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## Crystal structure, spectral and thermal characterisation of gel grown cobalt (II) nicotinate tetrahydrate

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**Abstract:** Single crystals of cobalt(II) nicotinate tetrahydrate is grown by gel method for the first time. The 3D supramolecular crystal structure is stabilised by the intermolecular hydrogen bonding as revealed by the single crystal XRD data. FTIR confirms the various functional groups. Thermal analysis is carried out and the thermal and kinetic parameters of the complex are tabulated. Coats - Redfern plots for the thermal decomposition stages are depicted. The optical properties are studied by UV-Visible spectral analysis.

**Keywords:** gel growth, supramolecular structure, cobalt nicotinate.

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