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Plasma technologies application for building materials surface modification

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Abstract

© Published under licence by IOP Publishing Ltd. Low-temperature plasma modification of LiYF 4 crystal surface in Helium atmosphere caused microhardness decreasing and increasing of roughness of crystal surface. The change of microhardness and morphology is a possible result of Fluorine outgoing from material structure due to heating of surface and plasma chemical reactions and ingoing of Oxygen. As a result of exchange and diffusion processes crystal surface structure become more crumbly, its morphology and mechanical properties change.

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