

Holographic properties of chalcogenide glassy semiconductor (CGS) films

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The paper considers the possibility of using chalcogenide glassy semiconductor films (CGS) for recording holographic information. The schemes and results of the study of the diffraction efficiency depending on the exposure time and the holographic characteristics of chalcogenide glassy semiconductor films under the influence of γ -irradiation are presented. It was found that the optical properties of CGS films and the diffraction efficiency of the recorded holograms do not change in the range of radiation doses (10^3 – 10^9 Roentgen, R). It has also been proven that the shelf life of recorded holograms under certain conditions is 10 years or more.

Keywords: CGS-chalcogenide glassy films, TPV-thin-film waveguides, holography, digital holography, interferometry, diffraction efficiency, holograms.

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