UNIVERSITY OF CALCUTTA

FACULTY ACADEMIC PROFILE/ CV

Full name of the faculty member: DEBABRATA MANDAL
Designation: Associate Professor
Specialization : CHEMISTRY (Physical Chemistry)

Contact information : Dept of Chemistry, University of Calcutta
92, APC Road, Kolkata - 9

Academic qualifications:

College/ university from which the degree was obtained	Abbreviation of the degree
University of Calcutta	B.Sc. (Chemistry Hons.)
IIT Kharagpur	M.Sc. (Chemistry)
IACS, Kolkata	Ph.D.

Positions held/ holding:

i) Assistant Professor, Visva-Bharati University, West Bengal
ii) Associate Professor, University of Calcutta

8. **Research interests**:

- Fluorescence Spectroscopy, Ultra-fast Lasers, Photophysical Processes
- Nanochemistry, Studies on Functional Materials

Research guidance :

Number of researchers awarded Ph.D degrees : **2**

Number of researchers pursuing Ph.D : **5**

Projects :

Completed projects : 3 (UGC - 1, CSIR- 1, DST -1)

Select list of publications: ***Pl. see attached Annexure-II***I

a) ***Journals:***
b) ***Books/ book chapters :***
c) ***Conference/ seminar volumes***:
d) ***Other publications*** :

Membership of Learned Societies:

i) Leife Member, Indian Association for the Cultivation of Sciences, Kolkata
ii) Life Member, Indian Chemical Society, Kolkata

Invited lectures delivered :

"Skill Development in the Application of Ultra-fast Lasers in Chemical Science and Technology" NIT, Durgapur, March 2015

Annexure-II

Select List of Research Publications

1. *3',4'-Methylenedioxy-3-Hydroxyflavone: Switchover from Reversible to Irreversible ESIPT along the n-Alcohol Series*
Deborin Ghosh, Giasuddin Ahamed, Shaikh Batuta, Naznin Ara Begum **Debabrata Mandal**
Journal of Photochemistry and Photobiology A: Chemistry (2016) **328,** 77-86.

2. *Effect of an Electron-Donating Substituent at the 3',4'-position of 3-Hydroxyflavone: Photophysics in Bulk Solvents*
Deborin Ghosh, Giasuddin Ahamed, Shaikh Batuta, Naznin Ara Begum, and **Debabrata Mandal**
J. Phys. Chem. A (2016) **120,** 44−54.

3. *Fluorescent Ag nanoclusters prepared in aqueous poly(acrylic acid-co-maleic acid) solutions: a spectroscopic study of their excited state dynamics, size and local environment*
Manika Dandapat and **Debabrata Mandal**
Phys. Chem. Chem. Phys. (2016) **18,** 2564--2573.

4. *Unusually slow intramolecular proton transfer dynamics of 4'-N,N-dimethylamino-3-hydroxyflavone in high n-alcohols: involvement of solvent relaxation*
Deborin Ghosh, Shaikh Batuta, Naznin Ara Begum and **Debabrata Mandal**
Photochem. Photobiol. Sci. (2016) **15,** 266–277.

5. *A case study of photo induced electron transfer between riboflavin and aliphatic amine: Deciphering different mechanisms of ET operating from femtosecond to microsecond time domain*
C. Sengupta a, M.K. Sarangi , A. Sau , **Debabrata Mandal,** Samita Basu
Journal of Photochemistry and Photobiology A: Chemistry (2015) **296,** 25–34.

6. *Fluorescence resonance energy transfer in AOT/4-chlorophenol/m-xylene organogels*
Manika Dandapat, **Debabrata Mandal**
Journal of Luminescence (2015) **162,** 108–114.

7. *Photoisomerization and reorientational dynamics of DTDCI in AOT/alkane reverse micelles containing non-aqueous polar liquids*
Manika Dandapat, **Debabrata Mandal**
Photochem. Photobiol. Sci. (2015) **14,** 378–386.

8. *Time-dependent fluorescence Stokes shift and molecular-scaledynamics in alginate solutions and hydrogels*
Manika Dandapat, **Debabrata Mandal**
Chemical Physics Letters (2015) **627,** 67–72.

9. *Proton Transfer Dynamics of 4′-N,N-Dimethylamino-3-Hydroxyflavone Observed in Hydrogen-Bonding Solvents and Aqueous Micelles*
Deborin Ghosh, Shaikh Batuta, Sreeparna Das, Naznin Ara Begum, **Debabrata Mandal**
J. Phys. Chem. B (2015) **119,** 5650−5661.

10. *Burmese grape fruit juice can trigger the "logic gate"-like colorimetric sensing behavior of Ag nanoparticles towards toxic metal ions*
M.N. Alam, A. Chatterjee, S.Das, S.Batuta, **Debabrata Mandal**, N.A.Begum
RSC Advances (2015) **5**, 23419–23430

11. *Proton transfer reactions of 4′-chloro substituted 3-hydroxyflavone in solvents and aqueous micelle solutions*
D. Ghosh, A.K. Pradhan, S. Mondal, N.A. Begum, **Debabrata Mandal**
Phys. Chem. Chem. Phys. (2014) **16**, 8594.

12. *Photoisomerization and reorientational mobility of symmetric carbocyanines in AOT/alkane/polar solvent microemulsions*
M. Dandapat, S. Basu, D Ghosh, **Debabrata Mandal**
Chemical Physics Letters (2014) **608,** 113.

13. *Fluorescence probing of the local environment in a hydrogel: TICT andphotoisomerization in chitosan hydrogel beads*
S. Basu, M. Dandapat, D. Ghosh, **Debabrata Mandal**
Colloids and Surfaces A: Physicochem. Eng. Aspects (2014) **457,** 196.

14. *Murraya koenegii Spreng. Leaf Extract: An efficient green multifunctional agent for the controlled synthesis of Au nanoparticle*
M.N. Alam, S. Das, S. Batuta, N. Roy, A. Chatterjee, **Debabrata Mandal,** N.A. Begum
ACS Sustainable Chem. Eng. (2014) **2,** 652.

15. *Green Chemistry for Nanochemistry: Exploring medicinal plants for the biogenic synthesis of metal nanoparticles with fine-tuned properties*
M.N. Alam, N.Roy , **Debabrata Mandal**, N.A. Begum
RSC Advances (2013) **3**, 11935.