

Crystal Structure of Poly[(μ_3 -iodo)(2-ethylpyrazine-N)-silver(I)] Containing a Novel AgX 6^3 Net

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Reaction of silver(I) iodide with 2-ethylpyrazine yields crystals of the new coordination polymer poly[(μ_3 -iodo)(2-ethylpyrazine-N)-silver(I)]. In the crystal structure a novel AgI substructure has been found which consists of a 6^3 net of alternating Ag and I atoms forming layers which are parallel to the *a-b*-plane. The 2-ethylpyrazine ligands are located above and below each layer and are coordinated only with one nitrogen atom to the silver atoms. The layers are stacked perpendicular to the *c*-axis and are connected only by weak van der Waals interactions. On heating the compound loses all ligands and transforms directly into AgI without the formation of a ligand poor intermediate compound.

Key words: Silver(I) Iodide Coordination Polymers, Crystal Structures, Thermal Properties