

## Effect of Deposition Time on Structural, Electrical, and Optical Properties of Tin Sulfide Thin Films Deposited by Spray Ultrasonic

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**Abstract :** Tin sulfide thin films on glass substrate were prepared by spray ultrasonic technique, at different experimental conditions. The influence of deposition time (2, 4, 6, 8 and 10 min) on different properties of thin films, such as, (XRD) and (UV) spectroscopy visible spectrum was investigated. X-ray diffraction showing that thin films crystallized in SnS, SnS<sub>2</sub>, and Sn<sub>2</sub>S<sub>3</sub> phases. The results of (UV) spectroscopy visible spectrum show that films deposited at 4 min are large transmittance 60% in the visible region.

**Keywords :** SnS, thin films, ultrasonic spray, X-ray diffraction, UV spectroscopy visible

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