

Dr. Subhodip Samanta

M.Sc., Ph.D.

Assistant Professor of Chemistry (W.B.E.S.)

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Date of joining W.B. Education Service: June 01, 2009

Date of joining Maulana Azad College: July 05, 2013

Vidwan ID: 464247



Since 2009, Dr. Subhodip Samanta has been actively teaching physical chemistry, covering fundamental subjects such as quantum chemistry, computational chemistry, statistical mechanics, molecular spectroscopy, and thermodynamics. He incorporates interactive and practical applications into his lessons, emphasizing a concept-oriented approach. In undergraduate chemistry education, this method not only broadens students' comprehension but also improves their capacity for critical thought and problem-solving.

Research Interest

Research interests include investigating photophysical processes in biomolecules and supramolecular systems, with a focus on mechanisms of photoinduced proton, energy, and electron transport. In order to obtain molecular-level understanding of these dynamic processes, the study combines computational modelling—mostly utilizing density functional theory (DFT) with Gaussian09—with experimental methods.

PUBLICATIONS

ORCID ID: <https://orcid.org/0000-0003-1455-8980>

Scopus ID: 57210528659

Google Scholar Link

<https://scholar.google.com/citations?hl=en&authuser=1&user=5AwZXNIAAAAJ>

1. Spectrophotometric Study of the Effect of Micellar Medium on the Dissociation Equilibrium of Sulfonephthalein pH Indicator Dye, **Subhodip Samanta**, *Asian Journal of Chemistry*, 2024, Vol. 36 No. 7, DOI: [10.14233/ajchem.2024.31673](https://doi.org/10.14233/ajchem.2024.31673)
2. Effect of Isopropanol Mixed Solvent on Interaction of Cetyltrimethylammonium Bromide with Bromocresol Green: A Conductometric Study, **Subhodip Samanta**, *Asian Journal of Chemistry*, 2024, Vol. 36 No. 4, DOI: [10.14233/ajchem.2024.31216](https://doi.org/10.14233/ajchem.2024.31216)
3. A Rhodamine Based Fluorometric and Colorimetric Probe for Detection of pH in Aqueous Medium, **Subhodip Samanta**, *Asian Journal of Chemistry*, 2023, Vol. 35 No. 7, DOI: [10.14233/ajchem.2023.27951](https://doi.org/10.14233/ajchem.2023.27951)
4. Selective fluorescence swing from cysteine to glutathione by switchover from solid to in situ probe in 100% water and bio-imaging studies for living species, Sanju Das, Yeasmin Sarkar, Santanu Mukherjee, Jaya Bandyopadhyay, **Subhodip Samanta**, Partha Pratim Parui, Ambarish Ray, *Sensors and Actuators, B: Chemical*, 2015, 209, 545, DOI: [10.1016/j.snb.2014.11.145](https://doi.org/10.1016/j.snb.2014.11.145)
5. A cyanide selective off-on fluorescent chemosensor with in vivo imaging in 100% water: Solid probe preferred over in situ generation, Sanju Das, Surajit Biswas, Santanu Mukherjee, Jaya Bandyopadhyay, **Subhodip Samanta**, Indrani Bhowmick, Dipak Kumar Hazra, Ambarish Ray, and Partha Pratim Parui, *RSC Advances*, 2014, 4, 9656, DOI: [10.1039/c4ra00069b](https://doi.org/10.1039/c4ra00069b)
6. Interaction of the excited state intramolecular proton transfer probe 3-hydroxy-2-naphthoic acid with poly N-vinyl-2-pyrrolidone polymer in water: An insight into the water structure in the binding region, Anirban Pal, Shyam Sundar Maity, **Subhodip Samanta**, Pinki Saha

Sardar, Sanjib Ghosh, *Journal of Luminescence*, 2010, 130, 11, 1975, DOI: [10.1016/j.jlumin.2010.05.001](https://doi.org/10.1016/j.jlumin.2010.05.001)

7. Dependence of photoinduced energy transfer on orientation of acceptor lanthanide ions with respect to π -plane of naphthalene in naphthalene-linked six-member crown ethers, Pinki Saha Sardar, **Subhodip Samanta**, Maitrayee Basu Roy, Sanjib Ghosh. *Molecular Physics*, 2008, 106(6), 827. DOI: [10.1080/00268970801974867](https://doi.org/10.1080/00268970801974867)

8. Energy transfer photophysics from serum albumins to sequestered 3-hydroxy-2-naphthoic acid, an excited state intramolecular proton-transfer probe, Pinki Saha Sardar, **Subhodip Samanta**, Shyam Sundar Maity, Swagata Dasgupta, Sanjib Ghosh, *Journal of Physical Chemistry B*, 2008, 112, 11, 3451, DOI: [10.1021/jp074598+](https://doi.org/10.1021/jp074598+)

9. Fluorescence, anisotropy and docking studies of proteins through excited state intramolecular proton transfer probe molecules, Shyam Sundar Maity, **Subhodip Samanta**, Pinki Saha Sardar, Anirban Pal, Swagata Dasgupta, Sanjib Ghosh, *Chemical Physics*, 2008, 354, 1-3, 162, DOI: [10.1016/j.chemphys.2008.10.020](https://doi.org/10.1016/j.chemphys.2008.10.020)

10. Photoinduced energy transfer from the triplet state of naphthalene moiety in the $\text{Tb}^{3+}/\text{Eu}^{3+}$ complexes of a specially designed naphthalene cryptand, Subhodip Samanta, Anirban Pal, Maitrayee Basu Roy, Sanjib Ghosh, *Journal of Luminescence*, 2008, 128, 10, 1689, DOI: [10.1016/j.jlumin.2008.03.025](https://doi.org/10.1016/j.jlumin.2008.03.025)

11. Comparative photophysical behaviour of naphthalene-linked crown ethers and aza crown ethers of varying cavity dimensions, **Subhodip Samanta**, Pinki Saha Sardar, Shyam Sundar Maity, Anirban Pal, Maitrayee Basu Roy, Sanjib Ghosh, *Journal of Chemical Sciences*, 2007, 119, 175, DOI: [10.1007/s12039-007-0025-5](https://doi.org/10.1007/s12039-007-0025-5)

12. Simultaneous emissions from T₂ and T₁ states of naphthalene moiety in a specially designed naphthalene cryptand, **Subhodip Samanta**, Maitrayee Basu Roy, Mausumi Chatterjee, Sanjib Ghosh, *Journal of Luminescence*, 2007, 126, 1, 230, DOI: [10.1016/j.jlumin.2006.07.008](https://doi.org/10.1016/j.jlumin.2006.07.008)

13. Time resolved studies of dual emission and photoinduced energy transfer in a Tris methoxy coumarin derivative of a cryptand and its complex with $\text{Tb}(\text{NO}_3)_3$, **Subhodip Samanta**, Maitrayee Basu Roy, Sanjib Ghosh, *Chemical Physics*, 2006, 328, 1-3, 392, DOI: [10.1016/j.chemphys.2006.07.029](https://doi.org/10.1016/j.chemphys.2006.07.029)

14. Exciplex emission and photoinduced energy transfer as a function of cavity dimension in naphthalene-linked aza-crown ethers, Maitrayee Basu Roy, **Subhodip Samanta**, Gautam Chattopadhyay, Sanjib Ghosh, *Journal of Luminescence*, 2004, 106, 2, 141, DOI: [10.1016/j.jlumin.2003.09.003](https://doi.org/10.1016/j.jlumin.2003.09.003)

RESEARCH PROJECT

Project Title: Photophysical studies of Luminescent Nanosensors Based on Fluorescence Resonance Energy Transfer (FRET), **Funding Agency:** UGC (ERO), **Minor Research Project:** PSW-054/14-15 (ERO) dt. 03/02/2015, **Duration:** 2015-2018

INVOLVEMENT IN FDP/WORKSHOPS:

1. Online NEP 2020 Theme Orientation and Sensitization Programme organized by the MMTTC, Jadavpur University, MMC-107-2024-NOV-B-02431, from 18/11/2024 to 29/11/2024.
2. One Day workshop on the newly introduced UG Chemistry syllabus for the 4-year Honours Degree Course and 3-year MDC of the University of Calcutta, organized by Scottish Church College, on 4th Aug, 2023

3. One Day State Level workshop on NIRF Ranking Preparation at College level, organized by Bethune College, 13th Sep, 2023
4. Two-day National Workshop on "*Chemistry in Everyday Life*" conducted by the Department of Chemistry, School of Advanced Sciences (SAS), VIT-AP University, 17th April to 18th April 2021
5. Two Day National Online Workshop on "Blended Learning with LMS-MOODLE (BASIC)" organized by Guru Angad Dev Teaching Learning Centre, SGTB Khalsa College, University of Delhi under the Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNMTT) of Ministry of Education held from 11th September to 12th September 2021.
6. Two Day National Online Workshop "Blended Learning with LMS-MOODLE (Advanced)" organized by Guru Angad Dev Teaching Learning Centre, SGTB Khalsa College, University of Delhi under the Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNMTT) of Ministry of Education held from 18th September to 19th September 2021.
7. Webinar on 'NAAC Assessment & Accreditation Process', under UGC Paramash Scheme organized by St. Xavier's College (Autonomous), Kolkata on 30th July to 31st July, 2020
8. Two Day National Level Seminar on '*New Methodology of NAAC Assessment for Quality Enhancement in Higher Education Institutes*' organized by Ramkrishna Mission Vivekananda Centenary College, Rahara, Kolkata-700118, 22nd January & 23rd January, 2019
9. One Day '*Workshop on UG Chemistry Honours Practical of Semester-III (under CBCS) University of Calcutta*', organized by Dept. of Chemistry, Asutosh College & UGBOS, University of Calcutta, 29th Jul, 2019
10. Five-Day Hands-on Workshop on '*Molecular Testing for Genetic Disorders*' organized by Centre for DNA Fingerprinting and Diagnostics, Hyderabad, 11th Nov, 2019 to 15th Nov, 2019

Oral/poster presentation in Seminars/Conferences (Last 5 years)

1. **Event Name:** One Day National Seminar on 'Interfaces of Chemistry and Biology (ICB-2024)', **Organized by:** Dept. of Chemistry in collaboration with IQAC, Rammohan College, Kolkata, **Date:** 11th May, 2024, **Topic Delivered:** Exploring the influence of Micellar Environment on the Dissociation Equilibrium of a Sulfonephthalein pH-indicator Dye via Spectrophotometric Analysis.
2. **Event Name:** One Day International Seminar on 'Innovation, Expansion, Impacts and Challenges in Chemical and Biological Sciences-2024', **Organized by:** Dept. of Chemistry, Surendranath College, Kolkata, **Date:** 22nd Dec, 2023, **Topic Delivered:** Conductometric and Spectrophotometric Study of the Solubility of Bromocresol Green in Cetyltrimethylammonium Bromide in Water-Isopropanol Mixed Solvent.
3. **Event Name:** One Day International Seminar on 'Innovation, Expansion, Impacts and Challenges in Chemical and Biological Sciences-2023', **Organized by:** Dept. of Chemistry, Surendranath College, Kolkata, **Date:** 4th Jan, 2023, **Topic Delivered:** Interfacial pH Detection Methods for Cationic Amphiphilic Self-Assemblies Using a Schiff-base Molecule.
4. **Event Name:** One Day National Seminar on 'Advancement in Chemical Education & Research Methodology', **Organized by:** Uluberia College, Howrah, **Date:** 1st Nov, 2022, **Topic Delivered:** Cyanide Selective Off-On Fluorescent Chemo-sensor with in-vivo Bio-imaging in Pure Water.

Membership of Academic & Professional Bodies

Life Member of Indian Science Congress Association (L19754)

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