

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 zwitterionic complexes; and the use thereof as catalysts for polymerizing olefins, diolefins and/or acetylenically unsaturated monomers.

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**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.

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**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***

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

Fischer Rolf Heidelberg, GERMANY assigned to BASF Aktiengesellschaft

A process for preparing compounds of the formula I (*See Patent for Chemical Structure*) (I) where: Y inter alia is (*See Patent for Chemical Structure*) where R3 is hydrogen or a C1-C10-hydrocarbon radical. R1 and R2, inter alia, are each, independently of one another, hydrogen, a C1-C20-hydrocarbon radical which optionally carries inert substituents or heteroaryl, wherein a compound of the formula II (*See Patent for Chemical Structure*) (II) where Z is (*See Patent for Chemical Structure*) is reacted in the presence of catalytic amounts of a carbonic ester and of a nitrogenous base at from 100 degrees to 250 degrees C under a pressure of from 0.01 to 100 bar.

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**PROCESS FOR THE PREPARATION
OF VINYL ACETATE CATALYST**

Lemanski Michael F; Papparizos Christos; Blum Patricia R; Cirjak Larry M; Pepera Marc A Chester, NY, UNITED STATES assigned to The Standard Oil Company

A process of producing a fluid bed oxacylation catalyst for olefins and diolefins having the following formula Pd-M-A where M=Au, Cd, Bi, Cu, Mn, Fe, Co, Ce, U and mixtures thereof, A=an alkali metal or mixture thereof, and M is present in the range of from 0 to 5 wt %, comprising milling a fixed bed oxacylation catalyst precursor comprising Pd-M on a fixed support with a fluid bed catalyst aqueous binder material to form a uniform aqueous slurry, drying the aqueous slurry to remove the water to form microspheroidal particles of solid fluid bed catalyst precursor, impregnating the microspheroidal particles with a solution of alkali metal salt to form the fluid bed catalyst. The catalyst is particularly useful in the manufacture of vinyl acetate from ethylene, acetic acid and oxygen.

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**PROCESS FOR THE PREPARATION
OF TOCOPHEROL DERIVATIVES
AND CATALYST**

Matsui Makot; Yamamoto Hisashi Aichi Prefecture, JAPAN assigned to Eisai Co Ltd

A process is provided for the preparation of an alpha-tocopherol derivatives which are useful as antisterile vitamins, hypolipidemics, blood flow increasing agents, anti-cytosenility agents, antioxidants and the like. Catalysts are also provided. The alpha-tocopherol derivatives are represented by the following formula (VII): (*See Patent for Chemical Structure*) (VII) wherein n stands for 0 or an integer of from 1 to 5. The derivatives can be industrially prepared by employing as catalyst a metal ion-exchanged montmorillonite, metal ion-exchanged bentonite or metal ion-exchanged saponite which is substituted with one metal ion selected from the group consisting of scandium, yttrium, lanthanide element, aluminium, iron, tin, copper, titanium, zinc, nickel, gallium or zirconium.

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**TETRASULFONATED DIPHOSPHINE
COMPOUNDS AND METAL
COMPLEXES THEREOF FOR
ASYMMETRIC CATALYTIC
REACTIONS**

Lalonde Michel; Schmid Rudolf Basel, SWITZERLAND assigned to Hoffmann-La Roche Inc

The invention is concerned with novel water-soluble racemic or optically active