Structural and spectroscopic study of the europium complex with ***N***-(diphenylphosphoryl)pyrazine-2-carboxamide.

Autorzy

Yen Pham

Victor A. Trush

Vladimir M. Amirkhanov

Paula Gawryszewska

Rok wydania

2017

Czasopismo

Optical Materials

Numer woluminu

74

Strony

197-200

DOI

10.1016/j.optmat.2017.04.031

Kolekcja

Naukowa

Język

Angielski

Typ publikacji

Artykuł

Streszczenie

This work presents a study of the Eu^{3+} complex with ***N***-(diphenylphosphoryl)pyrazine-2-carboxamide (HL) and diphenylphosphinate ions (Ph_2POO^-) as co-ligands with the aim of probing the specific energetic and structural characteristics that influence the ligand-to-metal energy transfer and luminescence efficiency. The compound $[Eu_2(L)_2(\mu\text{-}Ph_2POO)_2(\kappa\text{-}OP(O)Ph_2)_2(CH_3OH)_2]$ crystallizes as a dimer with the space group $P\ 1^{-}$. Absorption and emission (295, 77 K) spectra as well as luminescence decay times were used to characterize the photophysical properties of the complex in the solid state. Very effective energy transfer from ligands to Eu^{3+} ion was demonstrated.

Słowa kluczowe

photoluminescence, europium, crystal structures, N-(diphenylphosphoryl)pyrazine-2-carboxamide

Adres publiczny

http://dx.doi.org/10.1016/j.optmat.2017.04.031

Strona internetowa wydawcy

http://www.elsevier.com