

## Dipicolinate Complex of Oxovanadium(IV) with 4,4'-Dimethoxy-2,2'-Bipyridyl as a New Generation Ziegler-Natta Precatalyst

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**Abstract :** Polyvinyl alcohol and its derivatives such as 2-chloro-2-propen-1-ol have found application in many industries. They are mainly used for the production of adhesives, thickeners and stabilizers of emulsion paints, and surgical threads. Moreover, polyvinyl alcohol derivatives are indispensable reagents in the synthesis of hemiacetals. Polyolefins derived from polyvinyl alcohol are obtained by using catalysts belonging to complex compounds of transition metal ions. The aim of the studies is to the synthesis of a new complex, i.e. dipicolinate oxovanadium(IV) complex with 4,4'-dimethoxy-2,2'-bipyridyl, and to determine its catalytic activities. Moreover, the another aim of the studies was to set conditions for 2-chloro-2-propen-1-ol oligomerization. The catalytic system has been based on the dipicolinate complex of oxovanadium(IV) with 4,4'-dimethoxy-2,2'-bipyridyl and MMAO-12. The results of the studies showed that how a new oxovanadium(IV) complex compound effects on the 2-chloro-2-propen-1-ol oligomerization. Moreover, the results revealed that new catalytic material is a highly active catalyst for the investigated oligomerization.

**Keywords :** 2-chloro-2-propen-1-ol, oligomerization, dipicolinate, vanadium, methylaluminoxane

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