



**Synthesis through proton transfer reaction, structure and spectroscopic characterization of novel anionic nickel(II) complex with pyridine-2,6-dicarboxylic acid and 4-aminobenzenesulfonamide**

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**ABSTRACT**

*A novel nickel complex of the formula moiety,  $(C_6 H_9 N_2 O_2 S)_2^{2+} [Ni (C_{14} H_6 N_2 O_8)]^{2-} (C_6 H_8 N_2 O_2 S).4(H_2O)$  was synthesized and its crystal structure determined by X-ray diffraction and characterized by IR and UV-VIS spectroscopy. The complex crystallizes in the monoclinic system and  $P2_1/c$  space group. It has a distorted octahedral structure, consisting of six-coordinated Ni (II) unit with two pyridine-2,6-dicarboxylate ligands through  $O,N,O'$ -tridentate coordination mode. XRD structure shows that two dipic ligands are almost perpendicular to each other. Extensive hydrogen bonding,  $C-H \cdots \pi$  and  $\pi \cdots \pi$  interactions lead to the formation of 3D supramolecular framework.*

**Keywords:** Nickel(II) complex; Structure; Supramolecular framework; FTIR, XRD.

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