CURRICULUM VITAE

Profile

Name: Dr. Brotati Chakraborty

Present Affiliation: Assistant Professor
Department of Chemistry
Bejoy Narayan Mahavidyalaya,
Itachuna, Hooghly, PIN 712147

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Academic Background

- Ph.D. in Chemistry (*awarded by* Jadavpur University, *work done at* Saha institute of Nuclear Physics), **2012**.
- Post M.Sc. Course in Biophysical Sciences (Saha Institute of Nuclear Physics), **2007**.
- Qualified National Eligibility Test (NET), June, **2006**. [LS]
- M.Sc. in Chemistry, special paper: Physical Chemistry (University of Burdwan, Burdwan), **2006**.
- B.Sc. (Honours) in Chemistry (University of Burdwan, Burdwan), **2004**.

Teaching Experience

Name of the institute	Post	From	To
Adamas Institute of Technology, Barasat	Assistant Professor in Chemistry	12 January, 2012	18 March, 2015
Bejoy Narayan Mahavidyalaya, Itachuna	Assistant Professor in Chemistry	19 March 2015	Cont.

Current Research Interest

- Photochemistry in homogeneous and heterogeneous media
- Interaction of small molecules with proteins, DNA
- Host-guest interaction

Publications

Journals:

1) Interaction of BSA with proflavin: A spectroscopic approach
Brotati Chakraborty and Samita Basu
Journal of Luminescence 129 **(2009)** 34–39.

2) Study of interaction of proflavin with triethylamine in homogeneous and micellar media: Photoinduced electron transfer probed by magnetic field effect
Brotati Chakraborty and Samita Basu
Chemical Physics Letters 477 **(2009)** 382–387.

3) A comparative study of astaxanthin level in mangrove species
Kakoli Banerjee, Debajyoti Ray, Samita Basu, **Brotati Chakraborty**, Abhijit Mitra
Proceedings of the National Academy of Sciences India Section B-Biological Sciences 79 **(2009)** 135-142.

4) Interaction of proflavin with aromatic amines in homogeneous and micellar media: Photoinduced electron transfer probed by magnetic field effect
Brotati Chakraborty and Samita Basu
Chemical Physics Letters 487 **(2010)** 51–57.

5) Magnetic field effect on electron transfer reactions of acridine yellow with amines of varied structures in homogeneous medium
Brotati Chakraborty and Samita Basu
Chemical Physics Letters 493 **(2010)** 76-82.

6) Magnetic field effect corroborated with docking study to explore photoinduced electron transfer in drug-protein interaction
Brotati Chakraborty, Atanu Singha Roy, Swagata Dasgupta and Samita Basu
Journal of Physical Chemistry A 114 **(2010)** 13313–13325.

7) Deciphering the host-guest chemistry of Acridine Yellow and Cucurbit[7]uril: An integrated spectroscopic and calorimetric study
Brotati Chakraborty and Samita Basu
Chemical Physics Letters 507 **(2011)** 74-79.

8) Magnetic field effect on photoinduced electron transfer reaction associated with hydrogen bond formation in homogeneous medium
Brotati Chakraborty and Samita Basu
Applied Magnetic Resonance 42 **(2012)** 5-15.

9) Excimer of 9-aminoacridine hydrochloride hydrate in confined medium: An integrated experimental and theoretical study
Piyali Mitra[¶], **Brotati Chakraborty**[¶], Dhananjay Bhattacharyya, Samita Basu
¶ *Both the authors have equal contribution*
Journal of Physical Chemistry A 117 **(2013)** 1428-1438.

10) A spectroscopic investigation of the photophysical behaviour of 9-aminoacridine hydrochloride hydrate in presence of organic amines in homogeneous and heterogeneous media
Piyali Mitra, **Brotati Chakraborty**, Samita Basu
Journal of Luminescence 149 **(2014)** 221-230.

11) Exploring photoinduced electron transfer and excited-state proton transfer reactions involving 9-aminoacridine hydrochloride hydrate and methyl viologen using laser flash photolysis
Piyali Mitra, **Brotati Chakraborty**, Samita Basu
Chemical Physics Letters 610-611 **(2014)** 108-114.

12) Spectroscopic exploration of drug–proteininteraction: a study highlighting the dependence of the magnetic field effect on inter-radical separation distance formed during photoinduced electron transfer
Brotati Chakraborty*, Piyali Mitra, Samita Basu*
RSC Advances 5 **(2015)** 81533-81545.

13) Acridone in a biological nanocavity: detailed spectroscopic and docking analyses of probing both the tryptophan residues of bovine serum albumin
Brotati Chakraborty*, Chaitrali Sengupta, Uttam Pal, Samita Basu
New Journal of Chemistry 41 **(2017)** 12520-12534.

14) Preferential photochemical interaction of Ru (III) doped carbon nano dots with bovine serum albumin over human serum albumin
Arnab Maity, Uttam Pal, **Brotati Chakraborty**, Chaitrali Sengupta, Abhishek Sau, Swatadipta Chakraborty, Samita Basu
International Journal of Biological Macromolecules 137 **(2019)** 483-494.

15) Interaction of proflavin with tryptophan in reverse micellar microenvironment of AOT: Photoinduced electron transfer probed by magnetic field effect
Banabithi Koley Seth*, Abhishek Sau, Uttam Pal, Samita Basu, **Brotati Chakraborty***
Journal of Luminescence 220 **(2020)** 116953

16) Probing the hydrogen bond involving Acridone trapped in a hydrophobic biological nanocavity: Integrated spectroscopic and docking analyses
Brotati Chakraborty*, Chaitrali Sengupta, Uttam Pal, and Samita Basu
Langmuir 36 **(2020)** 1241-1251.

17) Revisiting magnetic field effects in homogeneous medium and heterogeneous bio-mimicking environments with emphasis on acridine derivatives
Brotati Chakraborty and Samita Basu
Journal of the Indian Chemical Society 98 **(2021)** 10057

18) A systematic computational study of acridine derivatives through conceptual density functional theory
Prabhat Ranjan, **Brotati Chakraborty***, Tanmoy Chakraborty*
Molecular Diversity 27 (**2023)** 1271-1283

19) Advances in exploration of photoinduced electron transfer reactions involving small molecules probed by magnetic field effect
Brotati Chakraborty*, Chaitrali Sengupta, Samita Basu
Journal of Photochemistry and Photobiology 21 **(2024)** 100238.

20) A systematic progress in probing the excited state using fluorescence spectroscopy
Brotati Chakraborty*, Samita Basu
Chemical Physics Impact 8 **(2024)** 100636.

Book Chapter in edited volumes:

1) Electron Transfer and Hydrogen Abstraction in biologically relevant systems
Brotati Chakraborty, Adity Bose, Samita Basu
in "Selectivity, Control, and Fine Tuning in High-Energy Chemistry" Edited by Dmitri V. Stass & Vladimir I. Feldman **(2011)**, Chapter 4, Research Signpost, India, ISBN: 978-81-308-0432-3, Pages 93-116.

Professional Training/ Courses Undertaken

Serial No.	Name of the Course	Place	Duration	Sponsoring Agency
1	Orientation Programme No. 119	UGC-HRDC, Calcutta University	17/07/2017 to 12/08/2017	UGC
2	Interdisciplinary Refresher Course on Modern Methods in Earth System Science	UGC-HRDC, Jadavpur University	18/09/2018 to 11/10/2018	UGC
3	STC on Stress Management and Counseling	UGC-HRDC, Jadavpur University	03/01/2019 to 09/01/2019	UGC
4	STC on Disability Studies	UGC-HRDC, Jadavpur University	20/11/2019 to 26/11/2019	UGC
5	Refresher Course on Chemistry	UGC-HRDC, University of North Bengal	11/02/2021 to 24/02/2021	UGC
6	STC in Gender Sensitization	UGC-HRDC, Calcutta University	23/03/2022 to 29/03/2022	UGC