



Techno College of Engineering Agartala

An Engineering College affiliated to Tripura University (A Central University),

Approved by AICTE, MHRD, Govt. of India

Website: www.tiaedu.org

Name of the faculty: Dr. Barnali Das

Designation: Lecturer

Education: PhD in Synthetic Organic Chemistry, Tripura University

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Research Interest: Sustainable synthesis of Bis-heterocyclic compounds using $\text{FeCl}_3/\text{SiO}_2$, Ionic liquids, Amberlyte IR 120 H^+ .

Membership of professional bodies: No

Professional Experience: Currently working in TCEA

Patents: No

Publications:

1. Unsymmetrical Bis-Coumarin Based on o-Hydroxy Aldehydes and 4-Hydroxy Coumarin: Expedient Synthesis, Single Crystal X-rays and DFT Studies. **B. Das**, A. R. Paul, U. C. De, B. Paul, R. Natarajan, S. Chakraborty, and S. Majumdar, *ChemistrySelect* 2023, **8**, e20230323. (**Publisher: Wiley-VCH, Impact Factor: 2.0**)
2. An elegant approach for the synthesis of multi-substituted imidazole via $\text{FeCl}_3/\text{SiO}_2$ catalyzed activation of acetals: a photophysical study of an imidazole–carbazole hybrid. **B. Das**, A. Bhattacharyya, B. Paul, R. Natarajan and S. Majumdar, *RSC Adv.*, 2024, **14**, 33512. (**Publisher: Royal Society of Chemistry, Impact Factor: 4.6**)
3. H-Bond Driven Solvent-Free Rapid Access of β -enamino Esters/ Ketones using 230-400 Mesh Silica Gel as a Catalyst. K. Das, **B. Das**, B. Paul, R. Natarajan and S. Majumdar, *Silicon*, 2024, **16**, 967. (**Publisher: Springer Science, Impact Factor: 2.8**)
4. Light emissions of ratiometric aliphatic redox polymer from canonical, anion, and anion-aggregate: Reduction-associated naked eye detections of Hg(II) , Fe(III) , and Cu(II) . J. S. Deb Roy, M. Deb, M. D H. Sanfui, N. Hassan, S. Roy, D. Chowdhury, **B. Das**, M. Rahaman, N. N. Ghosh, M. Chang, S. Majumdar, P. K. Chattopadhyay and N. R. Singha, *Eur. Polym. J.*, 2024, **206**, 112754. (**Publisher: Elsevier, Impact Factor: 6.04**)
5. $\text{FeCl}_3/\text{SiO}_2$ catalyzed bis-indolylolation of acetal and ketal: A highly atom economic approach to selective deprotection of protected carbohydrate. **B. Das**, K. Das, U. C. De, and S. Majumdar, *RSC Adv.*, 2025, **15**, 5523. (**Publisher: Royal Society of Chemistry, Impact Factor: 4.6**)
6. Metal-free access to 4-indolyl coumarin from coumarin 3-carboxylic acid and indole via Micheal addition-decarboxylation and dehydrogenation protocol: A photo-physical study and utility as invisible





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ink. S. Chakraborty, **B. Das**, B. Paul, A. Bhattacharyya, R. Natarajan, and S. Majumdar, *RSC Adv.*, 2025, 15, 37888. (**Publisher: Royal Society of Chemistry, Impact Factor: 4.6**)

Publishes Journal/ Conference papers/ Book/ Book Chapters : No

Achievements (if any): Pyari Mohan Lavanya Prabha-Best Research Scholar Award 2024

Hobbies: Painting and Singing