


Brief Biodata

Name: Dr. Shikha Sharma

Designation:	Scientist	
DP No. and Name:	3.02, Gas Metrology	
DU No. and Name:	3.0, Environmental Sciences and Biomedical Devices Division	
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Date of Joining CSIR-NPL:	2 nd May 2025	
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Research Area/ Interest

- Testing of gas standards and unknown gas mixtures using Gas Chromatography and FT-IR
- Synthesis and Characterization of Conjugated Porous Organic Polymers for Environmental Remediation via Adsorption of organic pollutants

Educational Qualifications

(Please write latest qualification first)

Degree	Subject	University/ Institute	Year
PhD	Chemical Sciences	IISc Bangalore	2020
MSc	Chemistry	IIT Roorkee	2014
BSc Honours	Chemistry	St. Stephen's College, University of Delhi	2012

Academic / Research Experience

Grade / Post	Institute	Duration		Research Field
		From	To	
Assistant Professor	JSS Academy of Technical Education, Noida	6 th November 2024	30 th April 2025	Teaching and Research
Assistant Professor	Netaji Subhash University of Technology NSUT, Dwarka, Delhi	13 th December 2021	30 th September 2024	Teaching and Research, Porous organic polymers
Dr. DS Kothari Post-Doctoral Fellow (National Fellowship)	Jawahar Lal Nehru University, New Delhi	1 st October 2021	12 th December 2021	Supramolecular chemistry

Project Scientist	Indian Institute of Technology IIT Delhi	1st April 2021	30th September 2021	Perovskite nanocomposites
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No. of Publications: 6

Selected Publications

No. of Publications in SCI Journals	No. of Publications in non-SCI Journals	No. of Publications in Conference Proceedings	Books	Total
6	0	1	0	7

1. Pritee ; Dhariwal, Neeraj; Yadav, Preety; **Sharma, Shikha***, Thakur, Sanjeeve*. "Enhanced Photocatalytic Degradation of Environmental Pollutants using A Triphenylamine-based Polymer: Synthesis, Characterization and Mechanistic Insights". *Langmuir* **2024**, 40 (49), 26007-26017 [*Corresponding author]
2. Pritee; **Sharma, Shikha***, Thakur, Sanjeeve*. Facile Green One-Pot Synthesis of Pyrimidine Based Hydroxy Azo-Polymer for Selective Adsorption of Cationic Dyes. *Chemistry Africa* **2024**, 1-14. [*Corresponding author]
3. **Sharma S.**; Rathod S.; Yadav S. P.; Chakraborty A.; Shukla A. K.; Aetukuri N.; Patil S. Electrochemical Evaluation of Diketopyrrolopyrrole Derivatives for Non-aqueous Redox Flow Battery. *Chem. Eur. J.* **2021**, 27, 1-10.
4. **Sharma S.**; Ghosh S.; Ahmed T.; Ray S.; Islam S.; Salzner U.; Ghosh A.; Seki S.; Patil S. Fermi Level Pinning Induced by Doping in Air Stable N-type Organic Semiconductor. *ACS Applied Electronic Materials* **2020**, 2 (1), 66-73.
5. **Sharma S.**; Sakai N.; Ray S.; Senanayak S. P.; Sirringhaus H.; Snaith H. J.; Patil S. Inverted perovskite solar cells with air stable Diketopyrrolopyrrole-based electron transport layer. *Solar Energy* **2019**, 186, 9-16.
6. Ray S.; **Sharma S.**; Salzner S.; Patil S. Synthesis and Characterization of Quinoidal Diketopyrrolopyrrole Derivatives with Exceptionally High Electron Affinities. *J. Phys. Chem. C* **2017**, 121, 30, 16088-16097.

Patents

Title: "Non-aqueous redox flow battery with Diketopyrrolopyrrole derivatives based redox active electrolyte"
Indian Provisional Application No: 201941039240; Filing date: 25/09/2020
Applicant: Indian Institute of Science; **Sharma S.**; Rathod S.; Aetukuri N.; Shukla A. K.; Patil S.
IPTeL Ref No: CS-SSCU-2019-022

Status: **Granted**
Patent Certificate No.: **450702**

Current Activities

(Not more than 100 words)

Gravimetric preparation of gas mixtures, Testing of gas standards and unknown gas mixtures using Gas Chromatography

Honour(s)/Award(s)/ Fellowship(s)

- Received **Dr DS Kothari Post-doctoral Fellowship** (National Fellowship) in 2021.
- Qualified **GATE 2014** with an All India Rank of **153** amongst 7932 students.
- Qualified **IIT-JAM 2012** with an All India Rank of **186** amongst more than 15000 students. IIT-JAM is an entrance admission test jointly conducted by IITs for admission to MSc courses at reputed IITs.
- Awarded **DST-INSPIRE** scholarship for the academic year 2009-2014 (**awarded to only top 1% students based on their performance at the National level**)
- Awarded KPMG scholarship in 2011 awarded to students with a consistent and strong academic track record of excellence
- Stood **2nd** rank in **B.Sc. Chemistry (hons.)** in **Delhi University (DU)** for year 2012.
- Received “**Science Meritorious scholarship**” provided by **DU** in year 2010.

Contributions to AcSIR

- Delivered an Invited talk in “One day as a Scientist” Program (21-25th July 2025) on 22nd July 2025 on the topic “Precision matters” under JIGYASA, CSIR-NPL.
- Briefed the school students (around 100 from different schools) regarding lab activities and research as a part of JIGYASA programme at CSIR-NPL.
- Submitted project proposal in CAQM (Commission for Air Quality Management) on “Traceable Monitoring of Gaseous Mercury in Ambient Air” on 31st July 2025 (PEC done in NPL on 16 July 2025).

Membership of Professional Societies/ Institutions

Metrology Society of India
Indian Women Scientists' Association

Any other Information

(Not more than 100 words)