

## Curriculum Vitae

### **Dr. Anamika**

(Guest Faculty)

Institution's Address

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### **Personal information**

<b>Father's Name</b>	: Mr Gyan Prakash Kushwaha
<b>Mother's Name</b>	: Mrs. Kusum Kushwaha
<b>Date of Birth</b>	: 2 <sup>nd</sup> July, 1989
<b>Nationality</b>	: Indian
<b>Permanent Address</b>	: 201, Patel Nagar, Harjinder Nagar, Kanpur- 208007

**Brief details of Thesis work:** The thesis entitled "Homo- and Heteroleptic Metal Complexes of 1,1-Dithio Ligands: Synthesis, Crystal Structures and Properties" is comprised of six chapters .

In this study nineteen (19) new homo- and heteroleptic complexes of Ni(II), Cu(I), Zn(II) and Bi(III) with dianionic 1,1-ethylenedithiolate and monoanionic xanthate and dithiocarbamate ligands have been prepared and characterized by elemental analysis, ESI- HRMS, spectroscopy (IR, <sup>1</sup>H, <sup>13</sup>C{<sup>1</sup>H}, <sup>31</sup>P{<sup>1</sup>H}, NMR, UV-Vis.) and X- ray crystallography . The phase purity of the bulk samples have been examined by powder X- ray diffraction (PXRD). The complexes have been applied as catalysts in Click synthesis, Knoevenagel condensation and electro catalyst in oxygen evolution schemes. The anti- leishmanial activity of Bi(III) dithiocarbamate complexes have been assessed.

### Educational Qualifications

Degree	Year of Passing	Board/College/University	Subjects	% of Marks
Intermediate	2005	U.P. Board	Hindi, English, Physics, Chemistry, Biology,	66.6
B. Sc.	2008	C.S.J.M.U. Kanpur	Chemistry, Botany, Zoology	66.37
M. Sc.	2010	C.S.J.M.U. Kanpur	Chemistry	58.33
Ph.D	2021	Banaras Hindu University	Chemistry	NA

### Academic Achievements

- Graduate Aptitude Test in Engineering (GATE): Qualified in 2014 and 2015.
- CSIR NET (Chemical Science) : Qualified in June 2016.
- CSIR –JRF (Chemical Science) : Qualified in June 2017.
- Third prize in Poster presentation in International Conference on Emerging Trends in Chemical Sciences (ICETCS) February 2018 at Deen Dayal Upadhyaya Gorakhpur University.

### Extra Curricula Activities

- Computer software: MS Word, PowerPoint, Chem Draw, Origin, Mercury 3.8, Diamond and Olex2.
- Active participation in cultural activities at school and college.

### Research Publications

1. Ferrocene Functionalized Dithiocarbamate Zn(II) Complexes as Efficient Bifunctional Catalysts for One-Pot Synthesis of Chromene and Imidazopyrimidine Derivatives via Knoevenagel Condensation Reaction.  
**Anamika**, Chote Lal Yadav, Michael G. B. Drew, Kamlesh Kumar and Nanhai Singh.  
*Inorg. Chem.*, 2021, 60, 6446–6462.
2. New Heteroleptic [Ni(II) 1,1-Dithiolate-Phosphine] Complexes: Synthesis, Characterization and Electrocatalytic Oxygen Evolution Studies.

- Anamika**, Dharmendra Kumar Yadav, Krishna K. Manar, Chote Lal Yadav, Kamlesh Kumar Vellaichamy Ganesan, Michael G. B. Drew and Nanhai Singh. *Dalton Trans.*, 2020, 49, 3592–3605.
3. Highly Efficient Structurally Characterised Novel Precatalysts: Di- and Mononuclear Heteroleptic Cu(I) Dixanthate/Xanthate–Phosphine Complexes for Azide–Alkyne Cycloadditions.  
**Anamika**, Anand K. Agrahari, Krishna K. Manar, Chote Lal Yadav, Vinod K. Tiwari, Michael G. B. Drew and Nanhai Singh. *New J. Chem.*, 2019, 43, 8939-8949.
  4. Impact of Substituents on the Crystal Structures and Anti-Leishmanial Activity of New Homoleptic Bi(III) Dithiocarbamates.  
**Anamika**, Rajan Singh, Krishna K. Manar, Chote Lal Yadav, Akhilesh Kumar, Rakesh K. Singh, Michael. G. B. Drew and Nanhai Singh. *New J. Chem.*, 2019, 43, 16921-16931.
  5. The rigidity and chelation effect of ligands on the hydrogen evolution reaction catalyzed by Ni(ii) complexes.  
Anjali Mishra, Gaurav Kumar Mishra, **Anamika**, Nanhai Singh, Rama Kant and Kamlesh Kumar. *Dalton Trans.*, 2024, 53, 1680-1690.
  6. Effect of substituents on the crystal structures, optical properties and catalytic Activity of homoleptic Zn(II) and Cd(II)  $\beta$ -oxodithioester complexes.  
Chote Lal Yadav, **Anamika**, Gunjan Rajput, Kamlesh Kumar, Michael G. B. Drew, and Nanhai Singh, *Inorg. Chem.*, 2020, 59, 11417.
  7. Anti-leishmanial Study of Discrete Tetrahedral Zinc(II)  $\beta$ -oxodithioester Complexes.  
C. L. Yadav, **Anamika**, R. Singh, A. Kumar, R. K. Singh, M. G. B. Drew, K. K. Manar and N. Singh *New J. Chem.*, 2025, 49, 484-496
  8. Preparation, Characterization and Photosensitizing Activities of Homoleptic Cu(II) Dithiocarbamates in TiO<sub>2</sub>-Based DSSC.  
Krishna K. Manar, Neetu, Kavita Kumari, **Anamika**, Chote L. Yadav, Pankaj Srivastava, Michael G. B. Drew, and Nanhai Singh. *ChemistrySelect.*, 2019, 4, 11140– 11148.
  9. A New Series of Heteroleptic Cd(II) Diimine-Ferrocenyl Dithiocarbamate Complexes which Successfully Co-Sensitizes TiO<sub>2</sub> Photoanode with Ru N719 Dye in DSSC .  
Krishna K. Manar, Neetu, **Anamika**, Pankaj Srivastava, Michael G. B. Drew, and Nanhai Singh., *ChemistrySelect.*, 2017, 1, (1-12).
  10. Influence of Functionalities Over Polymer, Trimer, Dimer Formation and Optical Properties of Cadmium Dithiocarbamates.  
K. K. Manar, M. K. Yadav, **Anamika**; M. G. B. Drew, N. Singh, *Polyhedron.*, 2016, 117, 592-599.

## Workshops/Seminars/Conferences participated

1. Poster presentation in Heteroleptic Ni(II) Complexes of 1,1-Dithiolate and Phosphine ligands: Synthesis, Characterization and Electrocatalytic Oxygen Evolution Studies. National Symposium on Contemporary Trends and Future Prospects of Functional Materials (CTFM-2019), (29-30 November, 2019), Department of Chemistry, Banaras Hindu University, Varanasi.
2. Poster presentation in Synthesis, Crystal Structures and Anti-Leishmanial Activity of Homoleptic Bismuth (III) Dithiocarbamates Complexes. National Symposium on “Emerging Trends in Chemical Sciences” (NSETCS 2018) 17-18 November 2018, Banaras Hindu University, Varanasi
3. Poster presentation in Influence of Substituents on the Crystal Structures and Properties of Tl(I) Dithiocarbamates; Tl...H-C Anagostic Interactions. International Conference on Emerging Trends in Chemical Sciences (ICETCS) 24-25 February 2018, Deen Dayal Upadhyaya Gorakhpur University
4. Participated in “Influence of ligand environments on the structures and properties of homoleptic cadmium (II) furfuryl, benzyl functionalized dithiocarbamates” Nanomaterials & Sustainable Synthetic strategies, 21 & 22 March 2015 at BHU Varanasi.
5. Poster presentation in “Effect of substituents on the crystal structures and properties of new functionalized zinc(II) dithiocarbamates; precursors for binary zinc sulphides” (18<sup>th</sup> CRSI National Symposium in Chemistry) 5 – 7 February, 2016 at Panjab University, Chandigarh, Panjab.
6. Poster presentation in “Functionalized Zinc (II) Dithiocarbamate as Molecular Precursors for the Preparation of ZnS and FeZn<sub>2</sub>S<sub>3</sub> Nano Sulphides” Indo-US International Conference on Nanotechnology: Science and Application in Advanced Materials and Beyond (NSAAMB) December 19-22, 2016 at Institute of science, BHU, Varanasi.
7. Poster presentation in “Luminescent Heteroleptic Copper(I) PPh<sub>3</sub>-Dithio Complexes” 20<sup>th</sup> CRSI National Symposium in Chemistry : (2-5 Feb 2017) at Gauhati University, Guwahati, Assam.
8. Poster presentation in “Synthesis, Crystal Structures and Luminescent Properties of Heteroleptic Copper(I) PPh<sub>3</sub>/dppf - Dithio Complexes” International conference on Frontiers at the Chemistry-Allied Sciences Interface( FCASI) 22-23, July 2017 at University of Rajasthan, Jaipur.

