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(54) Title: PROCESS FOR INSERTING AMIDE LINKAGES INTO POLYOLEFINS

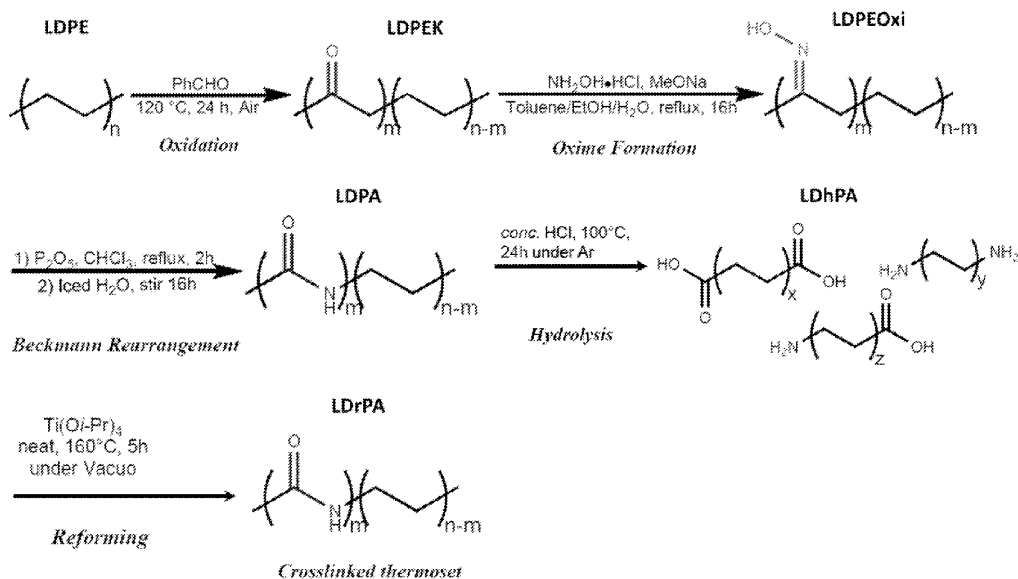


FIG. 2

(57) **Abstract:** The invention provides a process for inserting amide linkages into a polyolefin, the process comprising the steps of: (i) providing a polyoxime derived from the oxidation of a polyolefin into a polyketone and subsequently converting the polyketone into the polyoxime; and (ii) subjecting the polyoxime to a Beckmann rearrangement reaction in the presence of a dehydrating reagent to obtain a polyamide. The invention also provides a process to provide a reformed polyamide, the process comprising the steps of: (iii) subjecting a polyamide comprising a plurality of amide groups obtained from the process disclosed hereinbefore to hydrolysis conditions to cleave at least a portion of the amide groups to provide an intermediate mixture comprising a plurality of different compounds comprising carboxylic acid groups, amine groups or both; and (iv) generating a reformed polyamide from the intermediate mixture in the presence of a suitable catalyst.

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