

Dimethyl group IV metal complexes of the OSO-type ligand bearing AlMe₂ moieties.

Autorzy

Dorota Wiśniewska
Zofia Janas
Piotr Sobota
Lucjan B. Jerzykiewicz

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Streszczenie

Complexes having two ancillary (tbop)²⁻ ligands where tbopH₂ = 2,2'-thiobis{4-(1,1,3,3-tetramethylbutyl)phenol}, viz., [M(tbop-κ³O,S,O)₂] (M = Ti, **1**; M = Zr, **2**; M = Hf, **3**), have been prepared in good yields by amine or HCl elimination from tbopH₂. The ¹H and ¹³C NMR studies showed that complexes **1–3** adopt in solution mononuclear structures. Treatment of **1–3** with 2 equiv or an excess of AlMe₃ generates heterometallic [M(μ-tbop-κ³O,S,O)₂Me₂(μ-AlMe₂)₂] (M = Ti, **4**; M = Zr, **5**; M = Hf, **6**) complexes. The structures of **4–6** were confirmed by NMR spectroscopy; complexes **5** and **6** were further investigated by X-ray crystallography. These studies showed **4–6** to be trimers either in the solid state or in solution. The crystals of **5**·CH₂Cl₂ and **6**·CH₂Cl₂ consist of eight-coordinate dimethyl Zr or Hf centers and two AlMe₂ moieties attached to oxygen atoms of the tbop ligands. The saturated coordination sphere of the metal centers in **1–6** makes them inactive in ethene polymerization

Słowa kluczowe

Catalysts, Alkyls, Metals, Ligands, Aluminum

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