MOLECULAR WEIGHT CONTROL OF POLYOLEFINS USING HALOGENATED BIS-PHENYLPHENOXY CATALYSTS

ABSTRACT

A process for preparing an olefin homopolymer or copolymer comprises contacting ethylene, an alpha-olefin, or a combination, and a catalytic amount of a metal-ligand complex catalyst of a particular formula that requires at least one halogen atom that is ortho to a bridging moiety. The strategic location of the halogen atom(s) ensures a product having a molecular weight that is predictably and significantly reduced in comparison with that of copolymers produced using otherwise identical metal-ligand complex catalysts that lack halogen atoms at the specified sites.

[No available fig.]