

Concentration dependence of EPR spectra in mixed (BaF₂)_{1-x}(CeF₃)_x crystals

Aminov L., Kurkin I.

Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

In the EPR spectra of the (BaF₂)_{1-x}(CeF₃)_x system, additional lines appear as the concentration x in the mixture increases from 10^{-3} to 10^{-2} , some of which correspond to tetragonal centers with $g_{\parallel} = 0.725$ and $g_{\perp} = 2.52$. These lines are similar to those detected previously in mixed (BaF₂)_{1-x-y}(CeF₃)_x(LaF₃)_y systems with a low cerium concentration ($x \approx 10^{-3}$) and in the CaF₂: Ce³⁺ crystal grown with added Na⁺ ions. © 2013 Pleiades Publishing, Ltd.

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