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(54) Title: COPOLYMERS MADE WITH QUASI-LIVING POLYOLEFINS AND UNSATURATED ACIDIC REAGENTS, DISPERSANTS USING SAME, AND METHODS OF MAKING SAME

(57) Abstract: Copolymers made with quasi-living polyolefins and unsaturated acidic reactants, dispersants using same, and methods of making same are provided. Under one aspect, a copolymer of an unsaturated acidic reactant and high molecular weight polyolefin, wherein the polyolefin comprises an exo-olefin terminated quasi-living polymeric product, is provided. The quasi-living polymeric product is formed, e.g., by forming a quasi-living cationic polyolefin under suitable quasi-living conditions, and contacting the cationic polyolefin with an agent selected to convert the cationic polyolefin to the exo-olefin terminated quasi-living polymeric product. The cationic polyolefin can be formed, e.g., by one of (a) contacting a cationically polymerizable monomer with an initiator, in the presence of a Lewis acid; (b) ionizing a tert-halide terminated polyolefin with a Lewis acid; (c) contacting a preformed polyolefin with a Lewis acid; or (d) contacting a cationically polymerizable monomer with an inifer carrying at least two tertiary halogens under cationic polymerization conditions.



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