

Titanium complexes supported by bis(aryloxo) ligand: structure and lactide polymerization activities.

Autorzy

Jolanta Ejfler

Michał Kobyłka

Lucjan B. Jerzykiewicz

Piotr Sobota

Rok wydania

2006

Czasopismo

Journal of Molecular
Catalysis A-Chemical

Numer woluminu

257

Strony

105-111

DOI

10.1016/j.molcata.2006.04.063

Kolekcja

Naukowa

Język

Angielski

Typ publikacji

Artykuł

Streszczenie

Titanium bis(aryloxo) complexes, $[\text{Ti}_2(\mu\text{-OEt})_2(\text{edbp})_2(\text{OEt})_2]$ (**1**) and $[\text{Ti}(\text{edbp})(\text{O}^i\text{Pr})_2]$ (**2**) ($\text{edbp-H}_2 = 2,2'$ -ethylidenebis(4,6-di-*tert*-butylphenol)) have been prepared and characterized. It was shown that compounds **1** and **2** were efficient initiators in a process of ring-opening polymerization (ROP) of cyclic esters. The catalytic behavior of complexes **1** and **2** in the polymerization of l- and rac-lactide (l-LA and rac-LA) was studied in toluene at 70 °C with a monomer to initiator ratio fixed at 100. The dimeric complex **1** initiated polymerization of lactide in 90% conversion within 2.5 h to afford polylactide (PLA) with M_n of 17,500 and PDI of 1.06. The parameters of PLA obtained with the monomeric complex **2** were similar ($M_n = 18,000$, PDI = 1.08). Microstructures of polymers obtained from rac-LA for both initiators were assigned as heterotactic.

Słowa kluczowe

Bis(aryloxo) complexes, Lactides, Polymerization, Titanium

Adres publiczny

<https://doi.org/10.1016/j.molcata.2006.04.063>

Strona internetowa wydawcy

<http://www.elsevier.com>