

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

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

- ❖ Green Chemistry [Microwave reactions, On-water reactions, Fe, Cu, Zn, Mn, Co catalysis]
- ❖ Heterocycles Synthesis *via* C–H Functionalization
- ❖ Organic Synthesis
- ❖ Photoredox Catalysis
- ❖ Hypervalent Iodine Chemistry
- ❖ Metal free C–H Functionalization

Research Highlights

- ❖ H-index = **12**
- ❖ Publications = **20**
- ❖ Patents = **1 (granted)**
- ❖ Citations = **1102**
- ❖ 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
- ❖ Spectroscopic Techniques (NMR, IR, UV-VIS, Mass Spectrometry, GC and GC-MS & HPLC)
- ❖ 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. Arti Ramani, Bhargav Desai, Monak Patel, and **Togati Naveen*** Recent advances in the functionalization of terminal and internal alkynes. *Asian J. Org. Chem.*, **2022**, DOI: <https://doi.org/10.1002/ajoc.202200047> (**Impact Factor: 3.3**)
2. Aniruddha Paik, Sabarni Paul, Sabyasachi Bhowmik, Rahul Das, **Togati Naveen*** and Sujoy Rana* Recent Advances in First-Row Transition-Metal-Mediated C–H Halogenation of (Hetero)arenes and Alkanes. *Asian J. Org. Chem.*, **2022**, DOI: <https://doi.org/10.1002/ajoc.202200060> (**Impact Factor: 3.3**)
3. Monak Patel, Bhargav Desai, Aakash Sheth, Bharatkumar Z. Dholakiya and **Togati Naveen*** Recent Advances in Mono and Difunctionalization of Unactivated Olefins. *Asian J. Org. Chem.*, **2021**, DOI: <https://doi.org/10.1002/ajoc.202100666> (**Impact Factor: 3.3**)
4. Bhargav Desai, Monak Patel, Bharatkumar Z. Dholakiya, Sujoy Rana* and **Togati Naveen*** Recent Advances in Directed sp² C–H Functionalization Towards Synthesis of N–Heterocycles and O–Heterocycles. *Chem. Commun.*, 2021, 57, 8699–8725 (**Impact Factor: 6.22**)
5. Monak Patel, Bhargav Desai, Arti Ramani, Bharatkumar Z. Dholakiya and **Togati Naveen*** Recent Developments in the PalladiumCatalyzed/Norbornene-Mediated Synthesis of Carbo- and Heterocycles. *ChemistrySelect* 2021, 6, 8085–8106. (**Impact Factor: 2.1**)
6. **Togati Naveen*** Transition Metal-Catalyzed Synthesis of N, O–Heterocycles via C–H Functionalization *Tetrahedron* 2021, 84, 132025 (**Impact Factor: 2.6**)
7. 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 *Biomaterials* 2021 (<https://doi.org/10.1007/s10534-021-00293-1>)
8. **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: 15.3**)
9. 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: 15.3**)
10. **Togati Naveen**, Rajesh Kancherla 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**)
11. **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**)
12. Upendra Sharma, Rajesh Kancherla, **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: 15.3**)
13. Atanu Modak, **Togati Naveen** and Debabrata Maiti* An Efficient Dehydroxymethylation Reaction by a Palladium Catalyst. *Chem. Commun.*, 2013, 49, 252. (**Impact Factor: 6.22**)

14. 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: 15.4)
15. 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)
16. 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: 5.2)
17. 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: 5.2)
18. 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)
19. 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: 6.22)
20. 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: 6.22)

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

Ph. D and Project Students



Bhargav Desai [FRS]
Qualified: UGC-JRF-2019
GATE-2020



Monak Patel [FRS]
Qualified: CSIR- JRF- 202
GATE - 2021



Arti Ramani [FIR]
Qualified: GATE - 2019



Piyush Satani [JRF]
Qualified: GATE-2020



Akshay Bharodiya [FIR]
Qualified: GATE-2020

M.Sc. Dissertation Students



Neha Deshpande
(I17CY011)



Sunitha Malothu
(I17CY025)