

# Curriculum Vitae

## PERSONAL INFORMATION

Name: **Abhijit Patra**

ORCID ID: [0000-0003-3144-1813](https://orcid.org/0000-0003-3144-1813) Researcher ID: [A-7778-2017](https://scholar.google.com/citations?user=l9giKmAAAAAJ)

Nationality: Indian

Date of birth: 04.01.1979

URL for web site: <https://www.fmliiserb.com/>

<https://scholar.google.com/citations?user=l9giKmAAAAAJ>



### • EDUCATION

2003-2009: Ph.D. in the general area of Materials Chemistry, Supervisor: Prof. T. P. Radhakrishnan  
School of Chemistry, University of Hyderabad, Hyderabad

Dissertation: *Optical and Nonlinear Optical Materials based on Molecular Nano, Micro and Bulk Crystals*

2001-2003: Master of Science (M.Sc.) in Chemistry  
Burdwan University, West Bengal, Awarded First Class, 78.33%

1998 – 2001 Bachelor of Science (B.Sc.) in Chemistry, Bankura Christian College, Bankura  
Burdwan University, West Bengal, Awarded First Class, 68.75%

### • CURRENT POSITION(S)

Oct. 11, 2023 – Present: Professor, Department of Chemistry, IISER Bhopal

April 2018 – Oct. 10, 2023: Associate Professor, Department of Chemistry, Indian Institute of Science  
Education and Research Bhopal (IISERB), Bhopal, India

July 2012 – March 2018: Assistant Professor, Department of Chemistry, Indian Institute of Science  
Education and Research Bhopal (IISERB), Bhopal, India

### • PREVIOUS POSITIONS

Sept, 2010 – June 2012: **Alexander von Humboldt fellow**, working on Polymeric materials  
Dept. of Macromolecular Chemistry, University of Wuppertal, Germany

June 2009 – June 2010: Post-doctoral fellow in PPSM, ENS Paris-Saclay, France

### • FELLOWSHIPS AND AWARDS

2023: Fellow of The National Academy of Sciences, India, FNASc

2023: Chemical Research Society of India (CRSI) Bronze Medal

2018: Emerging Investigator: *Journal of Material Chemistry C* (Royal Society of Chemistry)

Sept, 2010 – June 2012: Alexander von Humboldt Fellowship awarded in Materials Science

2005: Qualified UGC-CSIR National Eligibility Test (NET) for Senior Research Fellowship (SRF)

2003: Qualified UGC-CSIR National Eligibility Test (NET) for Junior Research Fellowship (JRF)

2003: Qualified Graduate Aptitude Test in Engineering (GATE), AIR: 69

### • SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS

2012 – Present: Number of students guided: Postdocs: 4, Ph.D.; 15 (*completed: 7*), Master Students: 27 (*completed: 25*), Department of Chemistry, IISER Bhopal, India

### • TEACHING ACTIVITIES (IISER Bhopal, India)

2012 – Present: Chemistry Instructor, taught 22 full courses so far (Physical Properties of Matter, Physical Chemistry of Solutions, Physical Chemistry of Polymers, Classical Thermodynamics, Molecular Spectroscopy, Chemistry and Physics of Materials, Physical Chemistry Lab I, II)

*Received appreciation letter for teaching from the Chairperson, Senate in each offline semester except the first one since joining IISERB*

### • INSTITUTIONAL RESPONSIBILITIES

Jan 2024 – present: Head, Centre for Science and Society (CS2)

Nov 2022 – 2023: Coordinator, Innovation and Incubation Centre for Entrepreneurship (IICE), IISER Bhopal

2018 – 2022: Dean Alumni and International Relations, IISER Bhopal, India

2019 – 2022: Chairperson, Institute Career Development & Placement Council, IISER Bhopal

July-Sept, 2022: Acting Dean Faculty Affairs, IISER Bhopal, India

Jan-Aug, 2022: Departmental Undergraduate Committee (DUGC) convenor, IISER Bhopal

2016 – 2017: Convener, Cooperative Crèche and Preschool, Aadharshila, IISER Bhopal

2016 – 2017: Joint Admissions Committee (JAC) member, IISER Bhopal

2015 – 2016: Nodal person and Joint Admissions Comt. (JAC) member, IISER Bhopal, IISER Berhampur

2013 – 2018: In-charge, Instrument Room, Dept. of Chemistry, IISER Bhopal

### • COMMISSIONS OF TRUST/MEMBERSHIPS OF EVALUATION BOARD

2021 – 2024 Member of the Expert Committee of Teachers Associateship for Research Excellence (EC-TARE program),

- SERB, India
- 2011 – now Regular reviewer for journals published by ACS, Wiley, RSC, Nature Publishing Gr., etc.
- 2021 – 2022 Guest Editor of 1 special issue ([Metal-Free Room-Temperature Phosphorescence](#), *Frontiers in Chemistry*)
- 2013 – now Regular reviewer for SERB and other national funding agencies

• □ **MEMBERSHIPS OF SCIENTIFIC SOCIETIES**

- 2020 – Life member of Chemical Research Society (CRSI) of India
- 2020 – Life member of Materials Research Society (MRSI) of India
- 2012 – Member of American Chemical Society (ACS), Royal Society of Chemistry (RSC)

• □ **MAJOR COLLABORATIONS**

[Prof. R. S. Tomar](#), [Dr. A. Chande](#), Department of Biological Sciences, IISER Bhopal

[Prof. K. Kailasam](#), Institute of Nano Science and Technology (INST), Mohali

[Prof. Venkata Krishnan](#), Indian Institute of Technology Mandi

□ **MOST RELEVANT PUBLICATIONS (last five years):**

1. S. Das, A. Batra, S. Kundu, R. Sharma, A. Patra,\* Unveiling Autophagy and Aging through Time-resolved Imaging of Lysosomal Polarity with a Delayed Fluorescent Emitter, *Chem. Sci. Chem. Sci.*, **2024**, *15*, 102-112 (*back cover page*). [Link](#)
2. S. Jaiswal, A. Giri, D. Mandal, M. Sarkar, A. Patra,\* UV-to-NIR Harvesting Conjugated Porous Polymer Nanocomposite: Upconversion and Plasmon Expedited Thioether Photooxidation, *Angew. Chem. Int. Ed.*, **2023**, *62*, e202312910. [Link](#) (*highlighted in The Hindustan Times, Times of India, The Hindu, ANI News, Indian Economic Observer, Indian News Network, The Free Press Journal, The News Room, Humara Metro, Drumpe*)
3. A. Giri, G. Shreeraj, T. K. Dutta, A. Patra,\* Transformation of Imine Cage to Covalent Organic Framework Film at the Liquid-Liquid Interface, *Angew. Chem. Int. Ed.* **2023**, *62*, e2022190 (*frontispiece*). [Link](#) (*highlighted in The Hindustan Times, The Free Press Journal, The Hindu Business Line, Careers360, Prabha Sakshi, Business World – Education, The Hindu*).
4. S. Kundu, S. Das, A. Patra,\* Fluorescence Correlation Spectroscopy and Fluorescence Lifetime Imaging Microscopy for Deciphering the Morphological Evolution of Supramolecular Self-assembly, *Chem. Commun.* **2023**, *59*, 8017. [Link](#)
5. S. Kundu, B. Sk, N. Saha, S. Das, T. K. Dutta, A. Batra, R. S. Tomar,\* A. Patra,\* Unraveling Molecular Assembly and Tracking Lipid Droplet Dynamics Using Fluorescent Phenanthroimidazole Derivatives, *ACS Mater. Lett.* **2023**, *5*, 27. [Link](#)
6. M. Sarkar, A. Patra,\* *N,N'*-octyl Biphenothiazine and Dibenzothiophene Dioxide-based Soluble Porous Organic Polymer for Biphasic Photocatalytic Hydrogen Evolution, *Chem. Commun.* **2023**, *59*, 2584 (*Chem. Commun. HOT Articles 2023*). [Link](#)
7. A. Giri, S. Biswas, M. W. Hussain, T. K. Dutta, A. Patra,\* Nanostructured Hypercrosslinked Porous Organic Polymers: Morphological Evolution and Rapid Separation of Polar Organic Micropollutants, *ACS Appl. Mater. Interfaces* **2022**, *14*, 7369. [Link](#) (*highlighted in The Better India, The Telegraph, Vigyan Prasar, India Today, NDTV, The Hindustan Times and The Hindu, featured in Sansad TV in Science Monitor and Gyan Vigyan episodes*).
8. A. Giri, Y. Khakre, G. Shreeraj, T. K. Dutta, S. Kundu, A. Patra,\* The order-disorder conundrum: a trade-off between crystalline and amorphous porous organic polymers for task-specific applications, *J. Mater. Chem. A* **2022**, *10*, 17077. [Link](#)
9. S. Jaiswal, S. Das, S. Kundu, I. Rawal, P. Anand, A. Patra,\* Progress and Perspective: Fluorescent to Long-lived Emissive Multifunctional Probes for Intracellular Sensing and Imaging, *J. Mater. Chem. C* **2022**, *10*, 6141. (*Invited Review*)
10. B. Sk, M. Sarkar, K. Singh, A. Sengupta, A. Patra,\* UV to NIR Multistate Electrochromism and Electrofluorochromism in Dibenzophenazine-arylamine Derivatives, *Chem. Commun.* **2021**, *57*, 13590. [Link](#)
11. S. Kundu, A. Chowdhury, S. Nandi, K. Bhattacharyya,\* A. Patra,\* Deciphering the Evolution of Supramolecular Nanofibers in Solution and Solid-state: A Combined Microscopic and Spectroscopic Approach, *Chem. Sci.* **2021**, *12*, 5874. [Link](#)
12. S. Kundu, B. Behera, A. Giri, N. Saha, A. Patra,\* *N,N'*-Bicarbazole-Benzothiadiazole-based Conjugated Porous Organic Polymer for Reactive Oxygen species generation in live cells, *Chem. Commun.* **2021**, *57*, 6875. [Link](#)
13. B. Sk, S. Sharma, A. James, S. Kundu, A. Patra,\* N-rich Electron Acceptors: Triplet Harvesting in Multichromophoric Pyridoquinoxaline and Pyridopyrazine-based Organic Emitters, *J. Mater. Chem. C* **2020**, *8*, 12943. [Link](#)
14. M. W. Hussain, V. Bhardwaj, A. Giri, A. Chande,\* A. Patra,\* Multifunctional Ionic Porous Frameworks for CO<sub>2</sub> Conversion and Combating Microbes, *Chem. Sci.* **2020**, *11*, 7910. [Link](#)
15. S. Kundu, B. Sk, P. Pallavi, A. Giri, A. Patra,\* Molecular Engineering Approaches towards All-organic White Light Emitting Materials, *Chem. Eur. J.* **2020**, *26*, 5557 (*Review*).
16. A. Giri, M. W. Hussain, B. Sk, A. Patra,\* 'Connecting the Dots': Knitting *C*-phenylresorcin[4]arenes with Aromatic Linkers for Task-specific Porous Organic Polymers, *Chem. Mater.* **2019**, *31*, 8440. [Link](#)

**List of Patents:**

1. A. Patra, A. Chande, M. W. Hussain, V. Bhardwaj, Nanoporous Organic Framework of Metal Chelated Triaminoguanidinium, Complete specifications for patent (IPR) submitted on 19.03.2019, Application No. 201921010663.
2. A. Patra, B. Sk, M. Sarkar, S. Kundu, Dibenzopyridoquinoxaline based Derivatives, Complete specifications for patent (IPR) submitted on 11.10.2019, Application No. 201921041228.

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