

CURRICULUM VITAE



Dr. Pritam Eknath Kadam

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SUMMARY

- Dedicated and result-oriented researcher with R&D experience in the field of organic and analytical chemistry, plus expertise in the synthesis and purification of active pharmaceutical ingredients.
- Apt to design synthetic routes of target molecules as well as interpret analytical data using various analytical instruments and specialized equipment.
- Excellent team player with proven project management, communication skills, and managing multiple projects with international teams in Germany, the USA, and India within a given time frame.

WORK EXPERIENCE:

Research Scientist

01/2018 – 12/2021

As a post-doctoral researcher at TIFR, Mumbai, India.

Project: Hydrogen Bonding of N-heterocyclic Carbenes.

- Highly organized chemist involved in a research project focused on catalytically relevant ligand-based reactivity, as demonstrated by exploring hydrogen bonding of *N*-heterocyclic carbene using advanced mass spectrometry techniques such as TOF-MS, MALDI, HR-MS, and LC-MS.
- Product and market knowledge of instruments, reagents, and consumables obtained by synthesis of novel diazo, diazine, and azido compounds and their characterization using various analytical instruments such as IR, HPLC, GC-MS, GC-FID, NMR.
- Sublime communication skills to communicate complex information to a diverse audience, evidenced by 2 international conference presentations, 3 annual work seminars, and monthly scientific meetings. Troubleshooting skills as maintained and organized lab equipment's (IR, GC, Glovebox, etc.).

Research and Development Chemist

07/2008 - 07/2010

As a chemist at Arch Pharmalabs Ltd, Mumbai, India.

- Forward-thinking pharmaceutical chemist with experience in R&D projects aimed at therapeutic strategies for API intermediates, as demonstrated by synthesizing NCI-selected anticancer compounds, several heterocycles, and unprecedented building blocks.
- Knowledge of industry trends along with competence in process development of scale-up reactions (cyanation, hydrogenation, reduction, Na-metal reactions, etc.) and hands-on experience on common industrial purification techniques such as flash chromatography, prepTLC, prepHPLC, trituration.
- Efficient time management, teamwork, and knowledge transfer skills acquired by working in a fast-paced environment and apt in establishing and optimizing synthetic processes resourcefully leading to the production of targeted molecules as per the clients' requirements and active participation in safety training program.

EDUCATION:

Doctor of Philosophy (Ph. D) at Ruhr University of Bochum, Germany

02/2013 - 07/2017

Thesis: Synthesis of optically switchable magnets and highly unsaturated alkyne.

- A knowledgeable innovator with expertise in organic methodology development as demonstrated by designing carbene-based optically switchable magnetic materials, leading to publication in Journal of American Chemical Society (JACS).
- Synthesized several diazirine precursors having implications in carbene-mediated photoaffinity labelling in medicinal chemistry as well as cyclic enediyne toxin, a potent anticancer antibiotic.
- Excellent research skills evidenced by planning and executing several experiments, data analysis, and documenting results in the form of manuscripts and scientific reports. Strong leadership skills developed by guiding 5 undergraduate students for synthesis projects with proper safety practices.

M.Sc. at Indian Institute of Technology (IIT) Roorkee, India | GPA: 8.0/10

07/2010 - 07/2012

Thesis: In-Silico Docking studies of 4 actamidocyclohex-1-enecarboxylic acids as H1N1 Neuraminidase Inhibitors

- Synthesis of novel heterocycles through MCR sequences
- H1N1 neuraminidase receptor and its interaction with different inhibitors have been studied with various computational approaches.
- Thorough Literature survey on the various synthetic target for docking studies.

EXPERTISE:

Synthetic	Instrumentation	Analytical
Multistep Synthesis	Biotage Microwave reactor	NMR, UV-Vis, IR
High-Pressure Reactions	Buchi Sepacore	Flash chromatography
Heterocyclic Synthesis	H.W.S. Reactor	Column chromatography
Deuterium Chemistry	Huber Thermo controller	HPLC, GC-MS, LC-MS
Flow Chemistry	Radleys Parallel Synthesizer	GC-TCD-FID
Photochemical Reaction	Software/Packages	
Homogeneous Catalysis	ChemBioDraw, MS-Office, ISIS draws, Topspin, ACD/Labs	
Chiral & Peptide synthesis	MestreNova, Reaxys, SciFinder, Endnote, Mendeley	

REFERENCES:

- **Prof. Dr. Sanjay Wategaonkar**, Department of Chemical Sciences, TIFR Mumbai, India.
E-mail: sanwat@tifr.res.in
- **Prof. Dr. Wolfram Sander**, Department of Organic Chemistry, Ruhr-Universität Bochum, Germany.
E-mail: wolfram.sander@ruhr-uni-bochum.de
- **Prof. Dr. Igor Alabugin**, Department of Chemistry & Biochemistry, Florida State University, USA.
E-mail: alabugin@chem.fsu.edu

- RESEARCH EXPERIENCE, PUBLICATIONS AND AWARDS IN THE ATTACHMENT -

RESEARCH EXPERIENCE, PUBLICATIONS AND AWARDS

01.2018 – present TIFR Mumbai, India, Post-doctoral Researcher

- Synthesis and photochemistry of several free NHC carbenes and precursors as well as Azido compounds and characterization using NMR, GC-MS, HPLC
- Supersonic jet technique in combination with TOF-MS Spectroscopy, MALDI
- Investigation of Strong Hydrogen-bonded Complexes of N-heterocyclic Carbene
- Photocatalytic reactions in solutions in novel deep eutectic solvents

02.2013 – 07.2017 Ruhr-Universität Bochum, Germany, Doctoral Researcher - Physical Organic Chemistry

- Investigation of Reactive Intermediates (carbenes, radicals, and cations)
- Matrix Isolation technique in combination with FTIR, UV-Vis, and EPR
- Organic Synthesis of novel diazo/azido compounds
- Quantum Chemical Calculations

11.2015 – 01.2016 Florida State University, USA, Graduate Research Intern

- Synthesis of strained cyclooctyne for the noncatalyzed Azide-Alkyne cycloaddition
- Gold(I)-catalyzed 6-endo hydroxy-cyclization of Enynes
- Designed and synthesized a novel deep-blue luminescent compound, FT-ICR-MS
- Radical cascades converting Oligo-Alkynes to carbon-rich polycyclic structures

07.2010 – 07.2012 Indian Institute of Technology (IIT) Roorkee, India, Master Thesis Student

- Microwave-Assisted Organic Chemistry (MAOc) of cyclic hybrid molecules & their evaluation for anticancer activity
- light-absorbing photocatalysts in Organic Synthesis
- Synthesis of novel heterocycles through Multi-Component Reaction
- Molecular Docking for H1N1 neuraminidase receptor & its interaction with different inhibitors

07.2008 – 07.2010 Arch Pharmalabs Ltd, India, Research and Development Chemist

- Organometallic Synthesis of Homogeneous Catalysts, Protected Alkynes, Grignard, etc.
- Multi-step synthesis, Purification - Recrystallization, Column Chromatography, HPLC
- Formulated and implemented an innovative protocol for the synthesis of pharmaceutical intermediates and library of potentially new drug candidates' structures

AWARDS & ACHIEVEMENTS:

- **Visiting Fellowship** Postdoc in TIFR approved by Department of Atomic Energy 01/2018-07/2021.
- **RESOLV** funding in Ruhr University of Bochum for **Ph.D.** from 02/2013-10-2017.
- **Merit-cum-Means Scholarship** in **M.Sc.** at IIT Roorkee (JAM ranking) from 07/2010-05/2012.
- Secured 1st rank in **B.Sc.** for overall performance in R. J. College in 2008.

PUBLICATIONS:

- Y. A. Tsegaw, **P. E. Kadam**, N. totschi, E. Sanchez-Garcia, W. Sander, [*J. Am. Chem. Soc.* **139**, 2017, **12310-12316**](#), 'Is Magnetic Bistability of Carbenes a General Phenomenon? Isolation of Simple Aryl(trifluoromethyl)carbenes in Both their Singlet and Triplet States'.
- Dissertation, "Matrix isolation of highly reactive organic intermediates", 2017.
[hss-opus.ub.ruhr-uni-bochum.de/opus4/frontdoor/index/index/docId/5350](https://opus4.frontdoor.uni-bochum.de/opus4/frontdoor/index/index/docId/5350)