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Electronic structure of Ce³⁺ in yttrium and lutetium orthoaluminate crystals and single crystal layers

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Abstract

Low temperature infrared absorption spectra of yttrium orthoaluminate and lutetium orthoaluminate bulk crystals and liquid phase epitaxy grown single crystalline films doped with Ce³⁺ are presented. In the region of intra-configurational 4*f* – 4*f* transitions the spectra indicate the existence of at least three different Ce³⁺ related centers. The dominant center is

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