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(54) Title: PROCESSES TO IMPROVE REACTOR STABILITY FOR THE PREPARATION OF ETHYLENE-BASED POLY-
MERS USING ASYMMETRICAL POLYENES

(57) Abstract: The invention provides a process to form an ethylene-based polymer, said process comprising polymerizing ethylene and at least one asymmetrical polyene, comprising an "alpha, beta unsaturated - carbonyl end" and a "C-C double bond end," and wherein the polymerization takes place in the presence of at least one free-radical initiator, and wherein the polymerization takes place in a reactor configuration comprising at least two reaction zones, reaction zone 1 and reaction zone i ($i \geq 2$), wherein reaction zone i is downstream from reaction zone 1; and wherein at least one chain transfer agent (CTA) is added to the polymerization, and wherein the CTA is a saturated hydrocarbon or an unsaturated hydrocarbon.

