

Synthesis, X-ray Structural Analysis, and *l*-Lactide Polymerization of Novel Titanium Complexes Containing Aliphatic Salan Ligand

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Poly(lactide (PLA) is a biodegradable and renewable polymeric material for the use as eco-friendly commodities. The ring opening polymerization (ROP) of lactide (LA) with a wide variety of catalytic systems has been intensively studied over the past few decades. Despite the fact that some excellent initiators have been reported for the polymerization of LA in the literature, the search for new catalysts that generate well-defined PLA polymers are still important. Recently, titanium precursors with [ONNO]-type Salan ligands, which have methylene bridge between N and phenolate group, were extensively studied. Until now, much research focus on the modification of Salan has been directed toward the introduction of new substituents on two aryl-rings or two bridging N atoms; however, examples of aliphatic analogues for the Salan ligand remain undeveloped. In this regard, we report here the synthesis and characterization of novel titanium complexes and their controlled ring opening polymerizations of *l*-lactide(LA). Their X-ray structures of titanium complexes will be also shown.