

CURRICULUM VITAE

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Dr. Saurabh Kumar

(Shyama Prasad Mukherjee (SPM) Fellow)

**Assistant Professor, Department of Chemistry, College of
Commerce, Arts & Science, Patna-800020, Bihar, India
(A Constituent Unit of Patliputra University, Patna)**

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Education

Post-Doctoral Research Associate

*Indian Institute of Technology (IIT) Bombay,
India*

Ph.D., Inorganic Chemistry

*Indian Institute of Technology (IIT) Bombay,
India*

M.Sc., Chemistry (Inorganic Chemistry)

Patna University, Patna

Teaching Experiences

Position	Organization	Duration
Assistant Professor	College of Commerce, Arts & Science, Patna	15 th Jul. 2025 to till date
Faculty	Dept. of Chemistry, University of Delhi, Delhi, India	Oct. 2019 – May 2020
Assistant Professor	Central University of South Bihar, Gaya, Bihar, India	Jul. 2018 – Aug. 2019

Area of Interest

- ★ Coordination Chemistry
- ★ Organometallic Chemistry
- ★ Supramolecular Chemistry

Awards and Fellowships/Recognitions

- * 2025 Appointed as an **Assistant Professor, Department of Chemistry, College of Commerce, Arts & Science, Patna-800020, Bihar, India**
- * 2024 Selected as an **Assistant Professor in Patliputra University, Patna, Bihar, India**

- * 2023 Selected as a **Lecturer (Chemistry)** by **Science, Technology and Technical Education Department**, Bihar, India
- * 2019–2020 Selected for Postdoctoral Research Associate Fellowship from **Council of Scientific Industrial Research (CSIR), New Delhi, Govt. of India**
- * 2017 Obtained Research Associateship position in the **Department of Chemistry, IIT Bombay**, India
- * 2016 Recipient of **IIT Bombay International Travel Support**, based on the research performances (for **ICCC-2016, Brest, France**)
- * 2012 Recipient of prestigious **Shyama Prasad Mukherjee Fellowship (SPMF) Award from CSIR, New Delhi, Govt. of India, 2012**. [Ref. No: (116656-I/SPMF 2012 Award) EMR 1-]. For pursuing doctoral degree (JRF and SRF)
- * 2011 Achieved **All India Rank (AIR) 0004** in **National Eligibility Test** (NET with JRF-June 2011), an entrance test for the **prospective graduate students** of India
- * 2011 Qualified **Indian Institute of Science (IISc) Bangalore** Ph.D. entrance exam [Application form # 11201059]
- * 2011 **Graduate Aptitude Test in Engineering (GATE)** (February 2011): Percentile 94.32 [Organising Institute: **Indian Institute of Technology (IIT) Madras**]

Proficiency and Skills

- * **Spectroscopy and Spectrometry:**
NMR, ESI-MS, GC, GCMS, UV-VIS, FT-IR, Fluorescence
- * **Separation Techniques:**
Fractional Distillation, Vacuum Distillation, Column Chromatography, Flash Chromatography, HPLC, Soxhlet Apparatus
- * **Others:**
Schlenk Line technique and Glove Box (for handling air sensitive compounds)
- * **Softwares:**
Bruker, Scifinder, Origin, ChemDraw, MestReNova, Microsoft Office, Mercury & Diamond for making molecular structures of single crystals, EndNoteX9

Instruments Operated Independently during Ph.D. and Post Doc

Experienced in the handling of advanced experiment instrument like NMR spectrometer (Bruker-AVANCE 400 and Bruker AVANCE-500), FT-IR (Perkin-Elmer Spectrometer), UV-Vis and Fluorescence (Perkin-Elmer Spectrometers), TGA, GC-MS.

Publications

Book Chapter

	<u>Authors</u>	<u>Title</u>	<u>Journals/Book Chapter</u>
[1]	<u>Saurabh Kumar</u> and Neeladri Das	Self-assembly of pyrazine-based metallamacrocycles: Design, synthesis, and applications	Chapter 05, In “Supramolecular Coordination Complexes: Design, Synthesis, and Applications”, 2022, Elsevier Publication. ISBN: 978-0-323-90582-4 DOI: https://doi.org/10.1016/B978-0-323-90582-4.00004-X

Research papers published in Refereed/Peer Reviewed Journals

[1]	<u>Saurabh Kumar</u> , Sk Abdul Wahed, Neeladri Das	Efficient Iodine Capture and Release by a Triptycene and Tröger’s Base Cross-Linked Porous Organic Polymer	<i>ACS Appl. Polym. Mater.</i> , 2025, 7, 11216–11226. DOI: https://doi.org/10.1021/acsapm.5c01750
[2]	<u>Saurabh Kumar</u> , Kanisha Kar, Mukesh Kumar Singh, Arpita Chandra, Neeladri Das	Self-assembled palladium(II) metallacycles bearing imidazole motifs: Synthesis, characterization, and their in vitro cytotoxicity evaluation	<i>Inorg. Chim. Acta</i> , 2025, 581, 122638. DOI: https://doi.org/10.1016/j.inorg.2025.122638
[3]	Prince, Sohom Chandra, Atikur Hassan, <u>Saurabh Kumar</u> , M. Ravi Chandra, Neeladri Das	A hydroxy containing, naphthalene-based and imine linked porous organic polymer for rapid iodine uptake	<i>Microporous and Mesoporous Mater.</i> , 2024, 367, 112976. DOI: https://doi.org/10.1016/j.micromeso.2023.112976
[4]	<u>Saurabh Kumar</u> , Achintya Jana, Sourav Bhowmick, Neeladri Das	Topical progress in medicinal applications of self-assembled organoplatinum complexes using diverse Pt(II)– and N–based tectons	<i>Applied Organomet. Chem.</i> , 2022, e6722. DOI: https://doi.org/10.1002/ao.c.6722
[5]	Arnab Chakraborty, Shambhavi Pandey, Rishabh Kumar Pandey, Khushwant	Self-assembled neutral and ionic [2 + 2] metallomacrocycles using a new flexible ditopic Pt(II)–based organometallic tecton bearing a	<i>Applied Organomet. Chem.</i> , 2022, e6917. DOI: https://doi.org/10.1002/ao.c.6917

	Singh, Saurabh Kumar , Santosh Kumar, T. Rajagopala Rao, and Neeladri Das	pyrimidine motif: Facile syntheses and enhanced anticancer potency	
[6]	Arnab Chakraborty, Chitra Jaiswal, Atikur Hassan, Saurabh Kumar , Khushwant Singh, Biman B. Mandal, Neeladri Das	Tunable and improved antiproliferative activity of Pt(II)-based organometallics bearing alkynyls and 1,2,3-triazole moieties	<i>Applied Organomet. Chem.</i> , 2022, e6711. DOI: https://doi.org/10.1002/aoc.6711
[7]	Saurabh Kumar , Maravanji S. Balakrishna	Transition metal complexes of imidazole appended pyridine linked bisphosphine, 2,6-bis(2-(diphenylphosphanyl)-1H-imidazol-1-yl)pyridine	<i>Results Chem.</i> 2021, 3, 100161. DOI: https://doi.org/10.1016/j.rchem.2021.100161
[8]	Saurabh Kumar , Joel T. Mague and Maravanji S. Balakrishna	Versatile Coordination Modes of 2,6-Bis(2-(diphenylphosphanyl)-1H-imidazol-1-yl)pyridine in Cu(I) and Au(I) Complexes	<i>Eur. J. Inorg. Chem.</i> 2020, 2718–2725. DOI: doi.org/10.1002/ejic.202000520
[9]	Saurabh Kumar , Maravanji S. Balakrishna	Synthesis and metal complexes of a tertiary phosphine, 2-(2-(diphenylphosphaneyl)-1H-imidazol-1-yl)pyridine containing pyridyl and imidazole moieties	<i>Polyhedron</i> 2020, 190, 114779–114784. DOI: https://doi.org/10.1016/j.poly.2020.114779
[10]	Saurabh Kumar , Dipanjan Mondal, Maravanji S. Balakrishna	Diverse Architectures and Luminescence Properties of Group 11 Complexes Containing Pyrimidine-Based Phosphine, N-((Diphenylphosphine)methyl)pyrimidin-2-amine	<i>ACS Omega</i> 2018, 3, 16601–16614. DOI: 10.1021/acsomega.8b02484
[11]	Rajnish Kumar, Saurabh Kumar , Madhusudan Kumar Pandey, Vitthalrao S. Kashid, Latchupatula Radhakrishna and Maravanji S. Balakrishna	Synthesis of phosphine-chalcogenides under solvent free conditions using rotatory ball mill	<i>Eur. J. Inorg. Chem.</i> 2018, 1028–1037. DOI: https://doi.org/10.1002/ejic.201701414

[12]	Saurabh Kumar , Maravanji S. Balakrishna	Palladium(II) and copper(I) complexes of wide angle bisphosphine, 1,4-bis((diphenylphosphino)methyl)benzene	<i>J. Chem. Sci.</i> 2017 , <i>129</i> , 1115–1120. DOI: 10.1007/s12039-017-1334-y
[13]	Susmita Naik, Saurabh Kumar , Joel T. Mague and Maravanji S. Balakrishna	A hybrid terpyridine-based bis(diphenylphosphino)amine ligand, terpy-C ₆ H ₄ N(PPh ₂) ₂ : synthesis, coordination chemistry and photoluminescence studies	<i>Dalton Trans.</i> , 2016 , <i>45</i> , 18434–18437. DOI: 10.1039/c6dt03440c

Conference/Symposium/Workshop (Presented/Attended)

- [1] Successfully completed **18th Faculty Induction Programme** organized by the UGC-Malaviya Mission Teacher Training Centre, **Banaras Hindu University, Varanasi, Uttar Pradesh**, from January 05, 2026 to February 02, 2026.
- [2] “Iodine Capture by Triptycene-Based Porous Organic Polymer for Environmental Remediation” **International Seminar on Recent Advancement in Basic, Applied & Materials Sciences-2025 (RABAMS-2025)**, held in **T. P. S. College, Patna**, on September 18th and 19th, 2025 (*Oral Presentation*).
- [3] Involved in **G20 Presidency Committee Seminar on Climate change**, Organized by **Bhaskaracharya College of Applied Sciences, University of Delhi**, May 25, 2023.
- [4] Participated in **Department of Science and Technology (DST) Govt. of India** organized workshop on “**Hands on Training on Molecular Characterizations Using NMR, XRD and LC-MS**”, held by SAIF **Indian Institute of Technology (IIT) Patna**, July 15–21, 2022.
- [5] Attended the "**Data Management Tools for Researchers**" webinar held by **School of Medicine, Yale University** and organized by **WILEY**, on July 13, 2021.
- [6] Invited paper presentation on “Diverse Architectures and Luminescence Properties of Copper(I) Complexes Assembled from Pyrimidine Appendage Phosphine” **International Conference on Frontiers at the Chemistry–Allied Sciences Interface**, held in the Department of Chemistry, Rajasthan University, **Jaipur**, December 2018.
- [7] “Imidazole-based Bisphosphine: Synthesis, Structure and Coordination Chemistry”. **Kumar S. and Balakrishna, M. S.**, **42nd International Conference on Coordination Chemistry-(ICCC-42)**, July 03–08, 2016, Cité Universitaire Kergoat, 4 Rue des Archives, 29287 Brest, **France** (*Poster presentation*).

- [8] Participated in “In House Symposium 2016 (IHS-2016) *Frontier of Chemistry*” held in the Department of Chemistry, Indian Institute of Technology Bombay, Mumbai, on April 02, 2016. (*Oral Presentation*).
- [9] Participated in “*ACS on Campus*”, IIT Bombay, 2016.
- [10] “Phosphorus Based Ligands: Synthesis, Transition Metal Chemistry and Catalytic Applications”. Kumar S. and Balakrishna, M. S., 16th *Chemical Research Society of India, National Symposium in Chemistry (NSC-16)*, February 7–9, 2014, Department of Chemistry, IIT Bombay, Powai, 400076, India (*Poster presentation*).
- [11] Participated in “*Brukers Pre-NMRS Symposium 2013*”, held in IIT Bombay, February 2013.

Academic Committee Member/In charge

These are the following academic responsibilities; I have done in the last few years:

* In **University of Delhi**, Delhi, India [from Oct. 2019 to May 2020]

- [1] Appointed as **Paper-Setter & Examiner for M.Sc., Students** (Inorganic Specialization, Paper Code: 4101–A, Semester IV)
- [2] Involved in examination duty as an **invigilator for M.Sc., exams** (Semester I and III)

* In **Central University of South Bihar** (CUSB), Gaya, Bihar, India [from Jul. 2018 to Aug. 2019]

- [1] **Member of Board of Studies** for Department of Chemistry (assigned by **Vice-Chancellor**)
- [2] **Inorganic lab in-charge** in the Department of Chemistry, CUSB
- [3] **Mentor of M.Sc., Students** (Session 2018–2020)
- [4] Member of **departmental question paper moderation committee**
- [5] Participated in the **question paper setting for B.Sc., and M.Sc., exams**
- [6] Involved in examination duty as an **invigilator for B.Sc., and M.Sc., exams**
- [7] **Invigilator in Central University Common Entrance Test (CUCET)**, held on 25th May 2019
- [8] Member of **Ph.D., course work syllabus preparation committee** for the academic year 2019–2020

Courses Taught at UG and PG levels

* In **University of Delhi**

Semester	Course Code No.	Course Name

Even Semester 2019–2020	Paper No 4101–A	Inorganic Chemistry (Special - III) Spectral Techniques in Inorganic Chemistry (Elective course 1)
	204–I	Inorganic Chemistry–II (Practical core course 4)
Odd Semester 2019–2020	104–I	Inorganic Chemistry–I (Practical core course 1)

* In **Central University of South Bihar**

Even Semester 2018–2019	MSCHE2001C04	Photochemical and Magnetic Properties of Complexes and Nuclear Chemistry
	CHE–353(L)	Chemistry Practical
	CHE–451	Spectroscopy and Natural Products
	CHE–452	Dyes, Drugs, Macromolecules and Heterocyclics
Odd Semester 2018–2019	CHE–101	Atomic Structure, Bonding and Features of <i>s</i> - and <i>p</i> - Block Elements
	CHE–101(L)	Chemistry Practical
	CHE–301	Transition Elements and Coordination Compounds
	CHE–303(L)	Chemistry Practical

* In **IIT Bombay**

Autumn 2014–15	CH–438	Main Group Chemistry (for M.Sc., Students)
Spring 2013–14	CH–117L	Chemistry Lab (for B.Tech. Students)
Autumn 2013–14	CH–117L	
Spring 2012–13	CH–117L	