

ABSTRACT OF THE DISCLOSURE

POLYMER-BOUND LIGANDS, AND METALLOCENES USEFUL IN CATALYST SYSTEMS FOR OLEFIN POLYMERIZATION

A polymer bound ligand represented by the formula $QM(R)_m$ and process for preparing same are provided, wherein Q is a polystyrene, M is Si, C, Ge, Sn, P, or N, each R is a that at least one R is a cyclopentadienyl-type compound, and m is 2 or 3, said process comprising reacting a metallated polystyrene and an organohalide compound, wherein the polystyrene is metallated with an alkali metal, and wherein said organohalide compound is represented by the formula $XM(R)_m$ wherein X is a halide. Other aspects of the present invention include a polymer bound metallocene represented by the formula $QM(R)_mZY_n$ and a process for preparing same, wherein Z is a transition metal, Y is a halide, methyl, hydrogen, or a cyclopentadienyl-type group, and n is 2 or 3. Other aspects of the present invention include a catalyst system comprising the polymer bound metallocene and an organoaluminoxane, a method for preparing same, and a polymerization process employing the catalyst system.