



Nd³⁺-doped Lu₂O₃ transparent sesquioxide ceramics elaborated by the Spark Plasma Sintering (SPS) method. Part 1: Structural, thermal conductivity and spectroscopic characterization.

Autorzy

Guillaume Alombert-Goget

Yannick Guyot

Małgorzata Guzik

Georges Boulon

Akihiko Ito

Takashi Goto

Akira Yoshikawa

M. Kikuchi

Rok wydania

2015

Czasopismo

Optical Materials

Numer woluminu

41

Strony

3-11

DOI

10.1016/j.optmat.2014.10.014

Kolekcja

Naukowa

Język

Angielski

Streszczenie

We report the detailed analysis of both structural characterization by SEM, thermal conductivity of high value and high resolution spectroscopic properties of Nd³⁺-doped Lu₂O₃ transparent ceramics fabricated by the non-conventional SPS method. The emission spectra of the main C₂ site shows two close ⁴F_{3/2} → ⁴I_{11/2} laser lines at 1076.3 and 1080.5 nm, respectively. The optical properties of the two C₂ and C_{3i} sites and of C₂–C_{3i} and C₂–C₂ Nd³⁺ pairs have especially been analyzed.

Słowa kluczowe

Laser ceramics, SPS method, Lu₂O₃ sesquioxide, Nd³⁺ ions, Thermal conductivity, Spectroscopic properties

Adres publiczny

<http://dx.doi.org/10.1016/j.optmat.2014.10.014>

Strona internetowa wydawcy

<http://www.elsevier.com>

Artykuł

Plik został wygenerowany dnia 2026-10-09 04:30:58

Adres w repozytorium <https://old.chem.uni.wroc.pl/pl/repozytorium/FPkt48w>.