Uniwersytet Wrocławski

Repozytorium

Plik pochodzi z repozytorium Wydziału Chemii Uniwersytetu Wrocławskiego

Crystal structure and absorption spectroscopy of neodymium(III) complex with triethylenetetraaminehexaacetic acid, $Na_3[Nd(TTHA)]\ 2.5NaClO_4 \cdot 7.617H_2O$.

Autorzy

Anna Mondry

Przemysław Starynowicz

Rok wydania

1997

Czasopismo

Inorganic Chemistry

Numer woluminu

36

Strony

1176-1180

DOI

10.1021/ic9604728

Kolekcja

Naukowa

Język

Angielski

Typ publikacji

Artykuł

Streszczenie

The crystal structure and absorption spectroscopy results of the Na3[Nd(TTHA)]â2.5NaClO4â7.617H2O compound are presented. The crystal structure of the complex was determined by X-ray analysis. Crystals are monoclinic, space group C2/c, with a) 38.446(8) Å, b) 10.552(2) Å, c) 25.796(5) Å, â) 130.51(3)°, and Z) 4. The structure consists of monomeric (triethylenetetraaminehexaacetato)neodymate anions, perchlorate anions, sodium cations, and water molecules. The Nd(III) ion adopts a 10-coordinate geometry with six oxygen atoms and four nitrogen atoms from a ligand molecule, which is best described as a bicapped square antiprism. Absorption spectra of a single crystal were measured at room and liquid helium temperatures. Intensities of the f-f transitions were analyzed on the basis of Judd-Ofelt theory. The good correspondence between the spectra of [Nd(TTHA)]3- in solution and in the single crystal suggests close similarity of both coordination polyhedra.

Adres publiczny

https://doi.org/10.1021/ic9604728

Strona internetowa wydawcy

https://www.acs.org/content/acs/en.html

Plik został wygenerowany dnia 2026-11-04 04:56:08

Adres w repozytorium https://old.chem.uni.wroc.pl/pl/repozytorium/fVC8xIJ.