

Dr. Amita Nivas Jadhav

Post Doctoral Fellow

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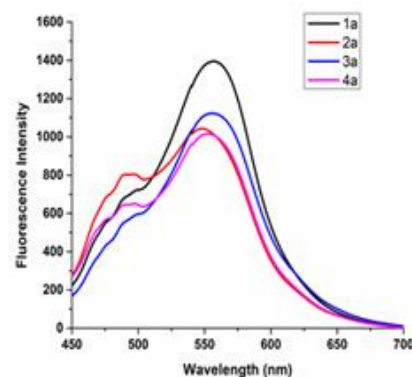
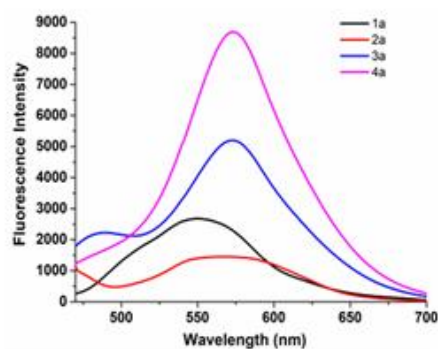
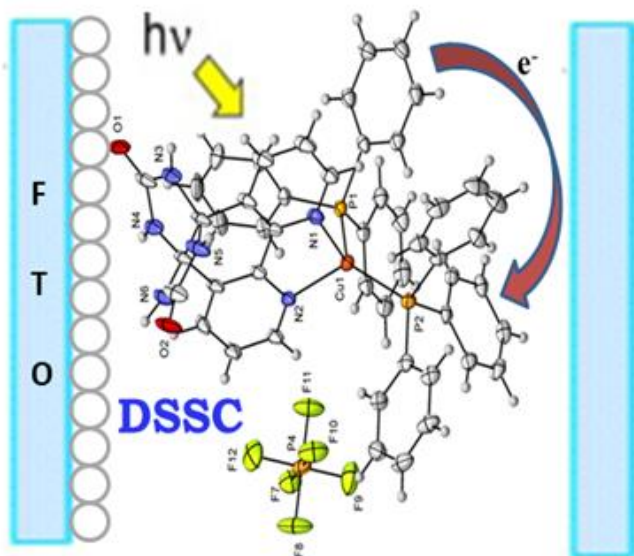
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Research Interest:

Copper (I) polypyridine complexes for Dye Sensitized Solar Cells (DSSC) and Fluorescence Imaging: Synthesis and structural characterization.

- The strategy is to design a molecular assembly of heteroleptic copper(I) complexes in term of light harvesting and overall photo conversion efficiencies.
- The synthesis and characterization of heteroleptic copper(I) polypyridine complexes in presence of mono and diphosphine ligands and study of these complexes as dyes for Dye Sensitized Solar Cells (DSSC) and fluorophores for fluorescence cell imaging.
- Interested in varying the steric hindrance of diphosphine ligands and coordination abilities of substituted polypyridine ligands to examine their structural effects on the photophysical properties.



Publications:

- i) Synthesis, crystal structure and conjugation properties of iminopyridine copper(I) phosphine.
A. N. Jadhav, S. B. Pawal, S. S. Chavan, *Inorganica Chimica Acta*, 440 (2016) 77-83.
- ii) Alkynyl functionalized iminopyridine copper(I) phosphine complexes: Synthesis, spectroscopic characterization and photophysical properties
A. N. Jadhav, S. S. Chavan, *Luminescence*, 148 (2014) 296-302.
- iii) Copper(II) complexes of N-(2-{[(2E)-2-(2-Hydroxy-(5-substituted)-benzylidene)-hydrazino]carbonyl}phenyl)benzamide ligands and heterocyclic coligands.
S. S. Chavan, V. A. Sawant, **A. N. Jadhav**, *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*, 117 (2014) 360-365.
- iv) Synthesis, characterization, photoluminescence and optical properties of hetero- bimetallic Cu/Ru hybrid complexes composed of coordination and organometallic sites.
B. G. Bharate, **A. N. Jadhav**, S. S. Chavan, *Polyhedron*, 33 (2012) 179-184.
- v) Synthesis, characterization and photoluminescence properties of copper(II) azido/thiocyanato complexes with thiazolylazo dye and 1,2-bis(diphenylphosphino)ethane.
B. A. Yamgar, V. A. Sawant, **A. N. Jadhav**, S. S. Chavan. *Inorg. Chem. Commun.* 13 (2010) 1207-1209.