

Dr. Vitthalrao Swamirao Kashid (PhD-IIT Bombay)

Assistant Professor (T & A Chemistry Department)



Contact

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Education

- 2011-2017:** **Doctor of Philosophy in Chemistry**, Indian Institute of Technology Bombay, Mumbai (IITB), India. (Awarded October 2017) (Supervisor: Dr. M. S. Balakrishna, Department of Chemistry, IIT Bombay).
- 2005-2008:** **Master of Science in Chemistry**, Dr. Babasaheb Ambedkar Marathwada University Chhatrapati Sambhaji Nagar, sub-campus Dharashiv, Maharashtra.
- 2002-2005:** **Bachelor of Science**, Dr. Babasaheb Ambedkar Marathwada University Chhatrapati Sambhaji Nagar, Maharashtra.

Professional Experience

- Teaching: As Assistant Professor
- 2024-Till Date:** **Designation:** Assistant Professor, Technical and Applied Chemistry Department, Veermata Jijabai Technological Institute (VJTI), Central Technological Institute, Maharashtra State Government, India.
- 2023-2024:** **Designation:** Assistant Professor, Department of Humanities & Science (Chemistry), Malla Reddy Engineering College for Women (MRECW), Hyderabad, Telangana, India.
- 2018-2023:** **Designation:** Assistant Professor, Assistant Professor in Chemistry (TEQIP-III, MoE Govt. of India on Contract) at Gaya College of Engineering (GCE), Gaya, (Govt. of Bihar), India.

Research Experience

- 2017-2018:** Research Associate (RA) at IIT Bombay, Mumbai (Supervisor: Dr. M. S. Balakrishna, Department of Chemistry, IIT Bombay).
- 2011-2016:** Junior Research Fellow at Indian Institute of Technology Bombay, Mumbai.
Senior Research Fellow at Indian Institute of Technology Bombay, Mumbai.

Teaching Assistance (TA) at IIT Bombay, Mumbai

- Course Name: CH-117 (Lab Course for B.Tech Students) Spring: 2011-2012
- Course Name: CH-438 (Main Group Chemistry for MSc Students) Autumn: 2012-2013
- Course Name: CH-437 (Chemistry of Transition Elements for MSc Students) Spring: 2012-2013

Research/Instrument Handling Skills

- Purification Techniques (Column Chromatography, Distillation, Crystallization etc.)
- Microwave reactor
- High pressure autoclave reactor
- UV-Vis Spectroscopy (Perkin Elmer UV-Vis Spectrometer)
- Fluorescence Spectroscopy (Perkin Elmer Spectrometer)
- NMR Spectroscopy (Varian 400 MHz, Bruker Avance-400/500 MHz)
- FT-IR Spectroscopy
- GC (Gas Chromatography)
- GC-MS (Gas Chromatography-Mass Spectrometry)
- Single Crystal X-ray Diffraction (Rigaku Saturn 724+)
- Single crystal solving and refining (SHELX, SHELXTL, Olex-sofwares)
- CHN Analysis (Carlo Erba Model 1112)
- High Resolution Mass Spectroscopy (Q-TOF micro YA-105 and Bruker Mass Spectrometer)
- Schlenk Line Technique and Glove Box (for handling air sensitive compounds)

Awards/Fellowship

- Awarded National Fellowship (JRF & SRF) from University Grant Commission (UGC), New Delhi, Govt. of India, from January 2011 for pursuing Doctoral Degree (JRF and SRF).

Research Grants

- As Principal Investigator funded by MHRD-AICTE Collaborative Research Scheme (CRS) research grant of 10,75,000/- for title "Microwave and Conventional Multi-component Reactions by C-H Activation: Substrate Scope and Reactivity" (Status: Completed)
- Research Project Proposals Under "Support to Research Project" Bihar Council on science & Technology (BCST), Govt. of Bihar Project title: Study of metal catalysts in various organic transformations. (Status: Research Project Submitted)

Publications (Research Papers)

1. Vitthalrao S. Kashid, Basvaraj S. Kote and Maravanji S. Balakrishna "Chloropalladated tetranuclear and copper(I) complexes of propargylamines [RC≡CCH₂NC₄H₈NCH₂C≡CR]" *Journal of Organometallic Chemistry* (2019) 897, 247-253 ISSN No. 0022-328X (IMPACT FACTOR-2.066) DOI: <https://doi.org/10.1016/j.jorganchem.2019.07.006>
2. Vitthalrao S. Kashid, Basvaraj S. Kote, Harish S. Kunchur, Joel T. Magueand Maravanji S. Balakrishna "Transition metal complexes of N¹,N¹,N²,N²-tetrakis(diphenylphosphaneyl)-ethane-1,2- diamine [(Ph₂P)₂NCH₂CH₂N(PPh₂)₂]" *Polyhedron* (2019) 172, 87-94. ISSN

No.0277-5387 (IMPACT FACTOR-2.067) DOI: <https://doi.org/10.1016/j.poly.2019.03.029>

- Rajnish Kumar, Saurabh Kumar, Madhusudan K. Pandey, **Vitthalrao S. Kashid**, Latchupatula Radhakrishna and Maravanji S. Balakrishna “*Synthesis of Phosphine-chalcogenides Under Solvent-free Conditions using Rotary Ball Mill*” **Eur. J. Inorg. Chem.** (2018), 2018, 1028–1037. doi- 10.1002/ejic.201701414. ISSN: 1099-0682. (IMPACT FACTOR-2.444)
- Vitthalrao S. Kashid** and Maravanji S. Balakrishna, “*Microwave-assisted copper(I) catalyzed A³- coupling reaction: reactivity, substrate scope and structural characterization of two coupling products*”. **Catalysis Communications** (2018), 103, 78–82. doi:10.1016/j.catcom.2017.09.020 ISSN: 1566-7367. (IMPACT FACTOR-3.463)
- Vitthalrao S. Kashid**, Joel T. Mague and Maravanji S. Balakrishna, “*Macrocyclic cyclodiphosphazane $[P(\mu\text{-}^t\text{BuN})_2(O\text{-}m\text{-}C_6H_4CHNCH_2)_2]_2$: Synthesis, chalcogen derivatives and gold(I) complex*”. **J. Chem. Sci.** Vol. 129, No. 10, (October 2017), pp. 1531–1537. DOI 10.1007/s12039-017-1358-3, ISBN/ISSN No. 0973-7103). (IMPACT FACTOR-1.235)
- Vitthalrao S. Kashid**, Radhakrishna Latchupatula and Maravanji S. Balakrishna, “*First examples of tri- and tetraphosphametacyclophanes: synthesis and isolation of an unusual hexapalladium complex containing pincer units with Pd–P covalent bonds*” **Dalton Trans.**, (2017), 46, 6510–6513. ISBN/ISSN No. 1477-9234. (IMPACT FACTOR-4.099)
- Vitthalrao S. Kashid**, Susmita Naik and Maravanji S. Balakrishna “*Silver(I) Complexes of Bisphosphines $PhN\{P(OC_6H_4C_3H_5-O)_2\}_2$ (1) and $[2,6\text{-}\{Ph_2PC(O)\}_2C_5H_3N]$ (2)*” **Proc. Natl. Acad. Sci., India, Sect. A Phys. Sci.** (October–December 2016) 86(4):601–604. ISBN/ISSN No. 2250-1762. (IMPACT FACTOR- 0.754)
- Pawan Kumar, **Vitthalrao S. Kashid**, Yernaidu Reddi, Joel T. Mague, Raghavan B. Sunoj and Maravanji S. Balakrishna “*A phosphomide based PNP ligand, $2,6\text{-}\{Ph_2PC(O)\}_2(C_5H_3N)$, showing PP, PNP and PNO coordination modes*” **Dalton Trans.**, (2015), 44, 4167–4179. ISBN/ISSN No. 1477-9234. (IMPACT FACTOR-4.099)
- Pawan Kumar, **Vitthalrao S. Kashid**, Joel T. Mague and Maravanji S. Balakrishna “*An efficient approach for the synthesis of functionalized selenoethers and selenocalix[4]thiophenes, $\{2,5\text{-}(\mu\text{-}Se)(3,4\text{-}dialkoxythiophene)\}_4$* ” **Tetrahedron Lett.** (2014), 55, 5232–5235. ISBN/ISSN No. 0040-4039. (IMPACT FACTOR-2.379)
- Vitthalrao S. Kashid**, Joel T. Mague and Maravanji S. Balakrishna “*Monophosphinites $[Ph_2POC_6H_4\text{-}3\text{-}CHO]$, and $[Ph_2POC_6H_4\text{-}3\text{-}C(O)CH_3]$: Synthesis, Metal Chemistry and Catalysis in Hydroformylation Reaction.*” (Manuscript under preparation).
- Vitthalrao S. Kashid**, Joel T. Mague and Maravanji S. Balakrishna “*Bis(phosphine) Pincer Ligand $[Ph_2PO\text{-}m\text{-}C_6H_4\text{-}CHNCH_2]_2$: Synthesis, Binuclear Pincer Complexes, Coordination Chemistry.*”(Manuscript under preparation).

Publications (Book/Book Chapter)

- Vitthalrao Swamirao Kashid** and Azaj Ansari, Chapter: *ORGANOPHOSPHORUS COMPOUNDS: RECENT DEVELOPMENTS AND FUTURE PERSPECTIVE* for the edited book entitled **Recent Advances in Organometallic Chemistry**, Elsevier, 2024, pp-155-194, ISBN: 978-0-323-90596-1.
- Monika, Oval Yadav, Manjeet Kumar, Ranjan Kumar Mohapatra, **Vitthalrao Swamirao Kashid** and Azaj Ansari, Chapter: *A COMPUTATIONAL APPROACH TOWARD THE ROLE OF*

Conference/Symposium (Presented/Attended/Organized)

- **Innovative Development in Engineering Applications (IDEA-2021)** held during 8th to 10th February 2021 at Gaya College of Engineering, Gaya, Bihar. (**Organized and Attended International Conference**).
- **Infrastructure Development and Environment Assessment (IDEA-2019)** held during 22nd to 24th October 2019 at Gaya College of Engineering, Gaya, Bihar. (**Organized and Attended National Conference**).
- **42nd International Conference on Coordination Chemistry (ICCC-2016)**, held on July 3-8 2016 “Tri- and Tetraphosphametacyclophanes Containing Phosphonide Units: Synthesis, Structure and Coordination Chemistry” (**Poster Presentation**) at Brest, France.
- **ACS on Campus**, held on January 25 2016 “Phosphorus Based Ligands: Syntheses, Transition Metal Chemistry and their Catalytic Applications” (**Oral Presentation**) at IIT Bombay, Mumbai.
- **16th CRSI National Symposium in Chemistry**, held on 7-9 February 2014 “Phosphorus Based Ligands: Synthesis, Transition Metal Chemistry and Catalytic Applications” (**Poster Presentation**) at IIT Bombay, Mumbai.
- **Symposium on Modern Trends in Inorganic Chemistry-XIV (MTIC-XIV)** held on 10-13th December 2011 at School of Chemistry University of Hyderabad (**Attended a Conference**).
- **One Day Symposium on Metalloproteins and Metalloenzymes** held on 26th March 2011 at IIT Bombay (**Oral Presentation**) at Dept of Chemistry IIT Bombay, Mumbai.
- **Recent Advances in Nano science (RANS)** held on 23-24th Feb. 2008 at Dept. of Chemistry Sub-centre Osmanabad, Maharashtra India (**Volunteer and Attended National Conference**).
- **Application of Spectroscopy for the Determination of Geometry of Organic Molecules** held on 1-2nd Feb. 2008 at Maharaja Jivajirao Shinde Mahavidyalaya, Shrigonda, Dist-Ahamednagar Maharashtra India. (**Attended a State Level Seminar**).

Workshop/Seminar/Sttp/Fdp (Presented/Attended/Organized)

- **Faculty Induction Program**, held on 20th – 24th to January, 2018 at IIT Kanpur (**Attended Workshop**)
- **Outcome Based Accreditation for Engineering Program**, held during 9th – 10th March, 2018 at Gaya College of Engineering, Gaya (**Attended Workshop**)
- **NBA Accreditation**, held during 19th – 23rd March, 2018 at Gaya College of Engineering, Gaya organized by NITTR, Kolkata (**Attended Workshop**)
- **NBA Awareness**, held on 8th June, 2018 at Gaya College of Engineering, Gaya (**Attended Workshop**)
- **Faculty Induction Program on Research Methodology**, held during 21st – 22nd September, 2018 at St. John College of Engineering and Management, Palghar, Mumbai, Maharashtra. (**Attended Workshop**)
- **Faculty Induction Program on Research Methodology**, held during 7th – 11th January, 2019 at Gaya College of Engineering, Gaya (**Organized and Attended Workshop**).

- **National Workshop on Alternative Sources of Energy-Scope & Impact** held during 4th – 8th February 2019 at Gaya College of Engineering, Gaya, Bihar. (**Attended National Workshop**).
- **Summer Training Program on Advanced Pedagogy & Digital Tools** held during 10th – 14th June, 2019 at IIT Kanpur (**Attended Workshop**).
- **Orientation Workshop for Principal Investigator on Collaborative Research Scheme** held on 16th July 2019 at AICTE Auditorium, New Delhi Organized by National Implementation Unit (NPIU) in association with World Bank under TEQIP-III (**Attended Workshop**).
- **One week workshop on Soft Skills & Personality Development** held during 22nd to 27th July 2019 at Gaya College of Engineering, Gaya, Bihar. (**Organized and Attended workshop**).
- **Two Days Online Workshop on Outcome Based Education (OBE) & Preparation for NBA Accreditation** held during 29th-30th May 2020 at State Project Implementation Unit, Bihar. (**Attended Workshop**).
- **One Week Workshop on Literature and Engineering** held during 29th September to 3rd October 2020 at Gaya College of Engineering, Gaya, Bihar. (**Organized and Attended Workshop**).
- **One Week National Level Refresher Course on Engineering Chemistry**, held during 15th – 20th July 2024 at Malla Reddy Engineering College for Women, Hyderabad. (**Attended Refresher Course**).

Subject Taught

- Engineering Chemistry in B.Tech.(UG)
- Chemistry Practical in B.Tech.(UG)

Administrative /Academic Responsibilities

- Head of Department, Chemistry at GCE, Gaya
- Nodal Officer (Academic) at GCE, Gaya
- Assistant Registrar (Academics) at GCE, Gaya
- Routine/Monitoring committee In-charge, at GCE, Gaya
- Member of Lab Development committee at GCE, Gaya
- Member of Disciplinary Committee at GCE, Gaya

Extra-Curricular Activities

- Participated in NSS (National Service Scheme).
- Participated and Volunteer in the "Techfest-2012 at IIT Bombay
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