

Curriculum Vitae

Personal Details

Dr. Togati Naveen

Assistant Professor

Department of Chemistry

SVNIT Surat -395007

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Date of Birth: 11th July 1987

DOJ: 31-09-2019

Nationality: Indian

Marital Status: Married



Academic Profile

2017-2019 SERB-NPDF, CSIR-IICT Hyderabad, Hyderabad [**Advisor: Dr. Rajender Reddy**]

2016 Aug-Dec Research Associate, IIT Bombay, Mumbai

2011-2016 **Ph. D in Catalysis and Synthetic Methodology, IIT Bombay, Mumbai**

Thesis title: Transition Metal Mediated C-H Functionalization Towards Heterocycles Synthesis [**Supervisor: Prof. Debabrata Maiti**]

2009-2011 Lecturer, Narayana IIT Academy, Hyderabad (2 years)

2007-2009 Master of Science in Organic Chemistry (First Class with 66.87%), Kakatiya University, Warangal

2004-2007 Bachelor of Science with Honors in Chemistry, Mathematics and Physics (First Class with Distinction 83.05%), Kakatiya University, Warangal

Expertise and Skills

- ❖ Expertise with the synthesis, purification, characterization of various organic compounds in gram and milligram scale
- ❖ Performing Deuterium and other labelling studies
- ❖ Reaction monitoring and evaluating the kinetic data with the help of NMR and GC
- ❖ Well versed with modern synthetic organic techniques, transformations and stereochemistry
- ❖ Robust knowledge in spectroscopy: NMR (1D and 2D: COSY, HSQC, HMBC, NOESY, etc.), GC, GC-MS, LC-MS, HPLC, UV-VIS & FT-IR instruments
- ❖ Dexterous in separation techniques: Fractional Distillation, Vacuum Distillation Column Chromatography, Flash Chromatography & Thin Layer Chromatography

- ❖ Experience in synthesis and handling of highly air and moisture sensitive compounds using glove box and schlenk line

Research Interests

- ❖ Metal Catalyzed C–H Functionalization Using Transient Directing Groups
- ❖ Heterocycles Synthesis *via* C–H Functionalization
- ❖ Metal Catalyzed Functionalization of Unactivated sp³ C–H Bonds
- ❖ Photoredox Catalysis
- ❖ Hypervalent Iodine Chemistry
- ❖ Metal free C–H Functionalization

Research Highlights

- ❖ H-index = **12**
- ❖ Publications = **15**
- ❖ Patents = **1 (granted)**
- ❖ Citations = **958**
- ❖ Google Scholar id: <https://scholar.google.co.in/citations?user=Iaya5t4AAAAJ&hl=en>

Teaching Areas

- ❖ Synthetic Organic Chemistry (Reaction Mechanism; Reaction Intermediates; Named Organic Reactions)
- ❖ Stereochemistry; Reagents in Organic Synthesis
- ❖ Pericyclic Reactions; Organic Photochemistry
- ❖ Heterocyclic Chemistry
- ❖ Cross Coupling Reactions (Heck, Suzuki, Negishi, Stille etc.)
- ❖ Spectroscopic Techniques (NMR, IR, UV-VIS, Mass Spectrometry, GC and GC-MS & HPLC)
- ❖ Analytical Chemistry
- ❖ Organometallic Chemistry; Engineering Chemistry

Awards and Honors

- ❖ 2011 Qualified National Eligibility Test (**NET-2011**) conducted by University Grants Commission(UGC) and Council of Scientific and Industrial Research (CSIR), New Delhi, India.
- ❖ Awarded with **Junior Research Fellowship** by Council of scientific and Industrial research (CSIR-JRF), Govt. of India by 2011-2013.
- ❖ Awarded with **Senior Research Fellowship** by Council of scientific and Industrial research (CSIR-SRF), Govt. of India by 2013-2016.

❖ Awarded with **National Post Doctoral Fellowship** by Science and Engineering Research Board, Govt. of India by 2017-2019

Publications

1. **Togati Naveen*** Transition Metal-Catalyzed Synthesis of *N*, *O*-Heterocycles via C–H Functionalization *Tetrahedron* 2021, 84 132025
2. Ramaiah Konakanchi, Geetha Swarupa Pamidimalla, Jyothi Prashanth, **Togati Naveen**, Laxma Reddy Kotha* Structural elucidation, Theoretical investigation, Biological screening and Molecular docking studies of metal(II) complexes of NN donor ligand derived from 4-(2-aminopyridin-3-methylene)aminobenzoic acid *Biometals* 2021 (<https://doi.org/10.1007/s10534-021-00293-1>)
3. **Togati Naveen**, Arghya Deb and Debabrata Maiti* Copper/P(*t*-Bu)₃-Mediated Regiospecific Synthesis of Fused Furans and Naphthofurans. *Angew. Chem. Int. Ed.*, 2017, 56, 1111. **(Impact Factor: 12.2)**
4. Upendra Sharma, **Togati Naveen**, Arun Maji, Srimanta Manna and Debabrata Maiti* Palladium- Catalyzed Synthesis of Benzofurans and Coumarins from Phenols and Olefins. *Angew. Chem. Int. Ed.*, 2013, 52, 12669. **(Impact Factor: 12.2)**
5. **Togati Naveen**, Rajesh Kancharla and Debabrata Maiti* Radical Based Strategy towards the Synthesis of 2,3-Dihydrofurans from Aryl ketones and Aromatic olefins. *Org. Lett.*, 2014, 16, 5446. **(Impact Factor: 6.49)**
6. **Togati Naveen**, Soham Maity, Upendra Sharma and Debabrata Maiti* A Predictably Selective Nitration of Olefin with Fe(NO₃)₃ and TEMPO. *J. Org. Chem.*, 2013, 78, 5949. **(Impact Factor: 4.8)**
7. Upendra Sharma, Rajesh Kancharla, **Togati Naveen**, Soumitra Agasti and Debabrata Maiti* Palladium-Catalyzed Annulation of Diarylamines with Olefins through C–H Activation: Direct Access to *N*-Arylindoles. *Angew. Chem. Int. Ed.* 2014, 53, 11895. **(Impact Factor: 12.2)**
8. Soham Maity, Srimanta Manna, Sujoy Rana, **Togati Naveen**, Arjit Mallick and Debabrata Maiti* Efficient and Stereoselective Nitration of Mono- and Disubstituted Olefins with AgNO₂ and TEMPO. *J. Am. Chem. Soc.*, 2013, 135, 3355. **(Impact Factor: 14.6)**
9. Atanu Modak, **Togati Naveen** and Debabrata Maiti* An Efficient Dehydroxymethylation Reaction by a Palladium Catalyst. *Chem. Commun.*, 2013, 49, 252. **(Impact Factor: 6.29)**
10. Soham Maity, **Togati Naveen**, Upendra Sharma and Debabrata Maiti* Stereoselective Nitration of Olefins with *t*-BuONO and TEMPO: Direct Access to Nitroolefins under Metal-free Conditions. *Org. Lett.*, 2013, 15, 3384. **(Impact Factor: 6.49)**

11. Rajesh Kancharla, **Togati Naveen** and Debabrata Maiti* Palladium-Catalyzed (3+3) Annulation Between Diarylamines and α , β -Unsaturated acids Through C–H Activation: Direct Access to 4-Substituted-2-quinolinones. *Chem. Eur. J.* 2015, 21, 8360. **(Impact Factor: 5.16)**
12. Rajesh Kancharla, **Togati Naveen** and Debabrata Maiti* Divergent Reactivity in Palladium-Catalyzed Annulation with Diarylamines and α , β -Unsaturated acids: Direct Access to Substituted 2-Quinolinones and Indoles. *Chem. Eur. J.* 2015, 21, 8723. **(Impact Factor: 5.16)**
13. Soham Maity, **Togati Naveen**, Upendra Sharma and Debabrata Maiti* Efficient and Stereoselective Nitration of Mono- and Disubstituted Olefins with AgNO₂ and TEMPO. *Synlett.*, 2014, 25, 603. **(Impact Factor: 2.369)**
14. Soumitra Agasti, Upendra Sharma, **Togati Naveen** and Debabrata Maiti* Orthogonal Selectivity with Cinnamic acids in 3-Substituted Benzofuran Synthesis through C–H Olefination of Phenols. *Chem. Commun.*, 2015, 51, 5375. **(Impact Factor: 6.29)**
15. Tuhin Patra, Rahul Watile, Soumitra Agasti, **Togati Naveen** and Debabrata Maiti* Sequential *meta*-C–H Olefination of Synthetically Versatile Benzyl Silanes: Effective Synthesis of *meta*-Olefinated Toluene, Benzaldehyde and Benzyl Alcohols. *Chem. Commun.*, 2015, 52, 2027. **(Impact Factor: 6.29)**

Participation in Courses/ Conferences/Workshop/STTP in India/Abroad

- ❖ Attended 3rd Indo-German Symposium “Frontiers In Chemistry” held at IIT Bombay [Sep 2011]
- ❖ Attended National symposium on “New Horizons In Chemistry” held at IIT Bombay [Oct 2011]
- ❖ Attended ACS Symposium held at IIT Bombay [Oct 2012]
- ❖ Poster entitled “Palladium-Catalyzed Synthesis of Benzofurans and Coumarins from Phenols and Olefins” in 16th CRSI National Symposium In Chemistry held at IIT Bombay [Feb 2014]
- ❖ Poster entitled “Palladium-Catalyzed Annulation of Diarylamines with Olefins through C–H Activation: Direct Access to *N*-Arylindoles” in 10th NOST Conference for research scholars (J-NOST-2014), held at IIT Madras, Madras, INDIA [Dec 2014]
- ❖ Attended ACS on Campus held at IIT Bombay [Jan2016]
- ❖ Attended 21st International Conference on Organic Synthesis held at IIT Bombay [Dec 2016]
- ❖ Attended Virtual international conference on Molecules to Materials – 2020 (MTM-2020) held at SVNIT Surat [Dec 2020]

- ❖ Attended **Virtual International Conference on Chemical Sciences in Sustainable Technology and Development (IC2S2TD-2020)** held at SVNIT Surat [Dec 2020]
- ❖ Attended **Virtual Symposium on Organometallic Chemistry and Catalysis** IIT-Kanpur/LCC-CNRS joint CEFIPRA/IFCPAR held at IIT Kanpur [Dec 2020]
- ❖ Delivered an Invited talk on “Palladium-Catalyzed Synthesis of *N,O*-Heterocycles *via* C–H Functionalization” at “**Virtual international conference on Emerging Trends In Medicinal Chemistry – 2021 (ETMC – 2021)**” Organized by Department of Chemistry, SVNIT Surat [Mar 2021]

Organization of Courses/ Conferences/Workshop/STTP

1. One week STTP on “**Advanced Analytical Techniques in Chemistry (AATC-2020)**” Organized at Department of Chemistry, SVNIT Surat [Role: **Coordinator**]
2. Two days “**Virtual International Conference on Physical Sciences (ICPS-2021)**” Organized at Department of Chemistry, SVNIT Surat [Role: **Organizing Secretary**]

Patents Granted

1. **Title:** Palladium Catalyzed Synthesis of Benzofurans and Coumarins Using Phenol or Substituted Phenols
Inventors: Upendra Sharma, **Togati Naveen**, Debabrata Maiti
Patent No. 299110 [**20 years**]
Award Date: 24/07/2018
Country: India

Research Projects

1. Research project entitled “Synthesis of Heterocycles *via* Multiple C–H Bond Activation: An Approach towards Synthesis of Biologically Active Drugs” **DST-SERB-NPDF (19.2 Lakh)**, Project No.: **PDF/2016/002207/CS**, Role: **Principal Investigator**, Status: **Completed**
2. Research project entitled “Strategies for the Heterocycles Synthesis: Art of Contriving Molecules *via* C–H Bond Activation” **SVNIT Seed Grant (10 Lakh)**, Project No.: **2020-21/seed money/29**, Role: **Principal Investigator**, Status: **Ongoing**
3. Research project entitled “Synthesis of Biologically Active Heterocyclic Drug Cores *via* Multiple C–H Bond Activation” **Council of Scientific & Industrial Research (CSIR) under EMR-II**. Project No.: **02/(1320)/20/EMRII**, Role: **Principal Investigator**, Status: **Proposal has been accepted for funding.**

Ph. D Students



Bhargav Desai [FRS]

Qualified: UGC – JRF - 2019



Monak Patel [FIR]

**Qualified: CSIR- NET - 2021
GATE - 2021**



Arti Ramani [FIR]

Qualified: GATE - 2020