

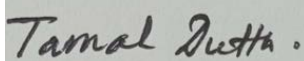
Abstract

“Synthesis and characterization of copper(II), nickel(II) and cobalt(II/III) complexes with Schiff base ligands”

Submitted by: Tamal Dutta

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Several copper(II), nickel(II) and cobalt(II/III) complexes with have been synthesized Schiff base ligands. The complexes were characterized by elemental analysis, spectral study and single crystal X-ray diffraction analysis. In several occasions, density functional theory (DFT) calculations and NCI plot have been employed to understand and estimate the energetic contribution of each interaction in the formation of supra-molecular assemblies. In terms of applications, some complexes have shown good catalytic efficiency and intriguing magnetic property. The phenoxazinone synthase mimicking activities of some of the complexes were evaluated spectrophotometrically. Variable temperature magnetic susceptibility measurement has confirmed ferromagnetic interaction in one complex.



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(Signature of candidate & date)



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(Signature of supervisor & date)

Dr. Shouvik Chattopadhyay
Professor
Department of Chemistry
Jadavpur University
Kolkata-700032