

## Optical properties of europium compounds with L- and DL- $\alpha$ -alanine-hydroxamic acids.

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### Streszczenie

Two of europium complexes with L- and DL- $\alpha$ -alanine-hydroxamic acids were synthesized. To our knowledge they are the first examples of X-ray and spectral data of lanthanide single crystals with hydroxamic acid derivatives. Both compounds consist of dimers in their structures, formed by two OH-bridging groups of amino-hydroxamic acid molecules. Besides, two metal ions are chelated by CO and OH groups, forming five-membered rings. In the complex with L-ligand, different than in the DL-one, two additional perchloric acid molecules are included in crystal cavities and form hydrogen bondings with nitrogen and oxygen atoms of the ligand. Absorption, emission and excitation spectra were measured and analyzed at room and low temperatures. Structural effect of ligand chirality was found and its spectroscopic consequences are reported. The effect of the dimeric structure on spectroscopic properties is discussed.

### Strona internetowa wydawcy

<http://www.ifpan.edu.pl>