

UV-visible studies of chemical bath deposited nise thin films.

ABSTRACT

NiSe thin films were deposited onto microscope glass slides by chemical bath deposition method. Chemical bath deposition method could be a cost-effective technology for the production of terrestrial photoelectrochemical cells. The films obtained were characterized by UV-Visible spectrophotometer. The values of optical band gap have been determined from the absorption spectra. The deposition was carried out under different deposition times (1, 2 and 3 hours) and bath temperatures(40 and 50 °C). Based on the optical absorbance spectra, all the films exhibited a high absorbance in the visible region. The films deposited at longer time showed higher absorbance values. The band gap values obtained were found to be 2.11-2.52 eV.

Keyword: Thin films; Chemical bath deposition; Nickel selenide; UV-visible spectrophotometer; Metal chalcogenide.