Uniwersytet Wrocławski

Repozytorium

Plik pochodzi z repozytorium Wydziału Chemii Uniwersytetu Wrocławskiego

Temperature dependence of host-associated luminescence from YAG transparent ceramic material.

Autorzy

Eugeniusz Zych

C. Brecher

Rok wydania

2000

Czasopismo

Journal of Luminescence

Numer woluminu

90

Strony

89-99

DOI

10.1016/S0022-2313(99)00620-1

Kolekcja

Naukowa

Język

Angielski

Typ publikacji

Artykuł

Streszczenie

We have prepared yttrium aluminum garnet (YAG) in the form of a transparent optical ceramic and measured its spectroscopic properties as a function of temperature. The measurements reveal the presence of at least three distinct types of luminescent defects. These defects are both distinct in nature and more abundant in number than in the corresponding single crystal. While all three emit at low temperatures, only one persists all the way up to and above room temperature. We have demonstrated that energy transfer processes take place between some of the centers. And finally, from the temperature-dependent shapes of the emission and excitation spectra, we have derived an energy level schematic that accurately describes the transfer processes that occur upon stimulation of the various centers.

Słowa kluczowe

Optical ceramic, Defect luminescence, Yttrium aluminum garnet (YAG)

Adres publiczny

https://doi.org/10.1016/S0022-2313(99)00620-1

Strona internetowa wydawcy

http://www.elsevier.com

Plik został wygenerowany dnia 2026-11-15 06:50:06

Adres w repozytorium https://old.chem.uni.wroc.pl/pl/repozytorium/yoZl8W8.