

Structural Characterization of CdCO₃-CdS by X-ray

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Thin films of cadmium sulfide (CdS) and cadmium carbonate (CdCO₃) were grown onto glass substrates by means of the chemical bath (CB) method. The temperature of growth was selected between 23-80 °C. At low temperatures, CdCO₃ is the compound predominant in the layers, whereas at high temperatures CdS is the compound deposited on the substrate. The gradual transition from an insulator CdCO₃ to a semiconductor CdS growth occurs when values a mixture increases. Physical properties of films they are studied by means of X-ray diffraction, and optical absorption.

Keywords: semiconductors, diffraction, cadmium carbonate