

CURRICULAM VITAE

Dr. Tapas Das

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ACADEMIC

B.Sc. (Chemistry Honours): Vidyasagar University (2005)

M.Sc. (Organic chemistry): Vidyasagar University (2007)

(NET-CSIR-JRF 2007, GATE-2007)

Ph.D : Indian Institute of Technology, Kharagpur (2012)

(Mentor: **Professor Samik Nanda**)

Title of the Thesis: “Asymmetric Synthesis of (+)-Chloriolide, (-)-Achaetolide, Stagonolide-E and Stagonolide-B”.

PROFESSIONAL EXPERIENCE

Post Doctoral Research:

1. Post-doctoral research From **January, 2014 to July, 2015** with **Prof. Vinod Kumar Singh, Director, IISER Bhopal**.
Field of research: Enantioselective synthesis by using various organo and metal catalyst
2. Post-Doctoral fellow from **January 2016 to December 2016** at Hanyang University, Seoul, South Korea, with **Prof. Cheon-G. Cho** in the field of **total synthesis of bioactive natural products**.

Working experience:

1. From **September, 2012-2013**: Worked as a Post doctoral trainee at **GlaxoSmith Kline, North Carolina, USA in HIV-DPU** (discovery processing unit).
Field of research: Small molecule drug discovery research focused on finding therapeutic agents to treat HIV/AIDS.
2. **March 2017- May 2018**: Worked at TCG Lifesciences Kolkata, India as a Research Scientist.
3. **June 2018-Present**: Assistant Professor in the Department of Chemistry, NIT Jamshedpur.

RESEARCH INTEREST

- Chemoenzymatic Asymmetric Synthesis.
- Enantioselective synthesis by organo and metal catalyst.
- Bioactive Natural Products
- Total Synthesis

SPONSORED PROJECT:

Agency : SERB-DST (2020-2022)

(Principal Investigator)

Title of the project: Enantioselective desymmetrization of cyclopentendione via [4+2] cycloaddition: Synthesis of highly functionalized alkaloid and terpenoids core structure.

LIST of PUBLICATIONS

1. T. Das* “Desymmetrization of Cyclopentene-1,3-Diones via Alkylation, Arylation, Amidation and Cycloaddition Reactions”. *Chemistry Select*, 2020, 5, 14484-14509.
2. M. Sau, K. Verma, T. Das* “Synthesis of N-heterocycles via [4 + 3] cycloaddition of azomethine imine”. *Journal of Heterocyclic Chemistry*, 2020, 57, 3722-3734.
3. T. Das,* M. Sau, B. Daripa, D. Karmakar, S. Chakraborty. “[3+3] Cycloaddition of Azomethine Imine: Synthesis of Bior Tricyclic N-Heterocycle”. *Chemistry Select*, 2020, 5, 7605-7626.
4. S. K. Manna, T. Das, S. Samanta. “Polycyclic Benzimidazole: Synthesis and Photophysical Properties”. *Chemistry Select*, 2019, 4, 8781-8790.
5. S. A. Ali, S. K. Mondal, T. Das, S. K. Manna, A. Bera, D. Dafadar, S., Naskar, M. R. Molla, S. Samanta. One-pot tandem cyclisation to pyrrolo[1,2-a][1,4]-benzodiazepines: a modified approach to the Pictet–Spengler reaction. *Organic & Biomolecular Chemistry*, 2019, 17, 4652-4662.
6. Park J., Kim D-H., Das T. and Cho C-G. Intramolecular Fischer indole synthesis for the direct synthesis of 3,4-fused tricyclic indole and application to the total synthesis of (-)-aurantioclavine. *Org. Lett.*, 2016, 18 (19), 5098-5101
7. Das T., Kayet A., Mishra R. and Singh V. K., Highly Fluorescent 1,2-Dihydropyrimido[1,6- α]indole: An efficient metal free Synthesis and Photophysical Study. *Chem. Commun.*, 2016, 52, 11231-11234

8. Das T., Saha P. and Singh V. K., Silver(1)-Ferrophox Catalized Enantioselective Desymmetrization of Cyclopentenedione; Synthesis of Highly Substituted Bicyclic Pyrrolidines, *Org. Lett.* **2015**, *17* (20), **5088-5091**.
9. Rej R.K., Das T., Hazra S. and Nanda S., Chemoenzymatic Asymmetric Synthesis Fluoxetine, Atomoxetine, Nisoxetine, and Duloxetine, *Tetrahedron:Asymmetry* **2013**, *24*, **913-918**.
10. Das T., Mahapatra T. and Nanda S., Total Synthesis of Stagonolide-B, *Tetrahedron Lett.* **2012**, *53*, **1186-1189**.
11. Das T. and Nanda S. Chemoenzymatic Total Synthesis of Stagonolide-E, *Tetrahedron Lett.* **2012**, *53*, **256-258**.
12. Mahapatra T., Das T. and Nanda S., Asymmetric Synthesis of Stagonolide-D and Stagonolide-G, *Bulletin of the Chemical Society of Japan* **2011**, *84*, **511-519**.
13. Das T., Bhuniya R. and Nanda S., First Asymmetric Synthesis of Achaetolide, *Tetrahedron: Asymmetry* **2010**, *21*, **2206-2211**.
14. Das T., Jana N. and Nanda S., Asymmetric Synthesis of (+)-Chloriolide, *Tetrahedron Lett.* **2010**, *51*, **2644-264**.
15. Bhunya R., Jana N., Das T. and Nanda, S. *Prunus Armenica* Lyase (ParHNL) Catalyzed Asymmetric Synthesis of δ,ϵ -Unsaturated Cyanohydrins, *Synlett* **2009**, *8*, **1237-1240**.
16. Mahapatra T., Das T. and Nanda, S., Enantioselective Enzymatic Desymmetrization of Prochiral 1,3-diols and Enzymatic Resolution of Monoprotected 1,3-diols Based on α -tetralone and Related Multifunctional Scaffolds, *Tetrahedron: Asymmetry*, **2008**, *19*, **2497-2507**.

POSTER IN CONFERENCE

1. Sixth One Day National Symposium in Chemistry held in the department of Chemistry, Indian Institute of Technology, Kharagpur, India (November 8, 2008). Topic of the presented **poster**: “*White biotechnology: Biocatalysis using enzyme & microorganism, synthesis of natural products and fine chemicals*”.
2. First Research Scholars’ Day Symposium in Chemistry held in the department of Chemistry, Indian Institute of Technology, Kharagpur, India (14th September, 2009). Topic of presented **poster** entitled “*Application of Enzyme in Asymmetric Organic Synthesis*”.
3. Second Research Scholars’ Day Symposium in Chemistry held in the department of Chemistry, Indian Institute of Technology, Kharagpur, India (14th September, 2010). Presented **poster** on the topic entitled “*Exploring enzymatic catalysis: Application towards synthesis of natural products and alike*”.
4. **Sixth J-NOST Conference** held at School of Chemistry, University of Hyderabad, India (28th -31st January, 2011). Presented **poster** on the topic entitled “*Asymmetric Synthesis of (+)Chloriolide*”.
5. Participated in **14th CRSI National Symposium in Chemistry (NSC-14)** held at National Institute of Interdisciplinary Science and Technology (CSIR-NIIST), Thiruvananthapuram, India (3-5 February, 2012).

COURSE TAUGHT

PG: Retrosynthesis and reaction mechanism (M.Sc), Supramolecular chemistry (M.Sc.) Surface Science and Engineering (M.Tech.).

UG: Engineering Chemistry (B.Tech.)

MSc. PROJECT SUPERVISION

1. Mr. Dipanjan Karmakar (2018-19)
2. Mr. Kshitiz Verma (2018-19)
3. Mr. Bishnu Daripa (2019-2020)
4. Sayan Chakraborty (2019-2020)