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les caractéristiques optiques et structurelles du sélénium amorphe après l'illumination

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Abstract : Amorphous Sélénium, a semi-conducteur from column VI, is a random mixture of chains And rings. It was, largely, used in, but now it is used in digital X-ray radiography and sensible TV cameras. The films of a-Se may be prepared by several techniques, we can mention: thermal evaporation, The cathodic sputtering, laser ablation. In this work, films of Se-a have been deposited by the technique of vacuum evaporation on glass substrates. The aim of this work is to study the change of optical and structural properties of amorphous selenium after illumination at room temperature. The optical characterization of films was performed using a UV-Visible spectroscopy in the spectral range from 500 to 2500 nm. Analysis of transmittance spectra allowed us to identify gap and thicknesse of the films. The thickness, the absorption coefficient ? (?), refractive index n (?), the optical gap Eg and E00 in different regions of absorption of Se-a have been extracted using the technique Swanepoel. The optical gap Eg was obtained using Tauc plot, and Urbach tail was obtained from the semi-logarithmic diagram (ln?) versus (?). Stable photoinduced changes at room temperature is now an evidence

Keywords : amorphous selenium, photoinduced changes, vacuum evaporation, optical properties