Magnetic properties, crystal and molecular structure of $(Nbu_4)_2[ReCl_4(ox)]$.

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Streszczenie

The synthesis, structure and magnetic properties of the rhenium(IV) complex $(NBu_4)_2[ReCl_4(ox)]$ is reported. The crystal and molecular structure $(NBu_4)_2[ReCl_4(ox)]$ has been solved by the heavy atom method and refined anisotropically to unique observed reflections. The title compound crystallizes in the monoclinic space group *P*21/*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 $[ReCl_4(ox)]^{-2}$ anion and two $[NBu_4]^+$ cations. The magnetic behavior of $(NBu_4)_2[ReCl_4(ox)]$ 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

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