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ABSTRACTS

Programme and Abstracts



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Second Harmonic Generation in Selenium Thin Films

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Our research showed that femtosecond laser radiation provoked second harmonic generation (SHG) in the selenium thin films.

The amorphous selenium thin films were obtained by thermal evaporation of selenium onto the glass substrate in vacuum [1]. The amorphous thin films was crystallised by annealing at temperature 85°C. Researches of SHG were spent on a complex of confocal microscope LEICA TCS SP5 [2] with injection of the femtosecond radiation from laser Chameleon Ultra (180 fs, 80 MHz) to a microscope.

The article examines possibility of SHG intensity growth when thickness of the selenium thin films rises. Processes of SHG in an amorphous and crystalline condition depending on energy of quanta of exciting radiation were investigated. The lifetime of excited charge carriers in the amorphous and crystalline selenium thin films under observation was estimated [3, 4].

References:

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