

Selected Publications of Prof. G. B. Talapatra

1. Ratan Sarkar, Prabir Pal, Mrityunjoy Mahato, Tapanendu Kamilya, Avinanda Chaudhuri, and **G. B. Talapatra** "On the Origin of Iron-Oxide Nanoparticle Formation Using Phospholipid Membrane Template" [*Colloids and Surfaces B Biointerfaces* 2010, xxx, xx-xx](#)
2. Mrityunjoy Mahato, Prabir Pal, Tapanendu Kamilya, Ratan Sarkar, Avinanda Chaudhuri and **G. B. Talapatra** "Hemoglobin-Silver Interaction and Bioconjugate Formation: A Spectroscopic Study" [*J. Phys. Chem. B* 2010, 114, 7062-7070](#)
3. Prabir Pal, Tapanendu Kamilya, Somobrata Acharya and **G. B. Talapatra** "On the Formation of Calcium Carbonate Crystal Using Phospholipid Monolayer Template Under Ambient Condition" [*J. Phys. Chem. C* 2010, 114, 8348-8352](#)
4. Sucheta Joy, Prabir Pal, Mrityunjoy Mahato, **G. B. Talapatra** and Sreebrata Goswami "Tailor Made Synthesis of Amphiphilic Azoaromatics via Regioselective C-N Bond Fusion. Comparative Studies of Surface Properties of the Two Positional Isomers and Cobalt Complexes", [*Dalton Transactions* 39, 2775-2784, 2010](#)
5. Mrityunjoy Mahato, Prabir Pal, Tapanendu Kamilya, Ratan Sarkar and **G. B. Talapatra** "pH Induced Structural Modulation and Interfacial Activity of Hemoglobin at Air/Water Interface" [*J. Phys. Chem. B* 2010, 114, 495-502](#)
6. Tapanendu Kamilya, Prabir Pal and G. B. Talapatra "Adsorption of pepsin in octadecylamine matrix at air-water interface" [*Biophysical Chemistry* 146, 2010, 85-91](#)
7. Prabir Pal, Tapanendu Kamilya Mrityunjoy Mahato and **G. B. Talapatra** "The formation of pepsin monomolecular layer by the Langmuir-Blodgett film deposition technique", [*Colloids and Surfaces B Biointerfaces*, 2009, 73, 122-31](#)
8. Tapanendu Kamilya, Prabir Pal, Mrityunjoy Mahato and **G. B. Talapatra** "Effect of salt on the formation of alcohol-dehydrogenase monolayer: A study by Langmuir-Blodgett technique" [*J. Phys. Chem. B*, 2009, 113, 5128-5135](#)
9. Tapanendu Kamilya, Prabir Pal, Mrityunjoy Mahato and **G. B. Talapatra** "Fabrication of Ovalbumin-Phospholipid thin film with minimal protein aggregation by different self-assembly methods" [*J. Nanosci. Nanotechnol.* 2009, 9, 2956-2964](#)
10. Tapanendu Kamilya, Prabir Pal, Mrityunjoy Mahato and **G. B. Talapatra** "Immobilization and the conformational study of phospholipid and phospholipid-protein vesicles" [*Mat. Sci. Eng. C* 29 \(2009\) 1480-1485](#)
11. Joydeep Chowdhury, Jyotirmoy Sarkar, Takeyuki Tanaka and **G. B. Talapatra** "Concentration dependent orientational changes of 2-Amino-2-thiazoline molecule adsorbed on silver nano colloidal surface investigated by SERS and DFT" [*J. Phys. Chem. C* 2008, 112, 227-239](#)
12. Jyotirmoy Sarkar, Joydeep Chowdhury and **G. B. Talapatra** "Adsorption of 4-Methyl-4H-1, 2, 4-Triazole-3-Thiol molecules on silver nano colloids: FT-IR, Raman and Surface-enhanced Raman Scattering study aided by Density functional theory" [*J. Phys. Chem. C* 2007, 111, 10049-10061](#)
13. Tapanendu Kamilya, Prabir Pal and **G. B. Talapatra** "Incorporation of Ovalbumin within cationic Octadecylamine monolayer and a comparative study with zwitterionic DPPC and anionic Stearic acid monolayer" [*Journal of Colloid and Interface Science*, 315 464-474 \(2007\)](#)
14. Tapanendu Kamilya, Prabir Pal and **G. B. Talapatra** "Interaction and Incorporation of Ovalbumin with Stearic Acid monolayer: Langmuir-Blodgett film formation and deposition" [*Colloids and Surfaces B Biointerfaces* 58, 137-144 \(2007\)](#)
15. Somobrata Acharya, Tapanendu Kamilya, Jyotirmoy Sarkar, Tapan Kr. Parichha, Prabir Pal and **G. B. Talapatra** "Photophysical properties of 4-methyl 3-phenyl coumarin organized in Langmuir-Blodgett films: Formation of aggregates" [*Materials Chemistry and Physics* 104, 88-92 \(2007\)](#)
16. Tapanendu Kamilya, Prabir Pal and **G. B. Talapatra** "Interaction of ovalbumin with phospholipids Langmuir-Blodgett film" [*J. Phys. Chem. B* 111, 1199-1205 \(2007\)](#)
17. Joydeep Chowdhury, Jyotirmoy Sarkar, Rina De, Manash Ghosh and **G. B. Talapatra** "Adsorption of 2-Amino-6-methylbenzothiazole on colloidal silver particles: Quantum chemical calculations and Surface Enhanced Raman Scattering study" [*Chem. Phys.* 330,172-183 \(2006\)](#)
18. Jyotirmoy Sarkar, Joydeep Chowdhury, Prabir Pal and **G. B. Talapatra** "ab initio, DFT Vibrational Calculations and SERS Study Of Rhodamine 123 Adsorbed On Colloidal Silver Particles" [*Vibrational Spectroscopy* 41, 90-96 \(2006\)](#)

19. Jyotirmoy Sarkar, Joydeep Chowdhury, Manash Ghosh, Rina De and **G. B. Talapatra** "Experimental and Theoretical Surface Enhanced Raman Scattering Study of 2-Amino-4-methylbenzothiazole Adsorbed On Colloidal Silver Particles" [*J. Phys. Chem. B* **109**, 22536-22544 \(2005\)](#)
20. Jyotirmoy Sarkar, Joydeep Chowdhury, Manash Ghosh, Rina De and **G. B. Talapatra** "Adsorption of 2-Aminobenzothiazole on colloidal silver particles: An experimental and theoretical surface enhanced Raman scattering study" [*J. Phys. Chem B* **109**, 12861-12867 \(2005\)](#)
21. Jyotirmoy Sarkar, Prabir Pal, **G. B. Talapatra** "Self-assembly of Silver Nano-particles on Stearic Acid Langmuir-Blodgett Film: Evidence of Fractal Growth" [*Chem. Phys. Letts.* **401**, 400-404 \(2005\)](#)
22. S. Acharya, D. Bhattacharjee, Jyotirmoy Sarkar and **G. B. Talapatra** "Spectroscopic Study of Nonamphiphilic 2-(4-Biphenyl)-5-(4-tert-butylphenyl)-1,3,4-oxadiazole Aggregates at Air-Water Interface and in Langmuir-Blodgett Films" [*Chem. Phys. Letts.*, **393**, 1 \(2004\)](#)
23. S. Paul, P. Pal, A. J. Pal, and **G. B. Talapatra** "A Monte Carlo Simulation Study of Organic Light-Emitting Devices under Alternating Applied Field" [*J. App. Phys.* **94**, 4357-4362 \(2003\)](#)
24. S. Acharya, D. Bhattacharjee, and **G. B. Talapatra** "Spectroscopic Study of Nonamphiphilic 9-Phenyl Fluorene Assembled in Langmuir-Blodgett Films in two Different Matrices: Dimer and Excimer Formation" [*Chem. Phys.Lett.* **372**, 97-103 \(2003\)](#)
25. S. Acharya, D. Bhattacharjee, and **G. B. Talapatra** "Monolayer Characteristics and Spectroscopic Study of Benzo (*b*)fluoranthene Assembled in Langmuir Blodgett films mixed with Stearic acid" [*J. Phys. Chem. Solid* **64**, 651-657 \(2003\)](#)
26. S. Acharya, T. K. Parichha and **G. B. Talapatra** "Photophysical properties of Hexamethoxytriphenylene mixed with Stearic acid assembled in Langmuir-Blodgett films" [*J. Lumin.* **96**, 177-184 \(2002\)](#)
27. S. Acharya, D. Bhattacharjee, and **G. B. Talapatra**. "Spectroscopic Characteristics of 9-Cyanoanthracene Mixed with Polymethyl Methacrylate and Stearic Acid in Langmuir Blodgett Films" [*Chem. Phys. Letts.* **352**, 429-434 \(2002\)](#)
28. S. Acharya, D. Bhattacharjee, M. Ghosh, and **G. B. Talapatra** "Spectroscopic Investigation of Mixed LB films of Benzo (*k*)fluoranthene" [*J. Col. & Interface Sci.* **244**, 313-318 \(2001\)](#)
29. S. Das, **G. B. Talapatra**, A. Chowdhury, and A. J. Pal "Transient response of organic light-emitting devices: A Monte Carlo study" [*J. Appl. Phys.* **88**, 6457-6461 \(2000\)](#)
30. T. K. Parichha and **G. B. Talapatra** "Spectroscopic study of non-amphiphilic 9-phenylanthracene Assembled in Langmuir-Blodgett film mixed with Stearic Acid" [*J. Phys. and Chem. of Solids* **60**, 111-118 \(1999\)](#)
31. T. K. Parichha and **G. B. Talapatra** "A spectroscopic study of non-amphiphilic 7-methylbenzo [*a*] pyrene assembled in Langmuir-Blodgett film mixed with stearic acid" [*Optical Materials* **11**, 9-15 \(1998\)](#)
32. T. K. Parichha, and **G. B. Talapatra**, "Multipolar interaction mediated Spectral Diffusion in disordered mixed molecular solid: A Monte Carlo Study", [*J. Lumin.* **78**,7-17 \(1998\)](#)
33. T. K. Parichha, and **G. B. Talapatra**, "Energy Transfer and Trapping in Mixed Molecular Solid: A Monte Carlo Simulation Study", [*Chem. Phys. Letts.* **257**, 622-626 \(1996\)](#)
34. T. K. Parichha, T. K. Acharyya, R. Dutta Roy and **G. B. Talapatra**, "A Monte Carlo Simulation of thermally activated spectral diffusion for an energetic and substitutionally disordered system", [*J. Lumin.* **68**, 35-42 \(1996\)](#)
35. A. K. Dutta, **G. B. Talapatra** and T. N. Misra, "Exciton Transport Mechanism in 1,4-Dibromonaphthalene and 1-Bromo-4-Chloronaphthalene (BCN) Mixed Crystal at 77K", [*Bull. Chem. Soc. Jpn.*, **68**, 3331-3335 \(1995\)](#)
36. A. K. Dutta, T. N. Misra and **G. B. Talapatra**, "A Monte Carlo Simulation of Spectral Diffusion in presence of Energetic and Substitutional Disorders", [*Chem. Phys. Letts.* **212**, 637 \(1993\)](#)
37. W. M. K. P. Wijekoon, S. P. Karna, **G. B. Talapatra** and P. N. Prasad, "Second Harmonic Generation studies of different Molecular Orientation of Langmuir-Blodgett films fabricated by Vertical and Horizontal dipping techniques", [*J. Opt. Soc. Am. B.* **10**, 213-221 \(1993\)](#)
38. **G. B. Talapatra**, N. Manickam, M. Samoc, M. E. Orezky, S. P. Karna and P. N. Prasad, "Nonlinear optical properties of the C60 molecule: Theoretical and Experimental Studies", [*J. Phys. Chem.*, **96**, 5206-5208 \(1992\)](#)
39. W. M. K. P. Wijekoon, B. Asgharian, M. Casstevens, M. Samoc, **G. B. Talapatra**, P. N. Prasad, T. Geisler and S. Rosenkilde, "Electrooptic effect in Langmuir-Blodgett films of 2-Docasylamino-5-nitropyridine probed by Surface Plasmon waves", [*Langmuir* **8**, 135-139 \(1992\)](#)
40. S. P. Karna, **G. B. Talapatra**, W. M. K. P. Wijekoon and P. N. Prasad, "Frequency dependence of linear and nonlinear optical properties of conjugated polyenes: An *AB initio* time dependent coupled-perturbed Hartree-Fock study", [*Phys. Rev. A.* **45**, 2763 \(1992\)](#)

41. S. P. Karna, **G. B. Talapatra** and P. N. Prasad, "Dispersion of linear and nonlinear optical properties of Benzene: An *AB initio* time dependent coupled-perturbed Hartree-Fock study", [*J. Chem. Phys.* **95**, 5873 \(1991\)](#)
42. S. P. Karna, Z. Laskowshki, **G. B. Talapatra** and P. N. Prasad, "A comparative study of the nonlinear optical properties of extended π -electron structure obtained by *AB initio* and INDO methods: Hexapentaene and Divinylacetylene", [*J. Phys. Chem.* **95**, 6508-6511 \(1991\)](#)
43. R. Dutta Ray and **G. B. Talapatra**, "On the Mechanism of the time dependent Spectral Diffusion in binary Solid Solutions of 1,4-Dibromonaphthalene and 1-Bromo-4-Chloronaphthalene", [*Chem. Phys. Lett.* **166**, 173, \(1990\)](#)
44. A. J. Pal, **G. B. Talapatra** and T. N. Misra, "Concentration Effect on Delayed Emissions: 1,4-Dibromonaphthalene Host-pyrene Guest Mixed Crystal System", [*Phys. Stat. Sol. \(b\)* **141**, 351-360, \(1987\)](#)
45. **G. B. Talapatra**, D. N. Rao and P. N. Prasad, "Time resolved Studies of Dynamics of Triplet State Spectral Diffusion in presence of both Orientational and Substitutional Disorders: Binary Solid Solution of 1,4-Dibromonaphthalene and 1-Bromo-4-Chloronaphthalene", [*Chem. Phys.* **101**, 147 \(1986\)](#)
46. **G. B. Talapatra**, D. N. Rao and P. N. Prasad, "Onset of Triplet State Spectral Diffusion in presence of both Orientational and Substitutional Disordered Solid Solution of 1,4-Dibromonaphthalene and 1-Bromo-4-Chloronaphthalene", [*J. Phys. Chem.* **89**, 3217-3222 \(1985\)](#)
47. **G. B. Talapatra**, D. N. Rao and P. N. Prasad, "Spectral Diffusion within the Inhomogeneously Broadened $n-\pi^*$ singlet-triplet transition of the Orientationally Disordered Solids of 4-Bromo-4'-Chlorobenzophenon", [*J. Phys. Chem.* **88**, 4636-4640 \(1984\)](#)
48. J. Swiatkiewics, **G. B. Talapatra**, R. J. Kurland and P. N. Prasad, "Phonon Echo in Organic Solids", [*J. Chem. Phys.* **78**, 7500 \(1983\)](#)
49. **G. B. Talapatra** and T. N. Misra, "Delayed Luminescence of Organic Mixed Crystals: Delayed Excimer Fluorescence of Pyrene in p-terphenyl", [*Phys. Stat. Sol. \(b\)* **114**, 73-82 \(1982\)](#)
50. **G. B. Talapatra** and T. N. Misra, "Homofusion and Heterofusion of Triplet Excitons in a Real Organic Mixed Crystal: Biphenyl Host-Naphthalene and Pyrene Guest System", [*J. Chem. Phys.* **77**, 2290 \(1982\)](#)
51. **G. B. Talapatra** and T. N. Misra, "Decay and Build-up Characteristics of Delayed Luminescence in a Real Organic Mixed Crystal: Naphthalene Host-Chrysene Guest System", [*J. Chem. Phys.* **75**, 3684 \(1981\)](#)
52. **G. B. Talapatra** and T. N. Misra, "Guest Excitation Energy in Dilute Organic Mixed Crystals with Chemically Distinct Guests", [*Chem. Phys. Lett.* **76**, 42-46 \(1980\)](#)