

CURRICULUM VITAE

BITHIKA SARKAR, Ph.D.

Assistant Professor

Department of Basic Science and Humanities

Regenet Education and Research Foundation Group of Institutions

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OBJECTIVES

I am ambitious, enthusiastic and a versatile, individual, with excellent communication skills. My aim is to work in a challenging environment that encourages conditions for learning and stimulates personal and professional growth and provides new ideas and creativity in teaching.

EDUCATIONAL QUALIFICATIONS

- **Doctor of Philosophy (Ph. D.) in Coordination Chemistry** **2017**
Department of Chemistry, IIT Roorkee
Thesis Title: Complexes of Vanadium, their characterization and catalytic applications
- **Master of Science (Chemistry)** **2011**
IIT Bombay
CPI: 7.38 (First class)
Project title: Selenium and Tellurium Assisted C-H Activation: Isolation and Catalytic Activity of Palladium Complexes with C, N, Se and C, N, Te Trident.
- **Bachelor of Science (Chemistry, Hons.)** **2009**
University of Kalyani (Chakdaha College).
Percentage of Marks: 64 (First Class)
- **Higher Secondary Examination (Science)** **2005**
West Bengal Council of Higher Secondary Education, India, 2005.
Percentage of Marks: 73.5
- **Secondary Examination** **2003**
West Bengal Board of Secondary Education, India
Percentage of Marks: 82

ACADEMIC EXPERIENCE

- **Assistant Professor: August, 2025 to Present;** Department of Basic Science and Humanities, Regent Education and Research Foundation Group of Institutions.
- **Lecturer: May 2022- March 2023;** Kingston Educational Institute. Barasat, Kol-700126.
- **Guest Faculty:** March, 2017 to June 2020; Adamas University, Barasat, Kol: 700126.

ADMINISTRATIVE EXPERIENCE

- Active member of Research and Development cell of RERFGI.
- Active member of Grievance cell, SC/ST cell, Social Media, RERFGI.

TEACHING EXPERTISE:

- Bioinorganic Chemistry, Chemical Periodicity, Chemical Bonding, Catalysis, Coordination Chemistry, Organometallic chemistry, Organic reaction mechanism.
- Taught Engineering Chemistry course (BS-CH-101/201), Chemistry lab (BS-CH-191/291, Environment and ecology (MCAN-E105A), Environmental Sciences (MC-EE-401), RERFGI.
- Assisted M.Sc students with learning laboratory techniques, IIT Roorkee.
- Mentor of 5 M.Sc students during their M.Sc project, Department of Chemistry, IIT Roorkee
- Have been appointed as an Examiner (Digital Evaluation) by The Controller of Examinations, MAKAUT, for the Odd Semester Examination 2025-26. Paper: Environment and Ecology. Paper Code: MCAN-E105A.

AWARDS AND HONORS

- Qualify Joint Admission Test For M.Sc (JAM) in 2009.
- 9th, 4th and 6th rank holder in 1st year, 2nd year and 3rd year examination in University of Kalyani respectively.
- Qualify Chemical Aptitude test, Indian Chemical Society, Mumbai branch, 2010.
- Qualify Graduate aptitude test of engineering (GATE) in 2011.
- Qualify National Eligibility Test with fellowship (NET) in 2011, 2012.
- Research Assistant, Department of Chemistry, IIT Roorkee, (August, 2012 to December, 2012).
- Junior Research Fellow, IIT Roorkee, (January, 2013 to December, 2014).
- Senoir Research Fellow, IIT Roorkee, (January, 2015 to October, 2016).
- NPTEL–AICTE FDP (4-week course followed by proctored exam) funded by Ministry of Education (MoE), Government of India on Bioinorganic Chemistry.

LIST OF RESEARCH PUBLICATIONS IN PEER-REVIEWED JOURNAL

- Synthesis, Characterization, Reactivity, Catalytic and Antiameobic Activity of Vanadium(V) Complexes of ICL670 (Deferasirox) and Related Ligand, Mannar R. Maurya, Bithika Sarkar, Fernando Avecilla, Saba Tariq, Amir Azam, and Isabel Correia Eur. J. Inorg. Chem. 2016, 1430–1441.
- Vanadium Complexes Derived from Acetyl Pyrazolone and Hydrazides. Structure, Reactivity, Peroxidase Mimic and Efficient Catalytic Activity for the Oxidation of 1-Phenylethanol, Mannar R. Maurya, Bithika Sarkar, Fernando Avecilla, and Isabel Correia, Eur. J. Inorg. Chem. 2016, 4028–4044.
- Vanadium (IV and V) Complexes of Pyrazolone Based Ligands: Synthesis, Structural Characterization and Catalytic Applications, Mannar R. Maurya, Bithika Sarkar, Fernando Avecilla and Isabel Correia, *Dalton Trans.*, 2016, 45, 17343-17364.
- New thiosemicarbazone oxidovanadium(IV) and dioxidovanadium(V) complexes. Reactivity and catalytic potential, Mannar R. Maurya, Bithika Sarkar, Amit Kumar, Nádia Ribeiro, Aiste Miliute and J. Costa Pessoa, *New J. Chem.*, 2019, 43, 17620-17635.
- Metal-organic supramolecular frameworks of new polymeric, dimeric and mononuclear dioxidomolybdenum(VI) complexes with an ONO donor ligand: Crystal structures, DFT calculations, Catalytic performance and Protein binding study, Debanjana Biswal, Nikhil Ranjan Pramanik, Syamal Chakrabarti, Michael G. B Drew, Bithika Sarkar, Mannar R. Maurya, Sanjib K Mukherjee, Pramit Chowdhury, *N. J. Chem.*, 2017, 41, 4116-4137.

PRESENTATIONS IN CONFERENCES/ SEMINARS/ SYMPOSIA/WORKSHOP

- M. R. Maurya and B. Sarkar “Synthesis, characterization and catalytic activities of oxidovanadium(IV) and dioxidovanadium(V) complexes and their catalytic activities for the oxidation of benzyl alcohol” *50th Annual Convention of Chemists*, Punjab University, December 04–07, 2013. (Poster).
- M. R. Maurya, B. Sarkar and Fernando Avecilla, “Selective Oxidation of Alkanes, Alkenes and Alcohols Catalyzed by Acetyl PyrazoloneDioxidomolybdenum(VI) Complexes”, The 5th Interdisciplinary Symposium on Materials Chemistry (ISMC-2014), Bhabha Atomic Research Centre (BARC), December 09–13, 2014. (Poster).
- M. R. Maurya and B. Sarkar, “Synthesis, characterization and reactivity of oxidovanadium(IV) and dioxidovanadium(V) complexes derived from ONS tribasic donor ligands and their catalytic activity towards the oxidation of benzyl alcohol”, *Recent Advancements in Chemical Sciences (RAICS-2015)*, Malaviya National Institute of Technology (MNIT), Jaipur, 21-23 August 2015. (Poster).
- M. R. Maurya, B. Sarkar, F. Avecilla, S. Tariq, A. Azam, “Preparation, Reactivity, Catalytic and Antiameobic aspects of Vanadium(V) Compounds of ICL670(Deferasirox) and Related Ligand”, *Modern Trends in Inorganic Chemistry-XVI (MTIC-XVI)*, Jadavpur University, Kolkata, December 03-05, 2015. (Poster).

PROFESSIONAL COMPETENCE:

Instrumental/Analytical techniques

- Familiar with the analysis of routine spectroscopic data such as Nuclear magnetic resonance spectrometer (NMR), UV-Vis spectrometer, Electrospray ionization-Mass spectrometer (ESI-MS), High Performance Liquid Chromatography (HPLC), FT-IR, Gas Chromatography (GC), Cyclic Voltametry (CV), crystallization.
- Excellent skill in column-chromatography, thin-layer chromatography, extraction of organic compounds,

Computer programs in Chemistry

- Familiar with all types of commonly used PC operations and computer software related to chemistry (Chemsketch, Chem-draw ultra, Scifinder, Origin, Mestrinova, Chemcraft)

LANGUGE PROFECIENCY

Good command of English, Bengali and Hindi in written and spoken.

PERSONAL DETAILS:

Date of Birth: 22nd December, 1987

Father's Name: Hrishikesh Sarkar

Blood Group: A+

Present Address: Lily3, 3F, Magnolia City, Barasat, Kol-700126

Parmanent Address: Vill: Raghampur, P.O: Panpara, Dist: Nadia, P.S : Ranaghat Pin: 741402, WB

Marital Status: Married

REFERENCES

- Prof. M. R. Maurya (Emeritus Professor)
Department of chemistry
IIT Roorkee
Email: rkmanfcy@gmail.com
Relationship: Ph.D Supervisor
- Dr. Kaushik Ghosh (Associate Professor)
Department of chemistry
IIT Roorkee
Email: ghoshfcy@iitr.ac.in
Contact No. +91-1332-285547
Relationship: Teaching advisor
- Prof. Anindya Datta
Director, INST, Mohali
Email: anindya@inst.ac.in
Relationship: Teaching advisor

I hereby declare that the above information is true to the best of my knowledge.

Date 10.03.2026

Bithika Sarkar