Faculty Profile

Personal Information

Name: **Dr. Arnab Bhattacharya**
Date of Birth: **03/03/1987**
Designation: **Assistant Professor**
Present Department: **Chemistry**
Contact Email: **abtask7@gmail.com**
Date of Joining: **1st July, 2025**

Academic Qualifications

Sl. No	Qualification	Institution	Year	Board/University
1	B. Ed.	Khargram College of Education	2019	WBUTTEPA
2	Ph.D. (Chemistry)	Tripura University	2017	Tripura University
3	M.Sc. (Chemistry)	Tripura University	2011	Tripura University
4	B.Sc. (Chemistry Hons.)	M.B.B. College	2004	Tripura University

Areas of Specialization

Inorganic Chemistry, Computational Chemistry, Analytical Chemistry

Subjects Taught

Inorganic Chemistry, Practical Chemistry, Physical Chemistry, Organometallics

Experience

Sl.	Institution	Designation	From - To
1	Holy Cross College Agartala	Assistant Professor	July 2025 – Present
2	M.B.B. University	Guest Teacher	Jan 2024 – June 2025
3	CSIR - CSMCRI	Postdoctoral Research Associate	Aug 2019 – August 2022
4	Tripura University	Guest Teacher	Jan 2016 – June 2019

Publications

Journals:

1. Azo-phenolate vs. carboxylate: (N, O)-Sn bonding advantage in stability and antibacterial activity of Dimethyltin(IV) explored via DFT and molecular docking. https://doi.org/10.1016/j.ica.2025.122714
2. NIR emissive dendritic fibrous nanosilica: Ultra-High adsorption and detection of the toxic sarin simulant. https://doi.org/10.1016/j.cej.2025.162135
3. Synthesis, characterization, DFT and docking studies of tributyltin(IV) complex of 2-{4-hydroxy-3-[(2 carboxyphenylimino) methyl] phenylazo} benzoic acid. https://doi.org/10.1080/00958972.2024.2384077
4. Label-free detection of unbound bilirubin and nitrophenol explosives in water by a mechanosynthesized dual functional zinc complex: Recognition of picric acid in various common organic media. https://dx.doi.org/10.1002/chem.202303068
5. Crystal structure of 2-((E)-((Z)-3-(((4-hydroxyphenyl)amino)methylene) -4-oxocyclohexa-1,5-dien-1 yl)diazenyl)benzoic acid and synthesis, spectroscopy, and DFT study of its dibutyltin(IV) complex. https://doi.org/10.1007/s10870-023-00996-y
6. Interference-free multimodal biosensing of adrenaline over other neurotransmitters: Role of 2 iminomethylenephenylboronic acid as the signal transduction unit of fluorescence and impedance. https://doi.org/10.1016/j.snb.2023.134772
7. Bridging the gap: Understanding the significance of catecholamines in neurochemistry and recent advances in their detection. http://dx.doi.org/10.57098/SciRevs.Biology.2.1.3
8. A simple, selective, and rapid detection-cum-precipitation of hazardous gold nanoparticles and their discrimination from gold(III) in environmental samples by a chromofluorogenic probe. https://doi.org/10.1016/j.snb.2022.133158
9. Affinity studies of hemicyanine-derived water-soluble colorimetric probes with reactive oxygen/nitrogen/sulfur species. https://doi.org/10.1002/cbic.202200541
10. Synthesis, structures, antioxidant, and antifungal activities of organotin(IV) complexes derived from 1-(3′-carboxyphenylhydrazono)naphthalene-2-one. https://doi.org/10.1080/00958972.2022.2155145
11. Studies on the interaction between oxido/dioxidovanadium(V) compounds and reactive oxygen species: Synthesis, characterization, and photophysical investigation. https://doi.org/10.1016/j.jinorgbio.2022.111845
12. Smartphone-assisted chromogenic sensing of halogenated solvents and monoaromatic hydrocarbons. https://doi.org/10.1016/j.dyepig.2021.109821
13. Sustaining energy systems using metal oxide composites as photocatalysts. https://doi.org/10.37357/1068/jser.2.1.02
14. A systematic review of metal oxide applications for energy and environmental sustainability. https://doi.org/10.3390/met10121604
15. Experimental and computational studies on a new mixed ligand oxido-rhenium(V) compound. https://doi.org/10.1002/jccs.201800033

16. A combination of experimental and computational studies on a new oxamido-bridged dinuclear copper(II) complex. https://doi.org/10.1016/j.molstruc.2017.05.093
17. A copper(II) complex of benzimidazole-based ligand: Synthesis, structure, redox aspects and fluorescence properties. https://doi.org/10.1080/00958972.2016.1234047
18. A new oxorhenium(V) complex with benzothiazole-derived ligand: Relative stability and global chemical reactivity indices. https://doi.org/10.1016/j.ica.2016.04.002
19. Synthesis and DFT calculations of oxido and phenylimido-rhenium(V) complexes incorporating the N, O donor ligand 2-[(2-hydroxyethylimino)methyl]phenol. https://doi.org/10.1080/00958972.2015.1113268
20. A new phenylimidorhenium(V) compound containing the 2-[(2-hydroxyethylimino)methyl]phenol Schiff base ligand: Experimental and theoretical aspects. https://doi.org/10.1080/00958972.2014.996145
21. New mixed ligand oxorhenium(V) complexes of 3-thiapentane-1,5-dithiolato with 2-thiocytosine and 5 amino-1,3,4-thiadiazole-2-thiol: Experiment and theory. https://doi.org/10.1016/j.ica.2014.10.004
22. A new trans -dioxorhenium(V) complex with 4-aminopyridine: Synthesis, structure, electrochemical aspects, DFT, and TD-DFT calculations. https://doi.org/10.1080/00958972.2014.90959
23. Copper(II) thiocyanate complexes of 2-(2-pyridinyl)-benzthiazole: Synthesis, structure, redox behavior, thermal aspects, and DFT calculations. https://doi.org/10.1080/00958972.2013.839784
24. An oxorhenium(V) Schiff-base complex: Synthesis, characterization, structure, spectroscopic and electrochemical aspects. https://doi.org/10.1016/j.ica.2013.01.018
25. An oxorhenium(V) Schiff-base complex: Synthesis, structure, spectroscopic Characterization, electrochemistry, and DFT calculations. https://doi.org/10.1080/00958972.2013.777955

Books/Chapters:

1. Bhattacharya. A et al. “Advanced Methods for the Separation and Identification of p and d block elements by Paper Chromatography” In book: A Basic Handbook of Science, Technology and Innovation for Inclusive Development [Volume: 1] (pp.40-61) Edition: 1 Chapter: 3 Publisher: International Academic Publishing House (IAPH)

Patents (Awarded):

1. Chatterjee, P. B.; Bhattacharya. A; Debnath, S; and Ghosh, R. “A Compound For Detection Of Gold Nanoparticles And Its Method Of Preparation Thereof” (Indian Patent, Application no –153NF2021)

Conferences / Seminars / Workshops Attended

Sl.	Title of Event	Organizer/Institution	Date (From – To)	Role
1	DST & ACS Workshop on Scientific Writing	CSIR-CSMCRI, Bhavnagar, Gujarat	November 15, 2019	Participant
2	National Seminar on Recent advances in natural products chemistry for drug discovery	Netaji Subhas Mahavidyalaya, Udaipur, Tripura	November 28 - 29, 2015	Presented Poster
3	UGC sponsored National Seminar on Recent trend of research in chemistry - A new horizon of hopes	Women's College, Agartala, Tripura	August 8 - 9, 2015	Presented Poster
4	Author Workshop on "How to use online resources and develop skills to write and publish"	Tripura University, Agartala, Tripura	March 25, 2015	Participant
5	Author Workshop on "Skill development to write scientific literature, quality improvement of manuscript for publication success"	Tripura University, Agartala, Tripura	November 18, 2014	Participant
6	Author Workshop on "Understanding the books & journal article publishing process"	Tripura University, Agartala, Tripura	September 26, 2014	Participant

Projects Undertaken

Sl.	Project Title	Funding Agency / Institution	Duration	Role	Outcome
1	Development of optical sensors for human body fluids biomarkers for diagnostic use	CSIR India	2019 – 2022 (3 Years)	Research Associate	Successfully Completed (2 Papers, 1 Patent)

Awards / Achievements

1. SLET NE Region 2012
2. GATE 2012

Membership in Professional Bodies

1. Life Member – The Indian Science Congress Association
2. Life Member – Tripura Chemical Society

Administrative / Academic Responsibilities

1. Head, Department of Chemistry, Holy Cross College Agartala
2. Member NAAC Criterion 7, Holy Cross College Agartala

Other Information

1. Professional programs attended: NEP 2020 Orientation & Sensitization Programme (MMC-005-2025-SEP-A-03105) 005-2025-SEP-A-03105) organized under UGC-MMTTC, Assam University, Silchar, in collaboration with Department of History & I.Q. A.C., Holy Cross College, Agartala during September 01 -11, 2025.

2. Professional Profiles:

LinkedIn: https://www.linkedin.com/in/abinitio360/

ResearchGate: https://www.researchgate.net/profile/Arnab-Bhattacharya-4

Google Scholar ID: https://scholar.google.com/citations?user=GJcbZekAAAAJ&hl=

Orchid ID: https://orcid.org/0000-0001-7949-1081