

Curriculum Vitae

Personal Details

Dr. Togati Naveen

Assistant Professor

Department of Chemistry

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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 HeterocyclesSynthesis [**Supervisor: Prof. Debabrata Maiti**]

2009-2011 Lecturer, Narayana IIT Acadamy, 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 (FirstClass with Distinction 83.05%), Kakatiya University, Warangal

Expertise and Skills

- ❖ Expertise with the synthesis, purification, and characterization of various organic compounds on gramand milligram scale
- ❖ Performing Deuterium and other labeling studies
- ❖ Reaction monitoring and evaluating the kinetic data with the help of NMR and GC
- ❖ Well-versed in 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: ColumnChromatography, Flash Chromatography & Thin Layer Chromatography

- ❖ Experience in synthesis and handling of highly air and moisture-sensitive compounds using glovebox 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 = **17**
- ❖ Publications = **37**
- ❖ Patents = **1 (granted)**
- ❖ Citations = **1585**
- ❖ Orcid Id: <https://orcid.org/0000-0003-3424-4348>
- ❖ Google Scholar Id: <https://scholar.google.com/citations?user=cQzxV5kAAAAJ>

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 the University Grants Commission (UGC) and Council of Scientific and Industrial Research (CSIR), New Delhi, India.
- ❖ Awarded with **Junior Research Fellowship** by the Council of Scientific and Industrial Research (CSIR-JRF), Govt. of India 2011-2013.
- ❖ Awarded with **Senior Research Fellowship** by the Council of Scientific and Industrial Research (CSIR-SRF), Govt. of India 2013-2016.
- ❖ Awarded with **National Post-Doctoral Fellowship** by Science and Engineering Research Board, Govt. of India by 2017-2019.

Publications

1. Desai Bhavyesh; Sudha Soliya; Ramaiah Konakanchi; Eeshwaraiah Begari; Kashamalla Chinna Ashalu; **Togati Naveen*** The Recent Advances in Iron-Catalyzed C(sp³)-H Functionalization. *Chemistry – An Asian Journal.*, 2024 DOI: [10.1002/asia.202301056](https://doi.org/10.1002/asia.202301056) (Impact Factor: 4.5)
2. Monak Patel; Nitish Kumar; Hussain Bhukya; Bharatkumar Z. Dholakiya; **Togati Naveen*** Copper-catalyzed ortho-thiocyanation of aromatic amines. *Organic & Biomolecular Chemistry.*, 2024 DOI: [10.1039/D4OB00137K](https://doi.org/10.1039/D4OB00137K) (Impact Factor: 3.98)
3. Arti Ramani; Desai Bhavyesh; Mani Kanta Koppolu; Kashamalla Chinna Ashalu; Eeshwaraiah Begari; **Togati Naveen*** An Efficient Synthesis of α -Sulfonamide Phosphonates through Metal-Free Three-Component Reaction. *Asian J. Org. Chem.*, 2024, DOI: [10.1002/ajoc.202400100](https://doi.org/10.1002/ajoc.202400100) (Impact Factor: 3.3)
4. Monak Patel; Desai Bhavyesh; Nitish Kumar; Hussain Bhukya; Bharatkumar Z. Dholakiya; **Togati Naveen*** Microwave-Assisted Cross-Coupling of Nitroarenes with Aryl Boronic Acids. *Asian J. Org. Chem.*, 2024, DOI: [10.1002/ajoc.202400064](https://doi.org/10.1002/ajoc.202400064) (Impact Factor: 3.3)
5. Sudha Soliya; Ketan Kuperkar; Kashamalla Chinna Ashalu; **Togati Naveen*** Catalyst-Free Three-Component Synthesis of α -Amino Phosphonates. *Asian J. Org. Chem.*, 2024, DOI: [10.1002/ajoc.202300572](https://doi.org/10.1002/ajoc.202300572) (Impact Factor: 3.3)
6. Bhargav Desai; Akshay Bharodiya; Mani Kanta Koppolu; Hussain Bhukya; Bharatkumar Dholakiya; **Togati Naveen*** Microwave-Assisted Copper-Catalyzed Synthesis of 1-Aryl Benzotriazole 3-Oxides *ChemistrySelect* 2024, DOI: [10.1002/slct.202402038](https://doi.org/10.1002/slct.202402038) (Impact Factor: 2.3)
7. Akshay Bharodiya; Bhargav Desai; Bhavyesh Desai; Areti Sivaih; Eeshwaraiah Begari; **Togati Naveen*** Microwave-Assisted Catalyst-Free Conjugate Addition of Amines to Maleimide *ChemistrySelect* 2024, DOI: [10.1002/slct.202401108](https://doi.org/10.1002/slct.202401108) (Impact Factor: 2.3)
8. A. Ramani, R. S. Patil, H. Bhukya and **Togati Naveen*** Copper-Catalyzed N, N-Alkyl Formylation of Sulfonamides *Asian J. Org. Chem.*, 2023, DOI: <https://doi.org/10.1002/ajoc.202300336> (Impact Factor: 3.3)
9. Bhargav Desai, Piyushkumar Satani, Rachit S. Patil, Hussain Bhukya, **Togati Naveen*** Microwave-Assisted Metal-Free C(sp²)-H Thiocyanation of Aromatic Amines. *ChemistrySelect* 2023, DOI: [10.1002/slct.202302849](https://doi.org/10.1002/slct.202302849) (Impact Factor: 2.3)
10. Bhargav Desai, Rachit S. Patil, Hussain Bhukya, Bharatkumar Z. Dholakiya, **Togati Naveen*** Copper-Catalyzed Synthesis of Diaryl Sulfones via Cross-Coupling of Boronic Acids and p-Toluenesulfonyl Hydrazide. *ChemistrySelect* 2023, DOI: [10.1002/slct.202301681](https://doi.org/10.1002/slct.202301681) (Impact Factor: 2.3)
11. Monak Patel, Siddhant Sharma, Hussain Bhukya, B. Z. Dholakiya, and **Togati Naveen*** Iron-catalyzed N, N-formyl ethylation of amines. *Asian J. Org. Chem.*, 2023, DOI: <https://doi.org/10.1002/ajoc.202300237> (Impact Factor: 3.3)
12. Akshay Bharodiya, Bhargav Desai, Rachit S. Patil, Hussain Bhukya, Areti Sivaiah, **Togati Naveen*** Microwave-Assisted Silver-Catalyzed Synthesis of Biaryl Compounds. *ChemistrySelect* 2023, DOI: [10.1002/slct.202301848](https://doi.org/10.1002/slct.202301848) (Impact Factor: 2.3)
13. Bhargav Desai, Uppuluru Ajay, Ashutosh Dey, Neha Deshpande, Bharatkumar Z. Dholakiya, Akella Sivaramakrishna, **Togati Naveen*** and Kishor Padala* The recent advances in cobalt-catalyzed C(sp³)-H functionalization reactions. *Organic & Biomolecular Chemistry.*, 2023 DOI: <https://doi.org/10.1039/D2OB01936A> (Impact Factor: 3.98)
14. Nidhi G. Savani, **Togati Naveen**, Bharatkumar Z. Dholakiya, A review on the synthesis of maleic anhydride-based polyurethanes from renewable feedstock for different industrial applications *Journal of Polymer Research* (2023) 30:175 DOI: <https://doi.org/10.1007/s10965-023-03543-7> (Impact Factor: 3.1)

15. Neha Deshpande, Piyushkumar Satani, Akshay Bharodiya and **Togati Naveen*** Recent advances in copper catalyzed functionalization of unactivated C(sp³)-H bonds. *Asian J. Org. Chem.*, **2022**, DOI: <https://doi.org/10.1002/ajoc.202200532> (**Impact Factor: 3.3**)
16. Arti Ramani, Bhargav Desai, B. Z. Dholakiya and **Togati Naveen*** Recent advances in visible-light mediated functionalization of olefins and alkynes using copper catalysts. *Chem. Commun.*, **2022**, 58, 7850-7873. (**Impact Factor: 6.22**)
17. Monak Patel, Uppuluru Ajay, Kishor Padala* and **Togati Naveen*** The recent advances in cobalt-catalyzed functionalization of unactivated olefins. *Asian J. Org. Chem.*, **2022**, DOI: <https://doi.org/10.1002/ajoc.202200201> (**Impact Factor: 3.3**)
18. 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**)
19. 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**)
20. 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**)
21. 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**)
22. 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**)
23. **Togati Naveen*** Transition Metal-Catalyzed Synthesis of N, O-Heterocycles via C-H Functionalization *Tetrahedron* **2021**, 84, 132025 (**Impact Factor: 2.6**)
24. 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>)
25. **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. (**ImpactFactor: 15.3**)
26. Upendra Sharma, **Togati Naveen**, Arun Maji, Srimanta Manna and D. Maiti* Palladium- Catalyzed Synthesis of Benzofurans and Coumarins from Phenols and Olefins. *Angew. Chem. Int.Ed.*, **2013**, 52, 12669. (**Impact Factor: 15.3**)
27. **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**)
28. **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**)
29. 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**)
30. Atanu Modak, **Togati Naveen** and Debabrata Maiti* An Efficient Dehydroxy methylation Reaction by a Palladium Catalyst. *Chem. Commun.*, **2013**, 49, 252. (**Impact Factor: 6.22**)

31. 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)**
32. 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)**
33. Rajesh Kancherla, **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)**
34. Rajesh Kancherla, **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)**
35. 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)**
36. 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)**
37. 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 [Jan 2016]
- ❖ 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 weak 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 the 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 Students

		
Bhargav Desai [FRS]	Monak Patel [FRS]	Arti Ramani [FIR]
		
Akshay [FIR]	Bhavyesh Desai [FSF]	