A complete list of publications

[H-index: 74 & Total citations: 23052 (From Google Scholar Citation)]

**Book publication:**

- **Written 4 books**
  - Statistical mechanics for chemists and materials scientists (CRC press, 2018)
  - Water in biological and chemical processes: From structure and dynamics to function (Cambridge University Press, 2013)
  - Molecular relaxation in liquids (Oxford University Press, 2012)
  - Solvation dynamics and charge transfer processes (World Scientific, 1991) (Edited)

**Journal publication:**


462. Ions' Motion in Water. P. Banerjee and B. Bagchi, J. Chem. Phys. (Perspective Article) 150, 190901 (2019) [This paper was selected as Featured]


460. Three-stage phase separation kinetics in a model liquid binary mixture: A computational study. M. K. Hazra, S. Sarkar and B. Bagchi. J. Chem. Phys. 150, 144501 (2019) (This paper was selected as an Editor's Pick)


442. Rotational dynamics of polyatomic ions in aqueous solutions: From continuum model to mode-


378. Non-monotonic, distance-dependent relaxation of water in reverse micelles:Propagation of


352. Dynamics in the Crossover Region of Supercooled Liquids. 10.1002/9781118202470. [ch8 in


339. Dynamical transition in translational and rotational dynamics of water in the grooves of DNA


327. Excitation Energy Transfer between Non-Spherical Metal Nanoparticles: Effects of Shape and Orientation on Distance Dependence of Transfer Rate, S. Saini, V. B. Shenoy and B. Bagchi, J. Phy.


313. Dynamical Heterogeneity and the interplay between activated and mode coupling dynamics in supercooled liquids, S. M. Bhattacharrya, B. Bagchi and P. G. Wolynes, arXiv:cond-mat/0702435v1 [cond-mat.stat-mech]


293. Anomalous orientation-dependent effective pair interaction among Histidine and other amino acid residues in metalloproteins: Breakdown of the hydropathy scale index, A. Mukherjee and B. Bagchi, Biochemistry 45, 5129 (2006).


276. Anomalous glassy relaxation near the isotropic-nematic phase transition, P. P. Jose, D.


263. Anomalous dielectric relaxation of water molecules at the surface of an aqueous micelle, S.


236. Foldability and the funnel of HP-36 protein sequence: Use of hydropathy scale in protein


223. Energy transfer efficiency distributions in polymers in solution during folding and unfolding,


183. Subquadratic quantum number dependence and other anomalies of vibrational dephasing in liquid nitrogen: Molecular dynamics simulation study from the triple point to the critical point and beyond, N. Gayathri and B. Bagchi, Phys. Rev. Lett. 82, 4851 (1999).


143. Molecular origin of the intrinsic bending force for helical morphology observed in chiral

142. Activated barrier crossing dynamics in slow, viscous liquids, R. Biswas and B. Bagchi, *J.

141. Solvent dynamic effects in electron transfer reactions in slow liquids: Interplay between ultra-
fast solvation and vibronic coupling in betaines, N. Gayathri and B. Bagchi, *J. de Chimie
Physique* 93, 1652 (1996).

140. Orientational relaxation in a random dipolar lattice: Wave-number and frequency dependence,

139. Ultrafast solvation dynamics of an ion in the gamma-cyclodextrin cavity: The role of restricted

138. Microscopic origin of the chirality driven morphologies of the amphiphilic monolayers and

137. Self-consistent microscopic treatment of the effects of self-motion of the probe on ionic and

136. Novel inter effects of high frequency modes in the dynamics of electron transfer reaction in the
Marcus inverted regime, N. Gayathri and B. Bagchi, *Fast Elementary Processes in Chemical and
Biological Systems*, Ed. Andre Tramer, American Institute of Physics, AIP Conference Proceedings

135. Quantum and non-Markovian effects in the electron transfer reaction dynamics in the Marcus

134. Non-Marcus energy gap dependence of electron transfer rate in contact ion pairs. Novel
interplay between relaxation and reaction in solution, N. Gayathri and B. Bagchi, *J. Mol. Struc.

133. Solvation dynamics in slow, viscous liquids: Application to amides, R. Biswas and B. Bagchi,


131. Orientational relaxation in dipolar systems: How much do we understand the role of


116. Solvation dynamics, energy distribution and trapping of a light solute ion in dipolar liquids, S.


28. Dynamic structure factor across the liquid-solid interface: Appearance of a delta-function elastic


