Elaboration of Cd0.1Zn0.9S thin films deposited by chemical bath deposition

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Abstract: Thin films of Cd0.1Zn0.9S were deposited on glass substrates by chemical bath deposition for photovoltaic applications. The thin films CdZnS were synthesized by the chemical bath deposition (CBD) with different deposition protocols for optimized the parameter of deposition as the temperature, time of deposition, concentrations of ion and pH. Surface morphology, optical and chemical composition properties of thin films CdZnS were investigated by SEM, EDAX and spectrophotometer. The transmittance is 80% in visible region 300 nm – 800 nm; it is observed the shape is nanoflower. This result favors of application these films in solar cells; the chemical analysis with EDAX gives information about the presence of Cd, Zn and S elements and investigates the stoichiometry.

Keywords: CdZnS, chemical bath, Thin films, solar cells