

Magnetic properties, crystal and molecular structure of $(\text{Nbu}_4)_2[\text{ReCl}_4(\text{ox})]$.

Autorzy

Alina Tomkiewicz

Tadeusz J. Bartczak

Rafał Kruszyński

Jerzy Mroziński

Rok wydania

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Streszczenie

The synthesis, structure and magnetic properties of the rhenium(IV) complex $(\text{Nbu}_4)_2[\text{ReCl}_4(\text{ox})]$ is reported. The crystal and molecular structure $(\text{Nbu}_4)_2[\text{ReCl}_4(\text{ox})]$ has been solved by the heavy atom method and refined anisotropically to unique observed reflections. The title compound crystallizes in the monoclinic space group $P21/n$ with $Z=4$. The Re atom is of six-coordinate distorted octahedral configuration being bonded to one bidentate oxalate group and four chloride anions. The asymmetric unit contains one $[\text{ReCl}_4(\text{ox})]^{-2}$ anion and two $[\text{Nbu}_4]^+$ cations. The magnetic behavior of $(\text{Nbu}_4)_2[\text{ReCl}_4(\text{ox})]$ has been investigated over the temperature range 1.72–300 K. This measurement revealed that examined compound is magnetically diluted with the great value of zero-field splitting parameter

Słowa kluczowe

Rhenium(IV) complexes, Magnetism, Oxalate group, Crystal structure, IR spectra

Adres publiczny

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