

Dr. Rina Ghosh

Designation: Associate Professor, Department of Chemistry

Director, Central Research Facility, St. Xavier's College



Positionsheld:

1. Research fellow, Indian Association for The Cultivation of Science, Kolkata **1986-1991**
2. Senior Research Associate, CSIR at Indian Association for The Cultivation of Science, Kolkata **1991-1995**
3. Assistant Professor, Serampore College, Hooghly **1996-2000**
4. Visiting Research fellow, University of California, Davis, California, USA **2000-2001**
5. Assistant Professor, St. Xavier's College, Department of Chemistry, **2001-Current date**
6. Director, Central Research Facility, St. Xavier's College, **2015-Current Date**

Research interests:

➤ *Pre-doctoral and post-doctoral*

Laser Induced Phenomena: Photophysics in the excited state, Nanosecond and Picosecond scale electron transfer and proton transfer phenomena. Free and Caged Radical Photochemistry and Effect of Externally applied magnetic field on singlet – triplet transitions.

➤ *Current area of research:*

- Biophysical Chemistry - aspects of structural biology dealing with multi-tryptophan cage proteins - characterization through fluorescence and phosphorescence studies.
- Protein phosphorescence and energy transfer phenomena, folding and unfolding studies, temperature dependence studies, Energy transfer and sensitized emission (Antenna effect) from protein – rare earth ion complexes.
- Corroboration of Tryptophan residue location through docking studies, Accessibility of such residues to ligands.

➤ *Inter-Departmental collaboration:* Dr. Sudheshna Shyam Chowdhury, HOD, Department of Microbiology.

➤ *Ph.D supervision (co-supervisor)*

1. Ms. Priyanka Mukherjee, Part – time

➤ *Publication(s): 2020- 2023*

Tracking zone-wise perturbation during unfolding of some globular proteins using Eu(III) complex of Tetracycline as a probe exhibiting Stark splitting, Moumita Mukherjee, Pinki Saha Sardar, Maitrayee Basu Roy, Priyanka Mukherjee, **Rina Ghosh**, and Sanjib Ghosh Spectrochimica Acta A - Molecular and Biomolecular Spectroscopy 264 (2022) 120231, pp1386 - 1425

➤ *Papers to be communicated:*

Structural aspects of poly-tryptophan using time resolved singlet and triplet state spectroscopy and molecular simulation.