Characterization the Tin Sulfide Thin Films Prepared by Spray Ultrasonic

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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.

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