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Subjects	Theoretical Chemistry, Quantum Chemistry, Chemical physics

Education and Experience

- B.Sc., ***Presidency College, Kolkata, 2002***
- M.S., ***Indian Institute of Science, Bangalore, 2005***
- Ph.D., ***Cornell University, Ithaca, NY, 2009***
- Postdoctoral research associate, ***University of Southern California, Los Angeles, CA (2009-2012)***
- Scientist E1, National Chemical Laboratory, 2012

Research Interests

- Excited state and redox properties of biochromophores
- Charge-transport, spectroscopy and electronic strurture
- Non-covalent interactions in condensed phase
- Many body quantum mechanics of large systems

Representative Publications

- **D. Ghosh**, A. Roy, R. Seidel, B. Winter, S. Bradforth, A. I. Krylov; First-Principle Protocol for Calculating Ionization Energies and Redox Potentials of Solvated Molecules and Ions: Theory and Application to Aqueous Phenol and Phenolate; *J. Phys. Chem. B*, **116**, 7269 (2012).

- **D. Ghosh**, A. Golan, L. Takahashi, A. I. Krylov, M. Ahmed; A VUV Photoionization and Theoretical Determination of the Ionization Energy of a Gas Phase Sugar (Deoxyribose); *J. Phys. Chem. Lett.* **3**, 97 (2012).

- **D. Ghosh**, O. Isayev, L. V. Slipchenko, A. I. Krylov; The Effect of Solvation on Vertical Ionization Energy of Thymine: from Microhydration to Bulk; *J. Phys. Chem. A*, **115 (23)**, 6028 (2011).

- **D. Ghosh**, D. Kosenkov, V. Vanovschi, C. F. Williams, J. M. Herbert, M. S. Gordon, M. W. Schmidt, L. V. Slipchenko, A. I. Krylov; Non-covalent Interactions in Large Systems Described by the Effective Fragment Potential Method; *J Phys. Chem. A*, **114 (48)**, 12739 (2010).

- D. Zgid, **D. Ghosh**, E. Neuscamman, G. K.-L. Chan; A Study of Cumulant Approximations to N-electron Valence Multireference Perturbation Theory; *J. Chem. Phys.*, **130 (19)**, 194107 (2009).

- **D. Ghosh**, J. Hachmann, T. Yanai, G. K.-L. Chan; Orbital Optimization in the Density Matrix Renormalization Group, with Applications to Polyenes and β-carotene; *J. Chem. Phys.*, **128 (14)**, 144117 (2008).