

New intermediates for the synthesis of olefin polymerization catalysts: the complexes $[M_2(\mu\text{-Cl})_2\text{Cl}_4(\text{thf})_4]$ ($M = \text{Ti}$ or V , thf = tetrahydrofuran) : crystal structures and properties.

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Streszczenie

The dimeric titanium(III) and vanadium(III) complexes $[M_2(\mu\text{-Cl})_2\text{Cl}_4(\text{thf})_4]$ ($M = \text{Ti}$ **1** or V **2**, thf = tetrahydrofuran) have been prepared by recrystallization of $[M\text{Cl}_3(\text{thf})_3]$ from dichloromethane. In the dimers, composed of slightly distorted edge-sharing octahedra, the metal atoms separated by $\text{Ti} \cdots \text{Ti}$ and $\text{V} \cdots \text{V}$ distances of 3.711 (3) and 3.619(1)Å, respectively, are surrounded by two terminal Cl atoms, two oxygen atoms of thf molecules and are linked by two bridging Cl atoms. The geometry around the titanium atoms differs from that around vanadium because the thf molecules and the terminal chlorine atoms are differently located with respect to the bridging chlorine atoms of the $M_2(\mu\text{-Cl})_2$ unit. High catalytic activity was found for ethylene polymerization by **1**.

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