2-tetrahydrofurfuroxo-vanadium-(III) and (IV) complexes. Synthesis, structures and reactivities of $[V_2Mg_2(\mu_3,\eta^2\text{-thffo})_2(\mu,\eta^2\text{-thffo})_4Cl_4]*2CH_2Cl_2$ and $[V_2(\mu,\eta^2\text{-thffo})_2Cl_2O_2]$.

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Streszczenie

Vanadium complexes of 2-tetrahydrofurfuroxide (2-tetrahydrofurylmethoxide) (thffo) with the metal in oxidation state III and IV have been prepared and characterized. The reaction of $[VCl_3(thf)_3]$ with 1.5 equivalents of $[Mg(thffo)_2]$ in tetrahydrofuran (thf) or CH_2Cl_2 led to the formation of $[V_2Mg_2(\mu_3,\eta^2\text{-thffo})_2(\mu,\eta^2\text{-thffo})_4Cl_4]\cdot 2CH_2Cl_2$ **1**. Its structure consists of centrosymmetric tetranuclear molecules and CH_2Cl_2 of crystallization. Two Mg and two V atoms have distorted octahedral geometry and form a nearly regular Mg_2V_2 rhombus. The V · · · V distance is 3.266(2) Å. The reaction of $[VOCl_2(thf)_2]$ with Na(thffo) in thf yielded $[V_2(\mu,\eta^2\text{-thffo})_2Cl_2O_2]$ **2**. Two VOCl units are linked by alkoxide oxygen bridges. The V · · · V distance is 3.070(1) Å. Compounds **1** and **2** are very effective procatalysts for the polymerization of ethylene.

Adres publiczny

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