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; Mercando 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; Nocci 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

Novel Group 4 metal complexes containing one and only one cyclic delocalized, anionic, pi-bonded group wherein the metal is in the +4 formal oxidation state and having a bridged ligand structure, also referred to as constrained geometry complexes and a conjugated diene divalent anionic ligand group; catalytic derivatives of such complexes including novel zwiterionic complexes; and the use thereof as catalysts for polymerizing olefins, diolefins and/or acetylenically unsaturated monomers.

5539069

OLEFIN POLYMERIZATION CATALYSTS AND METHODS OF OLEFIN POLYMERIZATION

Tsutsui Toshiyuki; Yoshitsugu Ken Waki cho, JAPAN assigned to Mitsui Petrochemical Industries Ltd

An olefin polymerization catalyst of the present invention comprises (A) a metallocene compound, (B) an organoaluminum oxy compound, and (C) at least one kind of carbonyl-containing compound selected from ketoalcohol and beta-diketone, and optionally (D) an organoaluminum compound, and therefore, the catalyst is excellent in polymerization activity per catalyst unit weight, and is capable of giving olefin (co)polymers having high molecular weight. A supported olefin polymerization catalyst and its olefin prepolymerized catalyst of the present invention are excellent in polymerization activity per catalyst unit weight, and is capable of giving olefin (co)polymers having uniform particle size.

5539124

POLYMERIZATION CATALYSTS BASED ON TRANSITION METAL COMPLEXES WITH LIGANDS CONTAINING PYRROLYL RING

Etherton Bradley P; Nagy Sandor Houston, TX, UNITED STATES assigned to Occidental Chemical Corporation

Disclosed is an azametallocene polymerization catalyst having the general formula (*See Patent for Chemical Structure*) where L is a ligand, or mixture of ligands, each having 4 to 30 carbon atoms and containing at least two fused rings, one of which is a pyrrolyl ring, Cp is a ligand containing a cyclopentadienyl group, B is a Lewis acid, Y is a halogen, alkoxy from C1 to C20, siloxy from C1 to C20, or mixtures thereof, M is titanium, zirconium, or mixtures thereof, m is 1 to 4, and n is 0 to 2, p is 0 to 2, q is 0 to 1, and m+n+q=4. The catalyst is useful in polymerizing unsaturated olefinic monomers such as ethylene.

FINE AND SPECIALITY CHEMICALS

5532386

CATALYTIC PROCESS FOR ELIMINATING CARBOXYLIC ESTER AND ACYL GROUPS FROM ORGANIC COMPOUNDS

Fischer Rolf Heidelberg, GERMANY assigned to BASF Aktiengesellschaft