

DR. SISIR LOHAR

Assistant Professor

M.Sc. (Chemistry), Ph.D.

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» Overview:

Dr. Sisir Lohar is an Assistant Professor of the Department of Chemistry, Triveni Devi Bhalotia College, Raniganj. He has been serving this institution since 2015. Dr. Sisir Lohar believes that Chemistry is everywhere in the world around you. It's in the food you eat, clothes you wear, water you drink, medicines, air, cleaners... you name it. It can answer all the basic questions. So, his noble aim is to grow the core interest in the mind of students in his subject as without understanding the chemistry, we cannot enjoy the ambrosia of life.

» Date of appointment to the present job:

23/03/2015

» Other Academic/ Administrative post:

- Member of Welfare and stipend committee
- Member of College environment committee
- Member of Boys' common room committee

» Academic background:

Dr. Lohar passed the Higher Secondary Examination in 2003. After that, he obtained his Graduation degree with Honours in Chemistry in 2007 from Vivekananda College, Burdwan and Post-Graduation Degree with Chemistry from The University of Burdwan, Burdwan in 2009. His Special paper in M. Sc. was Nuclear and Analytical Chemistry. He completed his research work for Ph. D degree from The University of Burdwan, Burdwan in 2016.

» Information about Ph.D.:

- **Date of Award:** 22.03.2016
- **Title of Thesis:** *Spectrofluorimetric Determination of Some Selective Cations, Anions and Amino Acids with Newly Synthesized Reagents.*
- **Web-link:** https://drive.google.com/file/d/1xAAgi4wHFYGGZaBIJXXyT6_4nsI-EWiz9/view?usp=drivesdk

» Professional Qualifications:

- **NET:** CISR 2009

» Publications in Journals:

1. Milan Ghosh, Sabyasachi Ta, Sisir Lohar, Sudipta Das, Paula Brando, Vitor Felix and Debasis Das, Exploring aggregation induced emission through tuning of ligand structure for pico-molar detection of pyrene, J. Mol. Recognit., DOI: 10.1002/jmr.2771, 2018. (I.F. 1.9 in 2018).
2. Sangita Adhikari, Sisir Lohar, Babli Kumari, Aparna Banerjee, Rajib Bandopadhyay, Jesu 's Sanmarti 'n Matalobos and Debasis Das. Cu(II) complex of a new isoindole

derivative: structure, catecholase like activity, antimicrobial properties and bio-molecular interactions, *New J. Chem.*, 40, 10094, 2016. (I.F. 3.3 in 2016).

3. Babli Kumari, Sisir Lohar, Milan Ghosh, Sabyasachi Ta, Archya Sengupta, Prajna Paramita Banerjee, Ansuman Chattopadhyay, Debasis Das, Structurally Characterized Zn²⁺ Selective Ratiometric Fluorescence Probe in 100 % Water for HeLa Cell Imaging: Experimental and Computational Studies, *J Fluoresc.*, 26, 87, 2016. (I.F. 1.7 in 2016).
4. Sudipta Das, Sisir Lohar, Jesús Sanmartín Matalobos and Debasis Das, Visible Light Excitable SCN⁻ Selective Fluorescence Probe Derived from Thiophene, *Chin. J. Chem.*, 33, 1173, 2015. (I.F. 1.9 in 2015).
5. Abhijit Ghosh, Sandip Nandi, Archya Sengupta, Ansuman Chattopadhyay, Sisir Lohar, Debasis Das, Single crystal X-ray structurally characterized palladium (II) selective fluorescence and colorimetric indicator for human breast cancer cell imaging, *Inorg. Chim. Acta.*, 436, 52, 2015. (I.F. 1.9 in 2015).
6. Sisir Lohar, Sougata Sinha, Subrata Ghosh and Debasis Das, Tri-color emission and colorimetric recognition of acetate using semicarbazide and thio-semicarbazide derivatives: Experimental and computational studies, *Spectrochimica Acta Part A*, 155, 75, 2016. (I.F. 2.7 in 2015).
7. Sisir Lohar, Damir A. Safin, Archya Sengupta, Ansuman Chattopadhyay, Jesús Sanmartín Matalobos, Maria G. Babashkina, Koen Robeyns, Mariusz P. Mitoraj, Piotr Kubisiak, Yann Garcias and Debasis Das, Ratiometric sensing of lysine through the formation of the pyrene excimer: experimental and computational studies. *Chem. Commun.*, 51, 8536, 2015. (I.F. 6.6 in 2015).
8. Babli Kumari, Sisir Lohar, Sangita Adhikari, Archya Sengupta, Ansuman Chattopadhyay, Paula Brandão, Vítor Félix and Debasis Das, Rhodamine derived colorimetric and fluorescence mercury (II) chemodosimeter for human breast cancer cell (MCF7) imaging. *RSC Adv.*, 5, 21797, 2015. (I.F. 3.3 in 2015).
9. Structurally Characterized Antipyrene-Based Dual Fluorescent Probe: Enhanced AlIII Selectivity of a Dinuclear ZnII Complex for Intracellular Sensing by a Displacement Approach. *Eur. J. Inorg. Chem.*, 2014, 5675. (I.F. 3.0 in 2014).
10. Sangita Adhikari, Abhijit Ghosh, Sandip Mandal, Archya Sengupta, Ansuman Chattopadhyay, Jesús Sanmartín Matalobos, Sisir Lohar and Debasis Das, Visible light excitable ON fluorescence and naked eye detection of Cu²⁺ via hydrolysis of rhodamine–thiophene conjugate: human breast cancer cell (MCF7) imaging studies. *Dalton Trans.*, 43, 7747, 2014. (I.F. 4.2 in 2014).
11. Raja Saha, Animesh Sahana, Sisir Lohar, Arnab Banerjee, Sudipta Das, Debasis Das, pH-controlled solid-phase enrichment of Mn(II): confirmation of the structure of the extracted ternary Mn(II) complex by single crystal X-ray structure analysis, *Desalin. Water Treat.*, 52, 6069, 2014. (I.F. 1.2 in 2014).
12. Sudipta Das, Arnab Banerjee, Sisir Lohar, Bidisha Sarkar, Subhra Kanti Mukhopadhyay, Jesus Sanmartin and Animesh Sahana, Debasis Das, 2-(2-Pyridyl) benzimidazole based ternary Mn(II) complex as arsenate selective turn-on fluorescence probe: ppb level determination and cell imaging studies. *New J. Chem.*, 38, 2744, 2014. (I.F. 3.1 in 2014).

13. Sudipta Das, Animesh Sahana, Sisir Lohar, Bidisha Sarkar, Subhra Kanti Mukhopadhyaya, Arnab Banerjee and Debasis Das., A visible light excitable pyrene–naphthalene conjugate for ON fluorescence sensing of histidine in living cells. *RSC Adv.*, 4, 7495, 2014. (I.F. 3.8 in 2014).
14. Debasis Karak, Sisir Lohar, Animesh Sahana, Subarno Guha, Arnab Banerjee, Jesús Sanmartín Matalobos and Debasis Das, Synthesis and crystallographically characterized thiadiazole derivative as an efficient Fe³⁺ selective fluorescent probe, *J. Indian Chem. Soc. (Calcutta)*., 91, 1053, 2014. (I.F. 0.2 in 2014).
15. Sisir Lohar, Animesh Sahana, Arnab Banerjee, Amarnath Chattopadhyay, Subhra Kanti Mukhopadhyay, Jesús Sanmartín Matalobos, Debasis Das, Aluminum(III) induced green luminescence for naked eye detection: Experimental and computational studies. *Inorganica Chim. Acta*, 412, 67, 2014. (I.F. 2.0 in 2014).
16. Sisir Lohar, Arnab Banerjee, Animesh Sahana, Sukanya Panja, Ipsit Hauli, Subhra Kanti Mukhopadhyay and Debasis Das, Selective fluorescence and naked eye detection of histidine in aqueous medium via hydrogen bonding assisted Schiff base condensation. *Tetrahedron Letters*, 55, 174, 2014. (I.F. 2.4 in 2014).
17. Arnab Banerjee, Animesh Sahana, Sisir Lohar, Sukanya Panja and Subhra Kanti Mukhopadhyay and Debasis Das, Visible Light Excitable Fluorescence Probe and its Functionalized Merrifield Polymer: Selective Sensing and Removal of Arsenate from Real Samples. *RSC Adv.*, 4, 3887, 2014. (I.F. 3.8 in 2014).
18. Arnab Banerjee, Animesh Sahana, Sudipta Das, Sisir Lohar, Bidisha Sarkar, Subhra Kanti Mukhopadhyay, Jesús Sanmartín Matalobos and Debasis Das, An INHIBIT logic gate from thiophene derivative using iron and zinc ions as input: Tuning the efficiency on moving from naphthalene to anthracene to pyrene for green luminescent detection of intracellular iron. *Dalton Trans.*, 42(46), 16387, 2013. (I.F. 4.1 in 2013).
19. Sahana, Arnab Banerjee, Sisir Lohar, Avishek Banik, Subhra Kanti Mukhopadhyay, Damir A. Safin, Maria G. Babashkina, Michael Bolte, Yann Garcia and Debasis Das, FRET based tri-color emissive rhodamine–pyrene conjugate as an Al³⁺ selective colorimetric and fluorescence sensor for living cell imaging. *Animesh Dalton Trans.*., 42, 13311, 2013. (I.F. 4.1 in 2013).
20. Sandip Mandal, Arnab Banerjee, Sisir Lohar, Amarnath Chattopadhyay, Bidisha Sarkar, Subhra Kanti Mukhopadhyay, Animesh Sahana and Debasis Das, Selective sensing of Hg²⁺ using rhodamine–thiophene conjugate: Red light emission and visual detection of intracellular Hg²⁺ at nanomolar level. *J. Haz. Mater.*, 261, 198, 2013. (I.F. 4.3 in 2013).
21. Animesh Sahana, Arnab Banerjee, Sisir Lohar, Sukanya Panja, Subhra Kanti Mukhopadhyay, Jesus Sanmartin and Debasis Das, Fluorescence sensing of arsenate at nanomolar level in a greener way: Naphthalene based probe for living cell imaging, *Chem. Commun.*, 49, 7231, 2013. (I.F. 6.7 in 2013).
22. Arnab Banerjee, Animesh Sahana, Sisir Lohar, Bidisha Sarkar, Subhra Kanti Mukhopadhyay and Debasis Das, A FRET operated sensor for intracellular pH mapping: strategically improved efficiency on moving from an anthracene to a naphthalene derivative. *RSC Adv.*, 3, 14397, 2013. (I.F. 3.7 in 2013).
23. Animesh Sahana, Arnab Banerjee, Sisir Lohar, Amarnath Chottapadhyay, Subhra Kanti Mukhopadhyay and Debasis Das, Lighting of a rhodamine-based fluorescent

- lamp using ClO_4^- as a connector: detection by the naked eye and cell imaging studies of trace amounts of ClO_4^- ions, *RSC Adv.*, 3(33), 14044, 2013. (I.F. 3.7 in 2013).
24. Subarna Guha, Sisir Lohar, Animesh Sahana, Arnab Banerjee, Damir A. Safin, Maria G. Babashkina, Mariusz P. Mitoraj, Michael Bolte, Yann Garcia, Subhra Kanti Mukhopadhyay and Debasis Das, A coumarin-based “turn-on” fluorescent sensor for the determination of Al^{3+} : single crystal X-ray structure and cell staining properties, *Dalton Trans.*, 42, 10198, 2013. (I.F. 4.1 in 2013).
 25. Debasis Karak, Sudipta Das, Sisir Lohar, Arnab Banerjee, Animesh Sahana, Ipsit Hauli, Subhra Kanti Mukhopadhyay, Damir A. Safin, Maria G. Babashkina, Michael Bolte, Yann Garcia and Debasis Das., Naphthalene-thiophene hybrid molecule as a fluorescent AND logic gate with Zn^{2+} and OAc^- ions as inputs: Cell imaging and computational studies, *Dalton Trans.*, 42, 6708, 2013. (I.F. 4.1 in 2013).
 26. Animesh Sahana, Arnab Banerjee, Sisir Lohar, Bidisha Sarkar, Subhra Kanti Mukhopadhyay and Debasis Das, A Rhodamine Based Fluorescent Probe for Al^{3+} Through Time Dependent PET-CHEF-FRET Processes and its Cell Staining Application. *Inorg. Chem.*, 52(7), 3627, 2013. (I.F. 4.5 in 2013).
 27. Arnab Banerjee, Animesh Sahana, Sisir Lohar, Ipsit Hauli, Subhra Kanti Mukhopadhyay, Damir A. Safin, Maria G. Babashkina, Michael Bolte, Yann Garcia and Debasis Das., Rhodamine derivative as “lock” and SCN^- as “key”: Visible light excitable SCN^- sensing in living cell, *Chem Commun.*, 49, 2527, 2013. (I.F. 6.7 in 2013).
 28. Sudipta Das, Animesh Sahana, Arnab Banerjee, Sisir Lohar, Damir A. Safin, Maria G. Babashkina, Michael Bolte, Yann Garcia, Subhra Kanti Mukhopadhyay and Debasis Das, Ratiometric fluorescence sensing and intracellular imaging of Al^{3+} ion driven by an intramolecular excimer formation of a pyrimidine-pyrene scaffold, *Dalton Trans.*, 42, 4757, 2013. (I.F. 4.1 in 2013).
 29. Sisir Lohar, Animesh Sahana, Arnab Banerjee, Avishek Banik, Subhra Kanti Mukhopadhyay, Jesus Sanmartin and Debasis Das, Antipyrine Based Arsenate Selective Fluorescent Probe for Living Cell Imaging, *Anal. Chem.*, 85(3), 1778, 2013. (I.F. 5.8 in 2013).
 30. Animesh Sahana, Arnab Banerjee, Sisir Lohar, Sudipta Das, Jesús Sanmartín Matalobos and Debasis Das, Naphthalene based highly selective OFF-ON-OFF type fluorescent probe for Al^{3+} and NO_2^- ions for living cell imaging at physiological pH, *Inorg. Chim. Acta*, 398, 64, 2013. (I.F. 2.0 in 2013).
 31. Sisir Lohar, Arnab Banerjee, Animesh Sahana, Subhra Kanti Mukhopadhyay and Debasis Das., A Rhodamine-Naphthalene Conjugate as a FRET Based Sensor for Cr^{3+} and Fe^{3+} With Cell Staining Application, *Anal Methods*, 5, 442, 2013. (I.F. 1.9 in 2013).
 32. Debasis Karak, Arnab Banerjee, Sisir Lohar, Animesh Sahana, Subhra Kanti Mukhopadhyay, Bidisha Sarkar, Sushanta. S. Adhikari and Debasis Das., Xanthone based Pb^{2+} selective turn on fluorescent probe for living cell staining, *Anal Methods*, 5, 169, 2013. (I.F. 1.9 in 2013).
 33. Raja Saha, Animesh Sahana, Sisir Lohar, Arnab Banerjee, Sudipta Das and Debasis Das. Thiocyanate mediated chelation assisted solid phase enrichment of $\text{Cu}(\text{II})$ using

pyridine derivative with X-ray crystallographic evidence, *Chem. Engg. Commun.*, 200, 638, 2013. (I.F. 1.3 in 2013).

34. Sisir Lohar, Debasis Karak, Subarna Guha, Arnab Banerjee, Animesh Sahana and Debasis Das., Spectroscopic studies of a new multi-element sensitive fluorescent probe derived from 2-(2-pyridyl)benzimidazole: Selective discrimination of Zn²⁺ from its congeners, *Spectroscopy Letters*, 46, 28, 2013. (I.F. 0.9 in 2013).
35. Debasis Karak, Sisir Lohar, Arnab Banerjee, Animesh Sahana, Ipsit Hauli, Subhra Kanti Mukhopadhyay, Jesús Sanmartín Matalobos and Debasis Das, Interaction of soft donor sites with a hard metal ion: Crystallographically characterized blue emitting fluorescent probe for Al(III) with cell staining studies, *RSC Advance*, 2, 12447, 2012. (I.F. 2.6 in 2012).
36. Arnab Banerjee, Animesh Sahana, Subarna Guha, Sisir Lohar, Ipsit Hauli, Subhra Kanti Mukhopadhyay, Jesús Sanmartín Matalobos and Debasis Das, Ni(II) induced excimer formation of a naphthalene based fluorescent probe for living cell imaging, *Inorg. Chem.*, 51, 5699, 2012. (I.F. 4.6 in 2012).
37. Sudipta Das, Debasis Karak, Sisir Lohar, Arnab Banerjee, Animesh Sahana and Debasis Das, Interaction of a naphthalene based fluorescent probe with Al³⁺: Experimental and computational studies, *Anal Methods*, 4, 3620, 2012. (I.F. 1.9 in 2012).
38. Subarna Guha, Sisir Lohar, Arnab Banerjee, Animesh Sahana, Subhra Kanti Mukhopadhyay, Jesús Sanmartín Matalobos and Debasis Das., Anthracene appended coumarin derivative as a Cr (III) selective turn-on fluorescent probe for living cell imaging: A green approach towards speciation studies, *Anal Methods*, 4(10), 3163-3168, 2012. (I.F. 1.9 in 2012).
39. Animesh Sahana, Arnab Banerjee, Sisir Lohar, Subarna Guha, Sudipta Das, Subhra Kanti Mukhopadhyay and Debasis Das., Cd(II) triggered excimer-monomer conversion of a pyrene derivative: Time dependent red-shift of monomer emission with cell staining application, *Analyst*, 137, 3910, 2012. (I.F. 4 in 2012).
40. Sudipta Das, Animesh Sahana, Arnab Banerjee, Sisir Lohar, Subarna Guha, Jesús Sanmartín Matalobos and Debasis Das., Thiophene anchored naphthalene derivative: Cr³⁺ selective turn-on fluorescent probe for living cell imaging, *Anal Methods*, 4, 2254, 2012. (I.F. 1.9 in 2012).
41. Debasis Karak, Sisir Lohar, Animesh Sahana, Subarna Guha, Arnab Banerjee and Debasis Das, Al³⁺ induced green luminescent fluorescent probe for cell imaging and naked eye detection, *Anal Methods*, 4, 1906, 2012. (I.F. 1.5 in 2012).
42. Subarna Guha, Sisir Lohar, Michael Bolte, Damir A. Safin and Debasis Das, Crystal structure and interaction of 6-amino coumarin with nitrite ion for its selective detection, *Spectroscopy Letters*, 45, 225, 2012. (I.F. 0.7 in 2012).
43. Animesh Sahana, Arnab Banerjee, Subarna Guha, Sisir Lohar, Amarnath Chattopadhyay, Subhra Kanti Mukhopadhyay and Debasis Das, Highly selective organic fluorescent probe for azide ion: Formation of a “Molecular Ring”, *Analyst*, 137, 1544, 2012. (I.F. 4 in 2012).
44. Arnab Banerjee, Animesh Sahana, Sudipta Das, Sisir Lohar, Subarna Guha, Bidisha Sarkar, Subhra Kanti Mukhopadhyay, Asok K Mukherjee and Debasis Das, A naphthalene exciplex based Al³⁺ selective on-type fluorescent probe for living cell at

physiological pH range: Experimental and computational studies, *Analyst*, 137, 2166, 2012. (I.F. 4 in 2012).

45. Subarna Guha, Sisir Lohar, Arnab Banerjee, Animesh Sahana, Amarnath Chatterjee, Subhra Kanti Mukherjee, Jesús Sanmartín Matalobos and Debasis Das, Thiophene anchored coumarin derivative as a turn-on fluorescent probe for Cr³⁺: Cell imaging and speciation studies, *Talanta*, 91, 18, 2012. (I.F. 3.5 in 2012).
46. Sudipta Das, Subarna Guha, Arnab Banerjee, Sisir Lohar, Animesh Sahana and Debasis Das, 2-(2-Pyridyl) benzimidazole based Co(II) complex as an efficient fluorescent probe for trace level determination of aspartic and glutamic acid in aqueous solution: A displacement approach, *Org. Biomol. Chem.*, 9, 7097, 2011. (I.F. 3.8 in 2011).
47. Subarna Guha, Sisir Lohar, Ipsit Hauli, Subhra K. Mukhopadhyay and Debasis Das, Vanillin-coumarin hybrid molecule as an efficient fluorescent probe for trace level determination of Hg(II) and its application in cell imaging, *Talanta*, 85, 1658, 2011. (I.F. 3.8 in 2011).
48. Animesh Sahana, Arnab Banerjee, Sudipta Das, Sisir Lohar, Debasis Karak, Bidisha Sarkar, Subhra Kanti Mukhopadhyay, Asok K. Mukherjee and Debasis Das, A naphthalene-based Al³⁺ selective fluorescent sensor for living cell imaging, *Org. Biomol. Chem.*, 9, 5523, 2011. (I.F. 3.8 in 2011).
49. Debasis Karak, Arnab Banerjee, Animesh Sahana, Subarna Guha, Sisir Lohar, Susanta Sekhar Adhikary and Debasis Das, 9-Acridone-4-carboxylic acid as an efficient Cr(III) fluorescent sensor: Trace level detection, estimation and speciation studies, *J. Haz. Mater.*, 188, 274, 2011. (I.F. 3.8 in 2011).
50. Arnab Banerjee, Debasis Karak, Animesh Sahana, Subarna Guha, Sisir Lohar and Debasis Das, Methionine-pyrene hybrid based fluorescent probe for trace level detection and estimation of Hg(II) in aqueous environmental samples: Experimental and computational studies, *J. Haz. Mater.*, 186, 738, 2011. (I.F. 3.8 in 2011).
51. Animesh Sahana, Sudipta Das, Arnab Banerjee, Sisir Lohar, Debasis Karak and Debasis Das, Pyridine appended L-methionine: A novel chelating resin for pH dependent Cr speciation with Scanning Electron Microscopic evidence and monitoring of yeast mediated green bio-reduction of Cr(VI) to Cr(III) in environmental samples, *J. Haz. Mater.*, 185, 1448, 2011. (I.F. 3.8 in 2011).

» **Books and Chapters:**

N. A.

» **Seminars, Conferences, Webinars and workshops attended:**

- Seminars/ Conferences / Workshops (National/ International): 07
- Webinars (National/ International): 00

» **Life Membership:**

N. A.

» **Awards/ Academic Achievements:**

N. A.

» **Professional Courses:**

- Orientation Programme/FDP/FIP:01

- **Refresher Course:** 01
- **Short Term Course:** 00

» **Others/ Miscellaneous:**

N. A.