S N BOSE NATIONAL CENTRE
FOR BASIC SCIENCES
Block JD, Sector III, Salt Lake, Kolkata 700 106

DEPARTMENTAL SEMINAR
Chemical and Biological Sciences

30th August, 2022 **4.00 PM** **FERMION/ ONLINE**

SPEAKER

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TITLE OF THE TALK

Aqueous Self-assembly of Chromophore-appended Amphiphiles: Bio-analyte Sensing, Photo-reactivity Modulation and Energy Transfer Studies

ABSTRACT

The self-assembly of π-conjugated building blocks has generated a great deal of interest in recent years as it provides a convenient way to create a plethora of intriguing nanostructures with novel optical and electronic properties. As the building blocks are held together via various non-covalent interactions, their properties can be controlled and modulated by the application of external stimuli. In this talk, I will focus on the self-assembly of chromophore-conjugated amphiphiles leading to the generation of luminescent organic materials in aqueous media and how we have utilized these self-assembled nano-structures for the detection of a variety of bio-analytes using the concept of multivalent binding,[1]controlled photo-reactivity[2] and in fluorescence resonance energy transfer (FRET) studies[3].

References:
1. a) S. K. Bhaumik, Y. S. Patra and S. Banerjee*, Chem. Commun. 2020, 56, 9541-9544; b) R.Biswas, S. Naskar, S. Ghosh, M. Das* and S. Banerjee*, Chem. Eur. J. 2020, 26, 13595-13600.
2. S. K. Bhaumik and S. Banerjee*, ACS Appl. Mater. Interfaces, 2022,https://doi.org/10.1021/acsami.2c07836.
3. R. Biswas and S. Banerjee*, Submitted.

HOST FACULTY

Dr. Suman Chakrabarty
Associate Professor, CHEMICAL and BIOLOGICAL SCIENCES

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