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Growth of solid solutions with colquiriite structure $\text{LiCa}_{0,2}\text{Sr}_{0,8}\text{AlF}_6: \text{Ce}^{3+}$

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Abstract

© Published under licence by IOP Publishing Ltd. Aim of this work were experiments on growing new materials based on fluoride crystals with the colquiriite structure $\text{LiSr}_{0,8}\text{Ca}_{0,2}\text{F}_6$, as well as the study of their phase composition. It is shown that for a series of crystals $\text{LiSr}_{0,8}\text{Ca}_{0,2}\text{F}_6$ distribution of reflections observed corresponds to the colquiriite structure, and the dependence of the lattice constant in the transition from LiCaAlF_6 crystal to LiSrAlF_6 crystal is linear. Also it found that absorption coefficient in mixed samples is much larger than in not mixed.

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