

Dr. Subhodip Samanta

M.Sc., Ph.D.

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

Department of Chemistry

Maulana Azad College, Kolkata



Education

- **Ph.D. in Chemistry**
[Calcutta University, 2008]
- **M.Sc. in Chemistry**
[Burdwan University, 2000]

Areas of Expertise

- Physical Chemistry
- Quantum Chemistry
- Computational Chemistry
- Statistical Mechanics & Thermodynamics
- Molecular Spectroscopy
- Photophysical Processes
- Biomolecules and Supramolecular Systems
- Photoinduced Proton, Energy, and Electron Transport
- Density Functional Theory (DFT) by Gaussian09 & Multiwfn

Professional Details

- **Date of joining W.B. Education Service: June 01, 2009**
- **Date of joining Maulana Azad College: July 05, 2013**
- **Vidwan ID: 464247**
- **ORCID ID: <https://orcid.org/0000-0003-1455-8980>**
- **Scopus ID: 57210528659**
- **Google Scholar: [View Profile](#)**
- **Google Certified Educator: [View Certificate](#)**

Service History

- **Maulana Azad College, Kolkata**
 - Assistant Professor (July 05, 2013 – Present)
- **A. P. C. Ray Govt. College, Siliguri**
 - Assistant Professor (Aug, 2010 – July 04, 2013)
- **A. B. N. Seal College, Cooch Behar**
 - Assistant Professor (June 01, 2009 – July 2010)

Teaching

Since 2009, I have been actively teaching physical chemistry, covering fundamental subjects such as quantum chemistry, computational chemistry, statistical mechanics, molecular spectroscopy, and thermodynamics.

I emphasize a concept-oriented approach in my lessons, incorporating interactive and practical applications. This method aims to broaden students' comprehension while enhancing their capacity for critical thought and problem-solving in their undergraduate chemistry education.

Research

My research interests involve investigating photophysical processes in biomolecules and supramolecular systems. This work includes a specific focus on the mechanisms of photoinduced proton, energy, and electron transport.

To obtain a molecular-level understanding of these dynamic processes, my research combines experimental methods with computational modelling, primarily utilizing Density Functional Theory (DFT) with Gaussian09 & Multiwfn.

Research Projects

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

Selected Publications

- **Samanta, S.** (2024). Spectrophotometric Study of the Effect of Micellar Medium on the Dissociation Equilibrium of Sulfonephthalein pH Indicator Dye. *Asian Journal of Chemistry*, 36(7). DOI: 10.14233/ajchem.2024.31673
- **Samanta, S.** (2024). Effect of Isopropanol Mixed Solvent on Interaction of Cetyltrimethylammonium Bromide with Bromocresol Green: A Conductometric Study. *Asian Journal of Chemistry*, 36(4). DOI: 10.14233/ajchem.2024.31216
- **Samanta, S.** (2023). A Rhodamine Based Fluorometric and Colorimetric Probe for Detection of pH in Aqueous Medium. *Asian Journal of Chemistry*, 35(7). DOI: 10.14233/ajchem.2023.27951
- Das, S., Sarkar, Y., Mukherjee, S., Bandyopadhyay, J., **Samanta, S.**, Parui, P. P., & Ray, A. (2015). 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. *Sensors and Actuators, B: Chemical*, 209, 545. DOI: 10.1016/j.snb.2014.11.145
- Das, S., Biswas, S., Mukherjee, S., Bandyopadhyay, J., **Samanta, S.**, ... & Parui, P. P. (2014). A cyanide selective off-on fluorescent chemosensor with in vivo imaging in 100% water: Solid probe preferred over in situ generation. *RSC Advances*, 4, 9656. DOI: 10.1039/c4ra00069b
- Sardar, P. S., **Samanta, S.**, Maity, S. S., Dasgupta, S., & Ghosh, S. (2008). Energy transfer photophysics from serum albumins to sequestered 3-hydroxy-2-naphthoic acid, an excited state intramolecular proton-transfer probe. *Journal of Physical Chemistry B*, 112(11), 3451. DOI: 10.1021/jp074598+
- **Samanta, S.**, Pal, A., Roy, M. B., & Ghosh, S. (2008). Photoinduced energy transfer from the triplet state of naphthalene moiety in the Tb³⁺ /Eu³⁺ complexes of a specially designed naphthalene cryptand. *Journal of Luminescence*, 128(10), 1689. DOI: 10.1016/j.jlumin.2008.03.025

➤ A full publication list is available via the [Google Scholar](#), [Scopus](#), and [ORCID](#) links.

Conference Presentations (Last 5 Years)

- **Event:** One Day National Seminar on 'Interfaces of Chemistry and Biology (ICB-2024)'
 - **Topic:** Exploring the influence of Micellar Environment on the Dissociation Equilibrium of a Sulfonephthalein pH-indicator Dye via Spectrophotometric Analysis.
 - **Date:** May 11, 2024

- **Event:** One Day International Seminar on 'Innovation, Expansion, Impacts and Challenges in Chemical and Biological Sciences-2024'
 - **Topic:** *Conductometric and Spectrophotometric Study of the Solubility of Bromocresol Green in Cetyltrimethylammonium Bromide in Water-Isopropanol Mixed Solvent.*
 - **Date:** December 22, 2023
- **Event:** One Day International Seminar on 'Innovation, Expansion, Impacts and Challenges in Chemical and Biological Sciences-2023'
 - **Topic:** *Interfacial pH Detection Methods for Cationic Amphiphilic Self-Assemblies Using a Schiff-base Molecule.*
 - **Date:** January 4, 2023
- **Event:** One Day National Seminar on 'Advancement in Chemical Education & Research Methodology'
 - **Topic:** *Cyanide Selective Off-On Fluorescent Chemo-sensor with in-vivo Bio-imaging in Pure Water.*
 - **Date:** November 1, 2022

Professional Development (FDPs & Workshops)

- Online NEP 2020 Theme Orientation and Sensitization Programme, MMTTC, Jadavpur University (Nov 2024)
- Workshop on the newly introduced UG Chemistry syllabus (CCF), Scottish Church College (Aug 2023)
- State Level workshop on NIRF Ranking Preparation, Bethune College (Sep 2023)
- National Online Workshops on "Blended Learning with LMS-MOODLE (BASIC & Advanced)", SGTB Khalsa College, University of Delhi (Sep 2021)
- National Workshop on "Chemistry in Everyday Life", VIT-AP University (Apr 2021)
- Webinar on 'NAAC Assessment & Accreditation Process', St. Xavier's College (Autonomous), Kolkata (Jul 2020)
- Five-Day Hands-on Workshop on 'Molecular Testing for Genetic Disorders', Centre for DNA Fingerprinting and Diagnostics, Hyderabad (Nov 2019)
- Workshop on UG Chemistry Honours Practical of Semester-III (CBCS), Asutosh College & UGBOS, University of Calcutta (Jul 2019)
- National Level Seminar on 'New Methodology of NAAC Assessment', Ramkrishna Mission Vivekananda Centenary College, Rahara (Jan 2019)

Professional Memberships

- **Life Member:** Indian Science Congress Association (L19754)

Contact Information

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