

The mechanism of X-ray excited luminescence in BaHfO₃ doped with Eu³⁺, Y³⁺ or Eu³⁺, La³⁺.

Autorzy

Anna Dobrowolska

Eugeniusz Zych

Rok wydania

2017

Czasopismo

Journal of Luminescence

Numer woluminu

192

Strony

397-403

DOI

10.1016/j.jlumin.2017.06.048

Kolekcja

Naukowa

Język

Angielski

Typ publikacji

Artykuł

Streszczenie

Luminescent properties of BaHfO₃:Eu codoped with Y³⁺ and La³⁺ were investigated. It was found that the codopants influence the location of Eu³⁺ in the host lattice. Y³⁺ directs Eu³⁺ into Ba²⁺ and La³⁺ channels Eu³⁺ into Hf⁴⁺ site. The mechanism of the process is discussed. Both, Eu_{Hf} and Eu_{Ba} show photoluminescence but only the former one exhibits X-ray excited luminescence. This phenomenon is explained based on the electronic structure of BaHfO₃ host.

Adres publiczny

<https://doi.org/10.1016/j.jlumin.2017.06.048>

Strona internetowa wydawcy

<http://www.elsevier.com>