

Spectroscopy of Eu^{3+} and Tb^{3+} pyridine- and pyrazine-2-carboxylates.

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Streszczenie

The luminescence excitation, luminescence and vibrational spectra of europium and terbium pyridine- and pyrazine-2-carboxylates were investigated. A special attention was paid to spectroscopic characterization of tetrakis-compounds, $\text{MLn}(\text{Lig})_4 \cdot \text{H}_2\text{O}$, where $\text{M} = \text{NH}_4, \text{Na}$; $\text{Ln} = \text{Eu}, \text{Tb}$; $\text{Lig} = \text{pyridine-2-carboxylate}$ and $\text{pyrazine-2-carboxylate}$ anions. The features of the spectra indicated a decrease of the interaction of carboxylic groups and an increase of the donor-acceptor interaction of coordinated nitrogen atoms with the lanthanide ions in different tetrakis-salts in comparison with the tris-salts. This is accompanied by clear manifestation of the 4f-5d electronic transitions in the excitation spectra of terbium salts.

Słowa kluczowe

Eu^{3+} , Tb^{3+} , Excitation spectra, Luminescence spectra, Vibrational spectra, Pyridine-2-carboxylate, Pyrazine-2-carboxylate

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