

CURRICULUM VITAE

1. Personal Information

- ❖ Name: **Dr. Tridib Mondal**
- ❖ Designation: **Assistant Professor**
- ❖ Department: **Department of Chemistry**
- ❖ Institution: **Sukanta Mahavidyalaya**
- ❖ Date of Joining: **03/08/2020**
- ❖ Address for Correspondence: **South Kamrangu, Jhorehat,
Howrah, West Bengal, 711302**
- ❖ Nationality: **Indian**
- ❖ Mobile Number: **8584037094**
- ❖ Email Address: **tridib.mondal@gmail.com**
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- ❖ Google Scholar Profile (if available):
https://scholar.google.com/citations?user=F_dPAzsAAAAJ&hl=en



2. Academic Qualifications

Degree	Subject/Specialization	Institution	University	Year
Ph.D.	Chemistry	Indian Association for the Cultivation of Science, Kolkata	Jadavpur	2013
NET/SET/GATE/JAM	Chemistry	NET-2007 JAM (46)-2006 GATE -2008		
M.Sc.	Chemistry	IIT Bombay	IIT Bombay	2008
B.Sc.	Chemistry	Narasinha Dutt College	Calcutta University	2006

3. Research Experience

- ❖ Research Specialization/Field: Solvation dynamics, proton transfer, electron transfer, FRET, protein folding, aggregation and its function, molecular chaperones, allostery
- ❖ Post-Doctoral/ Research Associate:
 - Department of Structural Biology, Weizmann Institute of Science, Israel (Postdoctoral fellow, September 2016 – June 2020)
 - Department of Physical Chemistry, Indian Association for the cultivation of science, Kolkata (Research Associate I, February 2016 - September 2016)

• Department of Biochemistry and Molecular Biophysics, Washington university School of Medicine in St. Louis, USA (Postdoctoral fellow, January 2014 –December 2015).

4. Publications

❖ Journal Articles :

- | Author(s), "Title of Paper:", Journal Name, Volume (Issue), Pages, Year. DOI (if any)/ISSN |
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| 1. "Solvation Energy: Role of Charged Species and Solvent Molecule" T. Mondal* 2026 |
| 2. "Probing Single-molecule Interfacial Electron Transfer Inside a Single Lipid Vesicle" A. K. Das, A. K. Mandal, T. Mondal* <i>Journal of Fluorescence</i> 2023 , 33 (6), 2229-2239. |
| 3. "Landfill: An eclectic review on structure, reactions and remediation approach" T. Mondal, M Choudhury*, D Kundu, D Dutta, P Samanta* <i>Waste management</i> 2023 , 164, 127-142. |
| 4. "Slowdown of Water Dynamics from the Top to the Bottom of the GroEL Cavity" N. Macro, L. Chen, Y. Yang, T. Mondal , L. Wang, A. Horovitz*, D. Zhong* <i>The Journal of Physical Chemistry Letters</i> 2021 , 12 (24), 5723-5730. (https://doi.org/10.1021/acs.jpcclett.1c01216). |
| 5. "Discriminating between Concerted and Sequential Allosteric Mechanisms by Comparing Equilibrium and Kinetic Hill Coefficients" A. Horovitz*, T. Mondal <i>J. Phys. Chem. B.</i> 2021 , 125,70- 73. (https://doi.org/10.1021/acs.jpccb.0c09351) |
| 6. "Insight into the Autosomal-Dominant Inheritance Pattern of SOD1-Associated ALS from Native Mass Spectrometry" J. Cveticanin†, T. Mondal† , E. M. Meiering*, M. Sharon*, A. Horovitz* <i>JMB</i> 2020 , 432, 5995-6002. (†Equal Contribution). (DOI: 10.1016/j.jmb.2020.09.025). |
| 7. "GroEL allostery illuminated by a relationship between the Hill coefficient and the MWC model", R. Gruber†, T. Mondal† , A. Horovitz* <i>Biophysical Journal</i> 2019 , 117, 1915-1921. (†Equal Contribution) (DOI: 10.1016/j.bpj.2019.10.013). |
| 8. "Double-mutant cycles: new directions and applications" A. Horovitz*, R. C. Fleisher, T. Mondal . <i>Curr. Opin. Struct. Biol.</i> 2019 , 58, 10-17. (DOI:10.1016/j.sbi.2019.03.025). |
| 9. "Contact order is a determinant for the dependence of GFP folding on the chaperonin GroEL" B. Bandyopadhyay, T. Mondal , R. Unger* and A. Horovitz* <i>Biophysical Journal</i> 2019 , 116, 42-48. (DOI: 10.1016/j.bpj.2018.11.019). |
| 10. "Enzyme Activity of α -chymotrypsin: Deactivation by Gold Nano-cluster and Reactivation by Glutathione" C. Ghosh†, T. Mondal† , K. Bhattacharyya* <i>Journal of Colloid and Interface Science</i> 2017 , 494, 74-81 (†Equal Contribution). (https://doi.org/10.1016/j.jcis.2017.01.027). |
| 11. "ApoE: In vitro studies of a small molecule effector" T. Mondal† , H. Wang†, G. T. DeKoster, B. Baban, M. L. Gross and C. Frieden* <i>Biochemistry</i> 2016 , 55, 2613 – 2621 (†Equal Contribution). (https://doi.org/10.1021/acs.biochem.6b00324). |

12. "Dynamics in Lipid Droplets, Cytoplasm and Nucleus in Live CHO cell: Time resolved Confocal Microscopy" S. Ghosh, S. Chattoraj, **T. Mondal**, and K. Bhattacharyya * *Langmuir* **2013**, 29, 7975 - 7982. (DOI: 10.1021/la400840n).
13. "Effect of Room Temperature Ionic Liquid on Femtosecond Solvation Dynamics in a Tri-block Copolymer (P123) Gel" A. K. Mandal, S. Ghosh, **T. Mondal**, A. K. Das and K. Bhattacharyya * *Indian Journal of Chemistry Section A-Inorganic Physical Theoretical & Analytical Chemistry* **2013**, 52, 1047 – 1055.
14. "Effect of NaCl on ESPT-Mediated FRET in a CTAC Micelle: A Femtosecond and FCS Study" A. K. Mandal, S. Ghosh, A. K. Das, **T. Mondal**, and K. Bhattacharyya* *ChemPhysChem* **2013**, 14, 788 - 796. (DOI: 10.1002/cphc.201200669).
15. "Salt Effect on the Ultrafast Proton Transfer in Niosome" **T. Mondal**, S. Ghosh, A. K. Mandal, A. K. Das, and Kankan Bhattacharyya* *J. Phys. Chem. B* **2012**, 116, 8105 - 8012. (<https://doi.org/10.1021/jp3043957>).
16. "Solvation Dynamics under a Microscope: Single Giant Lipid Vesicle" S. Sen Mojumdar, S. Ghosh, **T. Mondal**, and K. Bhattacharyya* *Langmuir* **2012**, 28, 10230 - 10237. (<https://doi.org/10.1021/la3014859>).
17. "Diffusion of organic dyes in a niosome immobilize on a glass surface using fluorescence correlation spectroscopy" S. Ghosh, A. K. Mandal, A. K. Das, **T. Mondal**, and K. Bhattacharyya* *Phys. Chem. Chem. Phys* **2012**, 14, 9749 - 9757. (<https://doi.org/10.1039/C2CP41212H>).
18. "Effect of an Ionic liquid on the Unfolding of Human Serum Albumin: A Fluorescence Correlation Spectroscopy Study" D. K. Das, A. K. Das, A. K. Mandal, **T. Mondal**, and K. Bhattacharyya* *Chemphyschem*. **2012**, 13, 1949 - 1955. (DOI: 10.1002/cphc.201100421).
19. "An FCS Study of Unfolding and Refolding of CPM –Labeled Human Serum Albumin: Role of ionic Liquid" D. K. Sasmal, **T. Mondal**, S. Sen Mojumdar, A. Choudhury, R. Banerjee, and K. Bhattacharyya*) *J. Phys. Chem. B* **2011**, 115, 13075 - 13083. (<https://doi.org/10.1021/jp207829y>).
20. "Binding of Organic Dyes with Human Serum Albumin: A Single-Molecule Study" D. K. Das, **T. Mondal**, A. K. Mandal and K. Bhattacharyya* *Chem. Asian J.* **2011**, 6, 3097 - 3103. (<https://doi.org/10.1002/asia.201100272>).
21. "Diffusion of Organic Dyes in Ionic Liquid and Giant Micron Sized Ionic Liquid Mixed Micelle: Fluorescence Correlation Spectroscopy" D. K. Sasmal, A. K. Mandal, **T. Mondal**, and K. Bhattacharyya* *J. Phys. Chem. B* **2011**, 115, 7781 - 7787. (<https://doi.org/10.1021/jp202090x>).
22. "Marcus-like Inversion in Electron Transfer in Neat Ionic Liquid and Ionic Liquid-Mixed Micelles" A. K. Das, **T. Mondal**, S. Sen Mojumdar and K. Bhattacharyya* *J. Phys. Chem. B* **2011**, 115, 4680 - 4688. (<https://doi.org/10.1021/jp200941c>).

23. "Probing Deuterium Isotope Effect on Structure and Solvation Dynamics of Human Serum Albumin" D. K. Das, **T. Mondal**, U. Mandal and K. Bhattacharyya * *Chemphyschem.* **2011**, 12, 814 - 822. (<https://doi.org/10.1002/cphc.201000912>).
24. "Femtosecond study of ultrafast fluorescence resonance energy transfer in a cationic vesicle" A. K. Das, **T. Mondal**, D. K. Sasmal, and K. Bhattacharyya* *J. Chem. Phys.* **2011**, 135, 074507. (<https://doi.org/10.1063/1.3624945>).
25. "Excited State Proton Transfer in Ionic Liquid Mixed Micelles" **T. Mondal**, A. K. Das, D. K. Sasmal, and K. Bhattacharyya* *J. Phys. Chem. B* **2010**, 114, 13136 - 13142. (<https://doi.org/10.1021/jp1058758>).
26. "Ultrafast FRET in Ionic Liquid-P123 Mixed Micelles: Region and Counterion Dependence" D. K. Das, A. K. Das, **T. Mondal**, A. K. Mandal, and K. Bhattacharyya* *J. Phys. Chem. B* **2010**, 114, 13159 - 13166. (<https://doi.org/10.1021/jp106689w>).
27. "Ultrafast and Ultraslow Proton Transfer of Pyranine in Ionic Liquid Microemulsion" S. Sen Mojumdar, **T. Mondal**, A. K. Das, S. Dey and K. Bhattacharyya * *J. Chem. Phys.* **2010**, 132, 194505. (<https://doi.org/10.1063/1.3428669>).

❖ Book Chapters :

Author(s), Title of chapter, in: Editor(s) (Eds.), *Book Title*, Publisher, Place of Publication, Year, pp. xx-xx.

1. "Micro and Nanoplastics: Effect on Lentic Ecosystem" A. K. Mandal, A. K. Das, S. Bhattacharyya, R. Chowdhury, **T. Mondal*** *Micro-Nano Plastics Exposure, Environmental Degradation and Public Health Crisis: Perspectives and Concerns for Sustainable Development (Springer Nature Singapore)* **2025**, 77-87.
2. "Two-Photon Fluorescence: Sensing and Imaging" A. K. Das, **T. Mondal**, A. K. Mandal *Fluorescent Chemosensing and Bioimaging (CRC Press)* **2024**, 320-346.
3. "Waste management towards achieving environmental sustainability: Some perspectives" S. Dey, **T. Mondal**, S. Karjee, P. Samanta* *Trash or Treasure: Entrepreneurial Opportunities in Waste Management (Springer Nature Switzerland)* **2024**, 207-230.
4. "Study of physicochemical properties of ionic liquids" **T. Mondal**, P. Samanta* *Handbook of ionic liquids: fundamentals, applications, and sustainability (Wiley-VCH GmbH)* **2024**, 51-67.
5. "Polyaromatic Hydrocarbons (PAHs): Sources, Distribution, and Health Impacts in Aquatic Vertebrates" S. Dey, **T. Mondal**, P. Samanta* *Xenobiotics in Urban Ecosystems: Sources, Distribution and Health Impacts (Springer International Publishing)* **2023**, 185-208.

5. FIP/FDP/RC/Short Term Course/Any others:

Sl. No.	Title	Organizer	Venue	Duration		Mode (Online/offline/hybrid)
				From	To	

1.	Recent Advancement in Science and Technology	NBU	NBU	15.02.2022	28.02.2022	Online
2.	15th Faculty Induction Programme	NBU	NBU	22.11.2023	22.12.2023	Online

6. Awards and Honors

- ❖ Fellowship/Scholarship

Qualified joint CSIR-UGC National Eligibility Test (NET), Govt. of India (2007)
Dean of Faculty fellowship for Post-doctoral research, Weizmann Institute of science, Israel

7. Administrative/Academic Responsibilities:

- ❖ Membership of Administrative/Academic Sub-committees :

Sl. No.	Bodies/Sub-committee	Duration	
		From	To
1.	Green Audit sub-committee	03.08.2020	Till Now
2.	Library Committee	01.07.2021	Till Now
3.	Anti Women Harassments Committee	01.07.2021	30.06.2022
4.	Grievances Committee	01.07.2022	Till Now
5.	Technical Committee	01.07.2022	Till Now
6.	Research Committee	01.07.2022	30.06.2022
7.	Routine subcommittee	01.07.2022	Till Now
8.	Sport Committee	01.07.025	Till Now
9.	Research Committee	01.07.025	Till Now
10.	Health Committee	01.07.025	Till Now

8. Skills

- ❖ Programming Languages: Matlab
- ❖ Software: Basic data fitting software

9. Research Interests

- ❖ Femtosecond up-conversion techniques, confocal microscopy, single molecule techniques, surface plasmon resonance (SPR), stopped-flow techniques, molecular biology, protein expression, purification and protein mass spectra techniques. Research interest are solvation dynamics, proton transfer, electron transfer, FRET, protein folding, aggregation and its function, molecular chaperones, allostery.