

Name : DR. BIPATTARAN PARAMANIK

Designation : Assistant Professor

Department : Chemistry

Qualifications : M.Sc, Ph.D

Email Id : write2bpnow [at] gmail.com

Teaching Experience : 5 years

Research Interest : Physical Chemistry
(*Synthesis of Fluorescent Metal Nanoclusters for Optical Sensor*)

1. Fabrication of metal nanoclusters/ alloy nanoclusters and nanoclusters based functional materials.
2. Deep understanding of the structure and electronic properties of the nanoclusters using different spectroscopic techniques.
3. Photoexcited energy and electron transfer within nanoclusters-semiconducting quantum dots nanocomposite.
4. Designing of light harvesting system using metal nanoclusters.
5. Nanocluster directed conformation switching of DNA and on/off Probe designing

Research Experience : 6 years

Publications in peer reviewed journals

1. "Core-Size Dependent Fluorescent Gold Nanoclusters and Ultrasensitive Detection of Pb^{2+} Ion" Dipankar Bain, Subarna Maity, Bipattaran Paramanik, and Amitava Patra, **ACS Sustainable Chem. Eng.**, 2018, 6, 2334–2343.
2. "Ultrafast Relaxation Dynamics of Luminescent Copper Nanoclusters (Cu_7L_3) and Efficient Electron Transfer to Functionalized Reduced Graphene Oxide" Subarna Maity, Dipankar Bain, Kalishankar Bhattacharyya, Soma Das, Rajesh Bera, Bikash Jana, **Bipattaran Paramanik**, Ayan Datta, and Amitava Patra, **J. Phys. Chem. C**, 2017, 122, 13354–13362..
3. "Silver (I) Induced Conformation Change of DNA: Gold Nanocluster as Spectroscopic Probe" Dipankar Bain, **Bipattaran Paramanik**, and Amitava Patra, **J. Phys. Chem. C**, 2017, 121, 4608–4617.
4. "Light Harvesting and White-Light Generation in a Composite of Carbon Dots and Dye-Encapsulated BSA-Protein-Capped Gold Nanoclusters" Monoj Kumar Barman, **Bipattaran Paramanik**, Dipankar Bain, and Amitava Patra, **Chem. Eur. J.** 2016, 22, 11699 –11705.
5. "Making and Breaking of DNA-Metal Base Pairs: Hg^{2+} and Au Nanocluster Based Off/On Probe" **Bipattaran Paramanik**, Dipankar Bain, and Amitava Patra, **J. Phys. Chem. C**, 2016, 120, 17127–17135.

6. "Structural evolution, photoinduced energy transfer in Au nanocluster–CdTe QD nanocomposites and amino acid sensing" **Bipattaran Paramanik**, Sangita Kundu, Goutam De and Amitava Patra, *J. Mater. Chem. C*, **2016**, 4, 486-496.
7. "A study into the role of surface capping on energy transfer in metal cluster–semiconductor nanocomposites" Dipankar Bain , **Bipattaran Paramanik** , Suparna Sadhu and Amitava Patra, *Nanoscale*, **2015**, 7, 20697-20708.
8. "Study of binding interactions between MPT63 protein and Au nanoclusters" **Bipattaran Paramanik**, Amrita Kundu, Krishnananda Chattopadhyay and Amitava Patra, *RSC Adv.*, **2014**, 4, 35059-35066.
9. "Fluorescent AuAg alloy clusters: synthesis and SERS applications" **Bipattaran Paramanik** and Amitava Patra, *J. Mater. Chem. C*, **2014**, 2, 3005-3012.
10. "Fluorescence Dynamics and Stochastic Model for Electronic Interaction of Graphene Oxide with CdTe QD in Graphene Oxide–CdTe QD Composite" Simanta Kundu, Suparna Sadhu, Rajesh Bera, **Bipattaran Paramanik**, and Amitava Patra, *J. Phys. Chem. C*, **2013**, 117, 23987–23995.
11. "Detection of Hg^{2+} and F^{-} Ions by Using Fluorescence Switching of Quantum Dots in an Au-Cluster–CdTe QD Nanocomposite" **Bipattaran Paramanik**, Santanu Bhattacharyya, and Amitava Patra, *Chem. Eur. J.*, **2013**, 19, 5980 – 5987.
12. "Steady state and time resolved spectroscopic study of QD–DNA interaction" **Bipattaran Paramanik**, Santanu Bhattacharyya and Amitava Patra, *J. Lumin.*, **2013**, 134, 401–407.
13. "Energy/Hole Transfer Phenomena in Hybrid α -Sexithiophene (α -STH) Nanoparticle–CdTe Quantum-Dot Nanocomposites", Santanu Bhattacharyya, **Bipattaran Paramanik**, Simanta Kundu and Amitava Patra, *ChemPhysChem*, **2012**, 13, 4155 – 4162.
14. "Energy transfer and confined motion of dyes trapped in semiconducting conjugated polymer nanoparticles" Santanu Bhattacharyya, **Bipattaran Paramanik**, and Amitava Patra, *J. Phys. Chem. C*, **2011**, 115, 20832–20839.
15. "Enhancements in Conductivity and Thermal Stabilities of Polypyrrole/Polyurethane Nanoblends" Moumita Kotal, Suneel K. Srivastava, and **Bipattaran Paramanik**, *J. Phys. Chem. C*, **2011**, 115, 1496–1505.