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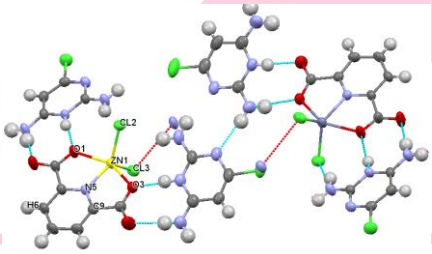
Supramolecular Frameworks of Zinc-Pyridine-2,6-dicarboxylic acid Compound: Synthesis and Characterization

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New Zinc-Pyridine-2,6-dicarboxylic acid supramolecular compound was synthesized from zinc chloride and two ligands (pyridine-2,6-dicarboxylic acid and 2,4-diamino-6-chloropyrimidine) by using sonochemical and side branch tube methods. The compounds were characterized by X-ray diffraction and crystallography, FT-IR, XRD, TGA-DTA, ^{1}HNMR, ^{13}CNMR, EDS, SEM and TEM techniques. The compound is a supramolecule with five coordination in the monoclinic crystal system with space group $P2_1/c$. By examining the angles and bond lengths around the central atom, a distorted square pyramidal geometric shape has been proposed for the compound. Non-covalent intermolecular forces have a great contribution in creating the supramolecular structure of this compound. Intermolecular and intramolecular interactions, including hydrogen bonds such as (O...H) and π-π interactions between aromatic rings such as (C...H, C...C, N...H and C...N). Particles of this compound has a cubic morphology and the particle size is 300-500 nm.



Keywords: Supramolecular, Zinc, Pyridine-2,6-dicarboxylic acid, 2,4-Diamino-6-chloropyrimidine

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