

## Annexure-I

### VIEW FACULTY PROFILE

1. Name: **Dr. Deblina Sarkar**
2. Father's Name: **Mr. Bijan Kumar Sarkar**
3. Designation: **Assistant Professor**
4. Office Address: Bagnan College, Khalore, P.O. & P.S. Bagnan,  
Dist.- Howrah, Pin Code- 711303, West Bengal
5. Date of Birth: **17.02.1988**  
Photograph
6. E-mail ID: [deblinasarkar17@gmail.com](mailto:deblinasarkar17@gmail.com)
7. Mobile Phone: 8017421518



#### 8. Academic & Professional Qualifications:

Sl. No.	Name of Examination Passed	Institution (Studied/Appeared From)	Name of Board/University/Institute	Year of Passing	Class / Grade
1.	B.Sc. (Chemistry Hons.)	Asutosh College	University of Calcutta	2008	First
2.	M.Sc (Organic Chemistry specialization)	University College of Science & Technology	University of Calcutta	2010	First
3.	Ph.D Title: <i>“Novel organic molecules with potential application as chemosensors in selective detection of metal ions and anions”</i>		Jadavpur University	2015	
4.	NET		Joint CSIR-UGC NET	Dec., 2009	

**9. Professional Training Programmes / Other Certificates:**

Sl. No.	Courses/Training	Institution	University/Institute	Year	Grade
1.	Refresher Course	HRDC (DAVV, INDORE)	UGC	17 <sup>th</sup> July, 2020 to 30 <sup>th</sup> July, 2020	A
2.	Faculty Induction Program	HRDC (UNIVERSITY OF BURDWAN)	UGC	5 <sup>th</sup> February, 2021 to 6 <sup>th</sup> March, 2021	A+

**10. Teaching Experiences:**

Sl. No.	Name of College / University	Designation	District	Nature of Appointment	Period/Academic Session
1.	Bagnan College	Assistant Professor (stage 1)	Howrah	Substantive permanent	15.6.2017- till date

**11. Published Books & Book Review in Journal:**

Sl. No.	Title of Books	Course Covered	ISBN Numbers	Publishers
1.	Nil	Nil	Nil	Nil

**12. Projects & FDP Undertaken (Self Financing & UGC Funding)**

Sl. No.	Name of the Project	University / Institute /UGC	Year
1.	Nil	Nil	Nil

**13. Participation in International, National, State & Regional Level Seminars /Workshops:**

Sl. No.	International Seminar/ Conference	National Seminar /Conference	State Level Seminar/Workshop	Regional & Institutional Level Seminar/Workshops/ Training
11	04	07	Nil	02

**14. Papers Presented in Conferences / Seminars**

Sl. No.	Presentation of Papers	Title of Paper/Discussant /Speaker	Institutions Organized	Year
1.	Oral presentation (Got Young Scientist Award)	“Synthesis, Characterization and Exploration of Electronic Structure of New [Pd(L <sup>ISQ</sup> )Cl] Radical Complex (L = 2,4-di- <i>tert</i> -butyl-6-(quinolin-8-ylimino)cyclohexa-2,4-dienone”	Organized by Indian Chemical Society	2 <sup>nd</sup> & 3 <sup>rd</sup> August, 2012

2.	Oral presentation (Got Young Scientist Award)	“Coumarin based fluorescent ‘turn-on’ chemosensor for Zn <sup>2+</sup> : An experimental and theoretical study”	50 <sup>th</sup> Annual Convention of Chemist -Organized by Indian Chemical Society	4 <sup>th</sup> – 7 <sup>th</sup> December, 2013
3.	Oral presentation (Got Young Scientist Award)	“Quinoline based reversible fluorescent ‘turn-on’ chemosensor for the selective detection of Zn <sup>2+</sup> : application in living cell imaging and as INHIBIT logic gate”	52 <sup>nd</sup> Annual Convention of Chemist - Organized by Indian Chemical Society	28 <sup>th</sup> – 30 <sup>th</sup> December, 2015
4.	Oral Presentation (Got First position)	Coumarin based fluorescent chemosensor for selective and efficient detection of Al <sup>3+</sup> : Application in live cell imaging	Department of Chemistry, Raja N. L. Khan Women’s College, Medinipore	October 21-23, 2016
5.	Poster Presentation	A Highly Selective Coumarin Based Chemosensor with Fluorescence ‘Turn-On’ Response for Zn <sup>2+</sup>	Indian Photobiology Society	12 <sup>th</sup> – 14 <sup>th</sup> December, 2013
6.	Poster Presentation	A novel coumarin based molecular switch for dual channel sensing of Zn(II) and Cu(II)	The Royal Society of Chemistry, University of Calcutta, IISER, Kolkata & Jadavpur University	30 <sup>th</sup> – 2 <sup>nd</sup> November, 2014.
7.	Poster Presentation	A Novel Coumarin Based Hydrazine Derivative for the Efficient and Selective Detection of Al <sup>3+</sup>	Jadavpur University	December 3 <sup>rd</sup> – 5 <sup>th</sup> , 2015
8.	Poster Presentation	A novel coumarin based Reversible Molecular Probe for the selective detection of Al <sup>3+</sup> and F <sup>-</sup>	Dept. of Chemistry, St. Xavier’s College, Kolkata	February 22-23, 2016
9.	Poster Presentation	A novel coumarin based molecular switch for the sequential detection of Al <sup>3+</sup> and F <sup>-</sup> : Application in lung cancer live cell imaging	IACS, Kolkata	January 7-11, 2017
10.	Oral Presentation	Coumarin based fluorogenic sensor for efficient and selective detection of Al <sup>3+</sup> : Application in imaging of live cells and tissues	Department of Chemistry, IEST, Shibpur, Howrah & Indian Chemical Society, Kolkata	2 <sup>nd</sup> & 3 <sup>rd</sup> August, 2017
11	Poster Presentation	Coumarin based ‘turn-on’ fluorescence probe for efficient detection of Al <sup>3+</sup> : Application in imaging of live cells and tissues	University of Calcutta Professor Asima Chatterjee Foundation, Kolkata Heritage Institute of Technology, Kolkata	9 <sup>th</sup> – 11 <sup>th</sup> January, 2020

#### 15. Acted as Resource Person/Discussant/ Chairperson/ Chief Guest

Sl. No.	Conference / Seminar	Conference & Discussant /Speaker	Institutions Organised	Year
	NIL	NIL	NIL	NIL

## 16. List of Publications

Sl. No.	Author(s)	Title	Name of the Journals	Volume	Page	Year
1.	P. Roy, <b>D. Sarkar</b> , P. Ghosh, C. K. Manna, N. Murmu, T. K. Mondal	Synthesis of luminescent rhodium(III) cyclometalated complex by $sp^2(C)-S$ bond activation: Application as catalyst in transfer hydrogenation of ketones and live cell imaging	J. Mol. Struct.	1204	127524	2020
2.	S. Gharami, K. Aich, <b>D. Sarkar</b> , P. Ghosh, N. Murmu, T. K. Mondal	An ESIPT based chromogenic and fluorescent ratiometric probe for $Zn^{2+}$ with imaging in live cells and tissues	New J. Chem.	43	1857	2019
3.	P. Roy, <b>D. Sarkar</b> , P. Ghosh, R. Naskar, N. Murmu, T. K. Mondal	Luminescent rhenium(I) carbonyl complex with redox noninnocent ONS donor azo-phenol ligand: Synthesis, X-ray structure, photophysical properties and live cell imaging, ,	Polyhedron	161	154	2019
4.	B. K. Rana, S. Mishra, <b>D. Sarkar</b> , T. K. Mondal, S. K. Seth, V. Bertolasi, K. Das Saha, C. W. Bielawski, A. A. Isab, J. Dinda	Isoelectronic Pt(II)- and Au(III)-N-heterocyclic carbene complexes: a structural and biological comparison	New J. Chem.	42	10704	2018
5.	N. Y. Feudjio, S. Bhattacharyya, P. Ghosh, <b>D. Sarkar</b> , S. R. Mouokeu, C. B. Tume, N. Murmu	Cytotoxic Effect of Spondias cytherea Fruit Extract in Murine Melanoma Model In Vivo and In Vitro	J. Environ. Pathol. Toxicol. Oncol	37	231	2018
6.	S. Gharami, <b>D. Sarkar</b> , P. Ghosh, S. Acharyya, K. Aich, N. Murmu, T. K. Mondal	A coumarin based azo-phenol ligand as efficient fluorescent "OFF-ON-OFF" chemosensor for sequential detection of $Mg^{2+}$ and $F^-$ : Application in live cell imaging and as molecular logic gate	Sens. Actuators B	253	317	2017
7.	S. Biswas, <b>D. Sarkar</b> , P. Roy, T. K. Mondal	Synthesis and characterization of a ruthenium complex with bis (diphenylphosphino)propane and thioether containing ONS donor ligand: Application in transfer hydrogenation of ketones	Polyhedron	31	1	2017
8.	<b>D. Sarkar</b> , P. Ghosh, S. Gharami, T.K. Mondal, N. Murmu	A novel coumarin based molecular switch for the sequential detection of $Al^{3+}$ and $F^-$ : Application in lung cancer live cell imaging and construction of logic gate	Sens. Actuators B	242	338	2017
9.	J. Dinda, G. Roymahapatra, <b>D. Sarkar</b> , T. K.	Cu(I)-N heterocyclic carbene complexes: Synthesis, catalysis and DFT studies	J. Mol. Struct.	1127	449	2017

	Mondal, C. Sinha, W. –S. Hwang, S. S. Al-Deyab, C. Sinha, W. –S. Hwang					
10.	<b>D. Sarkar</b> , A.K. Pramanik, T.K. Mondal	Benzimidazole based ratiometric and colourimetric chemosensor for Ni(II)	Spectrochim. Acta A	153	397	2016
11.	S. Biswas, P. Roy, <b>D. Sarkar</b> , T. K. Mondal	Ruthenium carbonyl complex bearing thioether containing Schiff base ligand: Structure, electrochemistry and catalytic activity	Indian J. Chem. Sec. A	55A	929	2016
12.	S. Gharami, <b>D. Sarkar</b> , S. Acharyya, T. K. Mondal	A phenanthraquinone based fluorescent probe for sequential detection of Cu <sup>2+</sup> and SO <sub>3</sub> <sup>2-</sup>	J. Fluoresc.	26	2113	2016
13.	S. Biswas, S. Acharyya, <b>D. Sarkar</b> , S. Gharami, T. K. Mondal,	Novel pyridyl based azo-derivative for the selective and colorimetric detection of nickel(II)	Spectrochim. Acta A	159	157	2016
14.	A. K. Pramanik, <b>D. Sarkar</b> , S. Biswas, T. K. Mondal	An octahedral nickel(II) complex of a hexadentate N <sub>2</sub> O <sub>2</sub> S <sub>2</sub> thioether ligand: synthesis, characterization, X-ray and electronic structure	Transit. Met. Chem.	41	849	2016
15.	A.K. Pramanik, <b>D. Sarkar</b> and T.K. Mondal	Copper(II) complex with thioether and ether containing azophenol ligand: Synthesis, spectra, X-ray structure and DFT computation	Polyhedron	102	32	2015
16.	<b>D. Sarkar</b> , A. Pramanik, T.K. Mondal,	A novel coumarin based molecular switch for dual channel sensing of Zn(II) and Cu(II)	RSC Adv.	5	7647	2015
17.	<b>D. Sarkar</b> , A. Pramanik, S. Jana, P. Karmakar, T. K. Mondal	Quinoline based reversible fluorescent 'turn-on' chemosensor for the selective detection of Zn <sup>2+</sup> : Application in living cell imaging and as INHIBIT logic gate	Sens. Actuators B	209	138	2015
18.	A.K. Pramanik, <b>D. Sarkar</b> and T.K. Mondal	Electronic structure of thioether containing NSNO donor azo-ligand and its copper(II) complex: Experimental and theoretical studies	J. Mol. Struct.	1099	92	2015
19.	S. Biswas, <b>D. Sarkar</b> , S. Kundu, P. Roy, T.K. Mondal	Rhodium(III)-triphenylphosphine complex with NNS donor thioether containing Schiff base ligand: Synthesis, spectra, electrochemistry and catalytic activity	J. Mol. Struct.	1099	297	2015
20.	A. K. Mahapatra, S. Mondal, S. K. Manna, K. Maiti, R. Maji, R. Uddin, S. Mandal, <b>D. Sarkar</b> , T. K. Mondal, D. K. Maiti	A new selective chromogenic and turn-on fluorogenic probe for copper(II) in solution and vero cells: recognition of sulphide by [CuL]	Dalton Trans.	44	6490	2015
21.	A.K. Mahapatra, R.	Synthesis and anion sensing	Sens.	207	878	2015

	Maji, K. Maiti, S.K. Manna, S. Mondal, C. Das Mukhopadhyay, S. Goswami, <b>D. Sarkar</b> , T.K. Mondal, C.K. Quah, H.-K. Fun	properties of novel N,O-chelated perimidine–BF complex	Actuators B			
22.	S. Goswami, K. Aich S. Das, C. Das Mukhopadhyay, <b>D. Sarkar</b> , T. K. Mondal	A new visible-light-excitable ICT-CHEF-mediated fluorescence ‘turn-on’ probe for the selective detection of Cd <sup>2+</sup> in a mixed aqueous system with live-cell imaging	Dalton Trans.	44	5763	2015
23.	N. R. Pramanik, M. Chakraborty, D. Biswal S. S. Mandal, S. Ghosh S. Chakrabarti, W. S. Sheldrick, M. G. B. Drew, T. K. Mondal, <b>D. Sarkar</b>	Binuclear dioxomolybdenum(VI) complexes of some tridentate ONS donor ligand containing [MoO <sub>2</sub> ] <sup>2+</sup> as the acceptor center: Synthesis, crystal structure, supramolecular architectures via hydrogen bonds, $\pi$ - $\pi$ stacking and DFT calculations	Polyhedron	85	196	2015
24.	G. Roymahapatra, <b>D. Sarkar</b> , A. Nandi S. Giri, T. K. Mondal, A. Mahapatra, W.-S. Hwang, J. Dinda	Synthesis, structure, electrochemistry, fluorescent and DFT study of RuII complexes with pincer-type 2,6-bis-(N-methylimidazolylidene)/benzimidazolylidene)pyrazine ligands	J. Indian Chem. Soc.	92	79	2015
25.	S. Kundu, <b>D. Sarkar</b> , S. Biswas, S. Jana, T. K. Mondal	Ruthenium triphenylphosphine complex with pendent quinolyl Schiff base ligand : Synthesis, spectral characterization and catalytic property	J. Indian Chem. Soc.	92	1847	2015
26.	<b>D. Sarkar</b> , A. Pramanik, S. Biswas, P. Karmakar, T. K. Mondal	Al <sup>3+</sup> selective coumarin based reversible chemosensor: application in living cell imaging and as integrated molecular logic gate	RSC Adv.	4	30666	2014
27.	<b>D. Sarkar</b> , A.K. Pramanik, T.K. Mondal	Coumarin based dual switching fluorescent ‘turn-on’ chemosensor for selective detection of Zn <sup>2+</sup> and HSO <sub>4</sub> <sup>-</sup> : an experimental and theoretical study	RSC Adv.	4	25341	2014
28.	<b>D. Sarkar</b> , A. K. Pramanik, T. K. Mondal	Coumarin based fluorescent ‘turn-on’ chemosensor for Zn <sup>2+</sup> : An experimental and theoretical study	J. Lumin.	146	480	2014
29.	A. K. Mahapatra, S. K. Manna, K. Maiti, R. Maji, C. Das Mukhopadhyay, <b>D. Sarkar</b> , T. K. Mondal	Imino–phenolic–azodye appended rhodamine as a primary fluorescence “off–on” chemosensor for tin (Sn <sup>4+</sup> ) in solution and in RAW cells and the recognition of sulphide by [AR–Sn]	RSC Adv.	4	36615	2014
30.	S. Goswami, S. Das,	A coumarin based chemodosimetric	Tet. Lett.	55	2695	2014

	K. Aich, <b>D. Sarkar</b> , T. K. Mondal	probe for ratiometric detection of hydrazine				
31.	M. S. Jana, A. K. Pramanik, <b>D. Sarkar</b> , S. Biswas, T. K. Mondal	Octahedral Mn(II) complex with new NNO donor Schiff base ligand: Synthesis, structure, photoluminescent behavior and computational studies	Polyhedron	81	66	2014
32.	<b>D. Sarkar</b> , A.K. Pramanik, T.K. Mondal	Synthesis, crystal structure and spectral properties of 2-[(1-methyl-2-benzimidazolyl) azo]-p-cresol: An experimental and theoretical study	Spectrochim. Acta Part A	115	421	2013
33.	S. Goswami, S. Das, K. Aich, <b>D. Sarkar</b> , T. K. Mondal, C. K. Quah, H.-K. Fun	CHEF induced highly selective and sensitive turn-on fluorogenic and colorimetric sensor for Fe <sup>3+</sup>	Dalton Trans.	42	15113	2013
34.	S. Goswami, K. Aich, S. Das, A. K. Das, <b>D. Sarkar</b> , S. Panja, T. K. Mondal, S. Mukhopadhyay	A red fluorescence 'off-on' molecular switch for selective detection of Al <sup>3+</sup> , Fe <sup>3+</sup> and Cr <sup>3+</sup> : experimental and theoretical studies along with living cell imaging	Chem. Commun.	49	10739	2013
35.	S. Goswami, S. Das, K. Aich, <b>D. Sarkar</b> , T. K. Mondal	Colorimetric as well as dual switching fluorescence 'turn on' chemosensors for exclusive recognition of Zn <sup>2+</sup> and HSO <sub>4</sub> <sup>-</sup> in aqueous solution: experimental and theoretical studies	Tet. Lett.	54	6892	2013
36.	S. Jana, M. S. Jana, <b>D. Sarkar</b> , M. K. Paira, T.K. Mondal	Ruthenium carbonyl complexes of 3-(2-(methylthio)phenylazo)-4-hydroxy-3-penten-2-one: Synthesis, spectral characterization, electronic structure and catalytic activity	J. Mol. Struct.	1054-1055	83	2013
37.	M. S. Jana, A. K. Pramanik, <b>D. Sarkar</b> , S. Biswas, T. K. Mondal	Rhenium(I) complexes with NNS donor thioaryazoimidazole ligands with the cis-{Re(CO) <sub>2</sub> } <sup>+</sup> core: Synthesis, characterization, electrochemical study and DFT calculation	J. Mol. Struct.	1047	73	2013
38.	S. Sinha, M. Chakraborty, N. R. Pramanik, T.K. Raychaudhuri, T. K. Mondal, <b>D. Sarkar</b> , M. G.B Drew, S. Ghosh, S. S. Mandal	Dimer formation by symbiotic donor- acceptor interaction between two molecules of a specially designed dioxomolybdenum(VI) complex containing both donor and acceptor centers – a structural, spectroscopic and DFT study	Polyhedron	55	192	2013
39.	S. Kundu, <b>D. Sarkar</b> , M. S. Jana, A. K. Pramanik, S. Jana, T. K. Mondal	Synthesis, Characterization, Electronic Structure and Catalytic Activity of New Ruthenium Carbonyl Complexes of N-[(2-pyridyl)methylidene]-2-aminothiazole	J. Mol. Struct.	1035	277	2013
40.	M. S. Jana, A. K.	<i>fac</i> -Tricarbonyl rhenium(I)	Inorg.	399	138	2013

	Pramanik, S. Kundu, <b>D. Sarkar</b> , T. K. Mondal	complexes of 2-(alkylthio)-N- ((pyridine-2-yl)methylene) benzenamine: Synthesis, spectroscopic characterization, X- ray structure and DFT calculation	Chim. Acta			
41.	M.S. Jana, A. K. Pramanik, S. Kundu, <b>D. Sarkar</b> , S. Jana, T. K. Mondal	Synthesis, X-ray structure, spectroscopic and DFT study of cis- [Ru(PPh <sub>3</sub> )(L)X <sub>2</sub> ] complexes (X = Cl <sup>-</sup> , Br <sup>-</sup> , I <sup>-</sup> and NCS <sup>-</sup> ) (L = 1- methyl-2-{(o-thiomethyl) phenylazo}imidazole)	Inorg. Chim. Acta	394	583	2013
42.	S. Khamarui, <b>D.</b> <b>Sarkar</b> , P. Pandit, D.K. Maiti	A fast and selective decarboxylative difunctionalization and cyclization for easy access to gem-dihalo alcohol, ether, ester and bromo-1,4-dioxane	Chem. Commun.	47	12667	2011

#### 17. Membership in Professional Bodies/Associations:

Sl. No.	Name of Associations	Membership
1.	NIL	NIL

#### 18. Area of Interest & Others Involvement (maximum 100 words):

##### Research Interest

- Development of novel organic molecules which can act as chemosensors for various toxic metal ions and anions.
- Characterization of the synthesized organic molecules using several spectral techniques which includes IR, NMR, Mass etc.
- Investigation of the sensing properties using mainly UV-Vis and Fluorescence spectroscopy
- Application of the developed chemosensors in several biological systems to explore the sensing ability in the intracellular region, in human tissues as well as in mice model.
- Development of fluorescent organic probes for the detection of metal ions with small radii i.e, Na<sup>+</sup>, K<sup>+</sup> etc. which can also penetrate the cell membrane of several biological system.

**Other Involvements:** Interested in various dance forms with special interest in Rabindra Nritya and Creative