Ce^{3+} luminescence in MLn_2O_4 system (M = Sr,Ca) and (Ln = Gd, Lu, Sc)

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ABSTRACT

In our earlier work (1) we reported the emission of Ce^{3+} and Ce^{4+} centers in SrY_2O_4. In this work we extend our studies to other materials that crystallize with the CaFe2O4 structure. Data pertaining to low temperature luminescence and decay time measurements on the various luminescent centers observed in the materials will be discussed. The variation in the luminescence properties in relation to the ionic radii of the rare earth site will also be elucidated.

(1) V. Manivannan, H. Comanzo, A. Setlur, A.Srivastava, P.Schmidt and U. Happek
J. Luminescence, 2002 (in press).