INFLUENCE OF DEPOSITION TEMPERATURE ON THE Cu_xS THIN FILMS SURFACE MORPHOLOGY

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Abstract: *Thin films of copper sulfides (Cu_xS, x = 1-2) were deposited at different temperatures (185 ºC - 335 ºC) onto TCO glass substrates by spray pyrolysis technique. Water:alcohol (ethanol, 1-propanol) solutions of copper(II) chloride and thiourea with Cu:S = 1:2.35 and Cu:S = 1:3 have been used as precursors. The films were analyzed by Scanning Electron Microscopy (SEM) and X-Ray Diffraction (XRD). The as-deposited Cu_xS films are dense and relatively uniforms and homogenous, the homogeneity of the films depending on their crystalline phases composition. The average aggregates size increases with the increasing of deposition temperature.*

Key words: *Cu_xS thin films, deposition temperature, surface morphology.*

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