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Intel-configuration 4f-5d transitions of the Ce³⁺ ion in a LiLuF₄ crystal¹

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Abstract

The 4f-5d absorption spectra of Ce³⁺ ions in a LiLuF₄ single crystal are interpreted. A set of crystal-field parameters for the 5d electron is suggested, and the values of the g-factors in the ground state and relative intensities of the 4f-5d transitions are calculated. Good agreement is obtained between the results of calculations and experimental data.
