STRUCTURAL CHARACTERIZATION BY XRD OF $Zn_XCd_{1-X}S$ FILMS GROWTH BY CHEMICAL BATH DEPOSITION (CBD)

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Abstract

A Structural analysis by XRD of $Zn_xCd_{1-x}S$ films was made, the films was deposited on glass substrates by Chemical Bath Deposition technique (CBD) at temperatures of: T = 85 ±2°C, varying the volume of the solution (x) that contains the Zn2+ to obtain: x = 5, 10,…, 40. The film thicknesses are in the 2000-2400 nm interval measured using a profile meter. The percentage of Zn atoms varies respect to x in the range of 3,8-48,34% quantified by means of Scanning Electron Microscopy (SEM). By means of x-ray Diffraction was found the phase and preferential direction in which deposit the films, from diffractograms was determined the grain size (GS), using the Scherrer equation, varies 30-7,5 nm and the interplanar distance d) is modified between 3.338-3.330 Å.