**Study of Optical Parameters of Chalcogenide Se70Sb20-x Ag10Inx thin films**

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**Abstract**

Thin films of Se70Sb20-xAg10Inx (0 ≤x≤20) glassy alloys have been deposited onto glass substrates by thermal evaporation technique under Vacuum. Transmission spectra T (λ) of the films were obtained in the wavelength range of 600–1600 nm. Estimation of the optical constants like refractive index (n), real dielectric constant (ε`), extinction coefficient (k), imaginary dielectric constant (ε"), absorption coefficient (α) is made by straight forward analysis proposed by Swanepoel. It is found that n, k, α decrease with the increase in the wavelength.Tauc relation for allowed non direct transition describes the optical transition in the studied films. The optical energy gap (Eg) has been calculated from optical coefficient data, which is found to increase with In content.

*Keywords*: Chalcogenide glasses, thin films, optical properties, band gap

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