

## Synthesis and Characterization of Mercury (II) Supramolecular Compound from Pyridine-2,4-dicarboxylic acid

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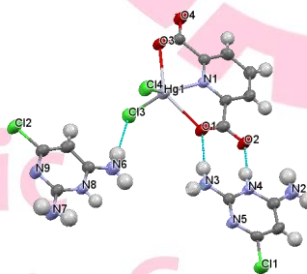
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New supramolecular compound was synthesized from mercury (II) chloride and two ligands (pyridine-2,6-dicarboxylic acid and 2,4-diamino-6-chloropyrimidine) by using sonochemical and side branch tube methods. These compounds were analyzed using FT-IR, TGA-DTA, <sup>1</sup>HNMR, <sup>13</sup>CNMR, EDS, SEM and TEM. Also, the structures of these complexes were determined by X-ray diffraction and crystallography. According to the analyzes performed and the investigations carried out, the compound is a supramolecule with five coordination in the monoclinic crystal system with space group P-1. By examining the angles and bond lengths around the central atom, a distorted square pyramidal geometric shape has been proposed for this compound. Also, intermolecular and intramolecular interactions that include hydrogen bonds such as (O...H and N...H) and  $\pi$ - $\pi$  interactions between aromatic rings such as (C...H, C...C and C...N) have a great effect on the stability of the supramolecular structure. Particles of this compound has a rod morphology and the particle size is 200-300 nm.



**Keywords:** Supramolecular, Mercury (II), Pyridine-2,6-dicarboxylic acid, 2,4-Diamino-6-chloropyrimidine

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