

Characterization the Tin Sulfide Thin Films Prepared by Spray Ultrasonic

Authors : A. Attaf A., I. Bouhaf Kharkhachi

Abstract : Spray ultrasonic deposition technique of tin disulfide (SnS₂) thin films know wide application due to their adequate physicochemical properties for microelectronic applications and especially for solar cells. SnS₂ film was deposited by spray ultrasonic technique, on pretreated glass substrates at well-determined conditions. The effect of SnS₂ concentration on different optical properties of SnS₂ Thin films, such us MEB, XRD, and UV spectroscopy visible spectrum was investigated. MEB characterization technique shows that the morphology of this films is uniform, compact and granular. x-ray diffraction study detects the best growth crystallinity in hexagonal structure with preferential plan (001). The results of UV spectroscopy visible spectrum show that films deposited at 0.1 mol/l is large transmittance greater than 25% in the visible region. The band gap energy is 2.54 Ev for molarity 0.1 mol/l.

Keywords : MEB, thin disulfide, thin films, ultrasonic spray, X-Ray diffraction, UV spectroscopy visible

Conference Title : ICMIPA 2015 : International Conference on Mathematical Physics and Applications

Conference Location : Istanbul, Türkiye

Conference Dates : February 16-17, 2015