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Electro- and photostimulated chemical processes in aluminium-chalcogenide glass semiconductor thin layer structures

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Abstract

The results of comparative investigations of photostructural processes in As/sub 2/Se/sub 3/ layers and of electrophotoinduced changes in Al-As/sub 2/Se/sub 3/ structures are presented. It was found that in Alchalcogenide glass (ChGS) structures irreversible chemical processes occur under the action of an electric field and light irradiation. This fact leads to the modification of bulk properties of the ChGS film, which is explained by diffusion of Al into ChGS and hydrolysis of the ChGS in the electric field.