TO MAGNIFICO RETTORE OF UNIVERSITA' DEGLI STUDI DI MILANO **ID CODE ___5768_____**

I the undersigned asks to participate in the public selection, for qualifications and examinations, for the awarding of a type B fellowship at **Dipartimento di Chimica**

Scientist- in – charge: Prof. Emma Gallo

[Name and surname] KUHELI DAS

CURRICULUM VITAE

PERSONAL INFORMATION

Surname	DAS
Name	KUHELI

PRESENT OCCUPATION

Appointment	Structure
Guest Lecturer (M.Sc., Chemistry Section)	Behala College, Parnasree, Kolkata - 700060, West Bengal, India

EDUCATION AND TRAINING

Degree	Course of studies	University	year of achievement of the degree
Bachelor of Science (B.Sc.)	Chemistry, Physics, Mathematics Major Subject: Chemistry	University of Calcutta	2004
Master of Science (M.Sc.)	Chemistry (Major Subject: Inorganic Chemistry)	University of Calcutta, Kolkata, West Bengal, India	2006
PhD	Chemistry (Area: Coordination Chemistry, Magnetochemistry, Photoluminescence, Bio-Inorganic Application) Thesis Title: Synthesis, Spectroscopic	Jadavpur University, Kolkata, West Bengal, India	2015

	Characterization, Structures and Magnetic Properties of Transition Metal Complexes of N,O Donor Ligands		
Master			
Degree of medicalspecialization			
Degree of Europeanspecialization			
Other			

REGISTRATION IN PROFESSIONAL ASSOCIATIONS

Date of registration	Association	City
2019	INDIAN CHEMICAL SOCIETY	KOLKATA, INDIA
2018	INDIAN SCIENCE CONGRESS ASSOCIATION	KOLKATA, INDIA

FOREIGN LANGUAGES

Languages	level of knowledge
English	Proficient
Bengali	Proficient
Hindi	Good

AWARDS, ACKNOWLEDGEMENTS, SCHOLARSHIPS

Year	Description of award
2007	CSIR (Council for Scientific & Industrial Research)-UGC NET Fellow , Govt. of India
2007-2010	DAE (Department of Atomic Energy) Fellowship, IGCAR, Kalpakkam, Tamilnadu, India
2011-2013	DST (Department of Science and Technology) Research Fellowship, Govt of India, Jadavpur University, Kolkata, India
2014-2015	CSIR (Council for Scientific & Industrial Research) Fellowship, Govt. of India, Jadavpur University, Kolkata, India
2016-2017	Post Doctoral Fellowship, Academia Sinica, Taipei, Taiwan
2017-2019	National Post Doctoral Fellowship (SERB), Govt. of India, University of Calcutta, Kolkata, India

TRAINING OR RESEARCH ACTIVITY

description of activity
A. February 2023 - till date (Guest Lecturer, Behala College, Kolkata, India) **Teaching Topics**: Organometallic Chemistry **Activities:** Teahcing the M.Sc. Students (Final Year)

B. May 2022 - February 2023 (Research Associate, Jadavpur University, Kolkata, India)
Research Topics: Synthesis of MOFs/Coordination Polymers and Application in Gas Adsorption & Proton Conductivity
Activities: Design and synthesis of N-donor planar anciliary ligands which can bind the metal center to generate a 2D/3D polymeric metal complex. Polymeric complexes are charateriesd by X-ray diffraction study, PXRD, IR, NMR, TGA etc. The gas (CO_2, N_2 etc.) adsorption study & proton conductivity measurments are performed by employing those polymeric complexes.

C. April 2019 - March 2020 (Research Associate, Jadavpur University, Kolkata, India)
Research Topics: Synthesis of Schiff Base Assisted Metal Derivatives, Characterization and Application in Photoluminescent Chemo-Sensors
Activities: Synthesis of transition metal complexes with N,O-donor Schiff base precursors; characterization of the metal derivatives by X-ray diffraction analysis and different spectral techniques (IR, UV-Vis, EPR, NMR, Emission etc.); application in photoluminescent chemo-sensors and bio-imaging.

D. April 2017 - March 2019 (National Post Doctoral Fellow, University of Calcutta, Kolkata, India)
Research Topics: Design and Synthesis of Photoluminescent Probe and Their Metal Complexes: Spectroscopy, Sensor Activity, Catalysis and Biological Application
Activities: Development of highly sensitive photoluminescent probes for selective detection of target cations through a fluorescence turn-on/turn-off signal is a fundamental task for the chemists because of their importance in biological and environmental processes. Different coumarin and hydrazone assisted N,O-donor precursors will be used as sensors, such as rapid response, reversibility and good quantum yields and various metal complexes will be afforded which will be used as catalysts in Catecholase and Catalase activity; hydrogen generation or water oxidation depending upon the redox behavior of metal derivatives. Additionally, fluorescence active ligands and their metal complexes can be explored in biological field like cell imaging, DNA-cleavage, cytotoxicity and anti-cancer activities.
Main Task:
1. Synthesis of ligand and metal derivatives; characterization by NMR, UV-Vis, FTIR spectroscopy
2. Using photoluminescence spectroscopy method, measurement of the fluorescence property, quantum yield, life time of the ligands
3. Use of the fluorescence probe for sensing metal ions/chemical species subjecting absorption and emission spectroscopy
4. Preparation of metal complexes using the fluorescence precursors and characterization by X-ray diffractometry, PXRD technique, spectroscopic (IR, NMR, UV-Vis etc.) measurements
5. Electrocatalytic hydrogen generation and water oxidation studies using metal catalysts
6. Biological activity study; e.g. cytotoxicity, DNA cleavage, anticancer activity

E. March 2016 - January 2017 (Post Doctoral Fellow, Academia Sinica, Taipei, Taiwan)
Research Topics: Electrocatalytic Hydrogen Generation & Water Oxidation by Using Transition Metal Derivatives with Bis-pyrozolyl Acetate Moiety
Activities: During my postdoctoral research at Academia Sinica, Taiwan; I was involved to work on energy related topics such as "Electrocatalytic H_2 Generation & H_2O Oxidation", "Artificial Photosynthesis" etc. Hydrogen has attracted increasing attention as an alternative energy resource. Effective reduction of proton or water to generate H_2 by using catalysts composed of earth-abundant transition metals is a vital procedure to obtain molecular hydrogen. Encouraged by recent reports in the field, I used metal complexes incorporating a 'scorpionate' type precursor, bdtbpza [bdtbpza = bis(3,5-di-*t*-butylpyrazol-1-yl)acetate] for electrocatalytic reduction of a proton to hydrogen. Based on electrochemical investigations (cyclic voltammetry, linear sweep voltammetry, and bulk electrolysis) and gas chromatography experiment, the Faradaic efficiency of the catalytic proton reduction by the metal catalysts is calculated.
Main Task:
1. Synthesis of Ligands and metal complexes and charaterisation by NMR, UV-Vis, FTIR, Mass spectroscopy
2. Electrochemical and catalytic study to measure the H_2 evolution properties

F. August 2011 - December 2015 (PhD Research Fellow, Jadavpur University, Kolkata, India)
Thesis Title: "Synthesis, Spectroscopic Characterization, Structures and Magnetic Properties of

Transition Metal Complexes of N,O Donor Ligands"
Skills and Expertise:
Synthesis of large varieties organic precursors: Schiff base, hydrozone, heterocyclic azo/Schiff base precursors
Characterization of ligands by using NMR, UV-Vis, FTIR, Mass spectroscopy etc.
Synthesis of different transition metal and lanthanide complexes using N, O donor organic precursors
Characterization by single crystal X-ray diffractometry, UV-Vis, FTIR, Mass spectroscopy
Expertise in handling Spectrophotometer - NMR, FTIR etc.
Expertise in handling photoluminescence spectrophotometer: Study of fluorescence properties of ligand and metal derivatives; calculation of quantum yield, life time etc.
Study of magnetic properties of metal complexes
Application in biological study: Cytotoxicity, anticancer activity, anti-mycobacterial acitivity
Activities: During my PhD tenure, my research work involves the design of di-, tetra- and polynuclear complexes manifesting with different types of Schiff bases, aliphatic and aroylhydrazones and Coumarin assisted derivatives as well as architecting by azide, thiocyanate, dicyanamide or cyanate, anions as bridging ligands on Cu(II), Co(II), Ni(II), Mn(II) and Zn(II) metal ions. The metal derivatives are characterized by different spectroscopic techniques as well the photoluminescence study, redox behavior, NMR, EPR and magnetic exchange interaction are investigated. Coordination compounds from different N,O-donor precursors are of great interest in biological applications. Coumarin derivatives have blood-thinning, anti-fungicidal, anti-tumor and anti-coagulant activities. I have focused the attention on the potential anticancer properties as well through cell-growth inhibition assays using human colorectal carcinoma cells (including COLO 205 and HT-29 cells) while using the metal derivatives. The inhibitory effects of different metal-coordinated compounds manifesting with tridentate or tetradentate precursors on the cell population growth of human lung carcinoma cells (A549 cells), and human hepatocellular carcinoma cells (PLC5 cells) were also determined by MTT assays. The transition metal derivatives incorporating different coumarin-assisted precursors exhibit anti-mycobacterial activity and considerable efficacy on M. tuberculosis H37Rv ATCC 27294 and M. tuberculosis H37Ra ATCC 25177 strains.

G. August 2007 - July 2010 (Research Fellow, DAE (Department of Atomic Energy) IGCAR, Kalpakkam, India)
Research Topics: Kinetic Study of Chemical Reaction and Detection of Analytes by Using Pulsating Conductometric Sensor
Main Task: 1. Understanding the working principle of pulsating sensor (eg. Conductometric/ Potentiometric)
2. Set up the instruments and optimization of the condition of the specific reactions (e.g. Saponification of acetic acid; Oscillatory chemical reaction)
3. Determination of the kinetic rate of the reaction and activation energy
4. Trace level detection of analytes (e.g. Uranium, hydrazone etc. which is useful for nuclear power plant), using oscillatory chemical reaction by pulsating sensor

Expertise during PhD (Jadavpur University, Kolkata, India)
A. Synthesis of different kinds of N,O-donor Schiff base, azo-imine ligands, fluorescent active (coumarin, quinolone, anthracene, Pyrene, acridine) organic precursors and their transition metal, lanthanide metal complexes
B. Characterization of the compounds by FT-IR, UV-Vis, Emission, EPR, NMR, Mass spectroscopic studies
C. Anti-mycobacterial, cytotoxicity and docking correlation studies

Expertise during Postdoctoral (Academia Sinica, Taipei, Taiwan & University of Calcutta, Kolkata, India)
A. Fluorescence Sensor Activity: Detection of Metal ions, anions or chemical species by Fluorescence sensor activity, life time, quantum yield measurement
B. Electrocatalytic Application: Electrocatalytic hydrogen generation and water oxidation studies using metal catalyst
C. Metal Organic Framework: Development of MOF (Metal Organic Framework)-based multifunctional materials and application in gas adsorption, storage and proton conductivity

Skills & Instruments Handled

* For C,H,N analysis, Perkin-Elmer 2400 CHNS/O elemental analyser
* For infrared spectra, RX-1 Perkin-Elmer spectrophotometer
* For electronic spectra, Perkin-Elmer Lambda 25 spectrophotometer
* For NMR spectra, Bruker (AC) 300 MHz FTNMR spectrometer
* For emission spectra, LS 55 Perkin-Elmer spectrofluorometer at room temperature (298 K) in CH3CN solution under degassed condition
* For cyclic voltammetry, CH-Instruments, Electrochemical workstation, Model No CHI 600D (SPL) with Pt-disk electrodes
* TLC, Column chromatography, Conductometer, PH Meter, PXRD, Hydrothermal reactor
* Computer ability in MS office, Excel, Power Point, Chemdraw, Origin and literature background by accessing the Web of Science and SciFinder databases for searching the corresponding references

PROJECT ACTIVITY

Year	Project
2007-2010	Research Fellow: Kinetic Study of Chemical Reaction and Detection of Analytes by Using Pulsating Conductometric Sensor
2011-2013	Junior Research Fellow: Synthesis, Characterization & Magnetism of Transition Metal Derivatives by Schiff Base Precursors
2013-2015	Senior Research Fellow: Structural Characterization of Transition Metal Derivatives & Biological Application: Cytotoxicity, DNA Cleavage & Anti-mycobacterial Activity
2016-2017	Postdoctoral Fellow: Electrocatalytic Hydrogen Evolution & Water Oxidation by Transition Metal Derivatives Bis-pyrozolyl Acetate Moiety
2017-2019	National Postdoctoral Fellow: Design and Synthesis of Photoluminescent Probe and Their Metal Complexes: Spectroscopy, Sensor Activity, Catalysis and Biological Application

CONGRESSES AND SEMINARS

Date	Title	Place
March 16-20, 2010	International Conference on Electroanalytical Chemistry & Allied Topics	Puri, Odisha, India
February 28 - March 2, 2013	20th West Bengal State Science Congress	Shibpur, West Bengal, India
June 14, 2013	National Seminar on Social Function of Science and The Celebration of 150th Birth Anniversary of Swami Vivekananda	Kolkata, West Bengal, India
August 7 – 8, 2013	Diversities and Frontiers in Chemistry	Kolkata, West Bengal, India
October 7 – 8, 2016	Sunny Chan Symposium - Membrane Proteins: Biochemistry, Diseases, and Energy	Taipei, Taiwan
October 27, 2016	Academia Sinica-University of Malaya Research Symposium on Life Sciences and Physical Sciences	Taipei, Taiwan
November 8, 2016	Academia Sinica-Max Planck Institute Seminar: Electronic Structure Contributions to Reactivity in High Valent Iron Model Complexes	Taipei, Taiwan
November 17 – 18, 2016	Taiwan Bioinorganic Chemistry Symposium	Kaohsiung, Taiwan

August 2 – 3, 2017	National Symposium on Recent Advances in Chemistry & Industry – 2017	Shibpur, West Bengal, India
March 30, 2019	National Conference on Functional Molecules (NCOFM) – 2019	Kolkata, West Bengal, India

Articles in reviews

2023

1. Structural elucidation of a Mn(III) derivative anchored with a tetradentate Schiff base precursor: in vitro cytotoxicity study; **K. Das**, M.G. Shetty, S.K. Melanthota, B.K. Sundara, S. Kar, C. Massera, E. Garribba, A. Datta, N. Mazumder; ***Chemical Papers**, **77 (2023) 1989***. (**Springer**)

2022

2. Aluminum derivatives incorporating 4,4-methylenebis(cyclohexyl) linked dehydroacetic acid-imine ligands: structural aspects, CO_2/styrene oxide coupling reaction; C.-Y. Chang, Y.-C. Su, B.-T. Ko, **K. Das**, J.-H. Huang; ***J. Organomet. Chem., 977 (2022) 122470***. (**Elsevier**)
3. Synthesis and detailed characterization of sustainable starch-based bioplastic; I. Chakraborty, N. Pooja, S. Banik, I. Govindaraju, **K. Das**, S.S. Mal, G.-Y. Zhuo, M.A. Rather, M. Mandal, A. Neog, R. Biswas, V. Managuli, A. Datta, K.K. Mahato, N. Mazumder; ***J. Appl. Polymer Sci., 139 (2022) e52924.*** (**Wiley**)

2021

4. Proton-Conducting Cobalt(II) 3D MOFs Incorporating Bis(imidazole) and Polycarboxylate Linkages: Framework Topology and Interpenetration; Z.-Y. Lin, A. Datta, **K. Das**, A.I. Inamdar, H.-Y. Hsieh,Y.-H. Huang, M.-H. Chiang, C.-J. Liu, L.-R. Chen, Y.-W. Lin, H.M. Lee; ***Cryst. Growth Des., 21 (2021) 5596***. (**American Chemical Society**)
5. Synthesis and structures of tantalum chloride and tantalum aryloxide compounds bearing bidentate and tridentate pyrrole-amine ligands; H.-H. Hsieh, M.-H. Tu, Y.-C. Su, B.-T. Ko, **K. Das**, J.-H. Huang; ***J. Chin. Chem. Soc., 2021 68(12) 2283***. (**Wiley**)

2020

6. A trimetallic Cu(II) derivative as an efficient and stable electrocatalyst for reduction of proton to molecular hydrogen; **K. Das,** B.B. Beyene, A.W. Yibeltal, S. Goswami, C. Massera, E. Garribba, A. Datta, C.-H. Hung; ***Cat. Lett.**, **150 (2020) 2200***. (**Springer**)
7. Zn(II) and Co(II) derivatives anchored with scorpionate precursor: Antiproliferative evaluation in human cancer cell lines; **K. Das**, A. Datta, A. Frontera, Y.-S. Wen, C. Roma-Rodrigues, L.R. Raposo, A.R. Fernandes, C.-H. Hung; ***J. Inorg. Biochem.**, **202 (2020) 110881***. (**Elsevier**)
8. Structural, Spectral, and DFT Interpretation of a Schiff Base Assisted Mn(III) Derivative; **K. Das**,* C. Massera, E. Garribba, A. Frontera, A. Datta; ***J. Mol. Struct., 1199 (2020) 126985***. (**Elsevier**)

2019

9. EPR, DFT and Electrochemical Interpretation of a Cu(II) Derivative Incorporating a Tetradentate Schiff Base Precursor; **K. Das**, S. Goswami, B.B. Beyene, A.W. Yibeltal, E.

Garribba, A. Frontera, A. Datta; ***Polyhedron, 159 (2019) 323.*** (**Elsevier**)

10. Electrocatalytic H_2 Evolution of A Schiff-base Assisted Cu(II) Derivative as on Homogeneous and Heterogeneous Phase; B.B. Beyene, **K. Das**, B.A. Kerayu, A. Datta, C.-H. Hung; ***Cat. Commun., 119 (2019) 111***. (**Elsevier**)
11. Spectral, Electrochemical and DFT Studies of a Trimetallic Cu^{II} Derivative: Antimycobacterial and Cytotoxicity Studies; **K. Das***, S. Goswami, B.B. Beyene, A.W. Yibeltal, C. Massera, E. Garribba, A. Frontera, Z. Cantürk, T. Askun, A. Datta; ***Inorg. Chim. Acta, 490 (2019) 155.*** (**Elsevier**)
12. Structural aspects of a trimetallic Cu^{II} derivative: Cytotoxicity and anti-proliferative activity on human cancer cell lines; **K. Das**, A. Datta, C. Massera, C. Roma-Rodrigues, M. Barroso, P.V. Baptista, A. R. Fernandes, C.-H. Hung; ***J. Coord. Chem., 72 (2019) 920***. (**Taylor & Francis**)
13. A New Phenoxido/Trifluoroacetato Bridged Heterometallic Ni^{II}_2-Cu^{II} Derivative: Structure, EPR Interpretation and DFT Computation; **K. Das***, A. Datta, S. Mendiratta, E. Garribba, A. Frontera, Z. Cantürk; ***J. Mol. Struct., 1175 (2019) 948***. (**Elsevier**)
14. Structural diversity, topology and luminescent properties of a two-dimensional Cd(II) coordination polymer incorporating 4,4'-dipyridyl and 4,4'-sulfonyldibenzoic acid; **K. Das**, A. Datta, C. Massera, C. Sinha; ***J. Mol. Struct., 1179 (2019) 618.*** (**Elsevier**)

2018

15. Electrocatalytic H_2 evolution of bis(3,5-di-methylpyrazol-1-yl)acetate anchored hexa-coordinated Co(II) derivative; **K. Das**, B. B. Beyene, A. Datta, E. Garribba, C.-H. Hung; ***Catalysis Letters, 148 (2018) 2703***. (**Springer**)
16. EPR and electrochemical interpretation of bispyrazolylacetate anchored Ni(II) and Mn(II) complexes: Cytotoxicity and anti-proliferative activity on human cancer cell lines; **K. Das**, B.B. Beyene, A. Datta, E. Garribba, C. Roma-Rodrigues, A. Silva, A.R. Fernandes, C.-H. Hung; ***New J. Chem., 42 (2018) 9126***. (**Royal Society of Chemistry**)
17. A Ni(II) derivative incorporating tetradentate Schiff base precursor: Structure, spectral, electrochemical and DFT interpretation; **K. Das**, G.W. Woyessa, A. Datta, B.B. Beyene, S. Goswami, E. Garribba, A. Frontera, C. Sinha; ***J. Mol. Struct., 1173 (2018) 462***. (**Elsevier**)
18. A new Cu(II) three-dimensional network with 4,4′-oxybis benzoic acid: structural diversity, EPR, and magnetism; A. Datta, **K. Das**, S. B. Mane, Eugenio Garribba; ***Struct. Chem., 29 (2018) 553***. (**Springer**)
19. A new Ni(II) coordination polymer formed by bulky bis(imidazole) and 4,4′-oxybis(benzoic acid): Topological and spectral elucidation; **K. Das**, A. Datta, S. Mendiratta, S. B. Mane, C. Massera, E. Garribba, C.-H. Hung; ***Inorg. Chim. Acta, 469 (2018) 478***. (**Elsevier**)
20. Structural elucidation, EPR and magnetic property of a Co(III) complex salt incorporating 4,4′-bipyridine and 5-sulfoisophthalate; **K. Das**, A. Datta, A. Pevec, S.B. Mane, M. Rameez, E. Garribba, T. Akitsu, S. Tanka; ***J. Mol. Struct., 1151 (2018) 198***. (**Elsevier**)

2017

21. EPR interpretation, magnetism and biological study of a Cu(II) dinuclear complex assisted by a schiff base precursor; **K. Das**, C. Patra, C. Sen, A. Datta, C. Massera, E. Garribba, M. S. El Fallah, B. B. Beyene, C.-H. Hung, C. Sinha, T. Askun, P. Celikboyun, D. Escudero, A. Frontera; ***J. Bio. Inorg. Chem., 22 (2017) 481***. (**Springer**)

22. EPR interpretation and electrocatalytic H_2 evolution study of bis(3,5-di-methylpyrazol-1-yl)acetate anchored Cu(II) and Mn(II) complexes; A. Datta, **K. Das**, B. B. Beyene, E. Garribba, M. J. Gajewskaa, C.-H. Hung; ***Molecular Catalysis, 439 (2017) 81***. (**Elsevier**)
23. Zn and Cd-Based Coordination Networks: Highly Selective Naked Eye Sensing of Pyridine; **K. Das**, S. Mendiratta, A. Datta, C. Massera, B. B. Beyene, C.-H. Hung; ***ChemistrySelect, 2 (2017) 2831***. (**Wiley**)
24. Structural elucidation, EPR and photoluminescent property of a Ce(III) two dimensional coordination polymer with 4,4′-bipyridine and 2-sulfoterephthalate; A. Datta, **K. Das**, S. Mendiratta, C. Massera, E. Garribba; ***J. Mol. Struct., 1139 (2017) 390***. (**Elsevier**)
25. A rare cobalt(III) paramagnetic derivative incorporating 1-alkyl-2-[(othioalkyl) phenylazo]imidazole (SMeaaiNEt): EPR, redox and magnetic interpretation; S. Nandi, **K. Das**, A. Datta, S. Roy, E. Garribb, T. Akitsu, C. Sinha; ***Inorg. Chim. Acta***, ***462 (2017) 75***. (**Elsevier**)
26. A zig-zag end-to-end azido bridged Mn^{III} 1-D coordination polymer: Spectral elucidation, magnetism, redox study and biological activity; **K. Das**, A. Datta, B. B. Beyene, C. Massera, E. Garribba, C. Sinha, T. Akitsu, S. Tanka; ***Polyhedron, 127 (2017) 315***. (**Elsevier**)
27. Synthesis, spectral elucidation, electrochemistry and DFT interpretation of manganese(II)-thioalkyl-arylazoimidazole complex; S. Nandi, **K. Das**, A. Datta, D. Banerjee, S. Roy, T. K. Mondal, D. Mandal, P. K. Nanda, T. Akitsu, S. Tanaka, C. Sinha; ***J. Mol. Struct., 1133 (2017) 574***. (**Elsevier**)

2016

28. A rare doubly nitrato and phenoxido bridged trimetallic CuII complex: EPR, antiferromagnetic coupling and theoretical rationalization; A. Datta, **K.Das**, S. B. Mane, S. Mendiratta, M. S. El Fallah, E. Garribba, A. Bauzá, A. Frontera, C.-H. Hung, C. Sinha; ***RSC Adv., 6 (2016) 54856***. (**Royal Society of Chemistry**)
29. Bulky bis(imidazole) and 2-sulfoterephthalate Assisted 3-D Cu(II) and 2-D Mn(II) Coordination Polymers: Topology, Diversity in Metal Containing Nodes and Spectral Elucidation; **K. Das**, A. Datta, S. B. Mane, S. Mendiratta, C. Massera, E. Garribba, J.-H. Huang, C.-H. Hung, T. Akitsu; ***ChemistrySelect, 1 (2016) 6230***. (**Wiley**)
30. A New CuII Coordination Polymer: Structural Elucidation, EPR and Sensing Studies for Detection of Volatile Organic Solvents; **K. Das**, S. Mendiratta, A. Datta, M. J. Gajewska, E. Garribba, T. Akitsu, C. Sinha; ***ChemistrySelect, 1 (2016) 2192***. (**Wiley**)
31. Synthesis and characterization of ruthenium compounds incorporating keto-amine ligands. The applications of catalytic transfer hydrogenation and cancer cell inhibition; T.-H. Lin, **K. Das**, **A**. Datta, W.-J. Leu, H.-C. Hsiao, C.-H. Lin, J.-H. Guh, J.-H. Huang; ***J. Organomet. Chem., 807 (2016) 22***. (**Elsevier**)
32. Structural elucidation, EPR and magnetic interpretation of lanthanide (Ln = La, Nd, Sm) compounds with 4,4′-bipyridine and 2-sulfoterephthalate; A. Datta, **K. Das**, S. Mendiratta, C. Massera, E. Garribba, J.-H. Huang, S. B. Mane, C. Sinha, M. S. El Fallah; ***Inorg. Chim. Acta, 453 (2016) 128***. (**Elsevier**)
33. Synthesis and spectral characterization of some mixed ligand complexes of Cu(II) containing NNS and NN/NO/OO chelating ligands; S.N. Nandi, S. Roy, **K. Das**, A. Datta, C. Sinha; ***J.Ind. Chem. Soc., 93 (2016) 1253.*** (**ICS**)

2015

34. Enolato-bridged dinuclear Cu(II) complex with a coumarin-assisted precursor : Spectra,

magnetism and biological study; **K. Das**, U. Panda, A. Datta, S. Roy, S. Mondal, C. Massera, T. Askun, P. Celikboyun, E. Garribba, C. Sinha, T. Akitsu, K. Kobayashi; ***New J. Chem., 39 (2015) 7309***. (**Royal Society of Chemistry**)

35. Triply phenoxo bridged Eu(III) and Sm(III) complexes with 2,6-diformyl-4-methylphenol-di(benzoylhydrazone) : Structure, Emission, EPR, antimicobacterial and cytotoxicity study on different human cell lines; **K. Das**, S. Nandi, S. Mondal, T. Askun, Z. Canturk, P. Celikboyun, C. Massera, E. Garribba, A. Datta, C. Sinha, T. Akitsu; ***New J. Chem., 39 (2015) 1101***. (**Royal Society of Chemistry**)
36. A Ni(II) Dinuclear Complex Bridged by End-on Azide-N and Phenolate-O Atom: Spectral Interpretation, Magnetism and Biological Study; **K. Das**, A. Datta, S. Nandi, S.B. Mane, S. Mondal, C. Massera, C. Sinha, C.-H. Hung, T. Askun, P. Celikboyun, Z. Canturk, E. Garribba, T. Akitsu; ***Inorg. Chem. Frontier, 2 (2015) 749***. (**Royal Society of Chemistry**)
37. A new 2-D coordination polymer incorporating cobalt(II), 2-sulfoterpthalate and the flexible bridging ligand 1,3-di(4-pyridyl)propane; A. Datta, **K. Das**, C. Massera, J.K. Klegg, M.C. Pfrunder, E. Garribba, J.-H. Huang, C. Sinha, T.K. Maji, T. Akitsu, S. Orita; ***Inorg. Chem. Frontier, 2 (2015) 157***. (**Royal Society of Chemistry**)
38. Pyrene-Appended Schiff base as a turn-on fluorescence sensor for $A1^{+}$ detection and interaction with DNA; U. Panda, **K. Das**, P. Dutta, C. Sinha; ***Ind. J. Chem. Sec A, 54 (2015) 1446***. (**ICS**)
39. Doubly end-on azido bridged mixed-valence cobalt trinuclear complex : Spectral study, VTM, inhibitory effect and antimycobacterial activity on human carcinoma and tuberculosis cells; A. Datta, **K. Das**, C. Sen, N.K. Karan, J.-H. Huang, C.-H. Lin, E. Garribba, C. Sinha, T. Askun, P. Celikboyun, S.B. Mane; ***Spectrochim. Acta Part A, 148 (2015) 427***. (**Elsevier**)

2014

40. Doubly phenoxo-bridged M-Na (M = Cu(II), Ni(II)) complexes of tetradentate Schiff base: Structure, photoluminescence, EPR, electrochemical studies and DFT computation; **K. Das**, A. Datta, S. Roy, J.K. Clegg, E. Garribba, C. Sinha, H. Kara; ***Polyhedron, 78 (2014) 62***. (**Elsevier**)
41. Phenoxo-bridged tetranuclear copper(II) and dinuclear zinc(II) complexes incorporating 2,6-diformyl-4-methylphenol-di(benzoylhydrazone) : Synthesis, spectral characterization, structure, redox and magnetic properties; **K. Das**, T.K. Mondal, E. Garribba, M. Fondo, C. Sinha, A. Datta; ***Inorg. Chim. Acta, 413 (2014) 194***. (**Elsevier**)
42. Structural characterization of Cobalt(II) complexes of N,O donor Schiff base and their activity on carcinoma cells; **K. Das**, A. Datta, P.-H. Liu, J.-H. Huang, C.-L. Hsu, W.-T. Chang, B. Machura, C. Sinha; ***Polyhedron, 71 (2014) 85***. (**Elsevier**)
43. A Mixed Valent Heterometallic Cu^{II}/Na^{I} Coordination Polymer with Sodium-Phenyl Bonds; A. Datta, **K. Das**, C. Massera, J.K. Clegg, C. Sinha, J.-H. Huang, E. Garribba; ***Dalton Trans., 43 (2014) 5558.*** (**Royal Society of Chemistry**)

2013

44. Studies on Oscillating Chemical Reaction in Cu(II) catalysed – Thiocyanate- Hydrogen Peroxide-NaOH System Using Pulsating Sensor; **K. Das**, P. Sahoo, N. Murali; ***Int. J. Chem. Kinetics 45 (2013) 19***. (**Wiley**)

2012

45. End-to-end Thiocyanato-Bridged Helical Chain Polymer and Di-chlorido-Bridged

Copper(II) Complexes with a Hydrazone Ligand : EPR, Variable Temperature Magnetic Study and Inhibitory Effect on Human Colorectal Carcinoma Cells; **K. Das**, A. Datta, C. Sinha, J.-H. Huang, E. Garribba, C.-S. Hsiao, C.-L. Hsu; ***ChemistryOpen, 1 (2012) 80***. (**Wiley**)

46. End-to-end Dicyanamide-Bridged 1-D Polymer of Cu^{II} with a Hydrazone Ligand : EPR and Variable Temperature Magnetic Susceptibility; **K. Das**, C. Sinha, A. Datta, E. Garribba, M.F. Busto, F.A. Mautner, R.C. Fischer; ***J. Chem. Res.*, 36 *(2012) 722***. (**Science Reviews**)
47. Structural Aspects and Spectroscopic Characterization of a Mn(II) Complex with Unsymmetrical NNO-donor Hydrazone Ligand; **K. Das**, C. Sinha, A. Datta; ***J. Chem. Cryst., 42 (2012) 150***. (**Springer**)

2011

48. Zinc and copper coordination polymers with 4,4′-bipyridine and sulfoterephthalate: infinite polypseudorotaxane and unprecedented (3,4,4)- connected trinodal topology; A. Datta, **K. Das**, J.-Y. Lee, Y.-M. Jhou, C.-S. Hsiao, J.-H. Huang, H.M. Lee; ***Cryst. Eng. Comm.*, 13 *(2011) 2824***. (**Royal Society of Chemistry**)
49. Doubly End-on Azido Bridged Trinuclear Cu(II) Complex: Synthesis, spectral and DFT Functional Studies; A. Datta, **K. Das**, W.-Y. Huang, J.-H. Huang, F.-X. Liao, C.-H. Hu; ***J. Chem. Res., 35 (2011) 140.*** (**Science Reviews**)
50. Synthesis and structural characterization of a nickel(II) complex with unsymmetrical NNO-donor Schiff base ligand; **K. Das**, C. Sinha, A. Datta, N. Revaprasadu; ***J. Chem. Cryst., 41 (2011) 1032***. (**Springer**)
51. Kinetic studies on saponification of ethyl acetate using an innovative conductivity-monitoring instrument with a pulsating sensor; **K. Das**, P. Sahoo, M. Saibaba, N. Murali, P. Swaminathan; ***Int. J. Chem. Kinetics 43 (2011) 648***. (**Wiley**)
52. Dichlorido{N′-[1-(2-pyridin-2-yl)ethylidene] acetohydrazide-κ^2N′,O}copper(II); A. Datta, **K. Das**, Y.-M. Jhou, J.-H. Huang, H.M. Lee; ***Acta Cryst. Section E, 67 (2011) m123***. (**IUCr**)

2010

53. A Dissymmetric, Singly Phenoxido-Bridged Cu^{II} Dinuclear Coordination Compound: Synthesis, Characterisation, Magnetic and Computational Study; A. Datta, N.-T. Chuang, F.-X. Liao, C.-H. Hu, W.-Y. Huang, J.-H. Huang, **K. Das**, P. Gamez, J.S. Costa; ***J. Chem. Res., 34 (2010) 637.*** (**Science Reviews**)
54. Di-μ-azido-bis({*N*′-[1-(2-pyridyl-κ*N*)ethylidene]acetohydrazidato-κ^2*N*′,*O*} dicopper (II)) A. Datta, **K. Das**, Y.-M. Jhou, J.-H. Huang, H. M. Lee; ***Acta Cryst. Sec. E, 66 (2010) m1271.*** (**IUCr**)

OTHER INFORMATION

During my PhD research work, I have guided three master's students for completion of the master degree thesis –

1. Master Thesis, "Structural Aspects of Metal Complexes with Schiff Base Ligands and Magnetism",

2. Master Thesis, "Characterization of Transition Metal Complexes Assited with N,O-donor Ligands, Magnetic and Biological Study",

3. Master Thesis, "Synthesis of Acridine-Functionalized Precursor and Corresponding Metal Derivatives: Fluorescence Based Sensor Activity"

During my teahching experince in Behala College, Kolkata India (Since February 2023 to till date), I has covered the following topics in Organometallic Chemistry –

1. Streochemical non-rigidity and fluxional behavior of organometallic compounds with typical examples

2. Catalysis by organometallic compounds: Hydrogenation of unsaturated compounds, Wilkinson's catalyst, Tolman catalytic loop, Hydroformylation (oxo process), Monsanto acetic acid process, Wacker process, Synthetic Gasoline-Fischer-Tropsch process, Polymerization, Oligomerization and metatheses reaction of alkenes and alkynes, Ziegler-Natta catalysis, Photodehydrogenation catalyst (Pt POP)

Due to COVID-19 pandemic (2020-2022), I could not focus on my research activities in proper way and could not visit in abroad for postdoctoral research. Since, I got affected by CORONA virus, so, my research progress (publication of papers) and teacing activities were severely hampered.

In the publication list, the submitted research papers are not listed (which are under revision and review).

Declarations given in the present curriculum must be considered released according to art. 46 and 47 of DPR n. 445/2000.

The present curriculum does not contain confidential and legal information according to art. 4, paragraph 1, points d) and e) of D.Lgs. 30.06.2003 n. 196.

Please note that CV WILL BE PUBLISHED on the University website and It is recommended that personal and sensitive data should not be included. This template is realized to satisfy the need of publication without personal and sensitive data.

Please DO NOT SIGN thisform.

Place and date: __Kolkata, India__, _09.05.2023___