

STRUCTURAL, OPTICAL AND ELECTRICAL PROPERTIES OF CDTE FILMS OBTAINED BY LASER ABLATION

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ABSTRACT

A simple and cheap method has been developed for the deposition of cadmium telluride thin films on glass substrates by pulsed Nd:YAG laser evaporation of cadmium telluride pellets prepared from high purity Cd and Te powders. Preliminary characterization of the crystallographic, electrical and optical properties of the films has been performed as a function of the deposition conditions (pellet constituent percentage of pellets Cd/Te \leq 1.0 and Cd/Te 1.0). Both deposition temperatures and nitrogen pressure during deposition have been considered. From transmittance and reflectance measurements, the values of the absorption coefficient α , of the band gap E_g , have been calculated.

KEYWORDS: CdTe, Thin Film, Laser Ablatio