

CURRICULUM VITAE

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1. **Name :** DEBASIS DAS
2. **Personal Information:**
- A. Date of birth: 15. 01. 1971
 - B. Nationality: Indian
 - C. Sex / Marital status: Male, Married
3. **Permanent address:** B-94 Meghmallar Sarani, Sector -2C, Bidhannagar, Durgapur- 713212, West Bengal, INDIA
3. **Present position :** Professor, Department of Chemistry, The University Burdwan, Golapbag, Pin- 713104, West Bengal, INDIA
4. **Contact details:** E-mail: ddas100in@yahoo.com; ddasbu@gmail.com; Mob: 9332021453
5. **Education :**

Qualifications	Board / University	Year
B. Sc. (Chemistry-Hons.)	Calcutta University, India	1992
M. Sc. (Analytical Chemistry)	Calcutta University, India	1994
Ph. D. (Science)	Burdwan University, India	1999
Post-doctoral research	New York University, New York, USA	2001- 2002
Post-doctoral research	Universidad de La Laguna, Spain	2000-2001
Visiting invited researcher	University of Valencia, Spain	2011

6. **Other achievements :**
- A. National Science Foundation (USA) Fellowship
 - B. Qualified All India Level National Eligibility Test (NET) in 1994
 - C. Qualified National Level Graduate Aptitude Test for Engineering and technology (GATE) in 1994.
 - D. National Scholarship Holder in merit list of Secondary Examination.
7. **Title of Ph.D. Thesis:** Studies on heterocyclic azo complexes of heavy metals and some analytical applications.
8. **Thesis Supervisors:** Prof. Arabinda K. Das, Former Vice-Chancellor, Kalyani University, Kalyani, West Bengal, India and Prof. Chittaranjan Sinha, Professor, Department of Chemistry, Jadavpur University, Jadavpur, West Bengal, India

9. Area of research:

- A. **Ph. D:** Synthesis, characterisation and red-ox studies of transition metal complexes with bio-relevant ligands.
- B. **Post-doc:** Redox induced inversion of helical chirality of transition metal complexes of derivatized amino acids and porphyrin systems.

10. Experience : (a) **Research:** 20 years; (b) teaching: 16 years

11. Research area of interest: Molecular Recognition of cations, anions, amino acids and small molecules of environmental/ biological relevance. Coordination chemistry of metal complexes, Solid-Phase-Extraction, and chemical speciation studies.

12. References:

- A. Prof. James W Canary, Professor, Dept. of Chemistry, New York University, New York, USA, E-mail: james.canary@nyu.edu
- B. Dr. Lei Zhu, Dept. of Chemistry, Florida State University, Florida, USA, E-mail: lzhu@chem.fsu.edu
- C. Prof. Ashutosh Ghosh, Dean (Science), Calcutta University, E-mail: ghosh_59@yahoo.com
- D. Prof. Asok K Mukherjee, Retired Professor, Department of Chemistry, The University of Burdwan, Burdwan, E-mail: akm_13@rediffmail.com

13. Ph. D. alumni: (a) (Doctoral degree awarded: 07)

- (i) Dr. Arnab Banerjee: post-doctoral fellow at University of Texas at Austin, USA.
- (ii) Dr. Animesh Sahana, Assistant Professor in a college under SKB University, Purulia.
- (iii) Dr. Subarna Guha, Assistant Professor in CPEIT, Haldia, W.B.
- (iv) Dr Debasis Karak, Assistant teacher at school.
- (v) Dr Raja Saha, Assistant teacher at school
- (vi) Dr Sudipta Das, Assistant teacher at school
- (vii) Dr. Sisir Lohar, Assistant Professor in a college under K N University.
- (viii) Dr. Abhijit Ghosh, Assistant teacher at school.
- (ix) Dr. Sangita Adhikari, NPDF at Visva Bharati, Shantiniketan
- (x) Dr. Sandip Mandal, Chemist at Ordnance factory, PUNE
- (xi) Dr Babli Kumari,
- (xii) Dr. Sabyasachi Ta, PDF at IIT, Mumbai

- (b) Ph.D. thesis submitted: 02
- (c) Post-doc completed: (NPDF-03, Kothari PDF- 02)
- (d) Post-doc continuing: (Kothari PDF- 01)
- (e) Research scholars working for Ph.D. degree: 08
- (f) M. Phil thesis awarded: 01
- (g) M.Sc. projects: several students every year

A. Details of Ph.D. awarded students:

Sl. No.	Name of the Awardees	Title of the Thesis	Supervisor(s)
1	Dr. Subarna Guha (31.12.13)	Syntheses, characterization and applications of different fluorescent probes derived from coumarin.	Dr. D. Das
2	Dr. Debasis Karak (20.02.14)	Syntheses, characterization and applications of several new fluorescence probes for selective determination of cations at trace level.	Dr. D. Das & Dr. S. S. Adhikari
3	Dr. Raja Saha (05.05.14)	Studies on some new d- and f- block metal complexes with ligands containing heterocyclic donor sites: syntheses, structure, properties and applications.	Dr. D. Das
4	Animesh Sahana (03/09/2014)	Use of atomic absorption and fluorescence spectroscopy for trace level determination of some toxic cations and anions with several new chelating ligands.	Dr. D. Das
5	Arnab Banerjee (03/11/2014)	Synthesis, characterization and application of different fluorescent probes with nitrogen, oxygen and/ or sulfur donor sites.	Dr. D. Das
6	Sudipta Das (18/8/2015)	Use of several new fluorescent probes for trace level determination of some cations , anions and amino acids	Dr. D. Das
7	Sisir Lohar (22/3/2016)	Spectrofluorimetric determination of some selective cations, anions and amino acids with newly synthesized reagents	Dr. D. Das
8	Abhijit Ghosh (28/7/2017)	Trace level detection and estimation of some toxic and bio-relevant analytes using newly synthesized probes	Dr. D. Das
9	Sangita Adhikari (08/2/2018)	Interaction/complexation of several n, o and s donors with cu(ii): structures, properties, spectroscopic studies and bio-analytical applications	Dr. D. Das
10	Sandip Mandal (25/4/2018)	Rhodamine based probes for colorimetric and fluorescence recognition of some cations and anions for bio-imaging	Dr. D. Das
11	Babli Kumari 09/2019	Synthesis, structure, photo and bio-physical interaction studies of new N, O and S-donors and their metal complexes with environmental and bio-relevant analytes	Dr. D. Das
12	Dr. Sabyasachi Ta 11/2019	Several new N, O donor ligands and their metal complexes: studies on their spectroscopic, catalytic and biological aspects	Dr. D. Das
13	Sandip Nandi (thesis submitted)	Fluorescence recognition of several small molecules, anions and amino acids using new probes for environmental and biological applications	Dr. D. Das
14	Milan Ghosh (thesis submitted)	Synthesis, Structure and Photo-Physical interaction studies of several organic molecules and metal complexes	Dr. D. Das

(c) Completed research projects

Sl. No.	Name of the project	Funding agency	Period
1	<i>Trace level determination of polyaromatic hydrocarbons (PAH's) in sewage sludge, polluted soil and waste water-samples using fluorescence spectroscopy and its remediation</i>	Department of Environment, Govt. of West Bengal	01.02.2013 – 31.01.2017
2	<i>Trace level determination of toxic anions with novel fluorescent probes and their selective removal by solid phase extraction from environmental samples</i>	DST (Govt. of W.B.)	01.01.2014- 31.12.2017
3	<i>Distribution and speciation studies of toxic metals in sea food samples using EDXRF, PIXE and fluorescence spectroscopy: Potential bio-indicator of heavy metal pollution in marine ecosystems</i>	UGC-DAE CSR, KOLKATA	01.01.2014- 31.12.2017
4	Studies on chemical speciation and metal ion separation by some newly synthesized chelating ligands with N, S and / O donor sites: Applications to environmental samples	UGC-DAE-CSR, Kolkata	01.9.2009 – 01.9.2013
5	Synthesis, characterisation and application of some novel molecules for speciation and selective removal of cations and anions from environmental and biological samples.	DST (Govt. of W.B.)	23.03.2009 - 23.03.2012
6	Supramolecular transition metal ensemble having doubly armed azoimine functionality: Some analytical applications	UGC (Minor)	01.02.2009 - 01.02.2011

14. **Experience in instrumental techniques:** NMR, Circular Dichroism, FTIR, UV-Vis. and Atomic absorption spectroscopy, XRD, Fluorescence spectroscopy, Polarimetry, MALDI-TOF and cyclic voltammetry etc.

15. Reviewer of different international journals like Chem. Comm., Cryst. Growth & Design; Chem. Eur. J., Chem. Asian. J, Inorg Chem., ACS Appl Mat Interface, Analyst, Dalton Trans., RSC Adv., Anal. Methods, Supramolecular Chemistry, Org. Biomol. Chem., New J Chem, J. Haz. Mater., J Mol Recognition, Spectrochimica Acta A, Talanta, Sensors and Actuators B, Int. J Env. Anal. Chem., Anal. Chim Acta, Spectroscopy Letters, Anal. Lett., Chem. Engg. J., Chem. Eng. Commun., Ind J Chem., J. Ind. Chem. Soc. and many more.

16. **Publications (RSC: 38; ACS: 09, Elsevier: ; Wiley: ; Springer: ; Indian Journals:**

186. Characterization of Exopolysaccharide Produced by *Pseudomonas* sp. PFAB4 for Synthesis of EPS-Coated AgNPs with Antimicrobial Properties, *J Polym Env.*, Aparna Banerjee, Debasis Das, Shalini G Rudra, Koushik Mazumder, Rodrigo Andler, Rajib Bandopadhyay, **2019**, DOI: 10.1007/s10924-019-01602-z
185. Naphthalene Based Amide–Imine Derivative and its Dinuclear Vanadium Complex: Structures, Atmospheric CO₂ Fixation and Theoretical Support, Sabyasachi Ta, Milan Ghosh, Rostam Ali Molla, Subhasis Ghosh, M. Islam, Paula Brandão, Vitor Felix, and **Debasis Das**, *ChemistrySelect* **2019**, 4(35):10254-10259
184. Zinc (II) incorporated porous organic polymeric material (POPs): A mild and efficient catalyst for synthesis of dicoumarols and carboxylative cyclization of propargyl alcohols and CO₂ in ambient conditions, Sk Safikul Islam, Noor Salam, Rostam Ali Molla, Sk Riyajuddin, Nasima Yasmin, Debasis Das, Kaushik Ghosh and Sk. M. Islam, *Molecular Catalysis*, **2019**, DOI: 10.1016/j.mcat.2019.110541
183. Oxovanadium(V) and Dioxomolybdenum(VI) Complexes of Amide–Imine Conjugates: Structures, Catalytic and Antitumor Activities, Sabyasachi Ta, Milan Ghosh, Noor Salam, Subhasis Ghosh, Paula Brandão, Vitor Felix, Sumit Kumar Hira, Partha Pratim Manna, and **Debasis Das**, *ACS Appl. Biomat.*, **(2019)**, DOI: 10.1021/acsabm.9b00527
182. Sequential Fluorescence Recognition of Molybdenum(VI), Arsenite, and Phosphate Ions in a Ratiometric Manner: A Facile Approach for Discrimination of AsO²⁻ and H₂PO₄⁻, Mahuya Banerjee, Sabyasachi Ta, Milan Ghosh, Avijit Ghosh and **Debasis Das**, *ACS Omega*, **2019**, DOI: 10.1021/acsomega.9b00377
181. Exploring Anticancer and (Bio)catalytic Activities of New Oxovanadium(V), Dioxomolybdenum(VI), and Copper(II) Complexes of Amide–Imine Conjugates, Sabyasachi Ta, Milan Ghosh, Kajari Ghosh, Paula Brandão, Vitor Felix, Sumit Kumar Hira, Partha Pratim Manna, and **Debasis Das**, *ACS Appl. Biomat.*, **(2019)**, DOI: 10.1021/acsabm.9b00226
180. Subtle structural variation in azine/imine derivatives controls Zn 2+ sensitivity: ESIPT-CHEF combination for nano-molar detection of Zn 2+ with DFT support, Somnath Khanra, Sabyasachi Ta, Milan Ghosh, Sudeshna Chatterjee and **Debasis Das**, *RSC Advances*, **2019**, 9(37) 21302-21310

179. A smart optical probe for detection and discrimination of Zn^{2+} , Cd^{2+} and Hg^{2+} at nano-molar level in real samples, Mahuya Banerjee, Milan Ghosh, Sabyasachi Ta, Jayanta Das and **Debasis Das**, **Journal of Photochemistry and Photobiology A Chemistry**, **2019**, 377, 286-297.
178. Azouracil and its Cu(II) catalyzed cyclization to anticancer active triazole derivative: symmetrical and asymmetrical reductive cleavage, DNA interaction and molecular docking studies, Mahuya Banerjee, Milan Ghosh, Sayantan Pradhan, J. S. Matalobos, Abhinandan Rej, Sumit Kumar Hira and Debasis Das, **ACS Appl. Biomat.**, **(2019)** DOI: 10.1021/acsabm.8b00775
177. Polymer supported triazine based palladium complex catalyzed double carbonylation reaction of halo aryl compounds for the synthesis of α -ketoamides, Sk Safikul Islam Rostam Ali Molla, Sabyasachi Ta, **Nasima Yasmin**, Debasis Das, and Sk. M. Islam; **J. Organomet. Chem.**, **2019**, 882, 18-25
176. A 1,8 Naphthalimide anchor Rhodamine B Based FRET Probe for Ratiometric Detection of Cr^{3+} ion in Living Cells, Susanta Adhikari, Sabyasachi Ta, Avijit Ghosh, Subhajit Guria, Abhishek Pal, Manisha Ahir, Arghya Adhikary, Sumit Kumar Hira, Partha Pratim Manna, Debasis Das, **J Photochem. Photobio. A: Chemistry**, **(2019)** 372, 49-58
175. Exploring aggregation induced emission through tuning of ligand structure for pico-molar detection of pyrene, M. Ghosh, S. Ta, S. Lohar, S. Das, P. Brando, V. Felix and D. Das, **J Mol. Recognition**, **2019**, **32 (5)**, e2771
174. Metal ion displacement approach for optical recognition of thorium: Application of a molybdenum(VI) complex for nano-molar determination and enrichment of Th(IV), M. Ghosh, S. Ta, M. Banerjee and D. Das, **ACS Omega**, **2018**, 3, 4262-4275.
173. A unique benzimidazole-naphthalene hybrid molecule for independent detection of Zn^{2+} and N^{3-} ions: Experimental and theoretical investigations, S. Ta, S. Das, M. Ghosh, M. Banerjee, S. K. Hira, P. P. Manna and D. Das, **Spectrochim. Acta, Part A, Mol. Biomol. Spectros.**, **173 (2018)** 196-200
172. Azine based smart probe for optical recognition and enrichment of Mo(VI), M. Ghosh, S. Ta, J. S. Matalobos and D. Das, **Dalton Trans.**, **47 (32)**, 11084-11090 (2018)
171. Exploring (bio)catalytic activities of structurally characterised Cu(II) and Mn(III) complexes: histidine recognition and photo-catalytic application of Cu(II) complex and derived CuO nano-cubes, B.

Kumari, S. Kundu, K. Ghosh, M. Banerjee, S. K. Pradhan, Sk. M. Islam, P. Brandão, V. Félix and D. Das, **Dalton Trans.**, **47**, 14008 - 14016 (2018)

170. Optical sensors for detection of nano-molar Zn^{2+} in aqueous medium: Direct evidence of probe- Zn^{2+} binding by single crystal X-ray structures, Md. Mahiuddin, M. Banerjee, A. Shaikh, T. Shyam, S. Taniya, A. Ghosh, A. Adhikary, P. Brandão, V. Félix and D. Das, **J. Photochem. Photobio. A: Chemistry**, DOI: 10.1016/j.jphotochem.2018.09.009 (2018)
169. Recognition of ceric ion in aqueous medium at pico-molar level: colorimetric, fluorimetric and single crystal X-ray structural evidences, M. Ghosh, S. Ta, M. Banerjee, Md. Mahiuddin, S. Khanra, S. K. Hira, P. P. Manna and D. Das, **J. Photochem. Photobio., A: Chemistry**, DOI: 10.1016/J.jphotochem.2018.08.010. (2018).
168. Exploring the scope of PET-CHEF-FRET processes for recognition and discrimination of Zn^{2+} , Cd^{2+} , Hg^{2+} and Al^{3+} in a ratiometric manner: Application to sea fish analysis; M. Ghosh, S. Ta, M. Banerjee, Md. Mahiuddin and D. Das; **ACS Omega**, **3**, 4262-4275, 2018.
167. Use of PS-Zn-antra complex as an efficient heterogeneous recyclable catalyst for carbon dioxide fixation reaction at atmospheric pressure and synthesis of dicoumarols under greener pathway; S. Ghosh, P. Mondal, D. Das, K. Tuhina and Sk. M. Islam; **J. Organomet. Chem.**, **866**, 1-12, 2018.
166. A FRET based colorimetric and fluorescence probe for selective detection of Bi^{3+} ion and live cell imaging; S. Adhikari, S. Mandal, A. Ghosh, S. Guria, A. Pal, A. Adhikary and D. Das; **J Photochem. Photobio., A: Chemistry**, **360**, 26-33, 2018.
165. An Efficient Polystyrene Functionalized Cerium Catalyst for One Pot Multi-component Synthesis of Spiropiperidine Derivatives and One Pot Click Reactions in Green Solvent, P. Mondal, S. Ghosh, D. Das and Sk. M. Islam; **Appl. Organometal. Chem.**, **e4227**, 1-15, 2018, doi.org/10.1002/aoc.4227.
164. A hydrogen bond assisted CHEF approach for colorimetric and fluorescence recognition of picric acid and its solid phase extractive removal with immobilized probe; M. Ghosh, S. Ta, M. Banerjee, Md. Mahiuddin and D. Das; **ChemSelect**, **3**, 6145-6151, 2018,

163. Melamine paraformaldehyde-based organic mesoporous polymer grafted silver nanoparticles catalyzed nitroarenes reduction under aqueous medium, Sk. Safikul Islam, Rostam Ali Molla, Kajari Ghosh, Debasis Das and Sk. Manirul Islam, **Nat. Res. Eng.**, 2017, 2, 13–22, DOI: 10.1080/23802693.2018.1440509
162. Mesoporous Zirconium Oxophosphate: An Efficient Catalyst for the Synthesis of Cyclic Acetals and Cyclic Carbonates under Solvent-Free Conditions, Sk. Safikul Islam, Piyali Bhanja, Kajari Ghosh, Rostam Ali Molla, Nasima Yasmin, Debasis Das and Sk. Manirul Islam, **ChemistrySelect**, 2017, 2, 10595 – 10602; DOI: 10.1002/slct.201701541.
161. A curcumin derived probe for colorimetric detection of azide ion in water, Susanta Adhikari, Subhajit Guria, Avijit Ghosh, Abhishek Pal, Debasis Das, **New J Chem.**, 2017, **41**, 15368-15372. DOI: 10.1039/C7NJ03266H
160. Palladium nanoparticles embedded over mesoporous TiO₂ for chemical fixation of CO₂ under atmospheric pressure and solvent-free conditions, Resmin Khatun, Piyali Bhanja, Paramita Mondal, Asim Bhaumik, Debasis Das, Manirul Islam, **New J Chem.**, 2017, **41**(21) 12937-12946, DOI: 10.1039/C7NJ02459B
159. Cu(II) and Co(II) complexes of benzimidazole derivative: Structures, catecholase like activities and interaction studies with hydrogen peroxide, Babli Kumari, Sangita Adhikari, Jesús Sanmartín, Debasis Das, **J Mol. Struc.**, 2017, DOI: 10.1016/j.molstruc.2017.09.031
158. ESIPT-Based Nanomolar Zn²⁺ Sensor for Human Breast Cancer Cell (MCF7) Imaging, Milan Ghosh, Abhijit Ghosh, Sabyasachi Ta, Jesús Sanmartín, Debasis Das, **Chemistry Select**, 2017, **2**(24):7426-7431, DOI: 10.1002/slct.201701102
157. Palladium nanoparticles embedded on mesoporous TiO₂ material (Pd@MTiO₂) as an efficient heterogeneous catalyst for Suzuki-Coupling reactions in water medium, Paramita Mondal, Resmin

Khatun, Piyali Bhanja, Asim Bhaumik, Debasis Das, Manirul Islam, **J Colloid Interface Sci.**, 2017, DOI: 10.1016/j.jcis.2017.08.046

156. Ratiometric sensing of Fe^{3+} through PET-CHEF-FRET processes: live cell imaging, speciation and DFT studies, Susanta Adhikari, Avijit Ghosh, Milan Ghosh, Subhajit Guria, Debasis Das, **Sensors and Actuators B Chemical**, 251 (2017) 942-950, DOI: 10.1016/j.snb.2017.05.135.

155. Detection and discrimination of Al^{3+} and Hg^{2+} using a single probe: nano-level determination, human breast cancer cell (MCF7) imaging, binary logic gate development and sea fish sample analysis, Milan Ghosh, Sandip Mandal, Sabyasachi Ta, Debasis Das, **Sensors and Actuators B Chemical**, 249 (2017) 339-347, DOI: 10.1016/j.snb.2017.04.040.

154. Pyridine-antipyrine appended indole derivative for selective recognition of Fe^{3+} : Concentration dependent coloration, Sabyasachi Ta, Sandip Nandi, Milan Ghosh, Somenath Banerjee, Debasis Das, **Spectrochimica Acta, Part A, Molecular and Biomolecular Spectroscopy**, 173 (2017) 196-200.

153. Silver nanoparticles supported over $\text{Al}_2\text{O}_3 @ \text{Fe}_2\text{O}_3$ core-shell nanoparticles as an efficient catalyst for one-pot synthesis of 1,2,3-triazoles and acylation of benzyl alcohol, Priyanka Basu, Piyali Bhanja, Noor Salam, Debasis Das, Manirul Islam, **Mol. Catal.** (2017) 439, 31-40 DOI: 10.1016/j.mcat.2017.05.005

152. Catalytic Activity of Crystallographically Characterized Organic-Inorganic Hybrid Containing 1,5-Di-amino-pentane Tetrachloro Manganate with Perovskite Type Structure, Paramita Mondal, Seham Kamal Abdel-Aal, Debasis Das, Sk Manirul Islam, **Catalysis Letters**, (2017), DOI 10.1007/s10562-017-2112-7.

151. Tuning of azine derivatives for selective recognition of Ag^+ with *in vitro* tracking of endophytic bacteria in rice root tissue, Abhijit Ghosh, Sangita Adhikari, Sabyasachi Ta, Avishek Banik, Tushar Kanti Dangar, Subhra Kanti Mukherjee, Jesús Sanmartín Matalobos, Paula Brandão, Vítor Félix and Debasis Das, **Dalton Trans.**, 45 (2016) 19491-19499

150. Molecular diversity in several pyridyl based Cu(II) complexes: Biophysical interaction and red-ox triggered fluorescence switch, Sangita Adhikari, Animesh Sahana, Babli Kumari, Durba Ganguly, Saurabh Das, Prajna Paramita Banerjee, Gautam Banerjee, Ansuman Chatterjee, Matilde Fondo, Jesús Sanmartín Matalobos, Paula Brandão, Vítor Félix and Debasis Das, *New J Chem.*, **40** (2016) 10378-10388, DOI: 10.1039/C6NJ02381A

149. Colorimetric and fluorescent probe for detection of nano molar lysine in aqueous medium, Susanta Adhikari, Avijit Ghosh, Sandip Mandal, Subhajit Guria and Debasis Das, *Organic & Biomolecular Chemistry*, **14** (2016) 10688-10694, DOI: 10.1039/C6OB01704E

148. Cu(II) complex of a new isoindole derivative: structure, catecholase-like activity, antimicrobial properties and bio-molecular interactions, Sangita Adhikari, Sisir Lohar, Babli Kumari, Aparna Banerjee, Rajib Bandopadhyay, Jesús Sanmartín Matalobos and Debasis Das, *New J Chem.*, **40** (2016) 10094-10099, DOI: 10.1039/C6NJ02193J

147. Pyridine- antipyrine appended indole derivative for selective recognition of Fe^{3+} : Concentration dependent coloration, Sabyasachi Ta, Sandip Nandi, Milan Ghosh, Somenath Banerjee and Debasis Das, *Spectrochimica Acta Part A, Molecular and Biomolecular Spectroscopy* **173** (2016) 196-200, DOI: 10.1016/j.saa.2016.09.010.

146. Smart Probe for Multianalyte Signaling: Solvent Dependent Selective Recognition of I^- , Sandip Nandi and Debasis Das, *ACS Sens.*, **1** (2016) 81–87

145. Tuning of donor-acceptor linker in rhodamine-coumarin conjugates leads remarkable solvent dependent FRET efficiency for Al^{3+} imaging in HeLa cells, Susanta Adhikari, Sandip Mandal, Avijit Ghosh, Subhajit Guria and Debasis Das, *Sens. Actut. B: Chemical*, **234** (2016) 222-230

144. Tailoring ligand environment towards development of colorimetric and fluorescence indicator for biological Mn (II) imaging, Susanta Adhikari, Avijit Ghosh, Animesh Sahana, Subhajit Guria and Debasis Das, *Analytical Chemistry*, **88** (2016) 1106–1110.

143. Tuning FRET efficiency as a novel approach for improved detection of naphthalene: Application to environmental samples, Sandip Nandi, Sangita Adhikari, Sandip Mandal, Arnab Banerjee and Debasis Das, **J Mol. Recognition**, 29 (2016) 303-307
142. Tri-color emission and colorimetric recognition of acetate using semicarbazide and thiosemicarbazide derivatives: Experimental and computational studies, Sisir Lohar, Sougata Sinha, Subrata Ghosh and Debasis Das, **Spectrochimica Acta Part A, Molecular and Biomolecular Spectroscopy**, 155 (2016) 75-80
141. Structurally Characterized Zn^{2+} Selective Ratiometric Fluorescence Probe in 100 % Water for HeLa Cell Imaging: Experimental and Computational Studies, Babli Kumari, Sisir Lohar, Milan Ghosh, Sabyasachi Ta, Archya Sengupta, Prajna Paramita Banerjee, Ansuman Chattopadhyay, Debasis Das, **J Fluorescence**, 26 (2016) 87-103
140. Fluorescence resonance energy transfer (FRET)-based technique for tracking of endophytic bacteria in rice roots, Avishek Banik, Subhra Kanti Mukhopadhyaya, Animesh Sahana, Debasis Das, Tushar Kanti Dangar, **Biol. Fertil. Soils**, 52 (2016) 277-282
139. Histidine based fluorescence probe for nanomolar magnesium(II), Abhijit Ghosh, Somenath Banerjee, Arnab Banerjee and Debasis Das, **J Ind. Chem. Soc.** 93 (2016) 165-173
138. A smart rhodamine-pyridine conjugate for bioimaging of thiocyanate in living cells, Sandip Mandal, Animesh Sahana, Arnab Banerjee, Damir A. Safin, Maria G. Babashkina, Koen Robeyns, Sjoerd Verkaart, Joost G. J. Hoenderop, Mariusz P. Mitoraj, Yann Garcia and Debasis Das, **RSC Adv.**, 5 (2015) 103350-103357
137. Dual mode ratiometric recognition of zinc acetate: nano-molar detection with in-vitro tracking of endophytic bacteria in rice root tissue, Abhijit Ghosh, Sabyasachi Ta, Milan Ghosh, Subhajit Karmakar, Avishek Banik, Tushar Kanti Dangar an Subhra Kanti Mukhopadhyay and Debasis Das, **Dalton Trans.**, 45 (2015) 599-606.

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135. Sn(II) induced concentration dependent dynamic to static excimer conversion of a conjugated naphthalene derivative, Susanta Adhikari, Sandip Mandal, Avijit Ghosh, Subhajit Guria and Debasis Das, **Dalton Trans.**, 44 (2015) 143888- 14393
134. Anion induced multisignaling probe for Hg^{2+} and its application for fish kidney and liver tissue imaging studies, Sandip Mandal, Arnab Banerjee, Debasree Ghosh, Dipak Kumar Mandal, Damir A. Safin, Maria G. Babashkina, Koen Robeyns, Mariusz P. Mitoraj, Piotr Kubisiak, Yann Garcia and Debasis Das, **Dalton Trans.** 44 (2015) 13186- 13195
133. Lysine triggered ratiometric conversion of dynamic to static excimer of a pyrene derivative: aggregation-induced emission, nanomolar detection and human breast cancer cell (MCF7) imaging, Abhijit Ghosh, Archya Sengupta, Ansuman Chattopadhyay and Debasis Das, **Chem Comm.**, 51 (2015) 11455—11458
132. X-ray structurally characterized sensors for ratiometric detection of Zn^{2+} and Al^{3+} in human breast cancer cell (MCF7): Development of binary logic gate as molecular switch, Abhijit Ghosh and Debasis Das, **Dalton Trans.**, 44 (2015) 11797 – 11804
131. Ratiometric sensing of lysine through the formation of pyrene excimer: Experimental and computational studies, Sisir Lohar, Damir A. Safin, Archya Sengupta, Ansuman Chattopadhyay, Jesús Sanmartín Matalobos, Maria G. Babashkina, Koen Robeyns, Mariusz P. Mitoraj, Piotr Kubisiak, Yann Garcia and Debasis Das, **Chem Comm.**, 51 (2015) 8536- 8539

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129. A single probe for sensing both acetate and aluminum(III): Visible region detection, red fluorescence and human breast cancer cell imaging, Abhijit Ghosh, Archya Sengupta, Ansuman Chattopadhyay and Debasis Das, **RSC Adv.**, 5 (2015) 24194-24199
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WORKSHOPS / SYMPOSIA / SEMINARS

- (i) As Jt. Coordinator in the 24th Refresher Course (January 08 to 28, 2016) in Environmental Science organized by UGC- Human Resource Development Centre, Burdwan University.
- (i) Member of the organizing committee of National seminar on “Design, synthesis, interactions, chemical and bio-chemical activities of different functional molecules” held on Feb.04-06, 2016 at the Chemistry Department of The University of Burdwan, Burdwan,West Bengal.
- (ii) Delivered a lecture on 08-10-2015 as a resource person in the 2nd refresher course (September 23 to October 13, 2015) in Biological Science held at HRDC, Burdwan University.
- (iii) Acted as Jt. Secretaries in the National seminar on “Advanced Spectroscopy, Theoretical Chemistry, Synthesis, Reactivity and Structure Evaluation” held on Feb.19-21, 2015 at the Chemistry Department of The University of Burdwan, Burdwan, West Bengal.

- (iv) Delivered lecture at 2nd Green Analytical Chemistry seminar at University of Valencia, on June 29, 2011
- (v) Participated at Green Analytical Chemistry seminar at University of Valencia, on January 28, 2011
- (vi) UGC-sponsored University Golden Jubilee National seminar on “Chemistry Today” on Feb. 20-22, 2010 at Burdwan University
- (vii) 2nd UGC sponsored National seminar on “Advanced Spectroscopy, Theoretical Chemistry, Synthesis, Reactivity and Structure Evaluation” held on Feb.20-22, 2010 at the Chemistry Department of The University of Burdwan, Burdwan,West Bengal.
- (viii) UGC-sponsored State Level seminar on “Application of Spectroscopy: Atomic to molecular systems” on March 20-21, 2009 at Vivekananda Mahavidyalaya, Burdwan
- (ix) UGC-sponsored National seminar on “Advanced Spectroscopy, Theoretical Chemistry, Synthesis, Reactivity and Structure Evaluation” held on April, 25-27th, 2008 at the Chemistry Department of The University of Burdwan, Burdwan, West Bengal.
- (x) U.G.C. Seminar on “Weather and Climate in Eastern India” organised by Brahmananda Keshab Chandra College, Kolkata-108 (under Calcutta University) on February 25th, 2004.
- (xi) Chiroptical features of chiral tripodal metal complexes containing tetraphenylporphyrin chromophores. Holmes, Andrea E.; Das, Debasis; Canary, James W. Department of Chemistry, New York University, New York, NY, USA. Abstracts of Papers, 226th ACS National Meeting, New York, NY, United States, September 7-11, 2003 (2003),
- (xii) Poster presented in 220th ACS meeting at Boston in USA, August, 18 – 22, 2002 on Redox-Triggered Ligand Conformational Changes in Metal Complexes of N, N Dialkylmethionine.
- (xiii) Delivered a lecture at West Bengal State Science Congress: “Purification of mercury contaminated water: Design of new resin, it’s characterisation and analytical application”, at 3rd West Bengal State Science Congress, 1996.
- (xiv) Participated in the “ Workshop on fundamentals of photosciences: application to basic research” held at Jadavpur University, Calcutta, October 7-12, 1996 - organised by Indian Photobiology Society in collaboration with Dept. of Chemistry and Dept. of Physics, Jadavpur University, Calcutta-700032.
- (xv) Participated in the “National Workshop on Recent Trends in Instrumentation for analysis of environmental contaminants” held during November 19-23, 1996, organised by All India Council for Technical Education, at Jadavpur University, Calcutta.

- (xvi) Symposium on Modern Trends in Inorganic Chemistry at IIT Kanpur held on 4-6 December 1997. Poster presented on “Synthesis, spectral characterisation, electrochemistry and solvatochromic studies of (catecholato)(arylazoimidazole)palladium(II) complexes.
- (xvii) 34th Annual convention of Chemists held on Delhi University on 16-20 December, 1997. Abstract accepted for oral presentation on “Design of imidazolylazo resin: separation and estimation of Class b metals”.
- (xviii) Delivered a lecture at “ National Conference on Environment” held during February 2 - 5, 1999, organised jointly by Dept. of Environment, Govt. of West Bengal, West Bengal Pollution Control Board & Paschim Banga Vigyan Mancha at Science City, Calcutta.
- (xix) Delivered a lecture at West Bengal State Science Congress: “Azoimidazolwe Function : From Basic Research to Industrial Application” Abstract of papers, Sixth West Bengal State Science Congress, 1999.
- (xx) Delivered a lecture at “ National Seminar on Organometallic Chemistry” held during March 24 -25, 1999, organised by Dept. of Chemistry, Bharathidasan University, Tiruchirapalli - 62004, Tamilnadu
- (xi) Delivered a lecture at International Conference on Chemistry and 36th Annual convention of Chemists held in Calcutta, on December 11-16, 1999, organised by Indian Chemical Society.

I. Membership:

- a. Royal Society of Chemistry
- b. American Chemical Society session-2001-2002.
- c. Indian Chemical Society
- d. Indian Association for the Cultivation of Science, Jadavpur, Kolkata- 700 032.