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# Effect of Strontium doping on Thermal and Optical properties of Gel grown Copper cadmium and Cobalt cadmium oxalate crystals

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**Abstract :** In the present paper, the Sr<sup>2+</sup> doped Copper cadmium oxalate (CuCO) and Cobalt cadmium oxalate (CoCO) crystals were grown by the single diffusion method in silica hydrogel at room temperature. Optimum conditions of the as-grown crystals were established by varying different growth parameters. Energy-dispersive X-ray analysis (EDX) confirmed the presence of major elements such as Sr<sup>2+</sup>, Co<sup>2+</sup>, Cu<sup>2+</sup>, Cd<sup>2+</sup> ions in the lattice of the grown crystals. The percentage weight loss, molecular weight and thermal stability of the grown crystals were studied using Thermogravimetric analysis (TGA). The Energy gap, refractive index, reflectance and electrical polarizability of the crystals were calculated by using UV-Visible spectroscopy. Direct and Indirect band gaps are calculated using Tauc's plot.

**Keywords :** CuCO, CoCO, X-Ray Diffraction, UV-Visible Spectroscopy.

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