

Curriculum Vitae

Vittal Babu Gudimetla

Assistant Professor
Department of Chemistry
Central University of Tamil Nadu
Thiruvavur – 610 005, Tamil Nadu

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Education

Ph.D. Chemistry, Case Western Reserve University, Cleveland, OH, USA (2010)

Advisor: Prof. John D. Protasiewicz, CWRU

M.Sc. Chemistry, Indian Institute of Technology Madras (2002)

Project Advisor: Prof. G. Ranga Rao, IITM

B.Sc. Chemistry, RKM Vivekananda College, Chennai (2000)

University of Madras, Chennai

Professional Experience

Assistant Professor – Regular (2013-Present)
(Current Pay Scale : erstwhile 15600-39100 – AGP 7000)
Department of Chemistry, School of Basic and Applied Sciences
Central University of Tamil Nadu, Tamil Nadu, India

Assistant Professor (on contract) (2012-2013)
Department of Chemistry, School of Basic and Applied Sciences
Central University of Tamil Nadu, Tamil Nadu, India

Welch Foundation Postdoctoral Fellow (2009-2011)
Advisor: Prof. Paul S. Engel
Department of Chemistry, Wiess School of Natural Sciences
Rice University, Houston, Texas, USA

Teaching Interests

Organometallics and Catalysis, Organic Chemistry, Inorganic Chemistry, Physical Methods in Chemistry
(organic & inorganic)

Research Interests

Synthesis and applications of structurally diverse imidazolium salts and NHCs for catalysis and other technological applications

Professional Associations

Member – ACS
Life Member – CRSI

Awards and Distinctions

1. **Robert Welch Foundation Postdoctoral Fellow - 2009-2011**, Rice University, Houston , TX, USA
 2. **Outstanding Graduate Performance Award - 2007** for Exceptional Graduate Research and Academic Performance, Case Western Reserve University, OH, USA
 3. **American Chemical Society-Student Travel Award - 2007** American Chemical Society- Inorganic Chemistry Section, USA
 4. **Outstanding Research Poster Award - 2006**, Case Western Reserve University, OH, USA
 5. **CSIR-Junior Research Fellowship - 2003**, India
 6. **Graduate Aptitude Test in Engineering- All India Rank 34 (98.71) - 2003**, India
 7. **College first in 2nd year Chemistry University Exam - 1999**, University of Madras
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Research Publications

Published/Accepted

1. Bony P. Joy, Sudeep Paul, Sandhyarani Sethy and Vittal Babu Gudimetla; **Non-Symmetrical Tetraaryl- α -Diimines via Transimination: A Promising Route for Non-Symmetrical 1,3,4,5-Tetraarylimidazolium Chlorides**. *ChemistrySelect*, **2023**, 8(9), e202204605
 2. Joy, B. P.; Paul, S.; Manohar B. G.; Gudimetla, V. B.; **Benzilbis(2-hydroxyanil) - highly efficient fluorophore for ferric ion (Fe³⁺) sensing**. *New J. Chem.*, **2023**, 47, 2995-2999.
 3. Paul, S.; Joy, B. P.; Sasikala, G.; Raghuthaman, A G.; Gudimetla, V. B.; **"Copper-NHC Based Ullmann Catalysis in Water for Selective N-Arylation of 3-Aminophenols"**, *ChemistrySelect*, **2020**, 5(47), 15004-5009.
 4. Paul, S.; Joy, B. P.; Rajendran, R.; Gudimetla, V. B.; **"Cost Efficient Synthesis of Diaryl Ethers Catalysed by CuI, Imidazolium Chloride and Cs₂CO₃"**, *ChemistrySelect*, **2019**, 4(24), 7181-7186
 5. Engel, P. S.; Gudimetla, V. B.; Gancheff, J. S.; Denis, P. A.; **Solution Phase Photolysis of 1,2-Dithiane Alone and with Single-Walled Carbon Nanotubes"**, *J. Phys. Chem. A*. **2012**, 116(32), 8345-8351.
 6. Gudimetla, V. B.; Liqing, Ma.; Washington, M. P.; Payton, J. L.; Simpson, C. M.; Protasiewicz, J. D.; **"meta-Terphenyl phosphalkenes bearing electron donating and accepting groups"**, *Eur. J. Inorg. Chem.* **2010**, 6, 854-865.
 7. Washington, M. P.; Gudimetla, V. B.; Laughlin, F. L.; Deligonul, N.; He, S.; Payton, J. L.; Simpson, M.C.; Protasiewicz, J. D.; **"Phosphorus can also be a photocopy"**, *J. Am. Chem. Soc.* **2010**, 132(13), 4566-4567.
 8. Protasiewicz, J.D.; Washington, M. P.; Gudimetla, V. B.; Payton, J. L.; Simpson, M. C. **"A closer look at the phosphorus-phosphorus double bond lengths in meta-terphenyl substituted diphosphenes"**, *Inorg. Chim. Acta.* **2010**, 364(1), 39-45.
 9. Gudimetla, V. B.; Rheingold, A. L.; Payton, J. L.; Peng, H. L.; Simpson, M. C.; Protasiewicz, J. D. **"Photochemical E-Z Isomerization of meta-Terphenyl-Protected Phosphalkenes and Structural Characterizations"**, *Inorg. Chem.* **2006**, 45, 4895-4901. (Cover Page)
 10. Mishra, B. G.; Ranga Rao, G.; Vittal Babu, G.; Narayan, A. **"Effect of preparation condition and cerium incorporation on the physicochemical properties and catalytic activity of Zr-pillared clays"**, *Bull. Catal. Soc. India*, **2002**, 1, 79-89
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To be submitted:

Joy, B. P.; Chokkiah, B.; Dhanasuraman, R.; Gudimetla, V. B.; **N-Heterocyclic Carbene-Copper Functionalized Graphite Oxide as Supercapacitor Materials.** (To be submitted)

Joy, B. P.; Sneha, K.; Gudimetla, V. B.; **NHC-Ag Complexes in Sensing Studies.** (To be submitted)

Book Chapter

V. B. Gudimetla, B. P. Joy, and S. Paul, **"Imidazolium-Based N-Heterocyclic Carbenes (NHCs) and Metal-Mediated Catalysis,"** Carbene, Mar. 2022, doi: 10.5772/intechopen.102561. (Book Title: Carbene; ISBN 978-1-83969-929-0)

Conferences

1. Joy, B. P.; Paul, S.; Sasikala, G. and Gudimetla, V. B; N-Heterocyclic carbenes (NHC) tethered graphite oxide for catalytic applications.; National Conference on Frontiers in Chemical Sciences, CUTN-Thiruvarur, (29th-30th March 2021)
 2. Rajendran, R; Paul, S.; Joy, B. P; Sasikala, G.; Gudimetla, V. B.; Cyclic voltammetry and the mechanistic investigations of NHC catalysed C-O and C-N bond formation.; International Conference on Emerging Trends in Catalysis (ETC-2020), VIT-Vellore, Tamil Nadu, (6th to 8th Jan, 2020)
 3. Gudimetla, V. B.; Paul, S.; Rajarajan, R.; Joy, B. P. and Sasikala, G, MTIC Conference, Synthesis, Studies of NHCs and Metal Based Catalytic Applications, IIT Guwahati (11th to 14th December, 2019)
 4. Joy, B.P.; Paul, S; Gudimetla, V. B.; Synthesis and Studies of - α -Diimines and NHCs, 25th CRSI National Conference, IIT Kanpur, Kanpur, 2019. (19th to 21st July, 2019)
 5. Paul, S.; Joy, B.P; Gudimetla, V. B.; Simple, Sustainable Green Route for Selective Arylation of Aminophenols, 24th CRSI National Conference, IIT Madras, Chennai, 2019. (8th-10th February, 2019)
 6. Paul, S.; Joy, B.P; Gudimetla, V. B.; Versatile Approach to C-O Bond Formation: Synthesis of Diaryl Ethers.; 22nd CRSI National Conference, Raipur, 2018. (2nd to 4th February, 2018)
 7. Gudimetla, V. B. and Engel, P. S.; Photochemical studies of cyclic disulfides and functionalization of single-walled carbon nanotubes; 242nd ACS National Meeting, Denver, CO, 2011.
 8. Washington, M. P.; Gudimetla, V. B.; Laughlin, F. L.; Protasiewicz, J. D.; Phosphorus as a carbon copy and as a photocopy for conjugated polymer chemistry.; 241st ACS National Meeting, Anaheim, CA, 2011.
 9. Protasiewicz, J. D.; Washington, M. P.; Gudimetla, V. B.; 240th ACS National Meeting, Boston, MA, 2010.
 10. Washington, M. P.; Gudimetla, V. B.; Laughlin, F. L; Protasiewicz, J. D.; Central Regional Meeting of the ACS, Cleveland, OH, 2009.
 12. Gudimetla, V. B.; Washington, M. P.; Li, F.; Protasiewicz, J. D.; 237th ACS National Meeting, Salt Lake City, UT, 2009.
 13. Gudimetla, V. B.; Washington, M. P.; Protasiewicz, J. D.; meta-Terphenyl protected phosphalkenes: Synthesis, Photochemistry and Effect of Electroactive Groups.; 9th Annual Ohio Inorganic Weekend, Toledo, OH, 2008.
 14. Washington, M. P.; Gudimetla, V. B. ; Protasiewicz, J. D.; Electrochemical behavior of para-substituted phosphalkenes.; 236th ACS National Meeting, Philadelphia, PA. 2008.
 15. Gudimetla, V. B.; Protasiewicz, J. D.; 234th ACS National Meeting, Boston, MA, 2007.
 16. Gudimetla, V. B.; Protasiewicz, J. D.; Research Showcase, Case Western Reserve University, Cleveland, OH, 2007.
 17. Gudimetla, V. B.; Ma, L.; Protasiewicz, J. D.; "meta-Terphenyl protected phosphalkenes as photoactive and NLO active materials, 7th Annual Ohio Inorganic Weekend, Athens, OH, 2006.
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Patent (Indian)

1. Synthesis of non-symmetrical α -diketimines and NHCs, Indian Patent filed on 01/02/21, Ordinary Application: 202141004387 (Inventors: Vittal Babu Gudimetla (PI), Bony P Joy (PhD Student) and Sudeep Paul (PhD Student) **(Published on 18/03/2022)**
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Invited Talks

1. Title: "Carbon-Heteroatom Bond Formation using Copper and N-Heterocyclic Carbenes", Online Lecture Series, Ewing Christian College-Allahabad(affiliated to Allahabad Central University) – 25th February, 2022.
 2. Title: "Intricacies of Synthetic Chemistry in Innovation and Nanomaterials"; National Conferences in Recent Advanced in Nanotechnology, NIT-Pondicherry, Karaikal, 20th September, 2018.
 3. Title: "Understanding the metal-mediated catalysis in forming carbon-heteroatom bonds", National Seminar on New Perspectives in Chemical Sciences, PSG Krishnammal College for Women, Coimbatore, 16th - 17th September, 2019.
 4. Title: "Metal-mediated catalysis in coupling reactions", Two Days Indo-Norway Workshop on Functional Materials for Energy and Technology, CUTN, Thiruvapur, , 23rd September, 2019.
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Project Supervision Experience

Number of Ph.D. : 1 (awarded) + 1 (Thesis Submitted)
Number of M.Sc.: 13 PGDCLT: 4

Number of M.Phil.: 1
Number of integrated M.Sc.: 28

Role in and details of Sponsored Research & Consulting projects:

1. UGC-BSR Startup Grant (22/01/2015 to 21/01/2017) :
PI: Dr. Vittal Babu Gudimetla
Title: "Fabrication of carbon nano-materials with pincer type complexes and applications in catalysis"
Grant Amount: Rs. 6 Lakhs
Contributions: We have made pincer ligands and studied its possibilities to functionalize carbon nano tubes. One M.Phil scholar, more than 10 iMSc students and PhD scholars used the facilities from this project to do their project work.
 2. DST-SERB-EEQ Grant (24/04/2017 to 23/04/2021):
PI: Dr. Vittal Babu Gudimetla
Title: "Exploring new possibilities and the chemistry of organic and organometallic functionalized nanomaterials"
Grant Amount: Rs. 44.20 Lakhs
Contributions: Our entire work is solely funded by this project. It gave us 2 published papers and 1 ready for submission. The work from this grant was submitted for an Indian Patent. Also, it enabled the completion of Ph.D. work of one PhD scholar and supported the project work of nearly 20 students from iMSc, MSc and PGDCLT programs. It
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Continuing Education Programs

1. 10th FDP on Computational Chemistry of Materials –online mode (19th to 25th October, 2022)
 2. One Week National e-Workshop on Innovation and Intellectual Property Rights(14th to 19th June, 2021)
 3. Swayam Online Chemistry Refresher Course – Obtained Grade A (30th September, 2019)
 4. Faculty Development Program –CUTN- Participation (8th September, 2018)
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Professional Activities/Contributions

1. Member – Academic Council – CUTN (2023)
 2. Member – Board of Studies – Department of Chemistry and Maths (2022-23);
Physics, Life Sciences, and Materials Science (earlier)
 3. Doctoral Committee Member (internal) – Depts. of Chemistry, Physics and Life Sciences – CUTN (2023)
 4. University Observer–CUCET(Central Universities Common Entrance Test)–2013, 2015, 2016 and 2017.
 5. External Doctoral Committee Member – Department of Chemistry, NIT Puducherry - 2023
 6. External Examiner – First Year B.Tech. practical exams, NIT Puducherry
 7. Chemistry Question Paper Setter for CUCET 2014 and 2017
 8. Reviewer – ChemistrySelect, Ionics & Heliyon
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Administrative Activities

1. Warden – New Boys Hostel (2021)
2. Member – SC/ST Cell (2016)
3. Member - Quarters Allotment Committee (2016)
4. Member – Anti Ragging Committee (2021)
5. Member - Course coordination committee for M.Tech. program offered by CUTN (2015)
6. Member –Faculty recruitment - Screening Committees and Guest Faculty recruitments
7. Mentor – Chemistry Department’s Remedial Coaching (2021)

Vittal Babu Gudimetla