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Spectroscopic properties of UV active media $\text{Ce}^{3+}:\text{LiCa}1-x\text{Sr}x\text{AlF}_6$

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Abstract

© 2016 IEEE. Optical absorption spectroscopy studies have shown that mixed crystals $\text{Ce}^{3+}:\text{LiCa}_{0.2}\text{Sr}_{0.8}\text{AlF}_6$ grown by Bridgeman technique exhibit more than 3 times higher absorption coefficient compared to $\text{Ce}^{3+}:\text{LiCaAlF}_6$ sample. An important result is based on the fact that this enhancement was achieved for two types of Ce^{3+} centers in a multisite $\text{Ce}:\text{LiSr}_{0.8}\text{Ca}_{0.2}\text{AlF}_6$ system.

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Keywords

crystal growth, rare earth materials, ultraviolet sources