PROCESS OF POLYMERIZING TETRA-FUNCTIONAL LONG-CHAIN BRANCHED

ABSTRACT

The present process embodiments for synthesizing long-chain branched copolymers include contacting together one or more C_2-C_{14} alkene monomers, at least one diene or polyene, optionally a solvent, and a multi-chain catalyst. The multi-chain catalyst includes a plurality of polymerization sites and produces at least two polymer chains of the C_2-C_{14} alkene monomers, each polymer chain polymerizing at one of the polymerization sites. The process synthesizes the long-chain branched polymers by connecting the two polymer chains with the diene or polyene, the joining of the two polymer chains being performed in a concerted manner during the polymerization.

[No suitable Figure.]