ‘**NanoMaterials and Sustainable Applications**’ (NANO-SA-2023) at ICT Mumbai Marathwada Campus, Jalna in January 2023.
- Poster presentation in International Workshop on ‘**Creating Profound Impact through Multidisciplinary Collaborations**’ (CPIMC-2022) at CSIR-IICT, Hyderabad in November 2022.
- Poster presentation in **ETCS-2020 “International Conference on Emerging Trends in Chemical Sciences”** at Gauhati University in February, 2020.
- Poster presentation in National seminar on “**CHEMISTRY IN INTERDISCIPLINARY RESEARCH**” (NSCIR-2018) at Department of Chemistry, Nagaland University in November, 2018.
- Poster presentation in National conference on “**RECENT ADVANCES IN APPLIED SCIENCES (RAAS’19)**” at Department of Applied Sciences, Gauhati University in May, 2019.

Hobbies

- Traveling, Cooking and Reading.

Publication in Peer Reviewed Journals

Denotes equal contribution and *Denotes corresponding author.

- **Priyanka Kalita**, Ratul Paul, Chih-Wen Pao, Rupak Chatterjee, John Mondal*, Putting forward a Ni-metallosalphen-based porous organic polymer for detoxification of sulfur mustard gas simulant. *Chem. Commun.* **2023**, 59, 5067-5070.
- Ratul Paul, **Priyanka Kalita**[#], Duy Quang Dao, Indranil Mondal, Bishal Boro, John Mondal*, Linker Independent Regioselective Protonation Triggered Detoxification of Sulfur Mustards with Smart Porous Organic Photopolymer, *Small*, **2023**, 2302045, <https://doi.org/10.1002/sml.202302045>
- Gobinda Prasad Chutia, Sudipta Chutia, **Priyanka Kalita**, Kandarpa Phukan, Xanthium strumarium seed as a potential source of heterogeneous catalyst and non-edible oil for biodiesel production, *Biomass and Bioenergy*, **2023**, 172, 106773.
- Ratul Paul, **Priyanka Kalita**[#], Bryan M. Wong*, John Mondal* Progress and Outlook of Solar-Powered Biomass for Biorefineries: A Minireview. *Energy Fuels* **2022**, 36, 24, 14573-14583.
- Subhash Chandra Shit, Niket S Powar, **Priyanka Kalita**, Ratul Paul *et al.* Selective photocatalytic CO₂ reduction to CH₄ over metal-free porous polyimide in the solid-gas mode. *Chem. Commun.* **2022**, 58, 13716-13719.
- **Priyanka Kalita**^{*}, Doli Rani Das, Anup Kumar Talukdar*, Phosphoric Acid Functionalized Nanostructured Heterogeneous Catalyst for Multicomponent Synthesis of 2-Amino-4H-chromene. *ChemistrySelect*, **2020**, 5, 5933.

- **Priyanka Kalita**, Doli Rani Das, Debojit Hazarika, Anup Kumar Talukdar*, Catalytic activity of a microporous-mesoporous composite towards liquid phase oxidation of diphenylmethane, *New. J.Chem.* **2021**, *45*, 18947.
- Doli Rani Das, **Priyanka Kalita**, Anup Kumar Talukdar*, Ti/Cr incorporated mesoporous MCM-48 for oxidation of styrene to benzaldehyde, *J. Porous.Mater.* **27**, 893, 2020.

References

(1) Prof. Anup Kumar Talukdar (PhD Supervisor)

Professor

Department of Chemistry

Gauhati University

Guwahati-781014, Assam India

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(2) Dr. John Mondal (PostDoc Supervisor)

Senior Scientist

Catalysis & Fine Chemicals Division

Assistant Professor, Academy of Scientific & Innovative Research (AcSIR)

CSIR-Indian Institute of Chemical Technology [IICT]

Tarnaka, Hyderabad-500007, Telangana, INDIA

Email: johnmondal@iict.res.in; johncuchem@gmail.com

Declaration:

I hereby declare that the above mentioned information is correct up to my knowledge and I bear the responsibility for the correctness of the above mentioned particulars.

Dr. Priyanka Kalita