62. Study Of Thickness Dependent Structural And Optical Properties Of ZnS Thin Films

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ABSTRACT

Zinc sulphide (ZnS) thin films were deposited on glass substrate using relatively simple chemical bath deposition. method (CBD), using the mixed aqueous solution of zinc sulphate, thiourea and ammonia. The ammonia was used as the complexing agents. The preparative parameters are concentration, pH of solution, deposition time and temperature has been optimized. Thin films of ZnS with different thickness 100-350 nm were prepared by changing the deposition time from 20–100 minutes at 80^0C temperature. The effect of film thickness on structural and optical properties was studied. The thin films were characterized by using X-ray diffraction (XRD) and Fourier transformation, Infrared spectroscopy (FTIR). The effect of thin films thickness on optical and structural properties has been studied.

Keywords: Zinc Sulfide, Thin films, structural and optical properties