

Dr. Ambarish Ray

Designation: Associate Professor (W.B.E.S.)

Date of joining at Barasat Govt. College: 03.01.2019

Qualifications: M.Sc. , B.Ed., Ph.D.

- CSIR-UGC NET Qualified (JRF)
- GATE Qualified
- Ph.D. from Jadavpur University on “Assembly of copper(II) complexes in tetra-coordinating nitrogen donor environment under the influence of bridging coligands: synthesis, crystal structure and other physical studies”

Research Interests:

- Areas of interest:
 - a) Supramolecular Chemistry
 - b) Chemo-Sensor
 - c) Bulk and interfacial properties of the molecules

Research grants:

- Principal Investigator “Polynuclear Metal Complexes of Ligands Containing Phenolic unit: Design, Synthesis and Physicochemical studies”, UGC (University Grants Commission) MRP, sanction no. F. PSW-196/13-14 (ERO).
- Principal Investigator “Cyanometalate Incorporated Supramolecular Network: Design, Synthesis and Physicochemical studies” UGC (University Grants Commission) MRP, sanction no. F. PSW-048/07-08 (ERO).

Ph.D. Guidance : one Scholar obtained Ph.D. degree under direct supervision.

Current Teaching:

- Course instructor for Inorganic and Analytical Chemistry including theoretical concept and practical related to allied fields.

Selected Publications:

1. S. Roy, S. Das, **A. Ray** and P. P. Parui, An inquisitive fluorescence method for the real-time detection of trace moisture in polar aprotic solvents with the application of water rancidity in foodstuffs. *New J. Chem.*, **2021**, 45, 4574. **(Impact Factor: 3.3)**
2. Y. Sarkar, S. Roy, R. Majumder, S. Das, D.V. Bhalani, A. Ray, S. K. Jewrajka and P. P. Parui, Protonation-induced pH increase at the triblock copolymer micelle interface for transient membrane permeability at neutral pH. *Soft Matter*, **2020**, 16, 798. **(Impact Factor: 3.4)**
3. S. Roy, S. Das, R. Majumder, **A. Ray** and P. P. Parui, An aluminium fluorosensor for the early detection of micro-level alcoholate corrosion. *RSC Adv.*, **2020**, 10, 23245. **(Impact Factor: 3.0)**
4. P. P. Parui, **A. Ray**, S. Das, Y. Sarkar, T. Paul, S. Roy, R. Majumder and J. Bandyopadhyay, Glutathione selective *off-on* fluorescence response by probe displaced modified ligand for its detection in biological domain. *New J. Chem.*, **2019**, 43, 3750. **(Impact Factor: 3.3)**
5. Y. Sarkar, R. Majumder, S. Das, **A. Ray** and P. P. Parui, Detection of Curvature-Radius-Dependent Interfacial pH/Polarity for Amphiphilic Self-Assemblies: Positive versus Negative Curvature, *Langmuir*, **2018**, 34, 6271. **(Cover page journal) (Impact Factor: 3.6)**
6. R. Majumder, Y. Sarkar, S. Das, **A. Ray** and P. P. Parui, Interfacial pH and polarity detection of amphiphilic self-assemblies using a single Schiff-base molecule, *New J. Chem.*, **2017**, 41, 8536. **(Impact Factor: 3.3)**

7. S. Das, Y. Sarkar, R. Majumder, S. Mukherjee, J. Bandyopadhyay, **A. Ray** and P. P. Parui, A unique cysteine selective water soluble fluorescent probe operable in multiple sensing cycles for the detection of biogenic cysteine in multicellular living species, *New J. Chem.*, **2017**, 41, 1488. **(Impact Factor: 3.3)**
8. Y. Sarkar, S. Das, **A. Ray**, S. K. Jewrajka, S. Hirota and P. P. Parui, simple interfacial pH detection method for cationic amphiphilic self-assemblies utilizing a Schiff-base molecule, *Analyst*, **2016**, 141, 2030. **(Impact Factor: 3.9)**
9. R. Majumder, Y. Sarkar, S. Das, S. K. Jewrajka, **A. Ray** and P. P. Parui, A ratiometric solvent polarity sensing Schiff base molecule for estimating the interfacial polarity of versatile amphiphilic self-assemblies, *Analyst*, **2016**, 141, 3246. **(Impact Factor: 3.9)**
10. S. Das, Y. Sarkar, S. Mukherjee, J. Bandyopadhyay, S. Samanta, **A. Ray** and P. P. Parui, 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, *Sens. Actuators B*, **2015**, 209, 545. **(Impact Factor: 7.3)**
11. Y. Sarkar, S. Das, R. Datta, S. Chattopadhyay, **A. Ray** and P. P. Parui, Exploitation of a new Schiff-base ligand for boric acid fluorescent sensing in aqueous medium with bio-imaging studies in a living plant system, *RSC Adv.*, **2015**, 5, 51875. **(Impact Factor: 3.0)**
12. S. Das, S. Biswas, S. Mukherjee, J. Bandyopadhyay, S. Samanta, I. Bhowmick, D. K. Hazra, **A. Ray** and P. P. Parui, A cyanide selective *off-on* fluorescent chemo-sensor with *in vivo* imaging in 100% water: solid probe preferred over *in situ* generation, *RSC Adv.*, **2014**, 4, 9656. **(Impact Factor: 3.0)**

❖ For other publications please visit the page of Dr. Ambarish Ray in Google Scholar:
<https://scholar.google.co.in/citations?user=y9zt40YAAAAJ&hl=en>

Participated in several National and International Seminar & Symposia for Paper/Poster presentation and delivered Invited Lecture in his related field in Chemical Science.

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Professional Memberships and Activities:

Life member of Indian Association of Cultivation of Science.