

## Dr. BITHIKA SARKAR

Assistant Professor  
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### Personal Details

Gender: Female  
Date of birth: 22.12.1987  
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### Address

#### Permanent

Vill: Raghampur  
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West Bengal

#### Current

Flat no: Lily 3, 3F Magnolia City  
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### Objective

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.

### Education

| Degree           | Institution/ Board                             | Year | % / Division          |
|------------------|------------------------------------------------|------|-----------------------|
| 10 <sup>th</sup> | Ranaghat Brojobala Girls' High School (WBBSE)  | 2003 | 82 (1 <sup>st</sup> ) |
| 12 <sup>th</sup> | Ranaghat Brojobala Girls' High School (WBCHSE) | 2005 | 73 (1 <sup>st</sup> ) |
| B.Sc (Chemistry) | Chakdaha College (Kalynai University)          | 2009 | 64 (1 <sup>st</sup> ) |
| M.Sc (Chemistry) | IIT Bombay                                     | 2011 | 74 (1 <sup>st</sup> ) |
| Ph.D (Chemistry) | IIT Roorkee                                    | 2017 | -                     |

### M.Sc Project

I did 1-year M.Sc project in the branch of Organometallic Chemistry and Catalysis under supervision of Prof. H. B. Singh, IIT Bombay. My project title is "selenium and Tellurium assisted C-H activation: Isolation and catalytic activity of palladium complexes with C, N, Se and C, N, Te Tridentate ligands".

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| <b><i>Research publications</i></b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <ul style="list-style-type: none"> <li>➤ Synthesis, Characterization, Reactivity, Catalytic and Antiameobic Activity of Vanadium(V) Complexes of ICL670 (Deferasirox) and Related Ligand, , Mannar R. Maurya, <b>Bithika Sarkar</b>, Fernando Avecilla, Saba Tariq, Amir Azam, and Isabel Correia Eur. J. Inorg. Chem. 2016, 1430–1441.</li> <li>➤ 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, <b>Bithika Sarkar</b>, Fernando Avecilla, and Isabel Correia, Eur. J. Inorg. Chem. 2016, 4028–4044.</li> <li>➤ Vanadium (IV and V) Complexes of Pyrazolone Based Ligands: Synthesis, Structural Characterization and Catalytic Applications, Mannar R. Maurya, <b>Bithika Sarkar</b>, Fernando Avecilla and Isabel Correia, Dalton Trans., 2016,45, 17343-17364.</li> <li>➤ 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, <b>Bithika Sarkar</b>, Mannar R. Maurya, Sanjib K Mukherjee, Pramit Chowdhury, N. J. Chem., 2017, 41, 4116-4137.</li> <li>➤ New thiosemicarbazone oxidovanadium(IV) and dioxidovanadium(V) complexes. Reactivity and catalytic potential, Mannar R. Maurya, <b>Bithika Sarkar</b>, Amit Kumar, Nádia Ribeiro, Aiste Miliute and J. Costa Pessoa, New J. Chem., 2019, 43, 17620-17635.</li> </ul> |
| <b><i>Extra Curricular</i></b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <ul style="list-style-type: none"> <li>✓ Qualify Joint Admission Test For M.Sc (JAM) in 2009.</li> <li>✓ 9th, 4th and 6th rank holder in 1st year, 2nd year and 3rd year examination in University of Kalyani respectively.</li> <li>✓ Qualify Chemical Aptitude test, Indian Chemical Society, Mumbai branch, 2010.</li> <li>✓ Qualify Graduate aptitude test of engineering (GATE) in 2011.</li> <li>✓ Qualify National Eligibility Test (NET) in 2012.</li> <li>✓ Empaneled in West Bengal College Service Commission as assistant professor.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b><i>Papers presented in symposium</i></b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <ul style="list-style-type: none"> <li>➤ M. R. Maurya and <b>B. Sarkar</b>, Bhawna Uprety “Synthesis, characterization and catalytic activities of oxidovanadium(IV) and dioxidovanadium(V) complexes and their catalytic activities for the oxidation of benzyl alcohol” <i>50th Annual Convention of Chemists</i>, Punjab University, December 04–07, 2013. (Poster).</li> <li>➤ M. R. Maurya, <b>B. Sarkar</b> and Fernando Avecilla, “Selective Oxidation of Alkanes, Alkenes and Alcohols Catalyzed by Acetyl Pyrazolone Dioxidomolybdenum(VI) Complexes”, The 5th Interdisciplinary Symposium on Materials Chemistry (ISMC-2014), Bhabha Atomic Research Centre (BARC), December 09–13, 2014. (Poster).</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

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| <ul style="list-style-type: none"> <li>➤ M. R. Maurya and <b>B. Sarkar</b>, “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”, <i>Recent Advancements in Chemical Sciences (RAICS-2015)</i>, Malaviya National Institute of Technology (MNIT), Jaipur, 21-23 August 2015. (Poster)</li> <li>➤ M. R. Maurya, <b>B. Sarkar</b>, F. Avecilla, S. Tariq, A. Azam, “Preparation, Reactivity, Catalytic and Antiameobic aspects of Vanadium(V) Compounds of ICL670(Deferasirox) and Related Ligand”, <i>Modern Trends in Inorganic Chemistry-XVI (MTIC-XVI)</i>, Jadavpur University, Kolkata, December 03-05, 2015. (Poster)</li> </ul> |
| <b><i>Software and Technical skills</i></b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <ul style="list-style-type: none"> <li>➤ MS word, MS excel, MS ppt, Chemdraw, Origin, Mestrinova, Chemcraft, Mercury, WinGx</li> <li>➤ UV, FT-IR, NMR, Gas Chromatography, GC-Mass, HPLC.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b><i>Language proficiency</i></b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Good command of English, Bengali and Hindi in written and spoken                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b><i>References</i></b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <ul style="list-style-type: none"> <li>➤ Prof. M. R. Maurya<br/>Department of chemistry<br/>IIT Roorkee<br/>Email: <a href="mailto:rkmanfey@iitr.ac.in">rkmanfey@iitr.ac.in</a><br/>Contact No. 91-01332-285327<br/>Relationship: Supervisor</li> <li>➤ Dr. Kaushik Ghosh (Associate Professor)<br/>Department of chemistry<br/>IIT Roorkee<br/>Email: <a href="mailto:ghoshfey@iitr.ac.in">ghoshfey@iitr.ac.in</a><br/>Contact No. +91-1332-285547<br/>Relationship: Teaching advisor</li> <li>➤ Prof. Anindya Dutta<br/>Department of chemistry<br/>IIT Bombay<br/>Email: <a href="mailto:anindya@chem.iitb.ac.in">anindya@chem.iitb.ac.in</a><br/>Contact No. : 022-25767149<br/>Relationship: Teaching advisor</li> </ul>                                                                    |

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

Date 10.07.2025

Bithika Sarkar