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(54) Title: CARBENIUM CATIONIC COMPLEXES SUITABLE FOR POLYMERIZATION CATALYSTS

(57) Abstract: This description addresses a process for the preparation of polyolefins from one or more olefinic monomers comprising combining under polymerization conditions said olefins with the product of combining i) an organometallic catalyst compound and ii) a cocatalyst complex comprising a trialkylsilyl-substituted carbenium cation and a suitable noncoordinating or weakly coordinating anion. These complexes exhibit good solubility in aliphatic solvents such that use in aliphatic solution based polymerization reaction processes can be conducted without the use of aromatic solvents or co-solvents and without the need for slurry means of introduction into chemical reaction environments. High number-average molecular weight polymers and copolymers at high rates of productivity were observed from the use of metallocene catalysts complexes when activated with [(3, 5-(Et₃Si)₂Ph)₃C]⁺ [(C₆F₅)₃B]⁻ and used in a hexane-based solution polymerization.

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