Professor (Dr.) Debasis Das
Registrar and Professor
University of Calcutta
87, 1, College St, Calcutta University, College Square,
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registrar@caluniv.ac.in
Mobile No.: 9830345023
Date of birth: October 24, 1967

Accademic Records

Ph. D. (Science) (1996)	The Indian Association for the Cultivation of Science, Kolkata, Jadavpur University; ***Dissertation*:** Synthesis and characterization of nickel(II) diamine complexes and their thermal studies in the solid phase. **Advisor: Professor Nirmalendu Ray Chaudhuri**
M. Sc. (Chemistry) (1990)	University of Calcutta (Presidency College); **Specialization**: *Inorganic Chemistry.*
B. Sc. (Honours) (1988)	*Presidency College, Kolkata (*University of Calcutta) Chemistry (Major), Mathematics and Physics (minor).

Research Experience

1997-1999	**Postdoctoral Research Fellow**, Department of Chemistry, National Tsing Hua University, Hsinchu, Taiwan 300, R. O. C. **Advisor: Professor C. P. Cheng.**
1996-1997	**Research Associate**, The Indian Association for the Cultivation of Science, **Supervisor: Professor N. Ray Chaudhuri**

Special Achievement

Special recognition as one of the **Top 2% Scientists of the World**, by **Stanford University.**

(Based on the September 2022 data-update for updated science-wide author databases of standardized citation indicators.)

Professional Experience

Oct. 2019- Till date	**Registrar,** *University of Calcutta*
August 2019-Oct. 2019	**Registrar (Acting) ,** *University of Calcutta*
July 2019-August 2019	**Deputy Registrar (Acting) ,** *University of Calcutta*
Dec. 2019-August 2022	**Director, Centre for Nano Science & Nano Technology**
Dec. 2011- Till date	**Professor in Chemistry,** *University of Calcutta*
Dec. 2008 – Nov. 2011	**Associate Professor in Chemistry,** *University of Calcutta*
Dec., 2005 – Nov. 2008	**Reader in Chemistry**; *University of Calcutta*
April 2001– Nov., 2005	**Senior Lecturer in Inorganic Chemistry**, *Visva-Bharati*
July, 1999 – March, 2001	**Lecturer in Chemistry**, *Bangabasi Morning College*

Administrative Experience

Oct. 2019- Till date	**Registrar,** *University of Calcutta*
August 2019-Oct. 2019	**Registrar (Acting) ,** *University of Calcutta*
July 2019-August 2019	**Deputy Registrar (Acting) ,** *University of Calcutta*
Dec. 2019-August 2022	**Director, Centre for Nano Science & Nano Technology**

Activity as Ph.D. Supervisor

Number of Scholars Obtained Ph. D.(Sc.) degree	**23 (22 , as sole supervisor and 1 as co-supervisor)**
Number of Research Scholars working at present	**5**
No. of Post-doctoral Fellow	**4 (2 DST and 2 NPDF)**

Sl No.	Name of the students awarded doctorate degree	Year
1.	Dr. Tanmay Chattopadhyay	2008
2.	Dr. Kazi Sabnam Banu	2010
3.	Dr. Arpita Banerjee	2010
4.	Dr. Averi Guha	2012

5.	Dr. Manami Ghosh	2013
6.	Dr. Madhuparna Mukherjee	2013
7.	Dr. Totan Ghosh	2014
8.	Dr. Sudhanshu Das	2014
9.	Dr. Sandip Mondal	2014
10.	Dr. Prateeti Chakraborty	2015
11.	Dr. Jaydeep Adhikary	2015
12.	Dr. Ria Sanyal	2015
13.	Dr. Priyanka Kundu	2016
14.	Dr. Ishani Majumder	2018
15.	Dr. Suranjana Purkait	2018
16.	Dr. Aratrika Chakraborty	2019
17.	Dr. Sanchari Dasgupta	2019
18.	Dr. Somali Mukherjee	2020
19.	Dr. Arnab Mandal	2021
20.	Dr. Tonmoy Chakraborty	2021
21.	Dr. Abani Sarkar	2023
22.	Dr. Suhana Karim	2023
23.	Dr. Tania Chowdhury	2023

Awards/Honours /Fellowships

(i) Special recognition as one of the **Top 2% Scientists of the World,** by **Stanford University**.

(ii) **Fellow (2020): West Bengal Academy of Science and Technology**.

(iii) **CRSI Bronze Medal (2019):** Presented by The Chemical Research Society of India "in recognition of contributions to research in chemistry".

(iv) **ACS Membership Award (2015):** Awarded by American Chemical Society.

(v) **Fellow (2010):** The Chemical Society of India.

Life Member/Member

(i) The Indian Association for the Cultivation of Science (IACS), Kolkata. **(Life Member)**

(ii) The American Chemical Society (ACS). **(Member)**

(iii) Board of Studies (UG), **University of Calcutta**. **(Member)**

(iv) Board of Studies (UG), Department of Chemistry, **University of Burdwan**.**(External Member)**

(v) Board of Studies (UG), Department of Chemistry**, University of Kalyani**. **(External Member)**

(vi) Board of Studies UG, Department of Chemistry, **St. Xavier's College (Autonomous), Kolkata. (External Member)**

(vii) The faculty Council of Natural & Mathematical Sciences, **Presidency University, Kolkata. (Member)**

Convenor/Coordinator

(i) **Convenor**, Ph.D. Research Advisory Committee (Inorganic Section), Department of Chemistry, University of Calcutta.

(ii) **Coordinator**, DST-FIST Committee, Department of Chemistry, University of Calcutta.

(iii) **Coordinator**, Library Committee, Department of Chemistry, University of Calcutta.

Served as Subject Expert

(i) **Subject Expert for Chemistry** in the Syllabus Revision Committee **(at the UG level)** appointed by The West Bengal State Council of Higher Education**, Govt. of West Bengal (GO number 533-Edn(CS)/10M-24/2015 dated 24-06-2016).**

(ii) **Subject Expert** in the Selection Committee for the post of Asst. Professor in the different Govt. aided Colleges in West Bengal appointed by the **West Bengal College Service Commission.**

(iii) **Subject Expert** in the Selection Committee for the post of Asst. Professor/Associate Professor/Professor in the Department of Chemistry, **University of Burdwan.**

(iv) **Subject Expert** in the Selection Committee for the post of Asst. Professor/Associate Professor/Professor in the Department of Chemistry, **Presidency University.** .

(v) **Honorary Reviewer** of **ACS, RSC, Wiley and Science Direct journals** on Inorganic Chemistry**.**

Research Interest

(i) Modeling of the active site of Metallobiosites.

(ii) Bioinspired catalysis (both homo- and heterogeneous).

(iii) Development of artificial nucleases.

(iv) Synthesis of nano materials using coordination compounds and their applications.

(v) Development of multifunctional Coordination Polymers and Metal-organic Frameworks.

Sponsored Research Projects

Completed Project: **4 (CSIR-2; UGC-1; CRNN-1)**

Ongoing Project: **1 (WB-DST)**

Sl. No.	Name of the Project	Role	Funding agency
1.	Acyclic compartmental ligand complexes of transition and post-transition metals: synthetic analogue of metallo bio sites.	Principal Investigator	Council for Scientific & Industrial Research, Govt of India. **(Completed)**
2.	Chemistry of ambidentate ligands (e.g. NO_2^-, CN^- , SCN^-, $SeCN^-$, N_3^-, $N(CN)_2^-$, $C(CN)_3^-$, NCO^- etc.) in transition and post- transition metal amine and its derivatives.	Principal Investigator	University Grants Commission, Govt. of India. **(Completed)**

3.	Functional Supramolecular Assemblies derived from Metal-Organic Building Blocks.	Principal Investigator	Centre for Research in Nano-science & Nano-technology, University of Calcutta. **(Completed)**
4.	Corroborative model study to investigate the functional mechanisms of some metallobiosites.	Principal Investigator	Council for Scientific & Industrial Research, Govt of India. **(Completed**)
5.	Mimicking of the active sites of some Metalloenzymes with special emphasis on catechol oxidase, phosphatase, metallo β-lactamase and urease.	Principal Investigator	Department of Science & Technology, Govt. of West Bengal. **(Completed)**

Invited Talks

In India: 15 **In abroad: 1 (Spain)**

Publications

Total Number of Publications: 160
Citation: 3623 (Research gate)
h-index: 32
i-10 index: 76

A few Selected Publications

1. Glutathione Depleting a Chemoselective Novel Pro-Oxidant NMOF 1 Induced G2/M Arrest and ROS Mediated Apoptotic Cell Death in Human Triple Negative Breast Cancer Cell Line

Suhana Karim, Satyajit Halder, Somali Mukherjee*, Utsab Debnath, Kuladip Jana* and **Debasis Das***

ACS Applied Materials and Interfaces **15 (2023) 26442-26456**

2. Atmospheric-Water-Induced Reversible Structural Transformation of a Two-Dimensional Ni(II)-Based Ferromagnetic MOF: A Highly Efficient Water Oxidation Electrocatalyst and Colorimetric Water Sensor

Suhana Karim*, Amit Adhikary*, MD Estak Ahmed, Debabrata Samanta and **Debasis Das***
ACS Sustainable Chem. Eng. 10 (2022) 16657-16669 (Front cover picture for volume 10, issue 50)

3. $ZnAl_2O_4$ Nanomaterial as Naked Eye Arsenate Sensor: A Combined Experimental and Computational Mechanistic Approach

Tania Chowdhury,* Tonmoy Chakraborty, Avik Ghosh, Abhijit K. Das and **Debasis Das***
***ACS Applied Materials and Interfaces* 14 (2022) 32457-32474**

4. Effect of O-substitution in imidazole based Zn(II) dual fluorescent probes in the light of arsenate detection in potable water: a combined experimental and theoretical approach.

Sneha Biswas, Tania Chowdhury, Avik Ghosh, Abhijit K. Das and **Debasis Das***
Dalton Trans.51 (2022) 7174-7187

5. Azide-mediated unusual *in situ* transformation of Mannich base to Schiff–Mannich base and isolation of their Cu(II) complexes: crystal structure, theoretical inspection and anticancer activities

Somali Mukherjee, Sili Hansda, Sudeshna Nandi, Tonmoy Charaborty, Debabrata Samanta, Krishnendu Acharya and **Debasis Das ***
Dalton Trans. 50 (2021) 13374-13386

6. Green facile synthesis to develop nanoscale coordination polymers as lysosome-argetable luminescent bioprobes

Suhana Karim, Somali Mukherjee, Supratim Mahapatra, Rumana Parveen* and **Debasis Das ***
Biomater. Sci. 9 (2021) 124-132 (HOT PAPER)

7. Naked Eye Cd^{2+} Ion Detection and Reversible Iodine Uptake by a Three-Dimensional Pillared-Layered Zn-MOF
Arnab Mandal, Amit Adhikary*, Abani Sarkar and **Debasis Das***
Inorg. Chem. 59 (2020) 17758-17765

8. Zn-BTC MOF as an Adsorbent for Iodine Uptake and Organic Dye Degradation

Abani Sarkar, Amit Adhikary*, Arnab Mandal, Tonmoy Chakraborty and **Debasis Das***,
Cryst. Growth Des. 20 (2020) 7833-7839

9. A Chemodosimetric Approach for Fluorimetric Detection of Hg^{2+} Ions by Trinuclear Zn(II)/Cd(II) Schiff Base Complex: First Case of Intermediate Trapping in a Chemodosimetric Approach

Abani Sarkar, Aratrika Chakraborty,* Tonmoy Chakraborty, Suranjana Purkait, Debabrata Samanta, Suvendu Maity, and **Debasis Das***
Inorg. Chem. 59 (2020) 9014-9028

10. Mapping of Solvent-Mediated Molecular Self-Assembly of Iron(III) Discrete Compounds: Exploring Their Magnetic Behavior and Phosphatase-Like Activity

Tania Chowdhury, Amit Adhikary*, Manasi Roy, Ennio Zangrando, Debabrata Samanta, and **Debasis Das***
Cryst. Growth Des. 20 (2020) 1254-1265

11. Sustainable Green Route to Synthesize Functional Nano-MOFs as Selective Sensing Probes for Cr^{VI} Oxoanions and as Specific Sequestering Agents for $Cr_2O_7^{2-}$

Somali Mukherjee*, Sumi Ganguly, Debabrata Samanta and **Debasis Das***
ACS Sustainable Chem. Eng. 8 (2020) 1195-1206

12. Synthesis of Structurally Diverse Ferrimagnetically and Antiferromagnetically Coupled M^{II}–Mn^{II} (M = Cu, Ni) Heterometallic Schiff Base Compounds with a Dicyanamide Spacer and Study of Biomimetic Catalytic Activity

Tonmoy Chakraborty, Abani Sarkar, Amit Adhikary*, Neha Chakiroy and **Debasis Das***
Cryst. Growth Des. 19 (2019) 7336-7348

13. Green Synthesis of Self Assembled Nanospherical Dysprosium MOFs: Selective and Efficient Detection of Picric Acid in Aqueous

Somali Mukherjee, Sumi Ganguly,*, Aratrika Chakraborty, Arnab Mandal, and **Debasis Das***
ACS Sustainable Chem. Eng. 7 (2019) 819–830

14. Anion-mediated bio-relevant catalytic activity of dinuclear nickel(II) complexes derived from an end-off compartmental ligand

Tonmoy Chakraborty, Somali Mukherjee, Sanchari Dasgupta, Biplab Biswas and **Debasis Das ***
Dalton Trans. 48 (2019) 2772–2784

15. Green Approach To Synthesize Crystalline Nanoscale ZnII-Coordination Polymers: Cell Growth Inhibition and Immunofluorescence Study

Somali Mukherjee, Sumi Ganguly, Krishnendu Manna, Sanchaita Mondal, Supratim Mahapatra and **Debasis Das***
Inorg. Chem. 57 (2018) 4050-4060

16. A Deep Insight into the Photoluminescence Properties of Schiff Base Cd^{II} and Zn^{II} Complexes

Ishani Majumder, Prateeti Chakraborty*, Sanchari Dasgupta, Chiara Massera, Daniel Escudero,*,and **Debasis Das***
Inorg. Chem. 21 (2017) 12893–12901

17. Cooperative influence of pseudohalides and ligand backbone of Schiff-bases on nuclearity and stereochemistry of cobalt(III) complexes: experimental and theoretical investigation

Arnab Mandal, Sanchari Dasgupta, Sumi Ganguly, Antonio Bauzá, Antonio Frontera * and **Debasis Das ***
Dalton Trans. 46 (2017) 15257–15268

18. Unveiling the effects of the in situ generated arene anion radical and imine radical on catecholase like activity: a DFT supported experimental investigation

Sanchari Dasgupta, Jaydeep Adhikary, Sanjib Giri, Antonio Bauza, Antonio Frontera and **Debasis Das ***

Dalton Trans. 46 (2017) 5888–5900

19. Unique mononuclear Mn^{II} complexes of end-off compartmental Schiff base ligand: experimental and theoretical study on their bio-relevant catalytic promiscuity

Jaydeep Adhikary, Aratrika Chakraborty, Sanchari Dasgupta, Shyamal Kumar Chattopadhyay, Rafał Kruszynski, Agata Trzesowska-Kruszynska, Stepan Stepanović, Maja Gruden-Pavlović, Marcel Swart, **Debasis Das***
Dalton Trans. 45 (2016) 12409-12422

20. Mn(II) complexes of different nuclearity: synthesis, characterization and catecholase-like activity

Prateeti Chakraborty,* Ishani Majumder, Kazi Sabnam Banu, Bipinbihari Ghosh, Hulya Kara, Ennio Zangrando* and **Debasis Das***
Dalton Trans. 45 (2016) 742-752

21. Influence of para substituents in controlling photophysical behavior and different non-covalent weak interactions in zinc complexes of a phenolbased "end-off" compartmental ligand

Prateeti Chakraborty, Jaydeep Adhikary, Sugata Samanta, Ishani Majumder, Chiara Massera, Daniel Escudero,* Sanjib Ghosh,* Antonio Bauza, Antonio Frontera* and **Debasis Das***
Dalton Trans. 44 (2015) 20032- 20044

22. Mechanistic Implications in the Phosphatase Activity of Mannich-Based Dinuclear Zinc Complexes with Theoretical Modeling

Ria Sanyal, Xuepeng Zhang, Priyanka Kundu, Tanmay Chattopadhyay, Cunyuan Zhao,* Franz A. Mautner,*, and **Debasis Das***
Inorg. Chem. 54 (2015) 2315–2324

23. Relation between the Catalytic Efficiency of the Synthetic Analogues of Catechol Oxidase with Their Electrochemical Property in the Free State and Substrate-Bound State

Prateeti Chakraborty , Jaydeep Adhikary , Bipinbihari Ghosh , RiaSanyal, Shyamal Kumar Chattopadhyay,*, Antonio Bauza´ , Antonio Frontera,* Ennio Zangrando,* and **Debasis Das***
Inorg. Chem. 53 (2014) 8257-8269

24. Combined Experimental and Theoretical Investigation of Ligand and Anion Controlled Complex Formation with Unprecedented Structural Features and Photoluminescence Properties of Zinc(II) Complexes

Prateeti Chakraborty, Jaydeep Adhikary, Sugata Samanta, Daniel Escudero, Abril C. Castro, Marcel Swart, Sanjib Ghosh, Antonio Bauza´ ,Antonio Frontera,*, Ennio Zangrando,* and **Debasis Das***
Cryst. Growth Des. 14 (2014) 4111-4123

25. Influence of the Coordination Environment of Zinc(II) Complexes of Designed Mannich Ligands on Phosphatase Activity: A Combined Experimental and Theoretical Study

Ria Sanyal, Averi Guha, Totan Ghosh, Tapan Kumar Mondal, Ennio Zangrando,* and **Debasis Das***
Inorg. Chem. 53 (2014) 85-96

26. A Combined Experimental and Theoretical Investigation on the Role of Halide Ligands on the Catecholase-like Activity of Mononuclear Nickel(II) Complexes with a

Phenol-Based Tridentate Ligand

Jaydeep Adhikary, Prateeti Chakraborty, Sudhanshu Das, Tanmay Chattopadhyay, Antonio Bauzá, Shyamal Kumar Chattopadhyay, Bipinbihari Ghosh, Franz A. Mautner,* Antonio Frontera,* **Debasis Das***
Inorg. Chem. 52 (2013) 13442-13452

27. Radical Pathway in Catecholase Activity with Zinc-Based Model Complexes of Compartmental Ligands

Averi Guha, Tanmay Chattopadhyay, Nanda Dulal Paul, Madhuparna Mukherjee, Somen Goswami, Tapan Kumar Mondal, Ennio Zangrando,*, and **Debasis Das***,
Inorg. Chem. 51 (2012) 8750–8759

28. Thiocyanate and Dicyanamide Anion Controlled Nuclearity in Mn, Co, Ni, Cu, and Zn Metal Complexes with Hemilabile Ligand 2-Benzoylpyridine

Totan Ghosh, Tanmay Chattopadhyay, Sudhanshu Das, Sandip Mondal, Eringathodi Suresh, Ennio Zangrando,* and **Debasis Das***
Cryst. Growth & Des. 11 (2011) 3198–3205

29. A Unique Nickel System having Versatile Catalytic Activity of Biological Significance

Tanmay Chattopadhyay, Madhuparna Mukherjee, Arindam Mondal, Pali Maiti, anerjee, Kazi Sabnam Banu, Santanu Bhattacharya, Bappaditya Roy, D. J. Chattopadhyay, Tapan Kumar Mondal, Munirathinam Nethaji, Ennio Zangrando,* and **Debasis Das***
Inorg. Chem. 49 (2010) 3121–3129

30. Mono- and dinuclear manganese(III) complexes showing efficient catechol oxidase activity: syntheses, characterization and spectroscopic studies

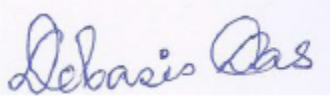
Kazi Sabnam Banu, Tanmay Chattopadhyay, Arpita Banerjee, Madhuparna Mukherjee, Santanu Bhattacharaya, Goutam Kumar Patra, Ennio Zangrando* and **Debasis Das***
Dalton Trans. (2009) 8755-8764

31. Metal Assisted Oxazolidine/Oxazine Ring Formation in Dinuclear Zinc(II) Complexes: Synthesis, Structural Aspects, and Bio-activity

Arpita Banerjee, Subhalakshmi Ganguly, Tanmay Chattopadhyay, Kazi Sabnam Banu, Santanu Bhattacharya, Ennio Zangrando*and **Debasis Das***
Inorg. Chem. 48 (2009) 8695–8702

32. Catechol Oxidase Activity of a series of new Dinuclear Copper(II) Complexes with 3, 5-DTBC and TCC as substrates: Syntheses, X-ray Crystal Structures, Spectroscopic Characterization of the adducts and Kinetic Studies

Kazi Sabnam Banu, Tanmay Chattopadhyay, Arpita Banerjee, Santanu Bhattacharaya, Eringathodi Suresh, Munirathinam Nethaji, Ennio Zangrando* and **Debasis Das***
Inorg. Chem. 47 (2008) 7083-7093



(Professor Debasis Das)