



Dr Sudip Kumar Mondal
Assistant Professor in Chemistry

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Date of Birth

December 31, 1980

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Department of Chemistry
Siksha-Bhavana (Institute of Science)
Visva-Bharati
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Areas of Specialisation

Physical Chemistry, UV-vis Spectroscopy, Luminescence Spectroscopy

Qualification

- B.Sc. (Honours) in Chemistry, Visva-Bharati, 2001
- M.Sc. in Chemistry (Physical Chemistry Spl.), Visva-Bharati, 2003
- Ph.D. (Science) with Professor Kankan Bhattacharyya, Jadavpur University (IACS), 2008
- JSPS Post-doctoral Fellow with Professor Tahei Tahara, RIKEN, Wako-shi, Japan, 2008 –2010

Other Academic Distinctions

- Qualified CSIR (NET) (December 2002), GATE (2003)
- JSPS Post-doctoral Fellowship, Japan

Teaching Experience

- Assistant Professor in Burdwan Raj College, Burdwan University: September, 2006 to November, 2008 and November, 2010 to April, 2012.
- Assistant Professor in Visva-Bharati: since April 2012

Current Areas of Research

- Luminescence Spectroscopy of Materials and Molecules,
- Photophysical studies of Luminescent Metal Organic Complexes.

Research projects (Completed/Ongoing)

- Better Understanding of Electrostatics and Dynamics in Protein and their role in protein function using new Synthetic Fluorescent amino acid as probe, UGC, 2013-2015, Rs. 6L
- Detailed Mechanistic Study of Chemical Sensing by Fluorescent Materials, DST-SERB, 2016-2019, Rs. 24.84L

Recent Publications

1. "Solvent Dependent Luminescence Sensing of Nitro-Explosives by a Terbium Based Metal-Organic Complex", Majee, Prakash; Singha, Debal Kanti; **Mondal, Sudip Kumar**; Mahata, Partha; ChemistrySelect, 3, 2, **2018**, 683-689.
2. "A luminescent cadmium based MOF as selective and sensitive iodide sensor in aqueous medium", Singha, Debal Kanti; Majee, Prakash; **Mondal, Sudip Kumar**; Mahata, Partha; Journal of Photochemistry and Photobiology A: Chemistry 356, **2018**, 389-396.
3. "Tenfold enhancement of fluorescence quantum yield of water soluble silver nanoclusters for nano-molar level glucose sensing and precise determination of blood glucose level", Naaz, Shagufta; Poddar, Soumabrota; Bayen, Shyama Prasad; Mondal, Maloy Kr; Roy, Debiprasad; **Mondal, Sudip Kr**; Chowdhury, Pranesh; Saha, Samar Kr; , Sensors and Actuators B: Chemical, 255, **2018**, 332-340.
4. "Trace-level and selective detection of uric acid by a luminescent Zn (II) based 1D coordination polymer in aqueous medium", Maji, Abir; Majee, Prakash; Singha, Debal Kanti; Ghosh, Ananta Kumar; **Mondal, Sudip Kumar**; Mahata, Partha; , Journal of Photochemistry and Photobiology A: Chemistry 365, **2018**, 125-132.
5. "Detection of Pesticides in Aqueous Medium and in Fruit Extracts Using a Three-Dimensional Metal Organic Framework: Experimental and Computational Study", Singha, Debal Kanti; Majee, Prakash; Mandal, Saurodeep; **Mondal, Sudip Kumar**; Mahata, Partha; , Inorganic chemistry 57, 19, **2018**, 12155-12165.
6. "Detection of pesticide using the large stokes shift of luminescence of a mixed lanthanide co-doped metal-organic framework", Singha, Debal Kanti; Majee, Prakash; **Mondal, Sudip Kumar**; Mahata, Partha; , Polyhedron, in press, **2018**.
7. "Luminescent rare-earth-based MOFs as optical sensors", Mahata, Partha; **Mondal, Sudip Kumar**; Singha, Debal Kanti; Majee, Prakash; , Dalton Transactions 46, 2, **2017**, 301-328.
8. "Selective Luminescence-Based Detection of Cd²⁺ and Zn²⁺ Ions in Water Using a Proton Transferred Coordination Polymer -Amine Conjugate Pair", Singha, Debal Kanti; Majee, Prakash; **Mondal, Sudip Kumar**; Mahata, Partha; , ChemistrySelect 2, 11, **2017**, 3388-3395.
9. "Highly Selective Aqueous Phase Detection of Azinphos Methyl Pesticide in ppb Level Using a Cage Connected 3D MOF, Singha, Debal Kanti; Majee, Prakash; **Mondal, Sudip Kumar**; Mahata, Partha; , ChemistrySelec, 2, 20, **2017**, 5760-5768.

10. "pH Controlled Luminescence Turn-On Behaviour of a Water Soluble Europium β -Based Molecular Complex", Singha, Debal Kanti; Majee, Prakash; **Mondal, Sudip Kumar**; Mahata, Partha; , European Journal of Inorganic Chemistry 2016, 28, **2016**, 4631-4636.
11. "A Co (ii) complex of a vitamer of vitamin B 6 acts as a sensor for Hg 2+ and pH in aqueous media", Sing, Nilam; Roy, Sanjay; Guin, Partha Sarathi; Mahali, Kalachand; Majee, Prakash; **Mondal, Sudip Kumar**; Mahata, Partha; Sengupta, Partha Sarathi; Mondal, Palash;, New Journal of Chemistry 40, 7, **2016**, 6396-6404.
12. "Design and sonochemical synthesis of water-soluble fluorescent silver nanoclusters for Hg²⁺ sensing", Bayen, Shyama Prasad; Mondal, Maloy Kr; Naaz, Shagufta; **Mondal, Sudip Kr**; Chowdhury, Pranesh;, Journal of Environmental Chemical Engineering 4, 1, **2016**, 1110-1116.
13. "A Eu-Doped Y-Based Luminescent Metal-Organic Framework as a Highly Efficient Sensor for Nitroaromatic Explosives", Singha, Debal Kanti; Majee, Prakash; **Mondal, Sudip Kumar**; Mahata, Partha;, European Journal of Inorganic Chemistry 2015, 8, **2015**, 1390-1397.
14. "Anomalous effective polarity of an air/liquid-mixture interface: a heterodyne-detected electronic and vibrational sum frequency generation study", **Mondal, Sudip Kumar**; Inoue, Ken-ichi; Yamaguchi, Shoichi; Tahara, Tahei;, Physical Chemistry Chemical Physics, 17, 37, **2015**, 23720-23723.
15. "Visible detection of explosive nitroaromatics facilitated by a large stokes shift of luminescence using europium and terbium doped yttrium based MOFs", Singha, Debal Kanti; Majee, Prakash; **Mondal, Sudip Kumar**; Mahata, Partha;, RSC Advances 5, 123, **2015**, 102076-102084.
16. "Optical detection of submicromolar levels of nitro explosives by a submicron sized metal-organic phosphor material, Singha, Debal Kanti; Bhattacharya, Saurav; Majee, Prakash; **Mondal, Sudip Kumar**; Kumar, Manoranjan; Mahata, Partha; , Journal of Materials Chemistry A 2, 48, **2014**, 20908-20915.