

## Uttara Basu

Int. PhD Student from December, 2008

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B.Sc.: Presidency College, Kolkata (2008)

MS: Indian Institute of Science (Joined in 2008)

**Research Interest:** Photodynamic therapy, a non-invasive treatment for the cancerous and precancerous lesions is a field which has attracted chemists all around the world. It requires essentially a photosensitizer, oxygen and light to generate reactive oxygen species capable of inducing cell death in diseased tissues. Organic molecules generate singlet oxygen from triplet oxygen, whereas metal-based photosensitizers generate highly diffusible hydroxyl radicals thus offering an alternative pathway to cause cellular damage.

My current research interest involves PDT using complexes of bio-essential 3d transition metals like iron with biocompatible ligand systems like functionalized terpyridines, amino acids and photoactive phenanthroline bases. Moreover, I am interested to study the effect of conjugating fluorophores to photocytotoxic metal complexes and their localization inside cell. Live cell imaging using these molecules as probes is also my area of interest.