

EFFECT OF GROWTH TEMPERATURE IN THE FORMATION OF CdS NANOPARTICLES

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ABSTRACT

In the present work different-sized CdS nanoparticles are grown by a chemical reduction method. The CdS nanoparticles are synthesized at different growth temperature. The structural and optical properties of CdS nanoparticles are characterized using TEM, SAD, XRD, optical absorption and photoluminescence study. The grown particle sizes are in the range of 6-11 nm. An increase in band gap is observed in each case as compared to bulk CdS. Also particle size increases with increase of growth temperature. Structural and optical properties of as prepared CdS nanoparticles are correlated.

KEYWORDS: CdS Nanoparticles, Structural Properties, Optical Properties, Photoluminescence