



Determination of photo-induced changes in linear optical coefficients by the Z-scan technique

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Résumé en anglais	We introduce a Z-scan technique as a tool to characterize small phase shift (<1 rad) and photodarkening, both effects induced inside photosensitive materials by light illumination. Theoretical analysis supported by experiments is presented for permanent refraction and absorption Gaussian profiles. Simple relations are derived in order to estimate the changes in the linear coefficients. Particularly, we investigate quantitatively the photo-induced modifications in the linear optical constants of As ₂ S ₃ caused by subbandgap irradiation (17 ps, 1064 nm).
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