



An ytterbium(II) complex with dimethyl ester of oxydiacetic acid.

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An Yb(II) complex with dimethyl ester of oxydiacetic acid, $[\text{Yb}(\text{CH}_3\text{OOCCH}_2\text{OCH}_2\text{COOCH}_3)_3](\text{ClO}_4)_2$, has been obtained by electrochemical reduction and its crystal structure has been determined. The complex cations have the D₃ (32) crystallographic symmetry. The compound shows a very broad absorption band, starting from 500 nm towards the UV region, and traces of luminescence with a maximum at 545 nm. The performed density functional theory (DFT) calculations have shown that the absorption band results from mixed f-d and charge transfer transitions, and the empty antibonding π^* orbitals of the ester groups quench the luminescence.

Adres publiczny

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Strona internetowa wydawcy

<https://www.rsc.org/>