

Abstract

The present invention provides a method for supporting a nonmetallocene olefin polymerization catalyst, comprising the following steps: a carrier reacts with a chemical activator to obtain a modified carrier; a magnesium compound is dissolved in a tetrahydrofuran-alcohol mixed solvent to form a solution, then the modified carrier is added to the solution to perform a reaction, then filtered and washed, dried and suction dried to prepare a composite carrier; a nonmetallocene olefin polymerization catalyst is dissolved in a solvent, and then reacts with said composite carrier, then is washed and filtered, dried and suction dried, to prepare a supported nonmetallocene olefin polymerization catalyst. The present invention further relates to a supported nonmetallocene olefin polymerization catalyst as prepared by this method. The present invention further relates to the use of the supported nonmetallocene olefin polymerization catalyst in an olefin polymerization and an olefin copolymerization between two or more different olefins. In one specific embodiment, the present invention relates to the use of the supported nonmetallocene olefin polymerization catalyst in a slurry ethylene polymerization. The present invention provides a new type of catalyst that improves the polymer morphology, increases polymer bulk density and enhances polymerization activity.