

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.

**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.

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***FINE AND SPECIALITY  
CHEMICALS***

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**5532386**

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

Fischer Rolf Heidelberg, GERMANY assigned to BASF Aktiengesellschaft