

# Dr. Dhrubajyoti Mondal



**Assistant Professor**  
**Department of Chemistry**  
**Siksha-Bhavana (Institute of Science)**  
**Visva-Bharati (A Central University)**  
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**India**

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**Google Scholar:** <https://scholar.google.com/citations?user=Ro4cmEkAAAAJ&hl=en&oi=ao>

## Teaching Experiences

- 1) 6<sup>th</sup> July, 2021 – till Date: **Assistant Professor in Chemistry**  
*Department of Chemistry,  
Visva-Bharati (A Central University), Santiniketan,  
West Bengal,  
Courses Taught: B.Sc. and M.Sc.*
- 2) 16<sup>th</sup> Dec 2019 – 5<sup>th</sup> Jul 2021: **Assistant Professor in Chemistry**  
*Department of Chemistry,  
Government General Degree College, Mangalkote  
(Burdwan University), West Bengal,  
Courses Taught: B.Sc.*
- 3) 16<sup>th</sup> Jan 2018 – 14<sup>th</sup> Dec 2019: **Assistant Professor in Chemistry**  
*Academy of Technology (Maulana Abul Kalam Azad  
University of Technology), West Bengal,  
Courses Taught: B.Tech*
- 4) 1<sup>st</sup> Jul 2017 – 31<sup>st</sup> May 2018: **Guest Lecturer in Chemistry**  
*Lady Brabourne College (Calcutta University), West Bengal  
Courses Taught: M.Sc.*

## Research Interests / Major Fields of Work

- Coordination Chemistry of Transition and Lanthanide Metal Ions.
- Activation of Small Molecules by Coordination with Biological Significance / Biomimetic Chemistry
- Synthesis and Properties of Stable Metal Complexes with Ligand Radical
- Detection and Characterization of High-valent Metal-Oxido Complexes
- Synthesis of Multinuclear Metal complexes and their Magnetic Properties.

## Academic Qualifications

- 1) July, 2011 - November, 2017: **Ph.D. in Chemistry**  
Department of Inorganic Chemistry  
Indian Association for the Cultivation of Science
- 2) September, 2009 - June, 2011: **M.Sc. in Chemistry**  
Indian Institute of Technology Delhi
- 3) August, 2006 - July, 2009: **B.Sc. in Chemistry**  
Visva-Bharati (A Central University), Santiniketan
- 4) August, 2004 - June, 2006: **Pre-degree Examination (10+2)**  
Visva-Bharati (A Central University), Santiniketan
- 5) June 2004: **Madhyamik (10<sup>th</sup>)**  
West Bengal Board of Secondary Education

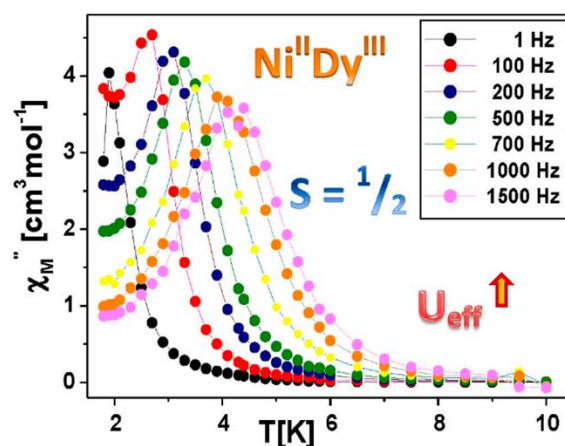
## Academic Achievements, Scholarships, Fellowships & Awards

- IIT-JAM Exam:** Cleared IIT-JAM exam in 2009 and got admission to IIT Delhi.
- NET Exam:** Cleared NET exams in 2010 (Dec) and 2011 (Jan) as CSIR-JRF.
- WBPSA Exam:** Cleared WBPSA (West Bengal Public Service Commission) exam *nine* times and was selected as an Assistant Professor in **Government General Degree College, Mangalkote**, in 2019.
- WBCSC Exam:** Cleared WBCSC (West Bengal College Service Commission) interview and was selected as an Assistant Professor in **Sree Chaitanya College, Habra**, in 2020.
- Fellowships:** **CSIR-NET Fellowship** (JRF, 2011-12 and SRF, 2013-2015) at IACS.
- Scholarships (BSc):** Merit-cum-Means Scholarship 2006, 07, 08 (Visva-Bharati) for Undergraduate.
- Scholarships (MSc):** Merit-cum-Means Scholarship 2009 - 2010 (IIT Delhi) for Postgraduate.

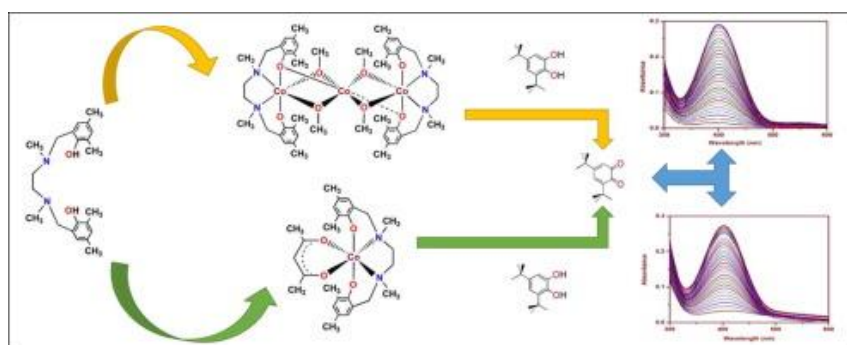
## Ph.D. Thesis / Dissertation Title

- Title:** *Studies on the Metal Complexes of Sterically Constrained Facially Coordinating Phenol Based Ligands*
- Supervisor:** **Prof. Muktimoy Chaudhury** (Retired)  
Dept. of Inorganic Chemistry, **Indian Association for the Cultivation of Science**, 2A & 2B Raja S. C. Mullick Road, Jadavpur, Kolkata-700 032, West Bengal, India.

- (14) **Synthesis, Structure and Catechol Oxidase Activity of Mono Nuclear Cu(II) Complex with Phenol-Based Chelating Agent with N, N, O Donor Sites**  
 Trilochan Rakshit, Bikramaditya Mandal, Anwesha Halder, Dhrubajyoti Mondal, Debdas Mandal,\* and Rakesh Ganguly\* *Crystals* **2022**, *12*, 511. [ISSN 2073-4352]
- (13) **Generalized Heisenberg-Type Magnetic Phenomena in Coordination Polymers with Nickel–Lanthanide Dinuclear Units**  
 Michał Antkowiak, Mithun Chandra Majee, Manoranjan Maity, **Dhrubajyoti Mondal**, Michalina Kaj, Monika Lesiów, Alina Bienko,\* Leeor Kronik,\* Muktimoy Chaudhury,\* and Grzegorz Kamieniarz\* *J. Phys. Chem. C* **2021**, *125*, 11182–11196. [ISSN 1932-7447]

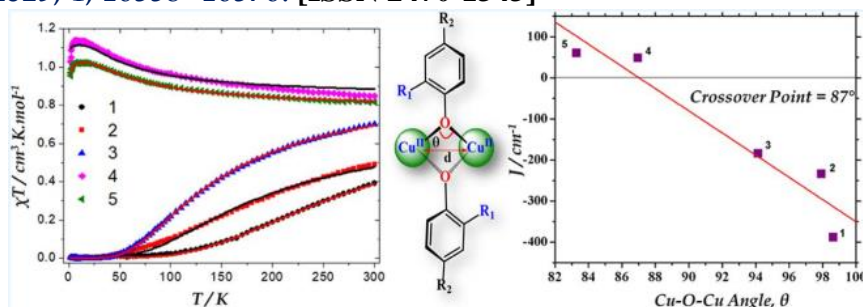


- (12) **Mono and tri-nuclear cobalt(III) complexes with sterically constrained phenol-based N<sub>2</sub>O<sub>2</sub> ligand: Synthesis, structure and catechol oxidase activity**  
 Imran Ali, Bikramaditya Mandal, Rajat Saha, Rajarshi Ghosh, Mithun Chandra Majee, **Dhrubajyoti Mondal**, Partha Mitra, Debdas Mandal\* *Polyhedron* **2020**, *180*, 114429. [ISSN 0277-5387]

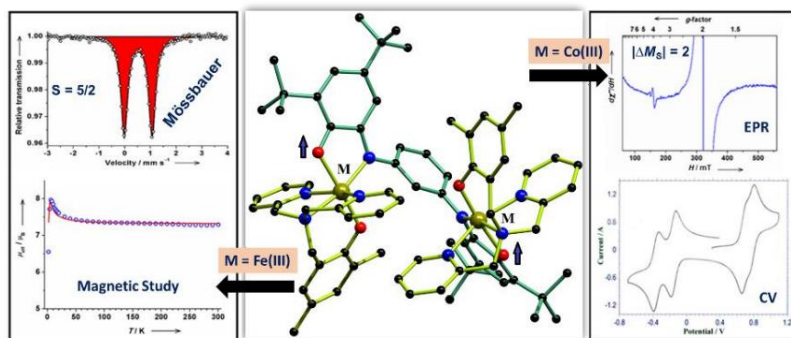


- (11) **Crossover from Antiferromagnetic to Ferromagnetic Exchange Coupling in a New Family of Bis-(μ-phenoxido)dicopper(II) Complexes: A Comprehensive Magneto–Structural Correlation by Experimental and Theoretical Study**

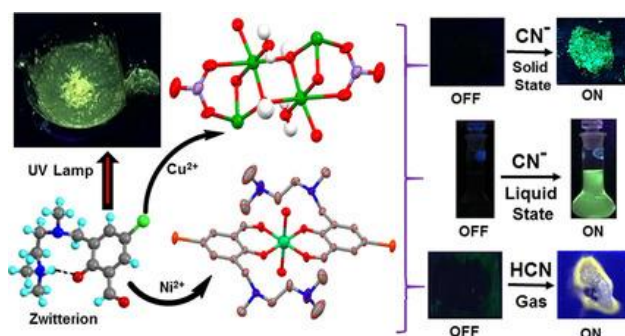
**Dhrubajyoti Mondal**, Mithun Chandra Majee, Kisholoy Bhattacharya, Jérôme Long, Joulia Larionova, Marat M. Khusniyarov, Muktimoy Chaudhury\* *ACS Omega* **2019**, *4*, 10558–10570. [ISSN 2470-1343]



- (10) **Dinuclear Iron(III) and Cobalt(III) Complexes Featuring a Biradical Bridge: Their Molecular Structures, Magnetic, Spectroscopic, and Redox Properties.** **Dhrubajyoti Mondal**, Mithun Chandra Majee, Sanchita Kundu, Ghulam Abbas, Akira Endo, Marat M. Khusniyarov Muktimoy Chaudhury\* *Inorg. Chem.* **2018**, *57*, 1004-1016. [ISSN 0020-1669]

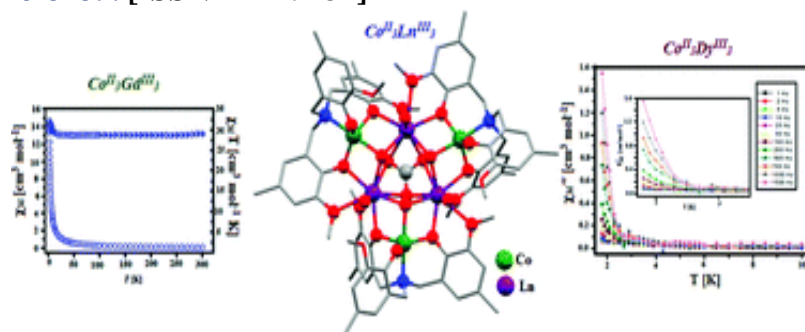


- (9) **Instant Detection of Hydrogen Cyanide Gas and Cyanide Salts in Solid Matrices and Water by the Cu(II) and Ni(II) Complexes of Intramolecularly Hydrogen-Bonded Zwitterions** M Raju, Kalyanashis Jana, **Dhrubajyoti Mondal**, E Suresh, Bishwajit Ganguly, Ratish R Nair, Pabitra B. Chatterjee *Chem.-Eur. J.* **2018**, *24*, 10721–10731. [ISSN 1521-3765]

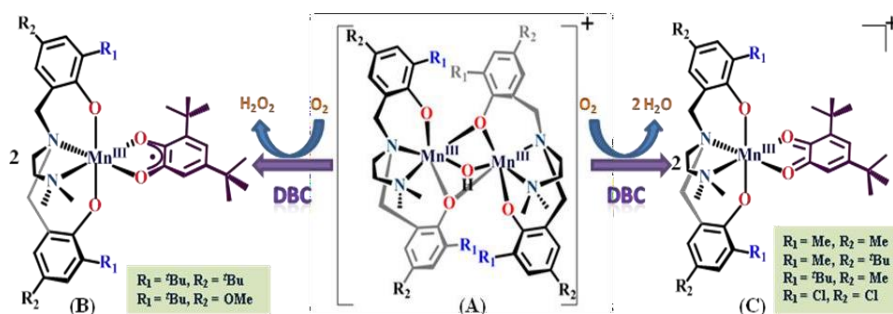


- (8) **Synthesis and magneto-structural studies on a new family of carbonato bridged 3d-4f complexes featuring a [Co<sup>II</sup>3Ln<sup>III</sup>3(CO<sub>3</sub>)] (Ln = La, Gd, Tb, Dy, and Ho) core: slow magnetic relaxation displayed by the cobalt(II)-dysprosium(III) analogue.**

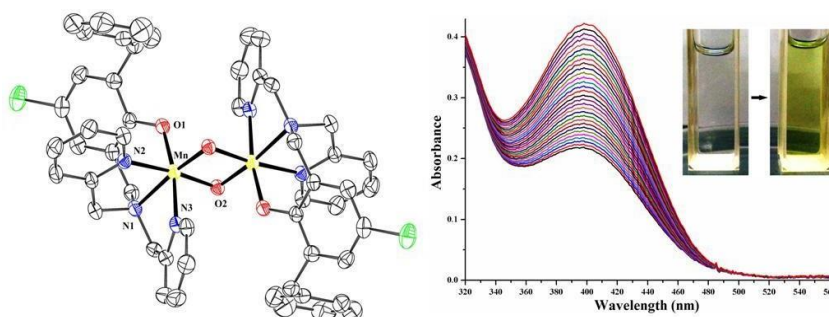
Mithun Chandra Majee, Sk Md Towsif Abtab, **Dhrubajyoti Mondal**, Manoranjan Maity, Marek Weselski, Maciej Witwicki, Alina Bieńko, Michal Antkowiak, Grzegorz Kamieniarz, and Muktimoy Chaudhury\* *Dalton Trans* **2018**, 47, 3425-3439. [ISSN 1477-9234]



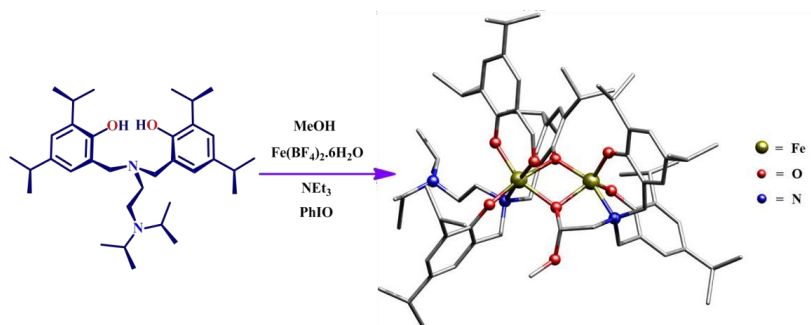
- (7) **Ligand-Induced Tuning of Oxidase Activity of  $\mu$ -Hydroxido Manganese(III) Complexes using 3,5 Di-tert-Butylcatechol as Substrate: Isolation and Characterization of Products Involving Oxidized Dioxolene Moiety**  
**Dhrubajyoti Mondal**, Sanchita Kundu, Mithun Chandra Majee, Atanu Rana, Akira Endo, Muktimoy Chaudhury\* *Inorg. Chem.* **2017**, 56, 9448–9460. [ISSN 0020-1669]



- (6) **Synthesis and Structural Characterization of a New High-valent Bis(oxo)-bridged Manganese(IV) Complex and its Catechol Oxidase Activity**  
**Dhrubajyoti Mondal\***, Mithun Chandra Majee *Inorganica Chimica Acta* **2017**, 465, 70-77. [ISSN 0020-1693]



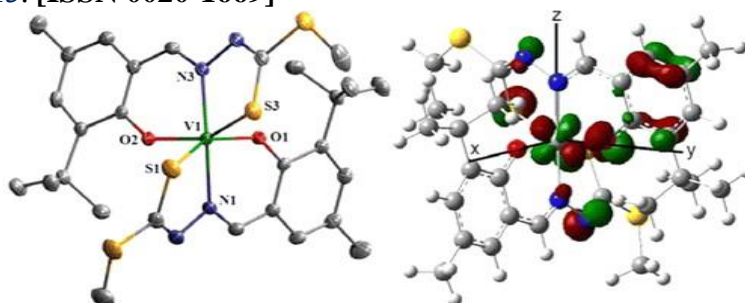
- (5) **Synthesis and Structural Characterization of a Hemiacetal and Aldehyde bound Diiron(III) Complex with two Different Coordination Numbers: A Product by Oxidative Cleavage of Carbon-Nitrogen Single Bond.**  
**Dhrubajyoti Mondal\***, Kisholoy Bhattacharya *Inorg. Chem. Commun.* **2017**, 84, 109-112. [ISSN 1387-7003]



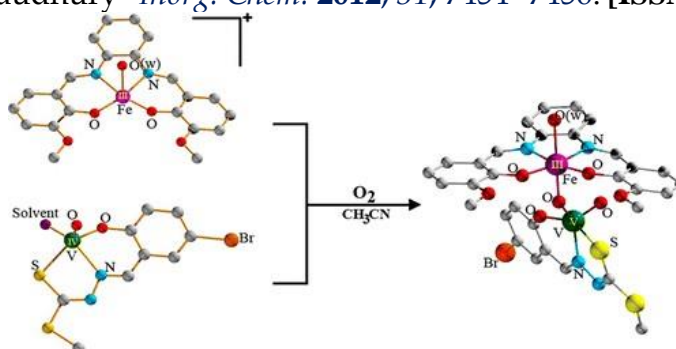
- (4) **Synthesis, Structure, Catechol Oxidase Activity and Antibacterial Studies of Mn(III) Complex with Sterically Constrained Phenol-based N<sub>2</sub>O<sub>2</sub> Ligand**  
 Bikramaditya Mandal, Tumpa Chakraborty, Imran Ali, **Dhrubajyoti Mondal**, Mithun Chandra Majee, Subrata Raha, Keshab Ghosh, Partha Mitra, Debdas Mandal\* *J. Indian Chem. Soc.* **2017**, *94*, 1-9. [ISSN 194522]

- (3) **CCDC 1547345: Experimental Crystal Structure Determination**  
[doi.org/10.5517/ccdc.csd.cc1ny4c3](https://doi.org/10.5517/ccdc.csd.cc1ny4c3) **Dhrubajyoti Mondal** *CSD Communication* **2017** [ISSN 2631-9888]

- (2) **Nonoxido Vanadium(IV) Compounds Involving Dithiocarbazate Based Tridentate ONS Ligands: Synthesis, Electronic and Molecular Structure, Spectroscopic and Redox Properties**  
 Sanchita Kundu, **Dhrubajyoti Mondal**, Kisholoy Bhattacharya, Akira Endo, Daniele Sanna, Eugenio Garribba, Muktimoy Chaudhury\* *Inorg. Chem.* **2015**, *54*, 6203–6215. [ISSN 0020-1669]



- (1) **Targeted Synthesis of Heterobimetallic Compounds Containing a Discrete Vanadium(V)-μ-Oxygen-Iron(III) Core**  
 Kisholoy Bhattacharya, Manoranjan Maity, **Dhrubajyoti Mondal**, Akira Endo, Muktimoy Chaudhury\* *Inorg. Chem.* **2012**, *51*, 7454–7456. [ISSN 0020-1669]



## ***Participated in Workshops/Seminars/Symposiums/Webinars***

- ***International Symposium on Chemistry and Complexity*** December 6-8, 2011 Indian Association for the Cultivation of Science (IACS), Kolkata, India
  - ***Modern Trends in Molecular Magnets (MTMM-2016)*** May 19-21, 2016, Department of Chemistry, IIT Bombay, India
  - ***Symposium on Advanced Biological Inorganic Chemistry (SABIC-2017)*** January 7-11, 2017, Kolkata, India
  - ***Workshop and Training Course on Single Crystal XRD*** August 28-30, 2017, Indian Association for the Cultivation of Science (IACS), Kolkata, India
  - ***Two Days International Webinar on Chemistry: A Motivation in Research,*** August 26.- 27, 2020, Government General Degree College, Keshiary, West Bengal
  - ***One day National Webinar: Importance of Chemistry in Biological Science,*** 25th August 2021, Sidhu-Kanho-Birsha University, Purulia, West Bengal
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