

Ce³⁺ and Bi³⁺ Luminescence in Ordered CaRE₂O₄ Structure

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ABSTRACT

The luminescence of broad band emitters, Ce³⁺ and Bi³⁺ in the ordered SrRE₂O₄ structure (RE= Rare-earth) is evaluated in the temperature range of 10 – 300 K. A large Stokes shift of Ce³⁺ luminescence (~13000 cm⁻¹) is observed at low temperatures. Factors responsible for quenching of Ce³⁺ luminescence will be discussed. Also, the luminescence of Bi³⁺ in these materials is reported and discussed.