

## बायोडाटा

डॉ. अनूप कुमार सैनी

**Dr. Anoop Kumar Saini**

(NET-JRF, DSKPDF Awardee)

Assistant Professor (Adhoc)

Department of Polymer Science

Bhaskaracharya College of Applied Sciences,

University of Delhi, New Delhi

Mobile: +91-8519068540

Email: [anoopsaini5@gmail.com](mailto:anoopsaini5@gmail.com)



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### Current Address

Sunview Apartment H. No.-RZ-112  
Plot No-92, Nand Vihar, Dwarka-16A  
Delhi- 110078

### Permanent Address

V + PO -Harsoli, District- Khairthal-Tijara  
State-Rajasthan, PIN-301403

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### More Information

<https://orcid.org/0000-0003-1792-9521> , [www.researchgate.net/profile/Anoop\\_Saini](http://www.researchgate.net/profile/Anoop_Saini)

**h -index = 14, i10-index = 16** and Total number of citations = 813 (Google Scholar)

### Objective:

My intensive education background with B.Sc. (Honours) in Chemistry and M.Sc. (Organic Chemistry) along with prestigious publications in Ph.D. from IIT Indore has trained me with ins and outs of Chemistry, which will definitely help me in connecting with UG and PG students inside the classroom. In my work, I have collaborated with scientists across disciplines ranging from Engineering, Materials Science and Biosciences apart from Chemistry. I believe that my research credentials and strong interdisciplinary collaboration will be very useful for students to both grasp the fundamentals of the subject as well as understand the applications and the broad scope of the subjects that they are studying.

## Education

- 2018** Ph.D. in Chemistry (**Thesis title: Facile Synthesis of Imine/Azine Based Organic Ligands: Sensing, Bio-Imaging and Solid-State Structural Reactivity**) from **Indian Institute of Technology Indore** (IIT Indore) India, under the supervision of Prof. Shaikh M. Mobin
- 2011** Master of Science (M.Sc.) in Organic Chemistry (First Class, 64.08%), B.S.A. College Mathura, Dr. Bhimrao Ambedkar University, Agra (U. P.)
- 2009** Bachelor of Science (B.Sc.) Honours (Chemistry), (First Class, 64.43%), Raj Rishi College Alwar, University of Rajasthan, Jaipur
- 2006** Senior Secondary School, 12<sup>th</sup> class (First Class with **Distinction in Chemistry and Biology**, 69.08%), Govt. Sr. Secondary School, Harsoli, Alwar, Rajasthan
- 2004** Secondary Education, 10<sup>th</sup> class (62.83%), Modern Sr. Secondary School, Harsoli, Alwar, Rajasthan

## Research Career

- 2018-2021** Dr. D. S. Kothari Postdoctoral Fellow at Department of Chemistry, University of Delhi, New Delhi under the mentorship of Prof. Rajeev Gupta
- 2017- 2018** Institute Postdoctoral Fellow at Discipline of Chemistry, IIT Indore
- 2015-2017** Senior Research Fellow (SRF) at Discipline of Chemistry, IIT Indore
- 2013-2015** Junior Research Fellow (JRF) at Discipline of Chemistry, IIT Indore

## Teaching Experience

- Jan 2022- till date-** Assistant Professor (Adhoc), Department of **Polymer Science**, Bhaskaracharya College of Applied Sciences, University of Delhi, New Delhi
- August 2021- Jan 2022 Guest Faculty, Department of Chemistry, University of Delhi, New Delhi
- Feb 2021-June 2021 Taught M.Sc-Final year, 4101b Course at Department of Chemistry, University of Delhi

## Research Area

- ✓ Polymeric Nanomaterials and coordination polymers.
- ✓ Flexibility of crystals: Elastic or plastic and their application in crystal engineering.
- ✓ Metal-Organic frameworks and their luminescence properties.
- ✓ Metal Cations /Anion sensing by new organic ligands *via* Uv-vis, fluorescence and cyclic voltammetry methods.
- ✓ Single-Crystal- to- Single-Crystal Transformation in organic and inorganic crystals.
- ✓ Inorganic polymers.
- ✓ Synthesis of transition metal and lanthanide-based metal complexes.
- ✓ Crystallography, Solid-state structural chemistry, bio-imaging and molecular docking.

## Achievements/Awards

- 2026 Organizing committee member in the National Conference IMPACT 2026 on “Cultivation, Post-Harvest Processing, Value Addition, and Innovative Packaging of Indigenous Medicinal Plants: Enhancing Shelf Life, Standardization, and Livelihoods” Organized by Bhaskaracharya College of Applied Sciences, University of Delhi, Delhi from 17-18 February, 2026
- 2025 Completed the NPTEL – AICTE Faculty Development Programme (**FDP**), (Funded by the MoE, Govt. of India), Jul-Oct 2025, 12-week course, Title: Polymers: Concepts, Properties, Uses and Sustainability.
- 2025 Completed the **NPTEL Online Certification Course** (Funded by the MoE, Govt. of India), Jul-Oct 2025, 12-week course, Title: Polymers: Concepts, Properties, Uses and Sustainability
- 2025 Completed the NEP 2020 Orientation & Sensitization Programme under Malviya Mission Teacher Training Programme (MM-TTP) of University Grants commission Organized by Centre for Professional Development in Higher Education (UGC-MMTTC), University of Delhi from January 6-15, 2025.
- 2018 ‘**Received Best Research paper award 2018**’ for the publication titled ‘A new multitalented azine ligand: elastic bending, single -crystal- to- single- crystal transformation and a fluorescence turn-on Al(III) sensor’ from IIT Indore on 15<sup>th</sup> august 2018. **A. K. Saini**, K. Natarajan and S. M. Mobin, Chem. Commun., 2017, **53**, 9870–9873.
- 2017 Editorial member in SF Journal of Material and Chemical Engineering.

- 2017 'Received Best Research paper award 2017' for the publication titled 'Multicolour fluorescent carbon nanoparticle probes for live cell imaging and dual palladium and mercury sensors.' V. Sharma, A. K. Saini and S. M. Mobin, *J. Mater. Chem. B*, 2016, 4, 2466–2476.
- 2012 Qualified CSIR-UGC test for Junior Research Fellowship (JRF) and Eligibility for Lectureship, secured 82<sup>nd</sup> rank under UGC Fellowship Scheme.

## **Publication List**

### **2025**

1. P. K. Muwal, **A. K. Saini**, K. Choudhary, V. Beniwal, B. Pani, S. Sirohi, A. Mittal, R. Kumar and R. Singh, *ChemistrySelect.*, 2025, 10, e202404394, Development of Cyclic and Acyclic Fluorescent Chemosensors for Selective Detection of Ions and Biomolecules in Water. (Review, as a corresponding author)

### **2023**

2. H. Goyal, V. Kumar, **A. K. Saini**, G. Kedawat, B. K. Gupta and Rajeev Gupta, *Materials Today Chemistry.*, 2023, 27, 101306, A multifunctional Schiff base with aggregation-induced enhanced emission, gelation, and mechanochromic properties for anti-counterfeiting applications. DOI: 10.1016/j.mtchem.2022.101306

### **2020**

3. N. Kaur, P. Tiwari, K. S. Kapoor, **A. K. Saini**, V. Sharma and S. M. Mobin, *CrystEngComm.*, 2020, 22, 7513–7527, Metal-Organic framework based antibiotic release and antimicrobial response: An overview (Invited Perspective from CrystEngComm Editor), DOI: 10.1039/D0CE01215G, ISSN: 1466-8033

### **2019**

4. S. N. Ansari, **A. K. Saini**, P. Kumari and S. M. Mobin, *Inorg. Chem. Front.*, 2019, 6, 736–745, An Imidazole derivative based chemodosimeter for Zn<sup>2+</sup> and Cu<sup>2+</sup> ions through "Off-On-Off" switching with intracellular Zn<sup>2+</sup> detection.  
DOI: 10.1039/c8qi01127c, ISSN: 2052-1553
5. N. Kaur, V. Sharma, P. Tiwari, **A. K. Saini** and S. M. Mobin, *Sens. Actuator B-Chem.*, 2019, 291, 275–286, Vigna radiate based green C-dots: Photo-triggered theranostics,

fluorescent sensor for extracellular and intracellular iron (III) and multicolor live cell imaging probe. DOI: 10.1016/j.snb.2019.04.039, ISSN: 0925-4005

6. P. Kumari, S. Verma, K. Natarajan, S. Ansari, **A. K. Saini** and S. M. Mobin, *Cryst. Growth Des.* 2019, **19**, 5483–5490, “Design and synthesis of a new facile ligand in a dual role: Mechanically elastic crystal and selective mitochondria target.  
DOI: 10.1021/acs.cgd.9b00846, ISSN: 1528-7483
7. P. Kumari, S. Ansari, R. Kumar, **A. K. Saini**, and S. M. Mobin, *Chem. Biodiversity.*, 2019, **16**, e1900315, Design and construction of aroyl-hydrazone derivatives: Synthesis, crystal structure, molecular docking and their biological activities.  
DOI: 10.1002/cbdv.201900315, ISSN: 1612-1880

### 2018

8. **A. K. Saini**, M. Saraf, P. Kumari and S. M. Mobin, *New J. Chem.*, 2018, **42**, 3509–3518, A highly selective and sensitive chemosensor for L-tryptophan by employing Schiff-based Cu(II) complex.  
DOI: 10.1039/c7nj04595f, ISSN: 1144-0546
9. V. Sharma, N. Kaur, P. Tiwari, **A. K. Saini** and Shaikh M. Mobin, *Carbon.*, 2018, **139**, 393–403, Multifunctional fluorescent “Off-On-Off” nanosensor for Au<sup>3+</sup> and S<sup>2-</sup> employing N-S co-doped carbon-dots.  
DOI: doi.org/10.1016/j.carbon.2018.07.004, ISSN: 0008-6223
10. A. Singh, S. Singh, **A. K. Saini**, S. M. Mobin and P. Mathur, *Appl. Organomet. Chem.*, **2018**, 32, e4574, Facile oxidation of alcohols to carboxylic acids in basic water medium by employing ruthenium picolinate cluster as an efficient catalyst.  
DOI: 10.1002/aoc.4574, ISSN: 1099-0739

### 2017

11. **A. K. Saini**, K. Natarajan and S. M. Mobin, *Chem. Commun.*, 2017, **53**, 9870–9873, A new multitasking azine ligand: elastic bending, single-crystal-to-single-crystal transformation and a fluorescence turn-on Al(III) sensor.  
DOI: 10.1039/c7cc04392a, ISSN: 1364-548X
12. M. Saraf, K. Natarajan, **A. K. Saini** and S. M. Mobin, *Dalton Trans.*, 2017, **46**, 15848–15858, Small biomolecules sensor based on an innovative MoS<sub>2</sub>-rGO hetero structure modified electrode platform: a binder-free approach.  
DOI: 10.1039/c7dt03888g, ISSN: 1477-9234

## 2016

13. **A. K. Saini**, V. Sharma P. Mathur and S. M. Mobin, *Sci. Rep.* 2016, **6**, 34807, The development of fluorescence turn-on probe for Al(III) sensing and live cell nucleus-nucleoli staining.  
DOI: 10.1038/srep34807, ISSN: 2045-2322
14. **A. K. Saini**, M. Srivastava, V. Sharma, V. Mishra and S. M. Mobin, *Dalton Trans.*, 2016, **45**, 3927–3935, A highly selective, sensitive and reversible fluorescence chemosensor for Zn<sup>2+</sup> and its cell viability.  
DOI: 10.1039/c5dt04945h, ISSN: 1477-9234
15. **A. K. Saini**, P. Kumari, V. Sharma, P. Mathur and S. M. Mobin, *Dalton Trans.*, 2016, **45**, 19096–19108, Varying structural motifs in the salen based metal complexes of Co(II), Ni(II) and Cu(II): synthesis, crystal structures, molecular dynamics and biological activities. DOI: 10.1039/c6dt03573f, ISSN: 1477-9234
16. V. Sharma, **A. K. Saini** and S. M. Mobin, *J. Mater. Chem. B*, 2016, **4**, 2466–2476, Multicolour fluorescent carbon nanoparticle probes for live cell imaging and dual palladium and mercury sensors.  
DOI: 10.1039/c6tb00238b, ISSN: 2050-7518
17. S. M. Mobin, **A. K. Saini**, V. Mishra and A. Chaudhary, *Polyhedron*, 2016, **110**, 131–141, A series of new heteroleptic Hg (II) complexes: Synthesis, crystal structures and photophysical properties.  
DOI: 10.1016/j.poly.2016.02.037, ISSN: 0277-5387
18. V. Mishra, A. Raghuvanshi, **A. K. Saini** and S. M. Mobin, *J. Organomet. Chem.*, 2016, **813**, 103–109, Anthracene derived dinuclear gold (I) diacetylide complexes: Synthesis, photophysical properties and supramolecular interactions.  
DOI: 10.1016/j.jorganchem.2016.04.013, ISSN: 0022-328X

## 2015

19. V. Kumar, S. Ghosh, **A. K. Saini**, S. M. Mobin and B. Mondal, *Dalton Trans.*, 2015, **44**, 19909–19917, Copper (ii) mediated phenol ring nitration by nitrogen dioxide.  
DOI: 10.1039/c5dt02318a, ISSN: 1477-9234

## Conferences/Poster Presentation/Courses

- 1 ***“Metal-Ligand Interplay in Advanced Coordination Chemistry”*** a Global Initiative on Academic Networks (GIAN) Course Organized by Discipline of Chemistry, Indian Institute of Technology Indore, an initiative from MHRD, New Delhi, from February 5–9, 2018
- 2 ***“Inorganic Chemistry of Imaging: Magnetic Resonance and Optical Imaging with Coordination Complexes”*** a Global Initiative on Academic Networks (GIAN) Course Organized by Discipline of Chemistry, Indian Institute of Technology Indore, an initiative from MHRD, New Delhi, from January 8–12, 2018
- 3 ***“Catalysis by Metal Complexes”*** a Global Initiative on Academic Networks (GIAN) Course Organized by Discipline of Chemistry, Indian Institute of Technology Indore, an initiative from MHRD, New Delhi, from November 21–26, 2016
- 4 ***“5<sup>th</sup> Symposium on Advanced Biological Inorganic Chemistry”*** organized by Tata Institute of Fundamental Research (TIFR) and Indian Association for the Cultivation of Science (IACS) Kolkata, January 07–11, 2017 (**Poster Presentation**).
- 5 ***“18<sup>th</sup> CRSI National Symposium in chemistry”*** organized by Institute of Nano science and Technology (INST) and Panjab University, Chandigarh on February 5–7, 2016 (**Poster Presentation**).
- 6 ***“Frontiers in Inorganic and Organometallics”*** organized by Discipline of Chemistry, Indian Institute of Technology-Indore, April 14–15, 2016 (**Poster Presentation**).
- 7 ***“17<sup>th</sup> CRSI National Symposium in chemistry”*** organized by National Chemical Laboratory Pune, IISER Pune and Pune University Pune, February 6–8, 2015 (**Poster Presentation**).
- 8 ***“Laboratory Health & Safety Workshop”*** one day workshop organized by the Royal Society of Chemistry (**RSC**) in partnership with the Chemical Research Society of India (**CRSI**) and **IIT Indore** on April 4, 2014.
- 9 ***“Scientific Writing”*** a workshop organized by Indian Institute of Technology Indore, under Continuing Education Program (CEP) from July 11–12, 2014.
- 10 ***“Frontier lecturer series in chemistry (FLSC-2014)”*** organized by Indian Institute of Technology Indore association with Jawaharlal Nehru Centre for Advanced Scientific Research (**JNCASR**), Bangalore, January 30–31, 2014.
- 11 ***“Introduction to Gaussian: Theory and Practice”*** organized by Delhi University from January 6–10, 2014.

- 12 “Rigaku Oxford Diffraction SMX User Meeting” organized by Rigaku Oxford Diffraction and supported by I. R. Technology Service PVC and Department of chemistry, IIT Bombay from October 18–19, 2016.

### **Professional Skills**

- ✓ Experienced in mounting of single crystal & structure solving (Data collection, Data reduction) by using Shelx package up to publication level.
- ✓ Well versed with Microsoft Office (Word, Excel, and Power Point *etc*).
- ✓ Chem draw for schematic diagram.
- ✓ Origin for plots.
- ✓ Diamond, Mercury for packing features
- ✓ Scifinder, and CCDC database (for searching scientific information).
- ✓ Knowledge of Zotero (for research paper references)
- ✓ Gaussian09- For theoretical calculation

### **Instruments Explored**

- ✓ Single crystal X-ray diffractometer
- ✓ NMR 400 MHz
- ✓ LCMS-HPLC
- ✓ UV-visible spectrometer
- ✓ Spectrofluorometer
- ✓ Fourier-transform infrared (FTIR) spectrometer.
- ✓ Microwave reactor
- ✓ Cyclic Voltammetry

### **Personal Information**

Date of birth: October 6, 1990  
Sex: Male  
Marital status: Married  
Nationality: Indian  
Language Known: English and Hindi

## **References**

**1. Dr. Shaikh M. Mobin (Ph.D. Supervisor)**  
Professor  
Discipline of Chemistry,  
Indian Institute of Technology Indore  
Tel: 91-731-2438 752  
Email: [xray@iiti.ac.in](mailto:xray@iiti.ac.in)

**2. Dr. Rajeev Gupta (DSKPDF-Mentor)**  
Professor  
Department of Chemistry,  
University of Delhi, New Delhi  
Email: [rgupta@chemistry.du.ac.in](mailto:rgupta@chemistry.du.ac.in)

**Declaration:** I hereby declare that the above information is correct to the best of my knowledge.

(Anoop Kumar Saini)