

5554704

**CONTROLLED PARTICLE SIZE
POLYOLEFINS FROM SILICA
SUPPORTED PREPOLYMERIZED
METALLOCENE CATALYST**

Burkhardt Terry J; Murata Masahide; Brandley William B Kingwood, TX, UNITED STATES assigned to Exxon Chemical Patents Inc

The invention relates to a novel process for producing a supported metallocene catalyst system useful for the polymerization and/or copolymerization of olefins, alpha-olefins, and/or diolefins which results in a catalyst product which during polymerization, produces minimal to no reactor fouling and polymer of controlled morphology. The invention is particularly useful for but not limited to polymerizing propylene or copolymerizing propylene with olefins having two or more carbon atoms. The novel support technique described herein results in a catalyst which will obtain polymer product having controlled, uniform particle size, narrow molecular weight distribution, high bulk density and depending upon the metallocene employed and monomers polymerized, stereoregularity.

5554721

**ACID CATALYZED PROCESS FOR
PREPARING AMINO ACID
POLYMERS**

Adler David; Freeman Michael B; Lipovsky James M; Paik Yi H; Shulman Jan E; Swift Graha Dresher, PA, UNITED STATES assigned to Rohm and Haas Company

The present invention relates to an acid catalyzed thermal polycondensation process for producing amino acid polymers. More specifically, amino acid polymers are produced by thermally condensing a

mixture of one or more amino acids and optionally one or more polyfunctional monomers, using an acid catalyst, while maintaining an intimate admixture. Processing techniques useful for maintaining an intimate admixture include adding to the mixture one or more processing aids, using mechanical means, and combinations thereof. The amino acid polymers produced by this process are useful as cleaning and detergent additives; fertilizer and pesticide additives; personal car

5554775

**BORABENZENE BASED OLEFIN
POLYMERIZATION CATALYSTS**

Krishnamurti Ramesh; Nagy Sando; Etherton Bradley P Amherst, NY, UNITED STATES assigned to Occidental Chemical Corporation

Disclosed is a catalyst having the general formula (*See Patent for Chemical Structure*) where Q is a ligand containing the ring (*See Patent for Chemical Structure*) R is hydrogen, N(R')₂, OR', or R', each R' is independently selected from alkyl from C1 to C10, aryl from C6 to C15, alkaryl C7 to C15, and aralkyl from C7 to C15, each X is independently selected from hydrogen, halogen, alkoxy from C1 to C10, dialkylamino from C1 to C10, methyl, (*See Patent for Chemical Structure*) each R1 is independently selected from halogen, alkoxy from C1 to C10, and R', L is (*See Patent for Chemical Structure*) RC negative earth#701 +A,3 +BL,A +BN,44 +SD,5 +S,5 (R+HD 1+L)+HD n+L ,+RE +0 +RB (R+HD 1+L)+HD n+US,5 +S,5 +BN,44 +BL,E +RD,335588BBDD00 +BL,55 +701 +A,4 +BN,5 +BL,5 +SD,5 +SB,5 +M,1 C+MR,1 +AB,8 R+A,3 +RD,444488B +A,2 +BL,BB +SD,5 +SB,5 +63 +A,2 +RD,335588BBDD +BL,33 +701 +A,3 +BL,A +BN,44 +SD,5 +S,5 (R+HD 1+L)+HD n+L ,+RE +0 +RB +BL,5 +RD,D00335588B +BL,B +SD,5 +SB,5 +M,1 B+MR,1 +AB,8 R+A,2 +BL,33 +SD,5 +SB,5 +63 +A,5 +BL,A +BN,44

+SD,5 +S,5 (R+HD 1+L)+HD n+L ,+RE +RE+PS +RE+PS Q, or X, where L can be bridged to Q, B is an optional base, +37 n+38 +0 is 0 to 5, and M is titanium, zirconium, or hafnium.+REium.+RE or hafnium.+REm.+REEium.+REm.+REum.+REu m.+REm.+REum.+REum.+REum.+RE or hafnium.+REum.+RE.+RERE+S,5 (R+HD 1+L)+HD n+L ,+RE +0 +RB +BL,5 +RD,D00335588B +BL,B +SD,5 +SB,5 +M,1 B+MR,1 +AB,8 R+A,2 +BL,33 +SD,5 +SB,5 +63 +A,5 +BL,A +BN,44 +SD,5 +S,5 (R+HD 1+L)+HD n+L ,+RE +RE+PS +RE+PS Q, or X, where L can be bridged to Q, B is an optional base, +37 n+38 +0 is 0 to 5, and M is titanium, z i r c o n i u m , o r hafnium.+REum.+RE+RE+RE.+RE+RE.+RE+R E.+REium.+REium.+REBN,44 +SD,5 +S,5 (R+HD 1+L)+HD n+L ,+RE +RE+PS +RE+PS Q, or X, where L can be bridged to Q, B is an optional base, +37 n+38 +0 is 0 to 5, and M is titanium, z i r c o n i u m , o r hafnium.+REum.+REium.+REium.+REtional base, +37 n+38 +0 is 0 to 5, and M is titanium, zirconium, or hafnium.+RE

5554777

**CATALYST FOR THE PREPARATION
OF LINEAR CARBON
MONOXIDE/ALPHA-OLEFIN
COPOLYMERS**

Hefner John G; Kolthammer Brian W S Lake Jackson, TX, UNITED STATES assigned to The Dow Chemical Company

Novel catalyst compositions comprising a cationic transition metal complex containing palladium, a mono-, di-, or tridentate ligand, and an anion are disclosed. The novel catalyst compositions can be

used in a process for polymerizing carbon monoxide and at least one ethylenically unsaturated hydrocarbon to produce linear alternating polymers. Processes for preparing the novel catalyst compositions are also disclosed.

5559161

**HYDROXY-FUNCTIONAL TRIAMINE
CATALYST COMPOSITIONS FOR
THE PRODUCTION OF
POLYURETHANES**

Klotz Herbert; Lassila Kevin; Listemann Mark L; Minnich Kristen E; Savoca Ann C Allentown, PA, UNITED STATES assigned to Air Products and Chemicals Inc

A method for preparing a polyurethane foam which comprises reacting an organic polyisocyanate and a polyol in the presence of a blowing agent, a cell stabilizer and a catalyst composition consisting essentially of a compound of structure I (*See Patent for Chemical Structure*) I wherein R is hydrogen, a C1-C4 alkyl, C6-C8 aryl, or C7-C9

ENVIRONMENTAL CATALYSIS

5552128

**SELECTIVE CATALYTIC
REDUCTION OF NITROGEN OXIDES**

Chang Clarence; Santiesteban Jose G; Shihabi David; Stevenson Scott; Vartuli James C Princeton, NJ, UNITED STATES assigned to Mobil Oil Corporation

There is provided a catalytic method for converting nitrogen oxides to nitrogen (i.e., N₂). The catalyst for this method comprises an acidic solid component comprising a Group IVB metal oxide modified with an oxyanion of a Group VIB metal