



Dr. A. HARINATH

ABOUT ME

To pursue a challenging academic role that enables me to drive research excellence, deliver quality education, and contribute to the scientific community in the field of organometallic chemistry. to be a part of learning community.

Contact Details

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Personal Information

Gender:

Male

Date of Birth:

13-06-1988

Marital Status:

Married

Nationality:

Indian

Teaching and Research Experience

Assistant Professor in Chemistry

C.M. Science college, Darbhanga | April 2025 - Present

Assistant Professor in Chemistry

MLR Institute of Technology-Hyderabad | April 2022 – March -2025

Postdoctoral Research Fellow

Georg August University of Gottingen | October 2020 - March 2022

Postdoctoral Research Fellow

Universitat Des Saarlandes | July 2019 - September 2020

Docotral research

IIT Hyderabad | August 2013 - June 2019

Thesis Title: Main Group Metal complexes as Efficient Catalysts for Functionalization of Small Molecules
Supervisor: Dr Tarun K Panda

Academic History

MSc | Chemistry | 2010-2012

Banaras Hindu University, Varanasi (UP)

72%, First Class

BSc | Chemistry, Biochemistry, Zoology | 2007-2010

Sri Krishna Devaraya University, Anantapur

75%, First class

Research Interests

Synthesis and characterization of main group metal complexes and their catalytic applications towards hydroelementation reactions

Languages Spoken

Telugu (native),
English (Fluent) and
Hindi (basic)

Skills and Attributes

Chemistry Skills	I have experience in: (1) Organic, inorganic and organometallic synthesis, (2) metal ion complexation, (3) ligand design, (4) handling highly air and moisture sensitive compounds (5) Schlenk line and Glove box techniques (6) multinuclear NMR spectroscopy, (7) X-ray crystallography, (8) IR spectroscopy, (9) UV-Vis Spectroscopy, (10) HPLC
Communication skills	Gained from: (1) authoring scientific publications, (2) authoring PhD thesis, (3) publications giving oral presentations, (4) authoring several project reports
Design Skills	Gained from: designing multiple posters which were presented at international chemistry conferences
Interpersonal Skills	Gained from: (1) working with colleagues and students in my research group (2) collaborating works with different scientific groups (3) supervising undergraduate laboratories
Computing Skills	Expertise in Microsoft Word, Excel, PowerPoint and Origin.

Conference Attendance

07/2025	IPACS-2025, Darbhanga, Invited lecture
11/2017	MTIC-XVII, Pune, India (Poster Presentation)
07/2017	CRSI-ACS symposium in CSIR-IICT Hyderabad, India (Poster Presentation)
07/2015	Mid CRSI- symposium NIT Tiruchirappalli, India (Poster Presentation)
03/2014	RDCS In NIT Rourkela, India (Oral Presentation)

Scholarships and Awards

2017-18	Awarded Research Excellent award form IIT Hyderabad in 2017 and 2018
2013	All India Rank 44 in CSIR (2013) conducted and Secured 199 rank in GATE 2013 organized by Indian Institute of Technology (IIT)s
2010	Qualified in the entrance exam organised by Banaras Hindu University (BHU)

Publications

1. **A. Harinath** et al. Recent Advances in the Total Synthesis of Coumarin-Based Natural Products, *Org. Biomol. Chem.* (2026, Accepted)
2. **A. Harinath** et. al. Sulfonated Graphene Oxide Catalyzed Transformation of Pyrazole-Oxazolidine Derivatives and their Antimicrobial Activities, *Asian J. Chem Vol. 38, No. 1 (2026), 180-186*
3. M. Nazish, **A. Harinath**, D. Lüert, Christian Köhler, R.H-Irmer, D. Stalke, H. W. Roesky, Reactivity of Silylene with Gallium-and Boron Trihalide at Reductive Conditions Resulting in Unforeseen Products, *Chem. Eur. J.*, **2023**, *29*, doi/10.1002/chem.202300310.
4. **A. Harinath**, H. Karmakar, D. A. Kisan, H. P. Nayek and T. K. Panda*, NHC-Zn alkyl catalyzed cross-dehydrocoupling of amines and silanes, *Organic & Biomolecular Chemistry*, 2023, Doi: D3OB00453H.
5. J. Bhattacharjee, **A. Harinath**,[#] A. Sarkar, T. K. Panda,* Alkaline Earth Metal–Mediated Highly Iso-selective ROP of rac-Lactide *Chemistry –An Asian Journal*, **2020**, *15*, 860866.
6. J. Bhattacharjee, **A. Harinath**, K. Bano, T. K. Panda,* Highly Chemo selective Hydroboration of Alkynes and Nitriles Catalyzed by Group 4 metal Amidophosphinborane Complexes. *ACS Omega* **2020**, *5*, 3, 1595-1606.
7. G. S. Kumar, [#] **A. Harinath**, [#] R. Kawaira, T. K. Panda,* Homoleptic zinc –catalyzed hydroboration of aldehydes and ketones in presence of HBpin. *Eur. J. Inorg. Chem.* **2020**, 467-474.
8. **A. Harinath**, I. Banerjee, J. Bhattacharjee, T. K. Panda,* Aluminium complex-catalysed hydroboration of alkenes and alkynes. *New J. Chem.* **2019**, *43*, 10531 - 10536.
9. J. Bhattacharjee,[#] **A. Harinath**,[#] A. Sarkar, T. K. Panda,* Polymerization of ϵ Caprolactam to Nylon-6 Catalyzed by Barium σ -Borane Complex under Mild Condition. *ChemCatChem.* **2019**, *11*, 3366 - 3370.
10. **A. Harinath**, J. Bhattacharjee, A. Sarkar, T. K. Panda,* Alkali metal complex-mediated ring-opening polymerization of rac-LA, ϵ -caprolactone, and δ -valerolactone. *New J. Chem.* **2019**, *43*, 8882 - 8891.
11. I. Banerjee, **A. Harinath**, T. K. Panda,* Alkali Metal Catalyzed Double Hydrophosphorylation of Nitriles and Alkynes. *Eur. J. Inorg. Chem.*, **2019**. 2224 - 2230.
12. **A. Harinath**, J. Bhattacharjee T. K. Panda,* Facile reduction of carboxylic acids to primary alcohols under catalyst-free and solvent-free conditions. *Chem. Commun.*, **2019**, *55*, 1386 - 1389.
13. **A. Harinath**, J. Bhattacharjee, T. K. Panda,* Catalytic Hydroboration of Organic Nitriles Promoted by Aluminum Complex. *Adv. Synth. Catal.*, **2018**, *361*, 850 - 857.
14. J. Bhattacharjee, [#] **A. Harinath**,[#] A. Sarkar, H. P. Nayek, T. K. Panda,* Highly Active

- Dinuclear Titanium(IV) Complexes for the Catalytic Formation of a Carbon–Heteroatom Bond. *Inorg. Chem.*, **2018**, *57*, 12610 - 12623.
15. J. Bhattacharjee, **A. Harinath**, N. Sohal, T. K. Panda,* Samarium Borohydride as Effective Reagent for Synthesis of Various Imines and Secondary Amines. *Journal of Modern Chemistry & Chemical Technology*. **2018**, *9*, 21 - 50.
 16. **A. Harinath**, J. Bhattacharjee, H. P. Nayek, T. K. Panda,* Alkali Metal Complexes as Efficient Catalysts for Hydroboration and Cyanosilylation of Carbonyl Compounds. *Dalton Trans.*, **2018**, *47*, 12613 - 12622.
 17. **A. Harinath**, J. Bhattacharjee, K. R. Gorantla, B. S. Mallik, T. K. Panda,* Hydroboration, Cyanosilylation, and Sequential Cyanosilylation Hydroboration of Carbonyl Compounds using Ti (IV) Amido Complex as an Efficient Catalyst. *Eur. J. Org. Chem.*, **2018**, 3180 - 3192.
 18. **A. Harinath**, J. Bhattacharjee, A. Sarkar, H. P. Nayek, T. K. Panda,* Ring Opening Polymerization and Copolymerization of Cyclic Esters Catalyzed by Group 2 Metal Complexes Supported by Functionalized P–N Ligands. *Inorg. Chem.*, **2018**, *57*, 2503 - 2516.
 19. S. Das, S. Anga, **A. Harinath**, H. P. Nayek, **T. K. Panda**,* Synthesis and Structure of Unprecedented Samarium Complex with Bulky Bis-iminopyrrolyl Ligand via Intramolecular C=N Bond Activation. *Z. Anorg. Allg. Chem.*, **2017**, *643*, 2144 - 2148.
 20. **A. Harinath**, K. Bano, S. Ahmed, T. K. Panda,* 2-Picolylamino (diphenylphosphinoselenic) amide Supported Zinc Complexes: Efficient Catalyst for Insertion of N–H bond into Carbodiimides, Isocyanates, and Isothiocyanate. *Phosphorus, Sulfur, Silicon.*, **2017**, *193*, 23 - 32.
 21. J. Bhattacharjee, **A. Harinath**, H. P. Nayek, A. Sarkar, T. K. Panda,* Highly Active and Iso-Selective Catalysts for the Ring-Opening Polymerization of Cyclic Esters using Group 2 Metal Initiators. *Chem. Eur. J.*, **2017**, *23*, 9319 - 9331.
 22. R. Vinayak, **A. Harinath**, C. J. G-García, T. K. Panda, S. Benmansour H. P. Nayek,* Solvent Modulated Assembly of Two Ni(II) Complexes: Syntheses, Structures and Magnetic Properties. *ChemistrySelect*, **2016**, *1*, 6532 - 6539.
 23. **A. Harinath**, J. Bhattacharjee, A. Srinivas, T. K. Panda,* Dehydrogenative Coupling of Hydrosilanes and Alcohols by Alkali Metal Catalysts for Facile Synthesis of Silyl Ethers. *Aus. J. Chem.*, **2017**, *70*, 727 - 730.
 24. S. Saha, **A. Harinath**, T. K. Panda, H. P. Nayek,* Schiff-base Supported Heterobicyclic Monomeric Boronates. *J. Organomet. Chem.* **2016**, *818*, 37 - 41.
 25. **A. Harinath**, A. Srinivas, T. K. Panda,* Alkali Metal Catalyzed Dehydro-coupling of Boranes and Amines Leading to the Formation of B–N Bond. *RSC Adv.* **2016**, *6*, 35648 - 35653.
 26. R. K. Kottalanka, **A. Harinath**, S. Rej, T. K. Panda,* Group 1 and Group 2 Metal Complexes Supported by Bidentate Bulky Iminopyrrolyl Ligand: Synthesis, Structural

- Diversity, and e-Caprolactone Polymerization Study. *Dalton Trans.*, **2015**, *44*, 19865 - 19879.
27. **A. Harinath**, D. P. Kukri, B. S. Mallik, T. K. Panda,* Formation of BH₃ Adducts with Pyridine-2-Methylaminophosphine Ligands - an Experimental and Computational Study. *J. Chem. Sci.* **2016**, *128*, 53 - 60.
 28. R. K. Kottalanka, **A. Harinath**, T. K. Panda,* Chiral Alkaline-Earth Metal Complexes Having M-Se Direct Bond (M = Mg, Ca, Sr, Ba): Syntheses, Structures and eCaprolactone Polymerization. *RSC Adv.* **2015**, *5*, 37755 - 37767.
 29. S. Anga, J. Bhattacharjee, **A. Harinath**, **T. K. Panda**,* Synthesis, Structure and Reactivity Study of Magnesium Amidinato Complexes Derived from Carbodiimides and N,N'-Bis(2,6-diisopropylphenyl)-1,4-diaza-butadiene Ligands. *Dalton Trans.*, **2015**, *43*, 955 - 965.
 30. S. Anga, K. Naktode, **A. Harinath**, **T. K. Panda**,* Titanium and Zirconium Complexes of N,N'-Bis(2,6 diisopropylphenyl)-1,4-diaza-butadiene Ligand: Syntheses, Structures and Their use in Catalytic Hydrosilylation Reactions. *Dalton Trans.*, **2014**, *44*, 14876 - 14888.
 31. K. Naktode, R. K. Kottalanka, **A. Harinath**, **T. K. Panda**,* Tetra-nuclear Copper Complexes having P-N-P Ligand to P-O-P Ligand- Synthesis, Structural and Mechanistic studies. *J. Coord. Chem.*, **2014**, *67*, 3042 - 3053.
 32. J. Bhattacharjee, R. K. Kottalanka, **A. Harinath**, **T. K. Panda**,* Synthesis of Monomeric and Polymeric Alkali and Alkaline Earth Metal Complexes using a Phosphinoselenoic Amide Ligand in Metal Coordination Sphere. *J. Chem. Sci.*, **2014**, *126*, 1463 - 1475.
 33. R. K. Kottalanka, **A. Harinath**, J. Bhattacharjee, T. K. Panda,* Bis(phosphinoselenoic amides) as Versatile Chelating Ligands for Alkaline Earth Metal (Mg, Ca, Sr and Ba) Complexes: Syntheses, Structure and e-Caprolactone Polymerisation. *Dalton Trans.*, **2014**, *43*, 8757 - 8766.
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