

List of Publications

- 26) Deep Blue and Highly Emissive ZnS-Passivated InP QDs: Facile Synthesis and Deciphering their Ultrafast-to-Slow Photodynamics, **S. Rakshit**, B. Cohen, M. Gutiérrez, A. O. El-Ballouli, A. Douhal, *ACS Appl. Mater. Interfaces*, 2023, 15 (2), 3099-3111.
- 25) Microscopic Insights into the Mechanism of White Light Generation by Disruptive Interaction between Human Serum Albumin Amyloid Fibrils and Surfactant-AIEgen Nanorods, T. Kistwal, **S. Rakshit**, R. Maini, A. Kumar, A. Datta, *J. Phys. Chem. Lett.* 2022, 13(31), 7355–7362. (Accepted as the Cover page of the issue)
- 24) Combining Perovskites and Quantum Dots: Synthesis, Characterization and Applications in Solar Cells, LEDs and Photodetectors, **S. Rakshit**, P. Piatkowski, I. Mora Seró, A. Douhal, *Adv. Opt. Mater.*, 2022, 10, 2102566.
- 23) Mechanistic Insights into Selective Sensing of Pb²⁺ in Water by Photoluminescent CdS Quantum Dots, S Das, **S Rakshit***, A Datta*, *J. Phys. Chem. C* 2020, 125 (28), 15396-15404.
- 22) Non-enzymatic electrochemical glucose sensing by Cu₂O octahedrons: elucidating the protein adsorption signature, **S Rakshit**, S Ghosh, R Roy, S C Bhattacharya, *New Journal of Chemistry* 2021, 45 (2), 628-637.
- 21) Interplay of Multiexciton Relaxation and Carrier Trapping in Photoluminescent CdS Quantum Dots Prepared in Aqueous Medium, S Das, S Rakshit*, A Datta*, *J. Phys. Chem. C* 2020, 124 (51), 28313-28322.
- 20) Morphological Evolution of Strongly Fluorescent Water Soluble AIEEgen-Triblock Copolymer Mixed Aggregates with Shape-Dependent Cell Permeability, **S Rakshit**, S Das, V Govindaraj, R Maini, A Kumar, A Datta, *J. Phys. Chem. B*, 2020, 124 (45), 10282-10291.
- 19) White Light Generation from a Self-Assembled Fluorogen–Surfactant Composite Light Harvesting Platform, **S Rakshit**, S Das, P Poonia, R Maini, A Kumar, A Datta, *J. Phys. Chem. B*, 2020, 124 (34), 7484-7493. (Accepted as the Cover page of the issue)
- 18) A differential approach towards understanding the enhanced emission induced superior bio-imaging and cytotoxicity within blockcopolymeric nanomicelles, **S. Rakshit**, A. Sarkar, S. C. Bhattacharya, *Colloids and Surfaces B: Biointerfaces* 2017, 155, 390–398.
- 17) Interpreting the effect of confined cyclodextrin media on the FRET efficacy between Naproxen and a bio-active 3-pyrazolyl-2-pyrazoline derivative on the light of spectroscopic investigation appended by TD-DFT simulations and molecular docking analysis, A. Sarkar,

S. Rakshit, S. C. Bhattacharya, *Journal of Photochemistry and Photobiology A: Chemistry* 2017, 343, 77–84.

16) Understanding the effect of size and shape of gold nanomaterials on nanometal surface energy transfer, **S. Rakshit**, S. P. Moulik, S. C. Bhattacharya, *Journal of Colloid and Interface Science*, 2017, 491, 349–357.

15) Polymer-fabricated synthesis of cerium oxide nanoparticles and applications as a green catalyst towards multicomponent transformation with size-dependent activity studies, B. Samai, S. Sarkar, S. Chall, **S. Rakshit**, S. C. Bhattacharya, *Cryst Eng Comm*, 2016, 18, 7873–7882.

14) Correlation of FRET efficiency with conformational changes of proteins in ionic and nonionic surfactant environment, D. Singharoy, S. S. Mati, **S. Rakshit**, S. C. Bhattacharya, *J. Molecular Liquids*, 2016, 213, 33–40.

13) A colorimetric and turn-on fluorescent chemosensor for selective detection of Hg²⁺: theoretical studies and intracellular applications, R. Roy, **S. Rakshit**, S. Bhar, S. C. Bhattacharya, *RSC Adv.*, 2015, 5, 67833–67840

12) Deciphering the Role of the Length of the Corona in Controlled NSET within Triblock Copolymers, **S. Rakshit**, S. P. Moulik, S. C. Bhattacharya, *J. Phys. Chem. B*, 2015, 119, 8457–8467

11) Synergism between anionic double tail and zwitterionic single tail surfactants in the formation of mixed micelles and vesicles, and use of the micelle templates for the synthesis of nano-structured gold particles, A. Pan, **S. Rakshit**, S. Sahu, S. C. Bhattacharya, S. P. Moulik, *Colloids and Surfaces A: Physicochem. Eng. Aspects*, 2015, 481, 644–654

10) Spectroscopic and Quantum Mechanical Approach of Solvatochromic Immobilization: Modulation of Electronic Structure and Excited-State Properties of 1,8-Naphthalimide Derivative, S. S. Mati, S. Chall, **S. Rakshit**, S. C. Bhattacharya, *J Fluorescence*, 2015, 25, 341–353

9) Toxicological assessment of PEG functionalized f-block rare earth phosphate nanorods, S. Chall, S. S. Mati, B. Gorain, **S. Rakshit**, S. C. Bhattacharya, *Toxicol. Res.*, 2015, 4, 966–975.

8) Substituted 3-*E*-Styryl-2*H*-chromenes and 3-*E*-Styryl-2*H*-thiochromenes: Synthesis, Photophysical Studies, Anticancer Activity, and Exploration to Tricyclic Benzopyran Skeleton, R. Roy, **S. Rakshit**, T. Bhowmik, S. Khan, A. Ghatak, S. Bhar, *J. Org. Chem.*, 2014, 79, 6603–6614.

- 7) Micellar charge induced emissive response of a bioactive 3-pyrazolyl-2-pyrazoline derivative: a spectroscopic and quantum chemical analysis, A. Sarkar, **S. Rakshit**, S. Chall, S. S. Mati, D. Singharoy, J. Bañuelos, I. L. Arbeloa and S. C. Bhattacharya, *RSC Adv.*, 2014, 4, 56361–56372
- 6) Pyrimidine-based fluorescent zinc sensor: Photo-physical characteristics, quantum chemical interpretation and application in real samples, S. S. Mati, S. Chall, S. Konar, **S. Rakshit**, S. C. Bhattacharya, *Sensors and Actuators B*, 2014, 201, 204–212.
- 5) Controlled synthesis of spin glass nickel oxide nanoparticles and evaluation of their potential antimicrobial activity: A cost effective and eco-friendly approach, **S. Rakshit**, S. Ghosh, S. Chall, S. S. Mati, S. P. Moulik S. C. Bhattacharya, *RSC Adv.*, 2013, 3, 19348–19356.
- 4) Morphology control of nickel oxalate by soft chemistry and conversion to nickel oxide for application in photocatalysis, **S. Rakshit**, S. Chall, S. S. Mati, A. Roychowdhury, S.P. Moulik, S. C. Bhattacharya, *RSC Adv.*, 2013, 3, 6106–6116
- 3) Spectroscopic probing of the microenvironment of 7-oxy(5-selenocyanato-pentyl)-2H-1-benzopyran-2-one in ionic and nonionic micelles, D. K. Rana, **S. Rakshit**, S. Dhar, S. C. Bhattacharya, *Journal of Photochemistry and Photobiology A: Chemistry*, 2013, 270, 67–74.
- 2) Soft-Templated Room Temperature Fabrication of Nanoscale Lanthanum Phosphate: Synthesis, Photoluminescence, and Energy- Transfer Behavior, S. Chall, S. S. Mati, **S. Rakshit**, and S. C. Bhattacharya, *J. Phys. Chem. C*, 2013, 117, 25146–25159.
- 1) Probing the spectral response of a new class of bioactive pyrazoline derivative in homogeneous solvents and cyclodextrin nanocavities: a spectroscopic exploration appended by quantum chemical calculations and molecular docking analysis, S. S. Mati, S. Sarkar, **S. Rakshit**, A. Sarkar, S. C. Bhattacharya, *RSC Adv.*, 2013, 3, 8071–8082