Dr. Chanchal Haldar

Current Position: Associate Professor
Department of Chemistry & Chemical Biology
Indian Institute of Technology (ISM) Dhanbad
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General Information

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Date of Birth:	7th January 1984 (07/01/1984)
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Total Publications	: 22
H-index	: 11
Sum of Times Cited	: 475
Average citations per item	: 22.8

Professional Work Experience

Associate Professor	12th April 2022 till date, Department of Chemistry & Chemical Biology, Indian Institute of Technology (ISM) Dhanbad, Jharkhand-826004, India

Assistant Professor, Grade-I (Level 13A1)	18th June 2018, to 11Th april 2022; Department of Chemistry, Indian Institute of Technology (ISM) Dhanbad, Jharkhand-826004, India
Assistant Professor, Grade-I (Level 12)	2015 to 2018; Department of Chemistry, Indian Institute of Technology (ISM) Dhanbad, Jharkhand-826004, India
Assistant Professor, Grade-II (Level 11)	2013 to 2015; Department of Applied Chemistry, Indian Institute of Technology (ISM) Dhanbad, Jharkhand-826004, India
Research Associate	July 2012- May 2013 (fellowship from Nov' 2012 to May 2013); Department of Chemistry, Indian Institute of Technology Roorkee, Roorkee-247667, India

Academic Qualification

Ph.D. (in Chemistry):	2009–2012; Department of Chemistry, Indian Institute of Technology Roorkee, Roorkee-247667, India. *Thesis Supervisor*: Prof M. R. Maurya
M.Sc. (in Chemistry)	2008; Indian Institute of Technology Guwahati, Assam, India *Thesis Supervisor*: Prof. V. Manivanan
B.Sc. (Honors in Chemistry)	In 2006; Burdwan University, West Bengal, India

Additional Academic Qualification

CSIR-NET-JRF (Chemical Science):	2007 and 2008, NET-JRF: Determine the eligibility for Junior Research Fellowship (JRF) and Lectureship/Assistant Professor in Indian universities and colleges conducted by CSIR (Council of Scientific and Industrial Research), New Delhi, India
GATE (Chemistry):	2007 and 2008, GATE: The Graduate Aptitude Test in Engineering, Administered by: Indian Institutes of Technology
JAM (Chemistry):	2004, JAM: Joint Admission Test for admission into M.Sc programs conducted by Indian Institute of Technology

Research Interests

- Coordination Chemistry of vanadium.
- Functional models of bio-enzymes: Vanadium Haloperoxidase (VHPO), Catechol oxidase (CO), galactose oxidase (GO)
- Heterogenization of homogeneous catalysts and their industrial applications
- Acceptorless Dehydrogenation of alcohols by transition metal complexes and production of hydrogen
- Chemical depolymerisation
- Selective Epoxidation
- Catalytic application of transition metal complexes (especially vanadium and copper) for green and effective conversion of small organic molecules into value-added chemicals
- Investigation of the reaction mechanism of the catalytic oxidation reactions with the help of spectroscopic, thermal, and computation studies

R & D Activities

Title	Sanctioning authority	Amount and Duration	Status
• PI: Chemical depolymerization of polyethylene terephthalate (PET) by graphene oxide (GO) supported transition metal complexes.	SERB-DST New Delhi	Rs. 15.60 lakhs 3.0 years 2022-2025	Ongoing
• Co-PI: Synthesis and in-vitro Application of Multifunctional Biotemplated Contrast Agents for MRI	NPIU-MHRD	Rs. 14.90 lakhs 2019-2020	Completed
• PI: Application of Geoporphyrins: Conversion of alkenes into value-added chemicals.	IIT-ISM (TEQIP-III)	Rs. 2.0 lakhs 02 years 2018-2020	Completed
• PI: Vanadium and copper catalyst grafted on graphene oxide for oxidation of hydrocarbons and alcohols.	SERB-DST New Delhi	Rs. 52.92 lakhs 04 years 2015-2019	Completed
• PI: Catalytic partial oxidation of glycerol to acrylic acid over polymer bound immobilized metal complexes under mild	SERB-DST New Delhi	Rs. 24.4 lakhs 03 years 2014-2017	Completed

conditions.			
• PI: Design, synthesis, and characterization of transition metal complexes for oxidative functionalization of olefins and alcohols.	FRS IIT(ISM) Dhanbad	Rs. 8.0 lakhs 03 years 2014-2017	Completed

International Collaborative Visits

- Visited Prof Delia Haynes laboratory, Department of Chemistry and Polymer Science, Stellenbosch University, SOUTH AFRICA to do collaborative research work on the topic "Stabilization of radical in transition metal complexes for the synthesis of galactose oxidase model and investigation of the possible reaction pathway for the oxidation of primary alcohols by EPR" from 15th May 2017 to 15th July 2017.
- Visited Prof Delia Haynes laboratory, Department of Chemistry and Polymer Science, Stellenbosch University, SOUTH AFRICA to do collaborative research work on the topic "Development of radical coordinated vanadium porphyrins and geoporphyrines and investigation of their structural uniqueness" from 15th May 2018 to 11th July 2018.

National/International Seminars Organized

- Session Coordinator: 'One-day International Webinar On Catalytic Materials' Organized by Department of Chemistry and Catalysis Society of India, 27th February 2021, Jharkhand, India
- Treasurer: in 'Recent Advances on Materials for Sustainable Energy-2018 (RAMSE-2018)' Organized by Department of Chemistry, IIT (ISM) Dhanbad, March 2-4, 2018, Jharkhand, India
- Member of the local organizing committee: '1st Annual Workshop on Catalysis', Department of Chemistry, IIT (ISM) Dhanbad, 06-09 March 2017, Jharkhand, India
- Member of the accommodation committee: 'XXXIII Annual Conference Indian council of Chemists', Department of Applied Chemistry, IIT(ISM) Dhanbad, 15-17th December 2014, Jharkhand, India

Invited Talks

- National webinar series on "Practicing ChemDraw, origin and Mendeley tools in research" Department of Chemistry, Laxman Singh Mahar Government Post Graduate College Pithoragarh, August 8-10, 2020, Uttarakhand, India
- Webinar series, "Meet IIT Roorkee Chemistry Alumni"- Department of Chemistry, Indian

Institute of Technology Roorkee, August 10-15, 2020, Uttarakhand, India

Conference/Workshop Attended

- ***Invited talk***: Chanchal Haldar1, Vivek Kumar Mishra1, Nikita Chaudhary, H. P. Nayek, Electronically tuned meso-phenyl substituted vanadium porphyrins: Synthesis, characterization, and catalytic application in selective epoxidation of olefins, 6th International Conference on Catalysis and Chemical Engineering, February 22-26, 2022, an Francisco, CA | Hybrid Meeting.
- ***Invited talk***: Chanchal Haldar and Neha Kesharwani, A stable oxidovanadium(IV) radical complex of 1,1′-thiobis(2-naphthol): Synthesis, characterization, reactivity, and application in heterogeneous catalytic oxidation of aliphatic alcohols, 5th International Conference on Catalysis and Chemical Engineering, February 22-26, 2021-Virtual.
- Chanchal Haldar, Workshop on "Energy resources: Future prospects of fuel and chemicals" Department of Chemistry, IIT(ISM) Dhanbad, 07-08 November 2016, Jharkhand, India.
- M. R. Maurya and C. Haldar, 'Oxidative bromination of styrene by mononuclear vanadium complexes of ONO donor ligand systems', National Conference on Global Challenges new Frontiers in Chemical Sciences, Kurukshetra University, September 22-23, 2012, Haryana, India
- M. R. Maurya, C. Haldar, A. Kumar, F. Avecilla and J. Costa Pessoa, 'Effect of coordination sites on vanadium complexes having $[VO]^{2+}$, $[VO]^{3+}$ and $[VO_2]^{+}$ cores with hydrazones of 2,6-diformyl-4-methylphenol: Synthesis, characterization, reactivity, and catalytic potential, 8th International Vanadium Symposium: Chemistry, Biological Chemistry & Toxicology, August 15-18, 2012, Washington DC, USA.
- M. R. Maurya, C. Haldar and A. A. Khan, 'Synthesis, characterization, catalytic and antiamoebic activities of vanadium complexes with 5,5'- methylenebis- salicylaldehyde–dibasic tridentate ONS donor systems', 48th Annual Convention of Chemists, Allahabad University, December 03 – 07, 2011, Allahabad, India.
- M. R. Maurya and C. Haldar, 'Zeolite–encapsulated vanadium(IV) complexes as catalysts for the oxidative desulfurization of organosulfur compounds', National Conference on Emerging Trends in Chemistry and Biology Interface, Kumaun University, November 03 – 05, 2011, Nainital, India
- M. R. Maurya, C. Haldar, N. Kamatham and S. Behl, 'Copper(II) complex of monobasic tridentate ONN donor ligand: Synthesis, encapsulation in zeolite-Y, characterization, and catalytic activity', 1st CRSI ZONAL MEETING, National Chemical Laboratory, May 13-14, 2011, Pune, India
- M. R. Maurya, C. Haldar, N. Kamatham and S. Behl, 'Copper (II) complex of monobasic tridentate ONN donor ligand: Synthesis, encapsulation in zeolite-Y, characterization, and

catalytic activity', Recent Trends in Instrumental Methods of Analysis, IIT Roorkee, February 18-20, 2010, Roorkee, India

Ph.D. Degree Guidance

SN	Name	Year	Title	Current Status
1	Sweta Kumari[#] (2013DR0148)	2013	Design and Synthesis of Vanadium and Copper homogeneous catalysts	Joined State Govt. Job in 2016
2	Arun Kumar Mahato* (2014DR0088)	2014	Synthesis and applications of Polymer Bound Vanadium Complexes.	Joined Coal India limited in 2015
3	Vijay Kumar Singh[@] (2015DR0075)	2015	Immobilized vanadium and copper complexes on the surface of graphene oxide: a potential mild oxidation catalyst.	Part-time Joined State Govt. Job in 2017
4	Abhishek Maurya (2015DR0166)	2015	Development of neat and polymer-supported dinuclear vanadium and copper complexes for green and economic catalytic oxidation of small organic molecules	**Completed**.
5	Neha Kesharwani (2016RD0094)	2016	Graphene oxide anchored vanadium and copper complexes for the synthetic as well as industrial applications of bio-active enzymes	**Completed.**
6	Payal Kachhap (16DR000238)	2016	Polymer supported transition metal catalysts for synthetic as well as industrial applications	**Completed**
7	Vivek Kumar Mishra (17DR000556)	2017	Synthesis, Characterization and Catalytic application of supported vanadium complexes as a model of Bio-enzyme	Submitting Soon
8	Sanish Kumar Roy	2018	Synthesis and catalytic applications of vanadium porphyrins	Join TATA steel, 2021
9	Animesh Mukherjee	2021	Yet to be announce	Resign

#Sweta Kumari: Joined as an Assistant Teacher in a state govt. School, in Dumka, Jharkhand, India.

*Mr. Arun Kumar Mahato joined as a Junior Scientific Assistant in CMPDI, a subsidiary company of Coal India limited in the

koriya district, Chhattisgarh, India.

[@]Vijay Joined as an Assistant Teacher in a state govt. Higher Secondary School, Dhanbad, Jharkhand, India.

M.Sc. Degree Supervised

SN	Name	Title	Awarded
1	Suprita Jharimune (2012MS0085)	Synthesis and characterization of copper and vanadium complexes of half-unit Schiff-bases: A potential candidate for catalytic oxidation	2014
2	Subinay Das (2012MS0094)	Design, synthesis, characterization, and catalytic activity of vanadium and copper complexes of Schiff-base ligands	2014
3	Anirban Bhattacharyya (2012MS089)	Synthesis, characterization, & catalytic activity of Schiff-base complexes of vanadium & copper	2014
4	Pintu Mondal (2013MS0062)	Synthesis and characterization of Schiff-base complexes of copper and vanadium –A potential oxidation catalysts	2015
5	Kamal Sharma (2010JE0317)	Design, synthesis, characterization, and catalytic activity of vanadium and copper complexes of Schiff-base ligands	2015
6	Sukanya Ghosh (2013MS0016)	Synthesis and characterization of copper and vanadium complexes of Schiff-bases for the catalytic oxidation of small organic molecules	2015
7	Sumanta Let (14MS000069)	Synthesis and characterization of mononuclear oxido vanadium(IV) complexes with their Schiff-base mixed tetradentate ligands	2016
8	Dharmendra (14MS000085)	Synthesis and characterization of mononuclear and dinuclear copper complexes containing monobasic tridentate ligands	2016
9	Rahul Minz (14MS0000120)	Synthesis and characterization of binuclear vanadium complex containing dibasic tetradentate Schiff-base ligands	2016
10	Anindya Roy (15MS000251)	Simultaneous computational analysis of a chemical reaction and myoglobin by HF and DFT method	2017
11	Lakhiram Mahato (15MS000271)	Synthesis and characterization of Schiff-base complexes of vanadium and copper and their catalytic activity	2017
12	Sanjoy Bose (15MS000280)	A theoretical study on tautomerism of cyclohexanone and conformational studies of a group of peroxides	2017

13	Raju Kumar (16MS000345)	Preparation of vanadium and copper porphyrin complexes: A functional model of vanadium halopeoxidase	2018
14	Sarojini Subhadarshinee Majhi (16MS000403)	Synthesis and characterization of novel heterogeneous vanadium catalysts for the selective oxidation of alcohols	2018
15	Prasanjit Hembram (16MS000291)	Graphene oxide supported vanadium complexes with flexible polydentate ligands: Synthesis, characterization, and application	2018
16	Tirthankar Kirtania (17MS000429)	Synthesis and characterization of oxido and dioxide vanadium complexes of polydentate Schiff-base ligands	2019
17	Ayan Mondal (17MS000437)	Oxidative bromination of the organic substrate using polymer anchored vanadium complex	2019
18	Sandhyawasini Kumari (17MS000487)	Synthesis & characterization of dioxide Vanadium(V) complex for efficient oxidative desulfurization of thiophene	2019
19	Kedar Kumar Nandi (18MS0101)	N, O, O donor Schiff-base vanadium complex: Synthesis and characterization	2020
20	Anurag Sharma (18MS0067)	Synthesis and spectroscopic analysis of Schiff-base ligands and their corresponding metal complexes	2020
21	Arpan Dutta (18MS0075)	N-donor macrocyclic Vanadium (IV) complex: Synthesis and characterization	2020
22	Nidhi Chaurasia (19MS0065)	Catalytic oxidation of alkenes and alcohols by vanadium complexes (review paper)	2021
23	Pawan Pandey (20MS0081)	Synthesis and spectroscopic analysis of Schiff base ligands and their corresponding metal complexes	2022
24	Pratap Mondal (20MS0085)	Synthesis and characterization of Schiff-base vanadium oxido and dioxide complexes	2022
25	Shivakant Tiwari (20MS00117)	Schiff-base complexes of vanadium : Synthesis and spectroscopic analysis	2022

Research Papers Published

24. Payal Kachhap, Nikita Chaudhary, Chanchal Haldar, Imidazole-modified Merrifield resin supported oxidovanadium(IV) complexes of Schiff-base-ether-based mixed functionality ligands for the catalytic oxidation of light aliphatic alcohols, Reactive and Functional Polymers, 105606 (189), **2023**, *https://doi.org/10.1016/j.reactfunctpolym.2023.105606* **(Q1: IF: 4.966)**
23. Vivek Kumar Mishra, Nikita Chaudhary, Chanchal Haldar, Electronically Tuned Copper Porphyrins for the Selective Epoxidation of Alkenes, Topics in Catalysis, 435–451(66), **2023,** *https://doi.org/10.1007/s11244-022-01764-6,* **(Q2: IF: 2.781)**
22. Neha Kesharwania & Chanchal Haldar, Synthesis, and characterization of Merrifield resin-supported vanadium complexes for the catalytic oxidation of straight-chain aliphatic alcohols, ***Polyhedron***, 115787 (219), **2022,** *https://doi.org/10.1016/j.poly.2022.115787*, **(Q2: IF: 3.052)**
21. Payal Kachhap, Nikita Chaudhary, Chanchal Haldar, Solvent-free oxidation of straight-chain aliphatic primary alcohols by polymer-grafted vanadium complexes, ***Applied Organometallic Chemistry***, Early View, **2021**, *https://doi.org/10.1002/aoc.6437* **(Q1: IF: 4.105)**
20. Neha Kesharwania, Nikita Chaudhary, Chanchal Haldar, Synthesis and characterization of Merrifield resin and Graphene oxide supported air-stable oxido vanadium (IV) radical complexes for the catalytic oxidation of light aliphatic alcohols, ***Catalysis Today***, **2021,** *https://doi.org/10.1016/j.cattod.2021.06.005*, **(Q1: IF: 6.766)**
19. Neha Kesharwania, Nikita Chaudhary, Chanchal Haldar, Heterogeneous catalytic oxidative bromination and oxidation of thioethers by vanadium(IV) oxido complex of benzoyl acetone and influence of solid supports, ***Catalysis letters***, 151, 3562–3581, **2021,** DOI: 10.1007/s10562-021-03594-9 **(Q2: IF: 3.186)**
18. Malini Roy, Debanjana Biswal, Nikhil Ranjan Pramanik, Michael G.B Drew, Suvendu Paul, Payal Kachhap, Chanchal Haldar, Syamal Chakrabarti, Structural elucidation, DFT calculations and catalytic activity of dioxomolybdenum(VI) complexes with N-N donor ligand: Role of halogen atom coordinated to the molybdenum centre, ***Polyhedron***, 200, 115144, **2021,** *https://doi.org/10.1016/j.poly.2021.115144* **(Q2: IF: 3.052)**
17. Abhishek Maurya & Chanchal Haldar, Liquid-phase oxidation of olefins with rare hydronium ion salt of dinuclear dioxido-vanadium(V) complexes and comparative catalytic studies with analogous copper complexes, ***Applied Organometallic Chemistry***, **2021**, https://doi.org/10.1002/aoc.6203, **(Q1: IF: 4.105)**
16. Abhishek Maurya & Chanchal Haldar, Green, homogeneous oxidation of alcohols by

dimeric copper(II) complexes, ***Journal of Coordination Chemistry***, 74(4-6), 885-904, **2021**, *https://doi.org/10.1080/00958972.2020.1857747* (**Q2: IF: 1.751**)

15. Arpita Samui, Neha, Kesharwani, Chanchal, Haldar, Sumanta Kumar Sahu, Fabrication of nanoscale covalent porous organic polymer: An efficacious catalyst for Knoevenagel condensation, ***Microporous and Mesoporous Materials***, 299, 110112, **2020,** *https://doi.org/10.1016/j.micromeso.2020.110112* **(Q1: IF: 5.455)**
14. Abhishek Maurya, Arun Kumar Mahato, Nikita Chaudhary, Neha Kesharwani, Payal Kachhap, Vivek Kumar Mishra, and Chanchal Haldar, Synthesis and characterization of dimeric μ-oxidovanadium complexes as the functional model of vanadium bromoperoxidase, ***Applied Organometallic Chemistr****y*, 34 (4), 5508, **2020,** *https://doi.org/10.1002/aoc.5508* **(Q1: IF: 4.105)**
13. Abhishek Maurya, Neha Kesharwani, Payal Kachhap, Vivek Kumar Mishra, Nikita Chaudhary, and Chanchal Haldar, Polymer-anchored mononuclear and binuclear Cu^{II} Schiff-base complexes: Impact of heterogenization on liquid-phase catalytic oxidation of a series of alkenes, ***Applied Organometallic Chemistry***, 33(9), 5094, **2019**. *https://doi.org/10.1002/aoc.5094*, **(Q1: IF: 4.105)**
12. Vijay Kumar Singh, Abhishek Maurya, Neha Kesharwani, Payal Kachhap, Sweta Kumari, Arun Kumar Mahato, Vivek Kumar Mishra, and Chanchal Haldar, Synthesis, characterization, and catalytic oxidation of styrene, cyclohexene, allylbenzene, and cis-clooctene by recyclable polymer-grafted Schiff base complexes of vanadium(IV), ***Journal of Coordination Chemistry***, 71, 520-541, **2018,** *https://doi.org/10.1080/00958972.2018.1434516*, (**Q2: IF: 1.751**)
11. Sweta Kumari, Arun Kumar Mahato, Abhishek Maurya, Vijay Kumar Singh, Neha Kesharwani, Payal Kachhap, Igor Koshevoy, Chanchal Haldar, Syntheses and characterization of monobasic tridentate Cu(II) Schiff-base complexes for efficient oxidation of 3,5-di-*tert*-butylcatechol and oxidative bromination of organic substrates, ***New. J. Chem.***, 41, 13625, **2017,** *DOI: 10.1039/c7nj00957g,* (**Q1: IF: 3.591**)
10. Dipankar Das, Paulomi Ghosh, Animesh Ghosh, Chanchal Haldar, Santanu Dhara, Asit Baran Panda, and Sagar Pal Stimulus-responsive, Biodegradable, Biocompatible, Covalently Crosslinked Hydrogel Based on Dextrin and Poly (N-isopropyl acrylamide) for In-vitro/In-vivo Controlled Drug Release, ***ACS Appl. Mater. Interfaces.***, 7(26), 14338, **2015,** *DOI: 10.1021/acsami.5b02975,* (**Q1: IF: 9.229**)
9. Angshuman Ray Chowdhuri, Satyajit Tripathy, Chanchal Haldar, Somenath Roy, Sumanta Kumar Sahu, Single-step synthesis of carbon dots embedded chitosan nanoparticles for cell

imaging and hydrophobic drug delivery, ***Journal of Materials Chemistry B***, 3(47), 9122-9131, **2015,** *DOI: 10.1039/C5TB01831E,* (**Q1: IF: 6.331**)

8. Angshuman Ray Chowdhuri, Satyajit Tripathy, Chanchal Haldar, Soumen Chandra, Balaram Das, Somenath Roy, Sumanta Kumar Sahu, Theoretical and experimental study of folic acid conjugated silver nanoparticles through electrostatic interaction for enhance antibacterial activity, ***RSC Advances.***, 5, 21515, **2015**, *https://doi.org/10.1039/C4RA16785F* (**Q2: IF: 3.361**)
7. Triveni Kumar Mahto, Soumen Chandra, Chanchal Haldar, Sumanta Kumar Sahu, Kinetic and Thermodynamic Study of Polyaniline Functionalized Magnetic Mesoporous Silica for Magnetic Field Guided Dye Adsorption, ***RSC Advances***, 5, 47909-47919, **2015**, *DOI: 10.1039/C5RA08284F,* (**Q2: IF: 3.361**)
6. M. R. Maurya, C. Haldar, A. Kumar, M. L. Kuznetsov, and J. Costa Pessoa, Effect of coordination sites on vanadium complexes having $[VO]^{2+}$, $[VO]^{3+}$ and $[VO2]^{+}$ cores with hydrazones of 2,6-diformyl-4-methylphenol: Synthesis, characterization, reactivity, and catalytic potential, ***Datlon Trans.,*** 42, 11941-11962, **2013,** *DOI: 10.1039/c3dt50469g*, (**Q1: IF: 4.390**)
5. M. R. Maurya, P. Saini, C. Haldar and F. Avecilla, Mn (III) complexes of monoprotic tridentate ONN donor 2-[2-(1H-(benzo[d]imidazol-2-yl)ethylimino)methyl]phenol as functiona mimic of haloperoxidase, ***Polyhedron***, 46, 33–40, **2012,** *http://dx.doi.org/10.1016/j.poly.2012.07.095*, **(Q2: IF: 3.052)**
4. M. R. Maurya, C. Haldar, A. A. Khan, A. Azam, A. Salahuddin, A. Kumar and J. Costa Pessoa, Synthesis, characterization, catalytic and antiamoebic activity of vanadium complexes of binucleatingbis (dibasic tridentate ONS donor) ligand systems, ***Eur. J. Inorg. Chem.***, 15, 2560-2577, **2012** DOI: 10.1002/ejic.201200012, (**Q2: IF: 2.524**)
3. M. R. Maurya, P. Saini, C. Haldar, F. Avecilla, Synthesis, characterization, and catalytic activities of manganese(III) complexes of pyridoxal-based ONNO donor tetradentate ligands, ***Polyhedron***, 31, 710–720, **2012,** *doi:10.1016/j.poly.2011.10.029,* **(Q2: IF: 3.052)**
2. M. R. Maurya, P. Saini, C. Haldar, A. K. Chandrakar, S. Chand, Oxidation of styrene and cyclohexene with TBHP catalyzed by Zeolite-Y encapsulated copper(II) complex, ***Journal of Coordination Chemistry***, 65, 2903-2918, **2012,** *http://dx.doi.org/10.1080/00958972.2012.706281* (**Q2: IF: 1.751**)
1. M. R. Maurya, C. Haldar, S. Behl, N. Kamatham and F. Avecilla, Copper(II) complex of monobasic tridentate ONN donor ligand: synthesis, encapsulation in zeolite-Y, characterization, and catalytic activity, ***Journal of Coordination Chemistry,*** 64, 2995–3011,

2011, http://dx.doi.org/10.1080/00958972.2011.610450, (**Q2: IF: 1.751**)

Scholarly Achievements

- Member of the panel *Catalysis Experts* in 6th International Conference on Catalysis and Chemical Engineering, 22-24, February 2022, San Francisco, CA, United States
- Peer reviewer for Journals:
- New Journal of Chemistry
- Journal of Coordination Chemistry
- Catalysis Letters
- Indian Journal of Chemistry -Section A
- Journal of Research on Chemical Intermediates.
- Journal of Inorganic and Organometallic Polymers and Materials