

Dr Bhaswati Bhattacharya



Assistant Professor (Chemistry)

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Research Interests

Exploration of different photophysical processes of fluoroprobes in different environments. Recent research focus deals with analysis of extracts/nutrients from fruits and vegetables based on absorption and fluorescence spectroscopy

Education

2009: PhD (Fluorescence Spectroscopy), School of Chemistry, University of Hyderabad, India (January 2004-April 2009)

2003: M.Sc. (Physical Chemistry), Razabazar Science College, University of Calcutta, India (September 2001 – July 2003)

2001: B.Sc (Honours in Chemistry), Scottish Church College, University of Calcutta, India (August 1998 – June 2001)

Work/Research

Experience

Postdoctoral Fellow : Department of Biochemistry, Stellenbosch University, South Africa (April 2010 – December 2011)

Postdoctoral Fellow : Department of Chemistry, Jadavpur University, India (August 2009 – February 2010)

Research Associate : School of Chemistry, University of Hyderabad, India (April 2009 – June 2009)

Publications

1. Multiple emissions of benzil at RT and 77K and their assignments from ab-initio quantum chemical calculations.” **B. Bhattacharya**, B. Jana, D. Bose and N. Chattopadhyay J. Chem. Phys. 2011, 134, 044535.
2. “Photophysics and dynamics of a β -carboline analogue in room temperature ionic liquids.” D. Sarkar, **B. Bhattacharya** and N. Chattopadhyay J. Colloid and Interface Sci. 2011, 353, 181.
3. “Studies of Triton X-165- β -cyclodextrin interactions using both extrinsic and intrinsic fluorescence.” A. Mahata, D. Bose, D. Ghosh, B. Jana, **B. Bhattacharya**, D. Sarkar and N. Chattopadhyay J. Colloid and Interface Sci. 2010, 347, 252.
4. “Interaction of bovine serum albumin with dipolar molecules: fluorescence and molecular docking studies.” **B. Bhattacharya**, S. Nakka, L. Guruprasad and A. Samanta J. Phys. Chem. B 2009, 113, 2143.
5. “Excited-state proton-transfer dynamics of 7-Hydroxyquinoline in room temperature ionic liquids.” **B. Bhattacharya** and A. Samanta J. Phys. Chem. B 2008, 112, 10101.
6. “Polarity dependence of the radiative and nonradiative rates of flavone derivatives comprising structurally similar amino moieties: Change in the nature of the emitting state.” M. Sarkar, K. Ravi Kumar, **B. Bhattacharya** and A. Samanta J. Phys. Chem. A 2008, 112, 3302.
7. “Laser flash photolysis study of aminophthalimide derivatives: Elucidation of nonradiative deactivation route.” **B. Bhattacharya** and A. Samanta Chem. Phys. Lett. 2007, 442, 316.
8. “Ratiometric fluorescence signaling of fluoride ions by an amidophthalimide derivative.” M. Sarkar, Y. Raghavendra, **B. Bhattacharya**, K. Ravi Kumar and A. Samanta J. Chem. Sci. 2007, 119, 91.
9. “Fluorescence response of mono- and tetra-azacrown derivatives of 4-aminophthalimide with and without some transition and post transition metal ions.” N. B. Sankaran, P. K. Mandal, **B. Bhattacharya** and A. Samanta J. Mater. Chem. 2005, 15, 2854.

Conferences/Workshop/Seminar Presentation and Participation

1. Annual In-house Symposia of School of Chemistry (**ChemFest- 2006, 2007, 2008**), School of Chemistry, University of Hyderabad, Hyderabad, India.
2. Trombay Symposium on Radiation and Photochemistry (**TSRP-2008**), BARC, YASHADA, Pune, India, Jan. 2008.
3. Trends In Surface Science and Related Areas (**TSSRA**), Indian Society for Surface Science and Technology and Bose Institute on, Bose Institute, Kolkata, November 06, 2009.
4. International Conference on Physics Biology Interface (**ICPBI-2009**), Saha Institute of Nuclear Physics, Kolkata, India, December 13 – 16, 2009.
5. 12th Conference on Methods and Applications of Fluorescence (**MAF12**), Strasbourg, France, 11-14th September 2011.

6. Visit to **Leibniz-Institut für Molekulare Pharmakologie** (16th September - 12th October 2011) for a German-South African Cooperation Program in Education and Research financed by the International Bureau of the BMBF. The project, SUA 09/048 (2010-2012) is entitled as “Optimization of small peptides as potential drugs against intracellular human pathogens.”

Awards and Recognition

1. NRF Innovation Postdoctoral Fellowship (2010) for doing postdoctoral work in Stellenbosch University, South Africa
2. UGC Dr. D. S. Kothari Postdoctoral Fellowship (2009) for pursuing postdoctoral work in Jadavpur University, Kolkata, India
3. CSIR-UGC Fellowship (NET-2003) for pursuing doctoral research in University of Hyderabad, Hyderabad, India