

## Dr. Bhupendra Goswami

Date of Birth: December 14, 1993

### Correspondence Address:

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### Academic Qualifications:

Degree	Subjects	Institute/ University	Percentage	Year
Post-Doc	Inorganic Chemistry (Supervisor: Prof. Dominik Munz)	Saarland University (Universität des Saarlandes), Germany	-----	2021–2022
Ph.D.	Inorganic Chemistry (Supervisor: Prof. Peter W. Roesky)	Karlsruhe Institute of technology (KIT), Germany	Magna-Cum-Laude	2017–2020
Integrated BS-MS	Chemistry	Indian Institute of Science Education & Research (IISER) Mohali (India)	89%	2012–2017
10+2	Physics, Chemistry, Mathematics, Hindi, English	Board of Secondary Education, Rajasthan (BSER), India	90%	2011
10 <sup>th</sup>	Science, Social Science, English, Hindi, Sanskrit, Mathematics	Board of Secondary Education, Rajasthan (BSER), India	83.67%	2009

**Ph.D. Thesis title:** *“Enantiopure Iminophosphonamide Complexes: Synthesis, Photoluminescence and Catalysis”* under the supervision of Prof. Dr. Peter W. Roesky (August 2017-October 2020).

**M.Sc. Thesis title:** *“Hydroamination reactions using Cyclic (Alkyl)(Amino) Carbene (CAAC) based metal complexes”*.

**Other Research Experience:**

- Summer Internship under the guidance of Dr. R. Vijaya Anand on “Organic synthesis” (IISER Mohali, June-July 2015).
- Summer Project on “Computational Chemistry” under the guidance of Dr. P. Balanarayan (IISER Mohali, June-July 2014).
- Summer Internship under the guidance of Dr. Samrat Ghosh (IISER Mohali, June-July 2013).

**Awards and Recognitions:**

- Recipient of INSPIRE fellowship by Department of Science and Technology (DST, India) from August **2012-2017**.
- GATE (Graduate Aptitude Test in Engineering, India) in Chemical Sciences **2017**.
- CSIR-NET-JRF (National Eligibility Test, India) for lectureship in Chemical Sciences **2017**.

**Conferences/Demonstration:**

- [Bhupendra Goswami](#), Thomas J. Feuerstein, Pascal Rauthe, Ralf Köppe, Sergei Lebedkin, Manfred M. Kappes, and Peter W. Roesky Presented a poster entitled “Alkali metal complexes of an enantiopure iminophosphonamide ligand with bright delayed fluorescence” in the 13th International Conference on Heteroatom Chemistry (**ICHAC 2019**) in Prague from June 30 to July 5, 2019.
- [Bhupendra Goswami](#), Deependra Bawari and Sanjay Singh Presented a poster entitled “Cyclic (Alkyl)(Amino)carbene mercury [cAAC-Hg(II)] complexes and their catalytic activity in the hydroamination reactions” in Inter IISER Chemistry Meet (**IICM 2017**) conference held at IISER Bhopal.
- Conference attended on “Raman Spectroscopy” (Indian Institute of Science Education and Research (IISER) Mohali - 2016).
- Workshop on “scientific writing: An Interactive workshop” (Indian Institute of Science Education and Research (IISER) Mohali - 2016).
- Chemiluminescence on “Science Day” at IISER Mohali (2014).

## Technical Skills

- Manipulation of pyrophoric sensitive compounds.
- Glove box and standard Schlenk techniques.
- Infrared spectroscopy, Multinuclear NMR ( $^1\text{H}$ ,  $^7\text{Li}$ ,  $^{11}\text{B}$ ,  $^{13}\text{C}$ ,  $^{19}\text{F}$ ,  $^{27}\text{Al}$ ,  $^{31}\text{P}$ ,  $^{29}\text{Si}$ ,  $^{77}\text{Se}$  etc.) measurements and data interpretation.

## **Publications: -**

1) Neutral and cationic Cyclic (Alkyl)(Amino)carbene mercury [cAAC-Hg(II)] complexes: Scope of hydroamination of alkynes with organomercury compounds, Deependra Bawari,<sup>‡</sup> [Bhupendra Goswami](#),<sup>‡</sup> (<sup>‡</sup>equal contribution) V. R. Sabari, Sandeep Kumar Thakur, Varun Tej R V, Angshuman Roy Choudhury and Sanjay Singh, *Dalton. Trans.* **2018**, 47, 6274-6278 (Featured on the front cover of the issue). **Impact factor: 4.39**; ISSN: 1477-9234.

2) Alkali metal complexes of an enantiopure iminophosphoramidate ligand with bright delayed fluorescence, Thomas J. Feuerstein,<sup>‡</sup> [Bhupendra Goswami](#),<sup>‡</sup> (<sup>‡</sup>equal contribution) Pascal Rauthe, Ralf Köppe, Sergei Lebedkin, Manfred M. Kappes, Peter W. Roesky. *Chem. Sci.*, **2018**, 10, 4742-4749. **Impact factor: 9.825**; ISSN: 2041-6539.

3) Syntheses and characterization of neutral and cationic cyclic (alkyl)(amino)carbene mercury [cAAC-Hg(II)] complexes, Deependra Bawari, Sandeep Kumar Thakur, Krishna Kumar Manar, [Bhupendra Goswami](#), V. R. Sabari, Angshuman Roy Choudhury and Sanjay Singh, *J. Organomet. Chem.* **2019**, 880, 108-115. **Impact factor: 2.369**; ISSN: 0022-328X.

4) Neutral and cationic enantiopure group 13 iminophosphoramidate complexes, [Bhupendra Goswami](#), Ravi Yadav, Christoph Schoo and Peter W. Roesky, *Dalton Trans.*, **2020**, 49, 675-681. **Impact factor: 4.39**; ISSN: 1477-9234.

5) Highly Selective Substitution and Insertion Reactions of Silylenes in a Metal-Coordinated Polyphosphide, Ravi Yadav, Thomas Simler, Stephan Reichl, [Bhupendra Goswami](#), Christoph Schoo, Ralf Köppe, Manfred Scheer and Peter W. Roesky, *J. Am. Chem. Soc.*, **2020**, 142, 3, 1190-1195. **Impact factor: 16.38**; ISSN: 1520-5126.

6) Regioselective Insertion of Aluminum(I) in the cyclo-P5 Ring of Pentaphosphaferrocene, Ravi Yadav, Thomas Simler, [Bhupendra Goswami](#), Christoph Schoo, Ralf Köppe, Subhayan Dey, Peter W. Roesky, *Angew. Chem. Int. Ed.*, **2020**, 59, 9443-9447. **Impact factor: 16.82**; ISSN: 1521-3773.

7) A bis(germylene) functionalized metal-coordinated polyphosphide and its isomerization, Ravi Yadav, [Bhupendra Goswami](#), Thomas Simler, Christoph Schoo, Stephan Reichl, Manfred Scheer and Peter W. Roesky, *Chem. Commun.*, **2020**, 56, 10207-10210. **Impact factor: 6.222**; ISSN: 1364-548X.

8) Enantiopure Calcium Complexes: Synthesis, Photoluminescence and Catalysis [Bhupendra Goswami](#), Thomas J. Feuerstein, R. Yadav, Ralf Köppe, S. Lebedkin, Manfred M. Kappes, Peter W. Roesky, *Chem. Eur.J.*, **2021**, 27,4401 –4411. **Impact factor: 5.236**; ISSN: 1521-3765.

9) Thermally activated delayed fluorescence and phosphorescence quenching in iminophosphonamide copper and zinc complexes, [Bhupendra Goswami](#),<sup>‡</sup> Thomas J Feuerstein,<sup>‡</sup> (**‡equal contribution**), Ravi Yadav, Sergei Lebedkin, Pit J Boden, Sophie T Steiger, Gereon Niedner-Schatteburg, Markus Gerhards, Manfred M Kappes, Peter W Roesky, *Chem. Eur.J.*, **2021**, 27,15110 –15119. **Impact factor: 5.236**; ISSN: 1521-3765.

10) Palladium Terminal Imido Complexes with Nitrene Character, Annette Grünwald, [Bhupendra Goswami](#), Kevin Breitwieser, Bernd Morgenstern, Martí Gimferrer, Frank W. Heinemann, Dajana M. Momper, Christopher W. M. Kay, Dominik Munz, *J. Am. Chem. Soc.*, **2022**, 144, 20, 8897-8901. **Impact factor: 16.38**; ISSN: 1520-5126.

<b>List of Referees</b>	
Prof. Dr. Peter W. Roesky (PhD thesis supervisor) Institute of Inorganic Chemistry, Karlsruhe Institute of Technology (KIT), Engesserstraße 15, 76131 Karlsruhe, Germany E-mail: <a href="mailto:peter.roesky@kit.edu">peter.roesky@kit.edu</a>	Dr. Sanjay Singh Associate Professor (HOD) Department of Chemical Sciences IISER Mohali Knowledge City, Sector 81, SAS Nagar, Mohali 140306, Punjab (INDIA) E-mail: <a href="mailto:sanjaysingh@iisermohali.ac.in">sanjaysingh@iisermohali.ac.in</a>
Prof. Dr. Dominik Munz (Post-Doc supervisor) Saarland University Inorganic Chemistry: Coordination Chemistry Campus C41, Room 3.02 D-66123 Saarbrücken, Germany E-mail: <a href="mailto:dominik.munz@uni-saarland.de">dominik.munz@uni-saarland.de</a>	Dr. Sugumar Venkataramani Assistant Professor Department of Chemical Sciences IISER Mohali Knowledge City, Sector 81, SAS Nagar, Mohali 140306, Punjab (INDIA) E-mail: <a href="mailto:sugumarv@iisermohali.ac.in">sugumarv@iisermohali.ac.in</a>