PARTICULARITIES OF LaB_6 BEHAVIOUR UNDER BOMBARDMENT WITH HELIUM AND ARGON ENERGETIC IONS

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S u m m a r y

The investigation results on the bombardment of LaB_6 of 18 – 26% porosity with 20 keV helium and 0.5 keV argon ions are presented. The rate of LaB_6 erosion under the helium ion beam is determined to be $5.43 \cdot 10^{-6}$ kG/(m^2s). The main contribution to the erosion is made by the material removal from the surface, which confirms the earlier conclusions about weakness of boundary grains, pores, and formation of cracks and round dislocation etch pits. It is shown that, during the bombardment as a dose is increased, a layer is formed on the LaB_6 surface with a subsequent change of the relative content of two elements. It is determined (characteristic features of the surface change and doses are given) when and where one can expect the formation of LaB_4 under bombardment of the surface.