

Abstract

Structural and electrical properties of prepared nanocrystalline lead sulfide thin films were studied which deposited on glass substrates by chemical bath deposition (CBD) techniques. The films were obtained in a reaction bath at times of (15, 30, 45, 60 and 90) min. The X-ray diffraction (XRD) and atomic force microscopy (AFM) measurements confirmed that the thin films grown by this technique had good crystalline cubic structures and homogeneous surfaces. The dc electrical conductivity found in the range of 10^{-6} - 10^{-5} ($\Omega\cdot\text{cm}$)⁻¹.