

DR. PIYALI MITRA

Assistant Professor

M.Sc. (Chemistry), Ph. D.

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» **Overview:**

Dr. Piyali Mitra had earned her B.Sc. with Honours in chemistry from Jadavpur University in 2008 and M.Sc. in chemistry in 2010 from Jadavpur University having highest total marks in special paper Physical Chemistry (Prof. M.N. Das Memorial Gold Centred Medal). She then joined the research group of Prof. Samita Basu to pursue doctoral studies in the area of spectroscopy. After graduating with a Ph.D., she joined Indian Association for the Cultivation of Science (IACS) as a UNILEVER project fellow under Prof. Amitava Patra. After that she obtained National Post-Doctoral Fellowship (DST-NPDF) and joined the same lab as a material scientist. Successfully completing the NPDF, she obtained UGC-Dr. DS Kothari Post-Doctoral Fellowship and Joined Calcutta University under Prof. Nikhil Guchhait. In 2021, she joined Department of Chemistry, Triveni Devi Bhalotia College, Raniganj, India. Her research interests include nanomaterials and spectroscopy.

» **Date of appointment to the present job:**

9th July, 2021

» **Other Academic/ Administrative post:**

N. A.

» **Academic background:**

- Ph. D. Course Work Examination, Jadavpur University, Marks: 81.5%.
- Post M.Sc. Course in Biophysical Sciences credited to support Ph.D. degree; Saha Institute of Nuclear Physics, Kolkata-700064, India. Marks: 76.00%; Mini Project: Photochemistry of host-guest interactions using therapeutically important molecules.
- CSIR Fellowship scheme and eligible for Lectureship (NET) in chemical sciences, 2010.
- Masters of Science (M.Sc.) in Chemistry; Special paper: Physical Chemistry; Jadavpur University, Kolkata– 700032, West Bengal, India.; Marks: 76.17% (Highest total marks in the special paper).
- Bachelor of Science (B.Sc.) in Chemistry; Jadavpur University, Kolkata– 700032, West Bengal, India.; Marks: 74.92%.
- Higher Secondary (H.S.) (WBCHE); Marks: 89.80%, 1st division.
- Secondary (M.P.); (WBBSE; Marks: 84.50%, 1st division.

» **Information about Ph.D.:**

- **Date of Award:** 14/03/2016
- **Title of Thesis:** *Photoinduced Interactions of Some Therapeutically Important Small Molecules with Organic Amines, Biological Macromolecules And Gold Nanoparticles.*

» **Professional Qualifications:**

- **NET:** CSIR-UGC, December 2009

» **Publications in Journals:**

1. Mitra, P., Chakraborty, B., Bhattacharya, D. & Basu, S. (2013) Excimer of 9-Aminoacridine Hydrochloride Hydrate in Confined Medium: An Integrated Experimental and Theoretical Study. *Journal of Physical Chemistry A*. Volume 117, pp. 1428-1438.
2. Mitra, P., Banerjee, M., Biswas, S. & Basu, S. (2013). Protein Interactions of Merocyanine 540: Spectroscopic and Crystallographic Studies with Lysozyme as a Model Protein. *Journal of Photochemistry and Photobiology B: Biology*. Volume 121, pp. 46-56.
3. Mitra, P., Chakraborty, B. & Basu, S. (2014) A spectroscopic investigation of the photophysical behavior of 9-aminoacridine hydrochloride hydrate in presence of organic amines in homogeneous and heterogeneous media. *Journal of Luminescence*. Volume 149, pp. 221–230.
4. Mitra, P., Chakraborty, B. & Basu, S. (2014) Exploring photoinduced electron transfer and excited-state proton transfer reactions involving 9-aminoacridine hydrochloride hydrate and methyl viologen using laser flash photolysis. *Chemical Physics Letters*. Volume 610-611, pp. 108-114.
5. Mitra, P., Chakraborty, P.K., Saha, P., Ray, P. & Basu, S. (2014) Antibacterial efficacy of acridine derivatives conjugated with gold nanoparticles. *International Journal of Pharmaceutics*. Volume 473, pp. 636-643.
6. Chakraborty, B., Mitra, P. & Basu, S. (2015) Spectroscopic exploration of drug-protein interaction: A study highlighting the dependence of magnetic field effect on inter-radical distances formed during photoinduced electron transfer. *RSC Advances*. Volume 5, pp. 81533-81545.
7. Mitra, P., Pal, U., Maiti, N.C., Ghosh, A., Bhunia, A. & Basu, S. (2016) Identification of modes of interactions between 9- aminoacridine hydrochloride hydrate and serum proteins by low and high resolution spectroscopy and molecular modelling. *RSC Advances*. Volume 6, pp. 53454–53468.
8. Sengupta, C., Mitra, P., Koley Seth, B., Mondal, D. & Basu, S. (2017) Electronic and spatial control over the formation of transient ion pairs during photoinduced electron transfer between proflavine–amine systems in a subpicosecond time regime. *RSC Advances*. Volume 7, pp. 15149–15157.
9. Barman, M.K., Mitra, P., Bera, R., Das, S., Pramanik, A. & Patra, A. (2017) An Efficient Charge Separation and Photocurrent Generation in the Carbon dot-Zinc Oxide Nanoparticles Composite. *Nanoscale*, Volume 9, pp. 6791–6799.
10. Mitra, P., Barman, M.K., Basu, S., Das, S., Pramanik, A. & Patra, A. (2017) Interfacial Charge Transfer between Zinc Oxide Nanoparticles and Methyl Viologen: Influence of Size. *Chemistry Select*. Volume 2, pp. 9869-9877.
11. Mitra, P., Dutta, D., Das, D., Basu, T., Pramanik, A. & Patra, A. (2018) Antibacterial and Photocatalytic Properties of ZnO–9-Aminoacridine Hydrochloride Hydrate Drug Nanoconjugates. *ACS Omega*. Volume 3, pp. 7962–7970.

» **Books and Chapters:**

N. A.

» **Seminars, Conferences, Webinars and workshops attended:**

- Seminars/ Conferences/ Workshops: 13

» **Life Membership:**

N. A.

» **Awards/ Academic Achievements:**

- Jadavpur University, Prof. M. N. Das Memorial Gold Centred Medal for securing highest mark in special paper Physical Chemistry, M.Sc.
- Awarded Senior Research Fellowship (SRF); Junior Research Fellowship (JRF) through National Eligibility Test (NET) from Council of Scientific & Industrial Research (CSIR), Govt. of India in 2010.
- Awarded DST-NPDF fellowship, Govt. Of India.
- Awarded Dr.DS Kothari Pot Doctoral Fellowship, Govt. of India.
- Awarded DST-International Travel Scheme, Govt. of India.
- *Best Poster Young Scientist Award* in: “Acharya Prafulla Chandra Ray Memorial Symposium on Chemistry & Industry (2012)” (In Commemoration of the 151st Birth Anniversary of Acharya Prafulla Chandra Ray) held at Kolkata during August 02-03, 2012.
- *Best Poster Award* in: National Symposium on Recent Palestrae in Photosciences held during September 3-4, 2012, organized by the Department of Zoology, Banaras Hindu University, Varanasi, India.

» **Professional Courses:**

- **Orientation Programme/FIP/FDP:** 01
- **Refresher Course:** 02
- **Short Term Course:** 00

» **Others/ Miscellaneous:**

N. A.