

product by the chain growth reaction of alpha-olefins on aluminum alkyl, the improvement comprising catalyzing the chain growth reaction that is a partially oxidized aluminum alkyl.

5536883

**HIGHLY ACTIVE DOUBLE METAL
CYANIDE CATALYSTS AND EPOXIDE
POLYMERIZATION**

Le-Khac Bi West Chester, PA, UNITED STATES assigned to ARCO Chemical Technology LP

Highly active double metal cyanide (DMC) catalysts are disclosed. The catalysts comprise a DMC complex, and organic complexing agent, and from about 5 to about 80 wt. %, based on the amount of catalyst, of a polyether having a number average molecular weight greater than about 500. A method of preparing the catalysts is also disclosed. The catalysts are easy to prepare, have exceptional activity, and are readily removed, if desired, from polymer products. The catalysts are used for polymerizing epoxides.

5539007

**CATALYST COMPOSITIONS FOR
MAKING POLYURETHANE BASED
ON IMIDAZOLES AND BORON
COMPOUNDS**

Listemann Mark; Mercado Lisa; Savoca Ann C Whitehall, PA, UNITED STATES assigned to Air Products and Chemicals Inc

A method for catalyzing the blowing reaction and making polyurethane foams employing a catalyst composition consisting essentially of a hydroxy-functional imidazole of the following

formula I (*See Patent for Chemical Structure*) I where R1 is a C1-C10 alkyl; R2 is hydrogen, methyl or ethyl and R3 is hydrogen or a C1-C20 organic group optionally having an ether functionality, provided that when R1 is methyl, R2 and R3 are not both hydrogen or a hydrogen and a methyl, in combination with a boron compound of the formula (*See Patent for Tabular Presentation*) PS where n=0 or 1, and R=C1-C8 alkyl, C5-C8 cycloalkyl, or C6-C10 aryl.

5539067

**COMPONENTS AND CATALYSTS
FOR THE POLYMERIZATION OF
OLEFINS**

Parodi Sandro; Nocchi Roberto; Giannini Umberto; Barbe'Pier C; Scata'Umert Oleggio, ITALY assigned to Montedison SpA

Disclosed are catalysts for the polymerization of alpha-olefins which comprise the reaction product of: (a) an Al alkyl compound; (b) a silicon compound containing at least a Si-OR or Si-OCOR or Si-NR2 bond, R being a hydrocarbyl radical; (c) a solid comprising, as essential support, a Mg dihalide in active form and, supported thereon, a Ti halide or a halo-Ti-alcoholate and a particular, selected type of electron-donor compound.

5539068

**GROUP 4, METAL-CONJUGATED
DIENE METALLOCYCLOPENTENE
COMPLEXES, AND ADDITION
POLYMERIZATION CATALYSTS
THEREFROM**

Devore David D; Stevens James; Timmers Francis J; Rosen Robert K Midland, MI, UNITED STATES assigned to The Dow Chemical Company