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Employement Info

Employee Type	Nature Of Employment
Teaching	Permanent

Educational

Degree/Certification	Institution	Year
Ph.D. - Dynamics of Solvation, Photoisomerization and Proton Transfer in Microheterogenous Systems Containing Surfactants, Polymers and Room Temperature Ionic Liquids	Indian Institute of Technology Kharagpur	2015
PG	Indian Institute of Technology Kharagpur	2011
UG	The University of Burdwan	2009

Research Publications

Article Name	Publication Type	Journal Name	ISSN No	Volume	Year	URL
Leaflet-by-Leaflet Synergistic Effects of Antimicrobial Peptides on Bacterial and Mammalian Membrane Models	Research Papers in Peer Reviewed Journals	J. Phys. Chem. Lett.	1948-7185	14	2023	
Cell-free Synthesis Goes Electric: Dual Readout Biosensor via Direct Channel Integration into	Research Papers in Peer	ACS Synth Biol	2161-5063	12	2023	https://pubs.acs.org/d

a Supported Membrane Electrode	Reviewed Journals					
Bioelectronic Impedance Sensing of Antibiotic Interactions with a Pathogenic E. coli Outer Membrane Supported Bilayer	Research Papers in Peer Reviewed Journals	Biosensors and Bioelectronics	0956-5663	204	2022	https://www.sciencedirect.com/science/article/pii/S0956566322000000
Cell-Free Synthesis of a Transmembrane Mechanosensitive Channel Protein into a Hybrid-Supported Lipid Bilayer	Research Papers in Peer Reviewed Journals	ACS Appl. Bio Mater.	2576-6422	4	2021	https://pubs.acs.org/doi/10.1021/acsami.1c00000
Clinically Relevant Bacterial Outer Membrane Models for Antibiotic Screening Applications	Research Papers in Peer Reviewed Journals	ACS Infect. Dis.	2373-8227	7	2021	https://pubs.acs.org/doi/10.1021/acscinf.1c00000
Biomembranes in Bioelectronic Sensing	Research Papers in Peer Reviewed Journals	Trends in Biotechnology	0167-7799 (Print) ISSN: 1879-3096 (Online)	40	2022	https://www.sciencedirect.com/journal/trends-in-biotechnology
Enhanced Fluorescent Protein Activity in Polymer Scaffold Stabilized Phospholipid Nanoshells using Neutral Redox Initiator Polymerization Conditions	Research Papers in Peer Reviewed Journals	ACS Omega	2470-1343	3	2018	https://pubs.acs.org/doi/10.1021/acsomega.8b00000
Micelle-vesicle-micelle transition in aqueous solution of anionic surfactant and cationic imidazolium surfactants: Alteration of the location of different fluorophores	Research Papers in Peer Reviewed Journals	J. Colloid Interface Sci.	0021-9797 (Print) 1095-7103 (Web)	490	2017	https://www.sciencedirect.com/science/article/pii/S0021979717300000
How Does the Surface Charge of Ionic Surfactant and	Research Papers in Peer	Langmuir	0743-7463 (Print)	31	2015	https://pubs.acs.org/doi/10.1021/acs.langmuir.5b00000

Cholesterol forming Vesicles Control Rotational Dynamics and Translational Diffusion of Rhodamine 6G Perchlorate (R6GClO ₄)?	Reviewed Journals		1520-5827 (Web)			
Spectroscopic investigation of the binding interactions of a membrane potential molecule in various supramolecular confined environments: contrasting behavior of surfactant molecules in relocation or release of the probe between nanocarriers and DNA surface	Research Papers in Peer Reviewed Journals	Phys. Chem. Chem. Phys.	1463-9076 (Print) 1463-9084 (web)	16	2014	https://pubs.rsc.org/e
Vesicles Formed in Aqueous Mixtures of Cholesterol and Imidazolium Surface Active Ionic Liquid: A Comparison with Common Cationic Surfactant by Water Dynamics	Research Papers in Peer Reviewed Journals	J. Phys. Chem. B	1520-6106 (Print) 1520-5207 (Web)	118	2014	https://pubs.acs.org/d
Unique Influence of Cholesterol on Modifying the Aggregation Behavior of Surfactant Assemblies: Investigation of Photophysical and Dynamical Properties of 2,2'-Bipyridine-3,3'-diol, BP(OH) ₂ in Surfactant Micelles, and Surfactant/Cholesterol Forming Vesicles	Research Papers in Peer Reviewed Journals	J. Phys. Chem. B	1520-6106 (Print) 1520-5207 (Web)	118	2014	https://pubs.acs.org/d
Organic Additive, 5-Methylsalicylic Acid Induces Spontaneous Structural Transformation of Aqueous Pluronic Triblock Copolymer	Research Papers in Peer Reviewed Journals	J. Phys. Chem. B	1520-6106 (Print) 1520-5207 (Web)	118	2014	https://pubs.acs.org/d

Solution: A Spectroscopic Investigation of Interaction of Curcumin with Pluronic Micellar and Vesicular Aggregates						
Exploring the Photophysics of Curcumin in Zwitterionic Micellar System: An Approach to Control ESIPT Process in the Presence of Room Temperature Ionic Liquids (RTILs) and Anionic Surfactant	Research Papers in Peer Reviewed Journals	J. Phys. Chem. B	1520-6106 (Print) 1520-5207 (Web)	118	2014	https://pubs.acs.org/d
Ultrafast FRET to Study Spontaneous Micelle-to-Vesicle Transitions in an Aqueous Mixed Surface-Active Ionic-Liquid System	Research Papers in Peer Reviewed Journals	ChemPhysChem	1439-7641	15	2014	https://pubmed.ncbi.n
Effect of Room Temperature Surface Active Ionic Liquids on Aggregated Nanostructures of γ -Cyclodextrins: A Picosecond Fluorescence Spectroscopic Study	Research Papers in Peer Reviewed Journals	Chem. Phys. Lett	0009-2614 (Print) 1873-4448 (Online)	601	2014	https://www.scienced via%3Dihub
Effect of Confinement on Excited-State Proton Transfer of Firefly's Chromophore D-Luciferin in AOT Reverse Micelles	Research Papers in Peer Reviewed Journals	J. Phys. Chem. B	1520-6106 (Print) 1520-5207 (Web)	118	2014	https://pubs.acs.org/d
Interaction of Gold Nanoclusters with IR Light Emitting Cyanine Dyes: A Systematic Fluorescence Quenching Study	Research Papers in Peer Reviewed Journals	Phys. Chem. Chem. Phys.	1463-9076 (Print) 1463-9084 (web)	16	2014	https://pubs.rsc.org/e
Spontaneous Transition of Micelle–Vesicle–	Research Papers in	Langmuir	0743-7463	29	2013	https://pubs.acs.org/d

Micelle in a Mixture of Cationic Surfactant and Anionic Surfactant-like Ionic Liquid: A Pure Nonlipid Small Unilamellar Vesicular Template Used for Solvent and Rotational Relaxation Study	Peer Reviewed Journals		(Print) 1520-5827 (Web)			
Effect of Alkyl Chain of Room Temperature Ionic Liquid (RTILs) on the Phase Behavior of [C2mim][CnSO4]/TX-100/Cyclohexane Microemulsions: Solvent and Rotational Relaxation Study	Research Papers in Peer Reviewed Journals	J. Phys. Chem. B	1520-6106 (Print) 1520-5207 (Web)	117	2013	https://pubs.acs.org/d
Modulation of the Photophysical Properties of Curcumin in Nonionic Surfactant (Tween20) Forming Micelles and Niosomes: A Comparative Study of Different Microenvironments	Research Papers in Peer Reviewed Journals	J. Phys. Chem. B	1520-6106 (Print) 1520-5207 (Web)	117	2013	https://pubs.acs.org/d
Unique Characteristics of Ionic Liquids Comprised of Long Chain Cations and Anions: A New Physical Insight	Research Papers in Peer Reviewed Journals	J. Phys. Chem. B	1520-6106 (Print) 1520-5207	117	2013	https://pubs.acs.org/d
Fluorescence Resonance Energy Transfer in Microemulsions Composed of Tripled-Chain Surface Active Ionic Liquids, RTILs, and Biological Solvent: An Excitation Wavelength Dependence Study	Research Papers in Peer Reviewed Journals	J. Phys. Chem. B	1520-6106 (Print) 1520-5207 (Web)	117	2013	https://pubs.acs.org/d
Zwitterionic Micelles as a Soft Template for the Extremely Rapid Synthesis of Small	Research Papers in Peer Reviewed Journals	RSC Advances	2046-2069	3	2013	https://pubs.rsc.org/e

Hollow Gold Nanocontainers						
Modulation of the Photophysical Properties of 2,2'-Bipyridine-3,3'-diol inside Bile Salt Aggregates: A Fluorescence-based Study for the Molecular Recognition of Bile Salts	Research Papers in Peer Reviewed Journals	Langmuir	0743-7463 (Print) 1520-5827 (Web)	29	2013	https://pubs.acs.org/d
An Investigation into the Effect of the Structure of Bile Salt Aggregates on the Binding Interactions and ESIHT Dynamics of Curcumin: A Photophysical Approach to Probe Bile Salt Aggregates as a Potential Drug Carrier	Research Papers in Peer Reviewed Journals	J. Phys. Chem. B	1520-6106 (Print) 1520-5207 (Web)	117	2013	https://pubs.acs.org/d
Unique Photophysical Behavior of 2,2'-Bipyridine-3,3'-diol in DMSO–Water Binary Mixtures: Potential Application for Fluorescence Sensing of Zn ²⁺ Based on the Inhibition of Excited-State Intramolecular Double Proton Transfer	Research Papers in Peer Reviewed Journals	J. Phys. Chem. B	1520-6106 (Print) 1520-5207 (Web)	117	2013	https://pubs.acs.org/d
Roles of Viscosity, Polarity, and Hydrogen Bonding Ability of a Pyrrolidinium Ionic Liquid and Its Binary Mixtures in the Photophysics and Rotational Dynamics of the Potent Excited State Intramolecular Proton-Transfer Probe 2,2'-Bipyridine-3,3'-diol	Research Papers in Peer Reviewed Journals	J. Phys. Chem. B	1520-6106 (Print) 1520-5207 (Web)	117	2013	https://pubs.acs.org/d
A Novel Ionic Liquid-in-Oil Microemulsion Composed of Biologically	Research Papers in Peer	J. Phys. Chem. B	1520-6106 (Print)	117	2013	https://pubs.acs.org/d

Acceptable Components: An Excitation Wavelength Dependent Fluorescence Resonance Energy Transfer Study	Reviewed Journals		1520-5207 (Web)			
Phase Boundaries, Structural Characteristics, and NMR Spectra of Ionic Liquid-in-Oil Microemulsions Containing Double Chain Surface Active Ionic Liquid: A Comparative Study	Research Papers in Peer Reviewed Journals	J. Phys. Chem. B	1520-6106 (Print) 1520-5207 (Web)	117	2013	https://pubs.acs.org/d
Photophysics of 3,3'-diethyloxadicarbocyanine iodide (DODCI) in Ionic Liquid Micelle and Binary Mixtures of Ionic Liquids: Effect of Confinement and Viscosity on Photoisomerization Rate	Research Papers in Peer Reviewed Journals	J. Phys. Chem. B	1520-6106 (Print) 1520-5207 (Web)	116	2013	https://pubs.acs.org/d
Designing a New Strategy for the Formation of IL-in-Oil Microemulsions	Research Papers in Peer Reviewed Journals	J. Phys. Chem. B	1520-6106 (Print) 1520-5207 (Web)	116	2012	https://pubs.acs.org/d
Modulation of Photophysics and Photodynamics of 1'-hydroxy-2'-acetonephthone (HAN) in Bile Salt Aggregates: A Study of Polarity and Nanoconfinement Effects	Research Papers in Peer Reviewed Journals	J. Phys. Chem. B	1520-6106 (Print) 1520-5207 (Web)	116	2012	https://pubs.acs.org/d
Ionic Liquid-in-Oil Microemulsions Composed of Double Chain Surface Active Ionic Liquid as a Surfactant: Temperature Dependent Solvent and Rotational Relaxation Dynamics of Coumarin-153 in [Py]	Research Papers in Peer Reviewed Journals	J. Phys. Chem. B	1520-6106 (Print) 1520-5207 (Web)	116	2012	https://pubs.acs.org/d

[TF2N]/[C4mim] [AOT]/Benzene Microemulsions						
Ionic Liquid Induced Changes in Properties of Aqueous Cetyltrimethylammonium Bromide: A Comparative Study of Two Protic Ionic Liquids with Different Anions	Research Papers in Peer Reviewed Journals	J. Phys. Chem. B	1520- 6106 (Print) 1520- 5207 (Web)	115	2011	https://pubs.acs.org/d

Publications other than journal articles						
Title of Publication	Type of Publication	Publisher	Role in Publication	ISBN Number	Year	URL
Designing a New Strategy for the Formation of IL-In-Oil Microemulsions Containing Double Chain Surface-Active Ionic Liquid	Chapters in Books	John Wiley & Sons, Inc.	Co-Author	Print: 9781118834190, Online: 9781118854501	2015	https://onlinelibrary.wiley.c

Research Projects					
Title of the Project	Project Type	Year Of Sanction	Output	Start Date	End Date
Cell-free biomembrane-based assay to evaluate leaflet-to-leaflet membrane fusion events between fusogenic and native membrane vesicles	Minor	2023		2023-09-01	
Design of Cell Free Biomembrane Platforms on Nanoparticle Surfaces for the Study of Membrane-Toxins Interaction and Channel Activities	Major	2023		2023-09-04	

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