

Poster Presentation

New Family of Copper(II) Complexes with Diproplenetriamine / Dipyridylamine Polydentate Ligands

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Abstract

Many organometallic complexes that found in living organisms, hemoglobin in human and animals blood, chlorophyll pigment in plants play crettical bio-effect. For example, Organometallic complexes are important in chemical and medicinal applications. Novel new four Chemical complexes monocationic and dicationic mixed copper(II) complexes, of general formula $[\text{Cu}(2.2'\text{-dpa})_2\text{Cl}]\text{Cl}$ (1) and $[\text{Cu}(2.2'\text{-dpa})(\text{dipn})]\text{Cl}_2$ (2) [dipn= Diproplenetriamine and dpa = Dipyridylamine] were made available in very good yields and simple way, as in Scheme 1. These complexes were characterized by spectroscopic, element analysis, UV-visible, IR-Spectroscopy, thermal analysis TGA/DTA and X-ray crystallographic techniques. Single crystal X-ray diffraction data for complex (1) shows square pyramidal geometry around Cu(II) ions as seen in Fig. 2. Antioxidant, Antimicrobials, Antifungal, IC50 assays and DNA binding were conducted to evaluate the biological activities of these complexes [1-2]. The Bio-application of these desired complexes will be evaluated in future work. The absorption spectrum of complex (1) in water was modeled by time-dependent density functional theory (TD-DFT) as seen in Fig. 2.

