

# **CURRICULUM VITAE**

**Dr. NILMONI SARKAR**

**A. Name** : Nilmoni Sarkar

**B. Date of Birth** : 25-01-1965

**C. Institution** : Indian Institute of Technology, Kharagpur 721 302

**D. Whether SC/ST/OBC** : No

**E. Academic & Professional Qualification :**

1983-1986	B. Sc. (Chemistry Hons.)	Burdwan University (Rank: 1 <sup>st</sup> )
1986-1988	M.Sc. (Chemistry) (Physical Chemistry Special)	-do- (Rank: 2 <sup>nd</sup> )
1990-1994	Ph. D. (Science)	Indian Assoc. For the Cultivation of Science, Jadavpur, Calcutta 700 032 Thesis Advisor: Prof. Kankan Bhattacharyya
1994-96	Research Associate (CSIR)	-do-
1996 (March) -1996 (May)	Postdoctoral Fellow (JSPS)	Institute for Molecular Science, Japan Advisor: Prof. K. Yoshihara
1996 (June)- 1998 (Feb)	Postdoctoral Fellow	The Institute of Physical and Chemical Research (RIKEN), Japan. Advisor: Prof. H. Hayashi
1998 (March)- 1998 (June)	Postdoctoral Fellow (JSPS)	Institute for Molecular Science, Japan Advisor: Prof. T. Tahara
1998 (June)- 2004 (August)	Assistant Professor	IIT, Kharagpur
2004 (August)- 2008 (December)	Associate Professor	IIT, Kharagpur
2005 (May)- 2006 (May)	Visiting Scientist	CEA, Saclay France Host: Professor Thomas Gustavsson
2008 (December)-	Professor	IIT, Kharagpur

**F. Awards/Honours:**

- (1) Awarded Dr. M. N. Ghosh memorial gold medal for securing 1st position in B. Sc. (Chemistry Hons.) examination, 1986.
- (2) University Grant Commission (UGC) National Scholarship from 1986-1988 for securing 1st position in B. Sc. (Chemistry Hons.) examination.
- (3) Japan Society for Promotion of Science (JSPS) short-term Post-doctoral fellowship from March 1996- May 1996.
- (4) Japan Society for Promotion of Science (JSPS) fellowship from March 1998-June 1998.

(5) Chemical Physics Letters most cited paper 2003-2007 award for the paper Chem. Phys. Lett. 381 (2003) 697-704.

(6) Reviewer Journal of American Chemical Society, J. Physical Chemistry, J. Physical Chemistry Letters, J. Chemical Physics, Langmuir, J. Photochemistry. Photobiol.A &B, J. Colloid and Surface Sci., J. Industrial Engineering and Chemistry, Chemical Physics Letters, Angew Chem., J. Mol. Liq., J. Luminescence, Chem. Rev., ACS Nano., ACS Applied Materials and Interfaces, Talanta.

## **G. TEACHING EXPERIENCE**

### **At the Undergraduate level:**

#### **Theory Courses:**

- 1) Chemistry Theory for the B. Tech. 1<sup>st</sup> year students.
- 2) Chemistry Tutorial for the B. Tech. 1<sup>st</sup> year students.
- 3) Reaction Dynamics and Photochemistry for M.Sc. 5<sup>th</sup> year students.
- 4) Chemical Applications of Group Theory for M. Sc. 4<sup>th</sup> year students.
- 5) Instrumental Methods of Chemical Analysis for M.Sc. 4<sup>th</sup> year students.
- 6) Quantum Chemistry-I for M. Sc. 4<sup>th</sup> year students.
- 7) Symmetry, Spectroscopy and Reaction Dynamics for M.Sc. 4<sup>th</sup> year students.
- 8) Introduction to Quantum Chemistry and Spectroscopy
- 9) Chemistry Theory for Preparatory students

#### **Laboratory Courses:**

- 1) Chemistry Lab. for the B. Tech. 1<sup>st</sup> year students.
- 2) Chemistry Lab. for the M. Sc. 5<sup>th</sup> year students in both autumn and spring semesters.

### **H. Publications:**

Books : Nil      Research Papers : 159      General Articles : X

Patents : Nil      Others (Conferences) : 02      Submitted : 06

### **Research Specialization:**

Extensive experience in linear spectroscopy, nonlinear laser spectroscopy, time resolved studies, photochemistry, femtosecond fluorescence up-conversion technique, fluorescence spectroscopy in organised assemblies, surface second harmonic generation (SSHG) and magnetic field effect in small molecules in the gas phase, spectroscopy in Room temperature ionic liquids (RTILs), fluorescence correlation spectroscopy (FCS), fluorescence lifetime imaging microscopy (FLIM).

### **Research Guidance:**

**Ph.D. Guidance: 12 (Twelve) degree awarded and 06 (six) under progress.**

**M. Sc. (Thesis guided): 18**

**H. List of Publications:** See below

## Full Publication List

### **2016**

152. Comparative Fluorescence Resonance Energy-Transfer Study in Pluronic Triblock Copolymer Micelle and Niosome Composed of Biological Component Cholesterol: An Investigation of Effect of Cholesterol and Sucrose on the FRET Parameters. A. Roy, N. Kundu, D. Banik, J. Kuchlyan, N. Sarkar. *J. Phys. Chem. B*, 2016, *120*, 131–142.

151. Unveiling the Mode of Interaction of Berberine Alkaloid in Different Supramolecular Confined Environments: Interplay of Surface Charge between Nano-Confined Charged Layer and DNA. N. Kundu, A. Roy, D. Banik, N. Sarkar *J. Phys. Chem. B* 2016, *120*, 1106–1120.

### **2015**

150. Preparation of Carbon Nanotube Doped Ceramic Powders for Plasma Spraying Using Heterocoagulation Method S. C. Jambagi, N. Sarkar, P.P. Bandyopadhyay *J. Eur. Ceram. Soc.*, 2015, *35*, 989-1000.

149. Picosecond Solvation Dynamics—A Potential Viewer of DMSO—Water Binary Mixtures. D. Banik, N. Kundu, J. Kuchlyan, A. Roy, C. Banerjee, S. Ghosh, N. Sarkar. *J. Chem. Phys.*, 2015, *142*, 054505(1) - 054505(10).

148. How Does the Surface Charge of Ionic Surfactant and Cholesterol Forming Vesicles Control Rotational and Translational Motion of Rhodamine 6G Perchlorate (R6G ClO<sub>4</sub>)? S. Ghosh, A. Roy, D. Banik, N. Kundu, J. Kuchlyan, A. Dhir, N. Sarkar. *Langmuir*, 2015, *31*, 2310-2320.

147. Vesicles Formation by Zwitterionic Micelle and Poly-L-lysine: Solvation and Rotational Relaxation Study. J. Kuchlyan, D. Banik, A. Roy, N. Kundu, N. Sarkar. *J. Phys. Chem. B*, 2015, *119*, 8285–8292.

146. Picosecond Solvation and Rotational Dynamics: An Attempt to Reinvestigate the Mystery of Alcohol–Water Binary Mixtures. D. Banik, A. Roy, N. Kundu, N. Sarkar. *J. Phys. Chem. B*, 2015, *119*, 9905–9919.

145. How does Bile Salt Penetration Affect the Self-Assembled Architecture of Pluronic P123 Micelles? – Light Scattering and Spectroscopic Investigations. A. Roy, N. Kundu, D. Banik, J. Kuchlyan, N. Sarkar. *Phys. Chem. Chem. Phys.*, 2015, *17*, 19977-19990.

144. Modulation of the Aggregation Properties of Sodium Deoxycholate in Presence of Hydrophilic Imidazoliumbased Ionic Liquid: Water Dynamics Study to probe the structural alteration of the aggregates.

N. Kundu, D. Banik, A. Roy, J. Kuchlyan, N. Sarkar. *Phys. Chem. Chem. Phys.*, 2015, *17*, 25216–25227.

143. Graphene Oxide and Pluronic Copolymer Aggregates—Possible Route to Modulate the Adsorption of Fluorophores and Imaging of Live Cells.

N. Kundu, A. Roy, D. Banik, J. Kuchlyan, N. Sarkar. *J. Phys. Chem. C*, 2015, *119*, 25023–25035.

142. Spectroscopy and Fluorescence Lifetime Imaging Microscopy To Probe the Interaction of Bovine Serum Albumin With Graphene Oxide.

J. Kuchlyan, N. Kundu, D. Banik, A. Roy, J. Kuchlyan, N. Sarkar. *Langmuir*, 2015, *31*, 13793–13801.

141. Stimuli-Sensitive Breathing of Cucurbit[7]uril Cavity: Monitoring through the Environment Responsive Fluorescence of 1'-Hydroxy-2'-acetonaphthone (HAN). D. Banik, J. Kuchlyan, A. Roy, N. Kundu, N. Sarkar. *J. Phys. Chem. B*, 2015, *119*, 2310–2322.

## 2014

140. Excited-State Proton Transfer Dynamics of Firefly's Chromophore D-Luciferin in DMSO–Water Binary Mixture.

Kuchlyan, J.; Banik, D.; Roy, A.; Kundu, N.; Sarkar, N. *J. Phys. Chem. B* **2014**, *118*, 13946–13953.

139. 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.

Ghosh, S.; Banik, D.; Roy, A.; Kundu, N.; Kuchlyan, J.; Sarkar, N. *Phys. Chem. Chem. Phys.* **2014**, *16*, 25024–25038.

138. Ultrafast FRET to Study Spontaneous Micelle-to-Vesicle Transitions in an Aqueous Mixed Surface-Active Ionic-Liquid System.

S. Mandal, J. Kuchlyan, D. Banik, S. Ghosh, C. Banerjee, V. Khorwal, N. Sarkar. *ChemPhysChem*, DOI: 10.1002/cphc.201402372.

137. Organic Additive, 5-Methylsalicylic Acid Induces Spontaneous Structural Transformation of Aqueous Pluronic Triblock Copolymer Solution: A Spectroscopic Investigation of Interaction of Curcumin with Pluronic Micellar and Vesicular Aggregates.

S. Ghosh, J. Kuchlyan, D. Banik, N. Kundu, A. Roy, C. Banerjee, N. Sarkar, *J. Phys. Chem. B*. DOI: 10.1021/jp507378w

**136.** Interaction of fluorescence dyes with 5-fluorouracil: A photoinduced electron transfer study in bulk and biologically relevant water.

J. Kuchlyan, D. Banik, N. Kundu, A. Roy, N. Sarkar. *Chem. Phys. Lett.* **2014**, *613*, 115–121.

**135.** Effect of Encapsulation of Curcumin in Polymeric Nanoparticles: How Efficient to Control ESIPT Process?

C. Banerjee, S. Maiti, M. Mustafi, J. Kuchlyan, D. Banik, N. Kundu, D. Dhara, N. Sarkar, *Langmuir*, **2014**, *30*, 10834–10844.

**134.** Stimuli-Sensitive Breathing of Cucurbit[7]uril Cavity: Monitoring through the Environment Responsive Fluorescence of 1'-Hydroxy-2'-acetonaphthone (HAN).

D. Banik, J. Kuchlyan, A. Roy, N. Kundu, N. Sarkar, *J. Phys. Chem. B*, DOI: 10.1021/jp5064879.

**133.** 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)<sub>2</sub> in Surfactant Micelles, and Surfactant/Cholesterol Forming Vesicles.

S. Ghosh, J. Kuchlyan, S. Roychowdhury, D. Banik, N. Kundu, A. Roy, N. Sarkar. *J. Phys. Chem. B*, **2014**, *118*, 9329–9340.

**132.** Interaction of gold nanoclusters with IR light emitting cyanine dyes: a systematic fluorescence quenching study.

C. Banerjee, J. Kuchlyan, D. Banik, N. Kundu, A. Roy, S. Ghosh, N. Sarkar. *Phys. Chem. Chem. Phys.*, **2014**, *16*, 17272–17283.

**131.** Vesicles Formed in Aqueous Mixtures of Cholesterol and Imidazolium Surface Active Ionic Liquid: A Comparison with Common Cationic Surfactant by Water Dynamics.

S. Mandal, J. Kuchlyan, S. Ghosh, C. Banerjee, N. Kundu, D. Banik, N. Sarkar. *J. Phys. Chem. B*, **2014**, *118*, 5913–5923.

**130.** Effect of Room Temperature Surface Active Ionic Liquids on Aggregated Nanostructures of  $\gamma$ -Cyclodextrins: A Picosecond Fluorescence Spectroscopic Study.

J. Kuchlyan, C. Banerjee, S. Ghosh, N. Kundu, D. Banik, N. Sarkar. *Chem. Phys. Lett.*, **2014**, *601*, 174–180.

**129.** Exploring the Photophysics of Curcumin in Zwitterionic Micellar System: An Approach to Control ESIPT Process in Presence of Room Temperature Ionic Liquids (RTILs) and Anionic Surfactant

C. Banerjee, S. Ghosh, S. Mandal, J. Kuchlyan, N. Kundu, N. Sarkar, *J. Phys. Chem. B*, **2014**, *118*, 3669–3681.

**128.** Effect of Confinement on Excited-State Proton Transfer of Firefly's Chromophore d-Luciferin in AOT Reverse Micelles

J. Kuchlyan, D. Banik, N. Kundu, S. Ghosh, C. Banerjee, N. Sarkar, *J. Phys. Chem. B*, 2014, 118, 3401–3408.

## 2013

**127.** A joint experimental/theoretical study of the ultrafast excited state deactivation of deoxyadenosine and 9-methyladenine in water and acetonitrile

T. Gustavsson, N. Sarkar, I. Vayá, M. C. Jiménez, D. Markovitsia, R. Improta. *Photochem. Photobiol. Sci.*, 2013, 12, 1375–1386.

**126.** Is it possible to apply dynamics of solvent to locate metal nanoparticles inside an ionic liquids-containing microheterogeneous system? A comparative study. Banerjee, S. Mandal, S. Ghosh, J. Kuchlyan, N. Sarkar. *Chem. Phys. Lett.*, 2013, 580, 88–93.

**125.** Zwitterionic micelles as a soft template for the extremely rapid synthesis of small hollow gold nanocontainers.

V. G. Rao, C. Bnaerjee, S. Mandal, S. Ghosh, N. Sarkar, *RSC Advances*, 2013, 3, 14963-14969.

**124.** Curcumin in Reverse Micelle: An Example to Control Excited-State Intramolecular Proton Transfer (ESIPT) in Confined Media

C. Banerjee, C. Ghatak, S. Mandal, S. Ghosh, J. Kuchlyan, N. Sarkar, *J. Phys. Chem. B*, 2013, 117, 6906–6916.

**123.** 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.

S. Mandal, S. Ghosh. D. Banik, C, Banerjee, J. Kuchlyan, N. Sarkar. *J. Phys. Chem. B*, 2013, 117, 13795-13807

**122.** Unique Photophysical Behavior of 2,2'-Bipyridine-3,3'-diol in DMSO-Water Binary Mixtures: Potential Application for Fluorescence Sensing of Zn<sup>2+</sup> Based on the Inhibition of Excited-State Intramolecular Double Proton Transfer.

S. Mandal, S. Ghosh, C. Banerjee, J. Kuchlyan, N. Sarkar. *J. Phys. Chem. B*, 2013, 117, 12212–12223.

**121.** Fluorescence Resonance Energy Transfer in Microemulsions Composed of Tripled-Chain Surface Active Ionic Liquids, RTILs, and Biological Solvent: An Excitation Wavelength Dependence Study.

C. Banerjee, N. Kundu, S. Ghosh, S. Mandal, J. Kuchlyan, N. Sarkar. *J. Phys. Chem. B*, 2013, 117, 9508–9517.

**120.** Spontaneous Transition of Micelle–Vesicle–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.

S. Ghosh, C. Ghatak, C. Banerjee, S. Mandal, J. Kuchlyan, N. Sarkar. *Langmuir*, 2013, 29, 10066–10076.

**119.** A Step toward the Development of High-Temperature Stable Ionic Liquid-in-Oil Microemulsions Containing Double-Chain Anionic Surface Active Ionic Liquid.

V. G. Rao, C. Banerjee, S. Ghosh, S. Mandal, J. Kuchlyan, N. Sarkar. *J. Phys. Chem. B*, 2013, 117, 7472–7480.

**118.** Modulation of the Photophysical Properties of Curcumin in Nonionic Surfactant (Tween-20) Forming Micelles and Niosomes: A Comparative Study of Different Microenvironments

S. Mandal, C. Banerjee, S. Ghosh, J. Kuchlyan, N. Sarkar. *J. Phys. Chem. B*, 2013, 117, 6957–6968.

**117.** 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.

S. Mandal, S. Ghosh, C. Banerjee, J. Kuchlyan, N. Sarkar. *J. Phys. Chem. B*, 2013, 117, 6789–6800.

**116.** Effect of Alkyl Chain of Room Temperature Ionic Liquid (RTILs) on the Phase Behavior of [C<sub>2</sub>mim][C<sub>n</sub>SO<sub>4</sub>]/TX-100/Cyclohexane Microemulsions: Solvent and Rotational Relaxation Study.

S. Ghosh, C. Banerjee, S. Mandal, V. G. Rao, N. Sarkar. *J. Phys. Chem. B*, 2013, 117, 5886–5897.

**115.** Unique Characteristics of Ionic Liquids Comprised of Long-Chain Cations and Anions: A New Physical Insight.

C. Banerjee, S. Mandal, S. Ghosh, J. Kuchlyan, N. Kundu, N. Sarkar. *J. Phys. Chem. B*, 2013, **117**, 3927–3934.

**114.** A Novel Ionic Liquid-in-Oil Microemulsion Composed of Biologically Acceptable Components: An Excitation Wavelength Dependent Fluorescence Resonance Energy Transfer Study.

S. Mandal, S. Ghosh, C. Banerjee, J. Kuchlyan, D. Banik, N. Sarkar. *J. Phys. Chem. B*, 2013, 117, 3221–3231.

**113.** Phase Boundaries, Structural Characteristics, and NMR Spectra of Ionic Liquid-in-Oil Microemulsions Containing Double Chain Surface Active Ionic Liquid: A Comparative Study

V. G. Rao, S. Mandal, S. Ghosh, C. Banerjee, N. Sarkar. *J. Phys. Chem. B*, 2013, 117, 1480–1493

**112.** 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.

S. Mandal, S. Ghosh, H. H. K. Aggala, C. Banerjee, V. G. Rao, N. Sarkar. *Langmuir*, 2013, 29, 133-143.

**111.** Solvent and rotational relaxation of coumarin-153 and coumarin-480 in ionic liquid (1-butyl-3-methylimidazolium tetrafluoroborate) modified sodium 1,4-bis(2-ethylhexyl) sulfosuccinate (NaAOT) micelle.

V. G. Rao, C. Banerjee, S. Mandal, S. Ghosh, N. Sarkar. *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy* 2013, 102, 371–378.

## **2012**

**110.** Protic ionic liquid-induced changes in the properties of aqueous triton TX-100–CTAB surfactant solution: Solvent and rotational relaxation studies.

V. G. Rao, U. Brahmachari, S. Mandal, S. Ghosh, C. Banerjee, N. Sarkar. *Chemical Physics Letters*, 552 (2012) 38–43.

**109.** Aggregation Behavior of Triton X-100 with a Mixture of Two Room Temperature Ionic Liquids: Can We Identify the Mutual Penetration of Ionic Liquids in Ionic Liquid Containing Micellar Aggregates?

V. G. Rao, S. Mandal, S. Ghosh, C. Banerjee, N. Sarkar. *J. Phys. Chem. B*, 116 (2012), 13868–13877.

**108.** Study of Fluorescence Resonance Energy Transfer in Zwitterionic Micelle: Ionic-Liquid-Induced Changes in FRET Parameters.

V. G. Rao, S. Mandal, S. Ghosh, C. Banerjee, N. Sarkar. *J. Phys. Chem. B*, 116 (2012), 12021–12029.

**107.** Tuning the Probe Location on Zwitterionic Micellar System with Variation of pH and Addition of Surfactants with Different Alkyl Chains: Solvent and Rotational Relaxation Studies.

C. Banerjee, S. Mandal, S. Ghosh, V. G. Rao, N. Sarkar. *J. Phys. Chem. B*. 116 (2012), 11313–11322.

**106.** 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.

S. Ghosh, S. Mandal, C. Banerjee, V. G. Rao, N. Sarkar. *J. Phys. Chem. B*, 116 (2012), 9482–9491

**105.** 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][TF<sub>2</sub>N]/[C<sub>4</sub>mim][AOT]/Benzene Microemulsions.

V. G. Rao, S. Mandal, S. Ghosh, C. Banerjee, N. Sarkar. *J. Phys. Chem. B*, 116 (2012), 8210–8221

**104.** Modulation of Photophysics and Photodynamics of 1'-Hydroxy-2'-acetonaphthone (HAN) in Bile Salt Aggregates: A Study of Polarity and Nanoconfinement Effects.

S. Mandal, S. Ghosh, C. Banerjee, V. G. Rao, N. Sarkar. *J. Phys. Chem. B*, 116 (2012), 8780–8792



**103.** Photoinduced electron transfer between various coumarin analogues and N,N-dimethylaniline inside niosome, a nonionic innocuous polyethylene glycol-based surfactant assembly.

C. Ghatak, V. G. Rao, S. Mandal, N. Sarkar. *Phys. Chem. Chem. Phys*, 14 (2012), 8925-8935.

**102.** Ionic Liquid-Induced Changes in the Properties of Aqueous Zwitterionic Surfactant Solution: Solvent and Rotational Relaxation Studies.

V. G. Rao, C. Ghatak, S. Ghosh, S. Mandal, N. Sarkar. *J. Phys. Chem. B*, 116(2012), 3690-3698.

**101.** Dynamics of Solvation and Rotational Relaxation of Coumarin 480 in Pure Aqueous-AOT Reverse Micelle and Reverse Micelles Containing Different Size Silver Nanoparticles Inside its Core: A Comparative Study.

P. Setua, C. Ghatak, V. G. Rao, S. K. Das, N. Sarkar. *J. Phys. Chem. B*, 116(2012), 3704-3712

**100.** The Chameleon-Like Nature of Zwitterionic Micelles: The Effect of Ionic Liquid Addition on the Properties of Aqueous Sulfobetaine Micelles.

V. G. Rao, C. Ghatak, S. Ghosh, S. Mandal, N. Sarkar. *ChemPhysChem* DOI: 10.1002/cphc.201100866.

**99.** Förster resonance energy transfer among a structural isomer of adenine and various Coumarins inside a nanosized reverse micelle.

C. Ghatak, V. G. Rao, S. Mandal, R. Pramanik, S. Sarkar, P. K. Verma, N. Sarkar. *Spectrochimica Acta Part A* 89 (2012) 67.

**98.** Designing a New Strategy for the Formation of IL-in-Oil Microemulsions.

V. G. Rao, S. Ghosh, C. Ghatak, S. Mandal, U. Brahmachari, N. Sarkar. *J. Phys. Chem. B*, 116 (2012) 2850.

**97.** An Understanding of the Modulation of Photophysical Properties of Curcumin inside a Micelle Formed by an Ionic Liquid: A New Possibility of Tunable Drug Delivery System.

C. Ghatak, V. G. Rao, S. Mandal, S. Ghosh, N. Sarkar. *J. Phys. Chem. B* 116 (2012) 3369.

**96.** Pluronic Micellar Aggregates Loaded with Gold Nanoparticles (Au NPs) and Fluorescent Dyes: A Study of Controlled Nanometal Surface Energy Transfer.

S. Mandal, C. Ghatak, V. G. Rao, S. Ghosh, N. Sarkar. *J. Phys. Chem. C* 116 (2012) 5585

**95.** Photoinduced Electron Transfer in an Imidazolium Ionic Liquid and in Its Binary Mixtures with Water, Methanol, and 2-Propanol: Appearance of Marcus-Type of Inversion.

S. Sarkar, S. Mandal, C. Ghatak, V. G. Rao, S. Ghosh, N. Sarkar. *J. Phys. Chem. B* 116 (2012) 1335

**2011**

**94.** Solvation Dynamics and Rotational Relaxation Study Inside Niosome, A Nonionic Innocuous Poly (ethylene Glycol)-Based Surfactant Assembly: An Excitation Wavelength Dependent Experiment.

C. Ghatak, V. G. Rao, S. Ghosh, S. Mandal, N. Sarkar. *J. Phys. Chem. B* 115 (2011) 12514.

**93.** Photophysics and Photodynamics of 10-Hydroxy-20-acetonaphthone (HAN) in Micelles and Nonionic Surfactants Forming Vesicles: A Comparative Study of Different Microenvironments of Surfactant Assemblies.

S. Mandal, V. G. Rao, C. Ghatak, R. Pramanik, S. Sarkar, N. Sarkar, *J. Phys. Chem. B* 115 (2011) 12108.

**92.** Solvation and Rotational Dynamics of Coumarin-153 in Ethylammonium Nitrate Containing  $\gamma$ -Cyclodextrin.

V. G. Rao, C. Ghatak, R. Pramanik, S. Sarkar, N. Sarkar. *J. Phys. Chem. B* 115 (2011) 10500.

**91.** Solvent and rotational relaxation study in ionic liquid containing reverse micellar system: A picosecond fluorescence spectroscopy study.

R. Pramanik, S. Sarkar, C. Ghatak, V. G. Rao, N. Sarkar. *Chem. Phys.Lett.* 512 (2011) 217.

**90.** Synthesis of Silver Nanoparticle in Imidazolium and Pyrrolidinium Based Ionic Liquid Reverse Micelles: A Step Forward in Nanostructure Inorganic Material in Room Temperature Ionic Liquid Field.

P. Setua, R. Pramanik, S. Sarkar, C. Ghatak, V. G. Rao, S. K. Das, N. Sarkar. *J. Mol. Liq.* 162 (2011) 33.

**89.** Effects of 1-butyl-3-methyl Imidazolium Tetrafluoroborate Ionic Liquid on TX-100 Aqueous Micelles: Solvent and Rotational Relaxation Studies.

R. Pramanik, S. Sarkar, C. Ghatak, V. G. Rao, S. Mandal, N. Sarkar, *J. Phys. Chem. B* 115 (2011) 6957.

**88.** Nanocavity Effect on Photophysical Properties of Colchicine: A Proof by Circular Dichromism Study and Picosecond Time Resolved Analysis in Various Reverse Micellar Assemblies.

C. Ghatak, V. G. Rao, R. Pramanik, S. Sarkar, N. Sarkar, *J. Phys. Chem. B* 115 (2011) 6644.

**87.** Photoinduced Electron Transfer in a Room Temperature Ionic Liquid 1-Butyl-3-Methylimidazolium Octyl Sulfate Micelle: A Temperature Dependent Study.

S. Sarkar, S. Mandal, R. Pramanik, C. Ghatak, V. G. Rao, N. Sarkar, *J. Phys. Chem. B* 115 (2011) 6100.

**86.** Ionic Liquid-Induced Changes in Properties of Aqueous Cetyltrimethylammonium Bromide: A Comparative Study of Two Protic Ionic Liquids with Different Anions.

V. G. Rao, C. Ghatak, S. Ghosh, R. Pramanik, S. Sarkar, S. Mandal, N. Sarkar, *J. Phys. Chem. B* 115 (2011) 3828.

**85.** Room Temperature Ionic Liquid in Confined Media: A Temperature Dependence Solvation Study in [bmim][BF<sub>4</sub>]/BHDC/Benzene Reverse Micelles.

R. Pramanik, C. Ghatak, V. G. Rao, S. Sarkar, N. Sarkar, *J. Phys. Chem. B* 115 (2011) 5971.

**84.** Photoinduced intermolecular electron transfer in a room temperature imidazolium ionic liquid: An excitation wavelength dependence study.

S. Sarkar, R. Pramanik, C. Ghatak, V. G. Rao, N. Sarkar, *Chem. Phys. Lett.* 506 (2011) 211.

**83.** Ionic Liquid Containing Microemulsions: Probe by Conductance, Dynamic Light Scattering, Diffusion-Ordered Spectroscopy NMR Measurements, and Study of Solvent Relaxation Dynamics

R. Pramanik, S. Sarkar, C. Ghatak, V. G. Rao, N. Sarkar, *J. Phys. Chem. B* 115 (2011) 2322.

**82.** Characterization of 1-Ethyl-3-methylimidazolium bis(trifluoromethylsulfonyl)imide ([Emim][Tf<sub>2</sub>N])/TX-100/Cyclohexane ternary microemulsion : Investigation of Photoinduced Electron Transfer in this RTIL containing microemulsion

S. Sarkar, R. Pramanik, C. Ghatak, V.G. Rao, N. Sarkar, *J. Chem. Phys.* 134 (2011). 074507.

**81.** The effect of membrane fluidity on FRET parameters: an energy transfer study inside small unilamellar vesicle.

C. Ghatak, V.G. Rao, R. Pramanik, S. Sarkar, N. Sarkar, *Phys. Chem. Chem. Phys.* 13 (2011) 3711.

**80.** Chemical dynamics in room-temperature ionic liquids: the role of hydrogen bonding.

S. Sarkar, R. Pramanik, N. Sarkar

Edited by Han, Ke-Li; Zhao, Guang-Jiu From Hydrogen Bonding and Transfer in the Excited State (2011), 1, 331-340.

## **2010**

**79.** Effect of water on the solvent relaxation dynamics in an ionic liquid containing microemulsion of 1-butyl-3-methyl imidazolium tetrafluoroborate/TritonX-100/cyclohexane.

R. Pramanik, S. Sarkar, C. Ghatak, P. Setua V.G. Rao, N. Sarkar, *Chem. Phys. Letters*, 490 (2010) 154.

**78.** Solvent and rotational relaxation of Coumarin-153 in a micellar solution of a room-temperature ionic liquid, 1-butyl-3-methylimidazolium octyl sulfate, in ethylammonium nitrate.

V.G. Rao, C. Ghatak, R. Pramanik, S. Sarkar, N. Sarkar, *Chem. Phys. Letters*, 499 (2010) 89.

**77.** Synthesis of Silver Nanoparticle Inside the Nonaqueous Ethylene Glycol Reverse Micelle and a Comparative Study to Show the Effect of the Nanoparticle on the Reverse Micellar Aggregates through Solvation Dynamics and Rotational Relaxation Measurements.

P. Setua, R. Pramanik, S. Sarkar, C. Ghatak, S. K. Das, N. Sarkar, *J. Phys. Chem. B*, 114 (2010) 7557.

**76.** Microemulsions with Surfactant TX100, Cyclohexane, and an Ionic Liquid Investigated by Conductance, DLS, FTIR Measurements, and Study of Solvent and Rotational Relaxation within this Microemulsion.

R. Pramanik, S. Sarkar, C. Ghatak, V.G. Rao, P. Setua, N. Sarkar, *J. Phys. Chem. B*, 114 (2010) 7579.

**75.** Effect of polymer, poly (ethylene glycol)(PEG-400), on solvent and rotational relaxation of coumarin-480 in an ionic liquid containing microemulsions.

R. Pramanik, S. Sarkar, C. Ghatak, P. Setua, N. Sarkar, *Phys. Chem. Chem. Phys.*, 12 (2010) 3878.

**74.** Probing the Interaction of 1-Ethyl-3-methylimidazolium Ethyl Sulfate ([Emim][EtSO<sub>4</sub>]) with Alcohols and Water by Solvent and Rotational Relaxation.

S. Sarkar, R. Pramanik, C. Ghatak, P. Setua, N. Sarkar, *J. Phys. Chem. B*, 114 (2010) 2779.

## **2009**

**73.** To probe the structure of methanol and Aerosol OT (AOT) in AOT reverse micelles by FTIR measurements.

P. Setua, D. Seth, N. Sarkar, *Phys. Chem. Chem. Phys.*, 11 (2009) 8913.

**72.** Photoinduced electron transfer (PET) from N, N-dimethylaniline to 7-amino Coumarin dyes in a room temperature ionic liquid (RTIL): Slowing down of electron transfer rate compared to conventional solvent.

S. Sarkar, R. Pramanik, D. Seth, P. Setua, N. Sarkar, *Chem. Phys. Letters*, 477 (2009) 102.

**71.** To Probe the Interaction of Methanol and Acetonitrile with the Ionic Liquid N,N,N- Trimethyl-N-propyl Ammonium Bis(trifluoromethanesulfonyl) Imide at Different Temperatures by Solvation Dynamics Study.

R. Pramanik, V.G. Rao, S. Sarkar, C. Ghatak, P. Setua, N. Sarkar, *J. Phys. Chem. B*, 113 (2009) 8626.

**70.** Direct Observation of Solvation Dynamics in Aqueous Reverse Micellar System Containing Silver Nanoparticle in the Reverse Micellar Core.

P. Setua, R. Pramanik, S. Sarkar, D. Seth, N. Sarkar, *J. Phys. Chem. B*, 113 (2009) 5677.

**69.** Photophysical Studies of a Hemicyanine Dye (LDS-698) in Dioxane-Water Mixture and in Different Alcohols and in a Room Temperature Ionic Liquid

D. Seth, S. Sarkar, R. Pramanik, C. Ghatak, P. Setua, N. Sarkar, *J. Phys. Chem. B*, 113 (2009) 6826.

**68.** Dynamics of Solvent and rotational relaxation of room temperature ionic liquid (RTILs) in RTIL containing microemulsions.

D. Seth, and N. Sarkar, Review book Microemulsions: Properties and Applications, Surfactant Science Series, Taylor and Francis/ CRC Press, **2009**, 203-246.

## **2008**

**67.** Solvent and rotational relaxation of Coumarin 153 in a protic ionic liquid dimethyl ethanol ammonium formate

D. Seth, S. Sarkar, N. Sarkar, *J. Phys. Chem. B* 112 (2008) 2629.

**66.** Assessing solvent effects on the singlet excited state lifetime of uracil derivatives: A femtosecond fluorescence upconversion study in alcohols and D<sub>2</sub>O

T. Gustavsson, N. Sarkar, A. Banyasz, D. Markovitsi, R. Improta, *Chem. Phys.*, 350 (2008) 186.

**65.** Dynamics of solvent and rotational relaxation of Coumarin 153 in a room temperature ionic liquid Butyl-3-methylimidazolium octyl sulfate forming micellar structure

D. Seth, S. Sarkar, N. Sarkar, *Langmuir*, 24 (2008) 7085.

**64.** Photoinduced Electron Transfer (PET) Reaction in Polymer-Surfactant aggregates : PET between N,N-dimethylaniline and 7-Amino Coumarin Dyes,

A Chakraborty, D. Seth, P. Setua, N. Sarkar, *J. Chem. Phys.*, 128 (2008) 204510.

## **2007**

**63.** Interaction of ionic liquid with water with variation of water content in 1-butyl-3-methylimidazolium hexafluorophosphate ([bmim][PF<sub>6</sub>])/TX-100/water ternary microemulsions monitored by solvent and rotational relaxation of Coumarin 153 and Coumarin 490

D. Seth, A. Chakraborty, P. Setua, N. Sarkar, *J. Chem. Phys.* 126 (2007) 224512/1.

**62.** Dynamics of Solvent and Rotational Relaxation of Coumarin-153 in Room Temperature Ionic Liquid 1-Butyl-3-methyl Imidazolium Tetrafluoroborate Confined in Poly(oxyethylene glycol) Ethers Containing Micelles

D. Seth, A. Chakraborty, P. Setua, N. Sarkar, *J. Phys. Chem. B*, 111 (2007) 4781.

**61.** Synthesis, Optical Properties, and Surface Enhanced Raman Scattering of silver Nanoparticles in Nonaqueous Methanol Reverse Micelles

P. Setua, A. Chakraborty, D. Seth, U. M. Bhatta, P. V. Satyam, N. Sarkar, *J. Phys. Chem. C*, 111 (2007) 3901.

**60.** Probing the interaction of ellagic acid with human serum albumin: A fluorescence spectroscopic study

R. K. Nanda, N. Sarkar, R. Banerjee, *J. Photochem. Photobiol. A.*, 192 (2007) 152.

**59.** Solvent Effects on the Steady-state Absorption and Fluorescence Spectra of Uracil, Thymine and 5-Fluorouracil

T. Gustavsson, A. Banyasz, N.Sarkar, D.Markovitsi, R. Improta, *Photochemistry and Photobiology* 83 (2007) 595.

**58.** Solvent relaxation of a room-temperature ionic liquid [bmim][PF<sub>6</sub>] confined in a ternary microemulsion

D. Seth, P. Setua, A. Chakraborty, N. Sarkar, *Journal of Chemical Sciences* (Bangalore, India) 119 (2007) 105.

**57.** Dynamics of solvent and rotational relaxation of ionic liquid confined in Microemulsion and Micelles

N. Sarkar, D. Seth, P. Setua, Book of Abstracts, *2<sup>nd</sup> International Congress of Ionic Liquids (COIL-2)*, Yokohama, Japan.

## **2006**

**56.** Singlet excited state dynamics of uracil and thymine derivatives: A femtosecond fluorescence upconversion study in acetonitrile

T. Gustavsson, N. Sarkar, E.Lazzarotto, D. Markovitsi, R. Improta, *Chem. Phys. Lett.*, 429 (2006) 551.

**55.** Solvent Effect on the Singlet Excited-state Dynamics of 5-Fluorouracil in Acetonitrile as Compared with Water

T. Gustavsson, N. Sarkar, E.Lazzarotto, D. Markovitsi, V. Barone, R. Improta, *J. Phys. Chem. B* 110 (2006) 12843.

**54.** Interaction of Ionic Liquid with Water in Ternary Microemulsions (TritonX-100/Water/1-Butyl-3-methylimidazolium Hexafluorophosphate) Probed by Solvent and Rotational Relaxation of Coumarin 153 and Coumarin 151

D. Seth, A. Chakraborty, P. Setua, N. Sarkar, *Langmuir* 22 (2006) 7768.

**53.** Photoinduced Electron Transfer in a Protein-Surfactant Complex: Probing the interaction of SDS with BSA

A. Chakraborty, D. Seth, P. Setua, N. Sarkar, *J. Phys. Chem. B* 110 (2006) 16607.

**52.** Photoinduced intermolecular electron transfer from dimethylaniline to 7- amino-Coumarin dyes on surface of  $\beta$ -cyclodextrin

A. Chakraborty, D. Chakraborty, D. Seth, N. Sarkar, *Spectrochimica Acta, Part A*, 64A (2006) 801.

**51.** Photoinduced electron transfer from N,N-dimethylaniline to 7-amino Coumarins in protein-surfactant complex: Slowing down of electron transfer dynamics compared to micelles

A. Chakraborty, D. Seth, P. Setua, N. Sarkar, *J. Chem. Phys.* 124 (2006) 074512.

**50.** Dynamics of Solvent and Rotational Relaxation of Glycerol in the Nanocavity of Reverse Micelles

A. Chakraborty, D. Seth, P. Setua, N. Sarkar, *J. Phys. Chem. B* 110 (2006) 5359.

**49.** Photoinduced intermolecular electron-transfer from electron donating solvents to Coumarin dyes in bile salt aggregates: Role of diffusion in electron transfer reaction

A. Chakraborty, D. Chakrabarty, D. Seth, P. Hazra, N. Sarkar, *Spectrochimica Acta, Part A*, 63A (2006) 594.

## **2005**

**48.** Dynamics of Solvent and Rotational Relaxation of Coumarin 153 in Room Temperature Ionic Liquid 1-Butyl-3-methylimidazolium Hexafluorophosphate Confined in Brij-35 Micelles: A Picosecond Time-Resolved Fluorescence Spectroscopic Study

A. Chakraborty, D. Seth, D. Chakrabarty, P. Setua, N. Sarkar, *J. Phys. Chem. A* 109 (2005) 11110.

**47.** Binding and relaxation behavior of Coumarin-153 in lecithin-taurocholate mixed micelles: A time resolved fluorescence spectroscopic study

D. Chakrabarty, A. Chakraborty, D. Seth, P. Hazra, N. Sarkar, *Chem. Phys. Lett.*, 412 (2005) 255.

**46.** Intramolecular charge transfer and solvation dynamics of coumarins in reverse micelles and mixed micelles

P. Hazra, D. Chakrabarty, N. Sarkar, **Photo/Electrochemistry & Photobiology in the Environment, Energy and Fuel** (2005), 305-356.

**45.** Study of energy transfer from 7-amino Coumarin donors to rhodamine 6G acceptor in lecithin vesicles and Sodium Taurocholate-lecithin mixed aggregates.

D. Seth, A. Chakraborty, P. Setua, D. Chakrabarty, N. Sarkar, *J. Phys. Chem. B* 109 (2005) 12080.

**44.** Photoinduced electron transfer from dimethyl aniline to coumarin dyes in reverse micelles

A. Chakraborty, D. Seth, D. Chakrabarty, P. Hazra, N. Sarkar, *Chem. Phys. Lett.* 405 (2005) 18.

**43.** Study of energy transfer from 7-amino Coumarin donors to rhodamine 6G acceptor in non-aqueous reverse micelles.

D. Seth, D. Chakrabarty, A. Chakraborty, N. Sarkar, *Chem. Phys. Lett.* 401 (2005)546.

**42.** Effect of alkyl chain length and size of the headgroups of the surfactant on solvent and rotational relaxation in micelles and mixed micelles

D. Chakrabarty, A. Chakraborty, D. Seth, P. Hazra, N. Sarkar, *J. Chem. Phys.* 122 (2005) 184516.

**41.** Dynamics of solvation and rotational relaxation of Coumarin 153 in an ionic liquid confined in a nanometer size microemulsions

D. Chakrabarty, D. Seth, A. Chakraborty, N. Sarkar, *J. Phys. Chem. B* 109 (2005) 5753.

**40.** Effect of water, methanol and acetonitrile on solvation relaxation and rotational relaxation of Coumarin153 in neat 1-hexyl-3-methyl-imidazolium hexafluorophosphate

D. Chakrabarty, A. Chakraborty, D. Seth, N. Sarkar, *J. Phys. Chem. A* 109 (2005) 1764.

## **2004**

**39.** Intramolecular charge transfer and solvation dynamics of Nile Red in the nanocavity of cyclodextrins

P. Hazra, D. Chakrabarty, A. Chakraborty, N. Sarkar, *Chem. Phys. Lett.* 388 (2004) 150.

**38.** Dynamics of solvation and rotational relaxation in neutral Brij 35 and Brij 58 micelles

D. Chakrabarty, P. Hazra, A. Chakraborty, N. Sarkar, *Chem. Phys. Lett.* 392 (2004) 340.

**37.** Dynamics of Photoisomerisation and rotational relaxation of 3,3-diethyloxadicyanine iodide in room temperature ionic liquid and binary mixture of ionic liquid and water

D. Chakrabarty, A. Chakraborty, P. Hazra, D. Seth, N. Sarkar, *Chem. Phys. Lett.* 397 (2004) 216.

**36.** Dynamics of solvation and rotational relaxation of Coumarin 153 in 1-butyl 3-methylimidazolium hexafluorophosphate [bmim][PF<sub>6</sub>]-water mixtures

D. Chakrabarty, A. Chakraborty, D. Seth, P. Hazra, N. Sarkar, *Chem. Phys. Lett.* 397 (2004) 469.

**35.** Effect of hydrogen bonding on intramolecular charge transfer in aqueous and non- aqueous reverse micelles

P. Hazra, D. Chakrabarty, A. Chakraborty, N. Sarkar, *J. Photochem. Photobiol. A* 167 (2004) 23

**34.** Probing protein-surfactant interaction by steady state and time- resolved fluorescence spectroscopy

P. Hazra, D. Chakrabarty, A. Chakraborty, N. Sarkar, *Biochem. Biophys. Res. Comm.* 314 (2004) 543.

**33.** Corrigendum to Photoinduced intermolecular electron transfer between Coumarin dyes and electron donating solvents in cetyltrimethylammonium bromide (CTAB) micelles: evidence for Marcus inverted region

A. Chakraborty, D. Chakrabarty, P. Hazra, D. Seth, N. Sarkar, *Chem. Phys. Lett.* 387 (2004) 517.

## **2003**

**32.** Solvation Dynamics of Coumarin 480 in TritonX-100 (TX-100) and Bile Salt Mixed Micelles



D. Chakrabarty, P. Hazra, N. Sarkar, *J. Phys. Chem. A* 107 (2003) 5887.

**31.** Solvation dynamics of Coumarin 480 in Bile salt-Cetyltrimethyl ammonium bromide (CTAB) and Bile salt-Tween 80 mixed micelles

D. Chakrabarty, P. Hazra, A. Chakraborty, N. Sarkar, *J. Phys. Chem. B* 107 (2003) 13643.

**30.** Solvation dynamics of Coumarin 153 in aqueous and non-aqueous reverse micelles

P. Hazra, D. Chakrabarty, N. Sarkar, *Chem. Phys. Lett.* 371 (2003) 553.

**29.** Solvation dynamics of coumarin 480 in Neutral (TX-100), anionic (SDS), and cationic (CTAB) water-in-oil microemulsions

P. Hazra, D. Chakrabarty, A. Chakraborty, N. Sarkar, *Chem. Phys. Lett.* 382 (2003) 71.

**28.** Dynamics of solvent relaxation in room temperature ionic liquids

D. Chakrabarty, P. Hazra, A. Chakraborty, D. Seth, N. Sarkar, *Chem. Phys. Lett.* 381 (2003) 697.

**27.** Photoinduced intermolecular electron transfer between Coumarin dyes and electron-donating solvents in cetyltrimethylammonium bromide (CTAB) micelles: evidence for Marcus inverted region

A. Chakraborty, D. Chakrabarty, P. Hazra, D. Seth, N. Sarkar, *Chem. Phys. Lett.* 382 (2003) 508.

## **2002**

**26.** Solvation dynamics of Coumarin 152A in methanol and acetonitrile reverse micelles.

P. Hazra, D. Chakrabarty, N. Sarkar, *Chem. Phys. Lett.* 358 (2002) 523.

**25.** Intramolecular Charge Transfer and Solvation Dynamics of Coumarin 152 in Aerosol-OT, Water-Solubilizing Reverse Micelles, and Polar Organic Solvent Solubilizing Reverse Micelles

P. Hazra, D. Chakrabarty, N. Sarkar, *Langmuir* 18 (2002) 7872.

**24.** Solvation dynamics of Coumarin 490 in methanol and acetonitrile reverse micelles

P. Hazra, N. Sarkar, *Phys. Chem. Chem. Phys.* 4 (2002) 1040.

**23.** Effect of large magnetic fields on the fluorescence from the a state of gaseous thiophosgene

N. Sarkar, S. Ikeda and H. Hayashi, *Mol. Phys.* 100 (2002) 1271.

**22.** Intramolecular charge transfer processes and solvation dynamics of coumarin-490 in reverse micelles

P. Hazra, N. Sarkar, *Chem. Phys. Lett.* 342 (2001) 303.

**21.** Effects of large magnetic fields on radiationless transitions of gaseous excited molecules

S. Ikeda, N. Sarkar, W. Sisk and H. Hayashi, *RIKEN Review*, No.24 (1999) 42.

- 20.** Influence of large magnetic fields on fluorescence of gaseous CS<sub>2</sub> excited through several V bands  
W. N. Sisk, N. Sarkar, S. Ikeda and H. Hayashi, *J. Phys. Chem. A* 103 (1999) 7179.
- 19.** Vibronic relaxation of polyatomic molecules in non-polar solvent : Femtosecond anisotropy/intensity measurements of the S<sub>n</sub> and S<sub>1</sub> fluorescence of tetracene  
N. Sarkar, S. Takeuchi and T. Tahara, *J. Phys. Chem. A*, 103 (1999) 4808.
- 18.** Dual emission of 2-(2'-hydroxy phenyl) benzimidazole (HPBI) in reverse micelle  
N. Sarkar, A. Dutta, S. Das, K. Das and K. Bhattacharyya, *J. Photochem. Photobiol. A*, 100 (1997) 259.
- 17.** Effect of large magnetic fields on the fluorescence from the A (<sup>1</sup>A<sub>2</sub>) state of gaseous thiophosgene, N. Sarkar, S. Ikeda and H. Hayashi, *International Workshop on Chemical Dynamics, Hakone, Japan*, October 27, 1997.
- 16.** Salt Effect on p-nitrophenol at the water surface : A surface second harmonic generation study  
K. Das, N. Sarkar, S. Das, A. Dutta, D. Nath and K. Bhattacharyya, *J. Chem. Soc. Faraday Trans.*, 92 (1996) 4993.
- 15.** Solvation dynamics of Coumarin-480 in micelles, N. Sarkar, A. Dutta, S. Das and K. Bhattacharyya, *J. Phys. Chem.*, 100 (1996) 15483.
- 14.** Effect of salt and solvent on the ionic solvation of p-toluidino naphthalene sulphonate  
N. Sarkar, K. Das, S. Das, A. Dutta, R. Dutta and K. Bhattacharyya, *J. Chem. Soc. Faraday Trans.*, 92 (1996) 3097.
- 13.** Solvation dynamics of Coumarin-480 in reverse micelles : Slow relaxation of water molecules,  
N. Sarkar, K. Das, A. Dutta, S. Das and K. Bhattacharyya, *J. Phys. Chem.*, 100 (1996) 10523
- 12.** Solvation dynamics in solid host : Coumarin-480 in zeolite 13X, K. Das, N. Sarkar, S. Das, A. Dutta and K. Bhattacharyya, *Chem. Phys. Lett.*, 249 (1996) 323.
- 11.** Fluorescence Monitoring of the hydrophobic surface of dextrin using p-Toluidinonaphthalenesulfonate  
K. Das, N. Sarkar, S. Das, and K. Bhattacharyya and D. Balasubramanian, *Langmuir.*, 11 (1995) 2410.
- 10.** Excited State Intramolecular Proton Transfer (ESIPT) of 2-(2'-hydroxyphenyl) benzimidazole (HPBI) in micelles,  
N. Sarkar, K. Das, S. Das, A. Dutta, D. Nath and K. Bhattacharyya, *J. Phys. Chem.*, 99 (1995) 17711.
- 9.** Effect of urea and Surfactant on p-nitrophenol at the water surface: A surface second harmonic generation study

N. Sarkar, K. Das, S. Das, D. Nath and K. Bhattacharyya, *J. Chem. Soc. Faraday Trans.*, 91 (1995) 1769

**8.** Excited State Intramolecular Proton Transfer in 2-(2'-hydroxy phenyl) benzimidazole and - benzoxazole : Effect of rotamerism and hydrogen bonding

K. Das, N. Sarkar, A. K. Ghosh, D. Majumdar, D. Nath and K. Bhattacharyya, *J. Phys. Chem.*, 98 (1994) 9126.

**7.** Salt Effect on the Hydrophobic binding of p-toluidino naphthalene sulphonate with cyclodextrins

N. Sarkar, K. Das, D. Nath and K. Bhattacharyya, *Chem. Phys. Lett.*, 218 (1994) 492. **6.** Twisted Charge Transfer Processes of Nile Red in homogeneous solution and in Faujasite zeolite

N. Sarkar, K. Das, D. Nath and K. Bhattacharyya, *Langmuir*, 10 (1994) 326.

**5.** Interaction of urea with fluorophores bound to protein surfaces

K. Das, N. Sarkar and K. Bhattacharyya, *J. Chem. Soc. Faraday Trans.*, 89 (1993) 1959

**4.** Excited-state intramolecular proton transfer and rotamerism of 2-(2'-hydroxy phenyl) benzimidazole

K. Das, N. Sarkar, D. Majumdar and K. Bhattacharyya, *Chem. Phys. Lett.*, 198 (1992) 443.

**3.** Non-radiative pathway of anilino-naphthalene sulphonates : twisted intramolecular charge transfer versus intersystem Crossing

K. Das, N. Sarkar, D. Nath and K. Bhattacharyya, *Spectrochimica Acta*, 48A(1992) 1701.

**2.** Interaction of urea with fluorophores bound to cyclodextrins. Fluorescence of p-toluidino naphthalene sulphonate

N. Sarkar, K. Das, D. Nath and K. Bhattacharyya, *Chem. Phys. Lett.*, 196 (1992) 491.

**1.** Effect of urea on micelles : Fluorescence of p-toluidino naphthalene sulphonate

N. Sarkar and K. Bhattacharyya, *Chem. Phys. Lett.*, 180 (1991) 283.

