

Poster Presentation

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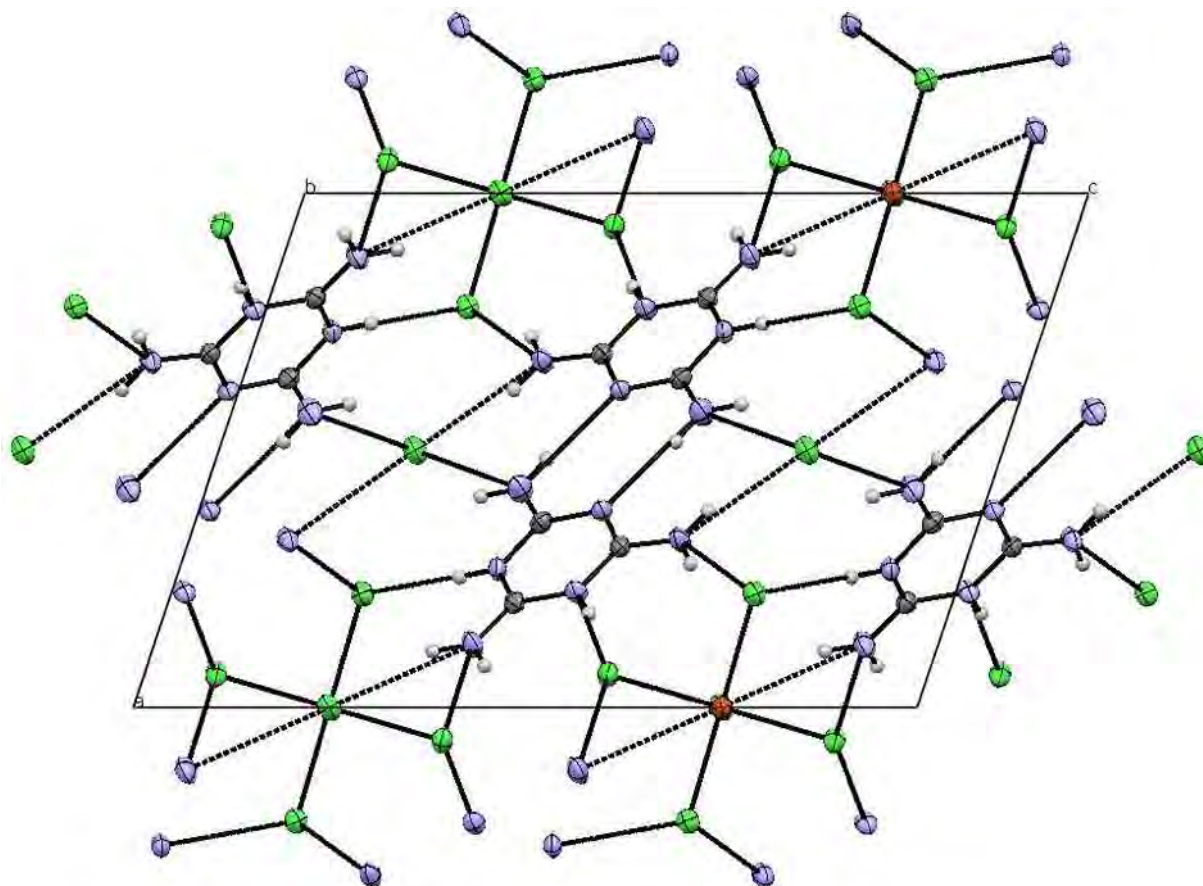
Synthesis, spectroscopic and structural analysis of a melamine copper complex

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Owing to its multiple sites acting as H-bonds' donors, melamine and its derivatives are considered as excellent building blocks for the construction of various crystalline supramolecular architectures based on phosphate, sulfate, chloride and carboxylic anions [1-10] on one hand and chlorometallate anions on the other hand [11-13]. In our contribution, we will discuss the synthesis, FTIR spectra and the structural investigation using the single crystal X-ray diffraction of (H₂Melamine) [CuCl₅]Cl, (I). The structural analysis of (I) revealed that it consists of alternating negative and positive layers running through the a-axis direction. The negative layers are built up of alternatively CuCl₅³⁻ and discrete non-coordination Cl⁻ anions, whereas the positive sheets are formed of [H₂melamine₂]²⁺ Hydrogen-bonded dimers. The N-H...N and N-H...Cl interactions are assembled to build three-dimensional H-bond patterns which insure the cohesion within the lattice (Fig. 01). A previous work showed that (I) exhibits antiferromagnetic properties [14]

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