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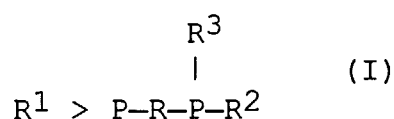
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more of the carbon atoms are replaced by heteroatoms ("2-PA" group); wherein R² and R³ independently represent univalent radicals of up to 20 atoms or jointly form a bivalent radical of up to 20 atoms; wherein R represents a bivalent organic bridging group; and c) a complexing anion; wherein the complexing anion is the anion of the carboxylic acid. Process wherein the carboxylic acid is prepared in-situ and use of the carboxylic anhydride as an acylation agent.

(57) Abstract: Process for the preparation of a carboxylic anhydride by reaction of an ethylenically unsaturated compound with carbon monoxide and a carboxylic acid in the presence of a catalyst comprising: a) a source of a group VIII metal, b) a bidentate diphosphine of formula (I), wherein R¹ represents a bivalent radical that together with the phosphorus atom to which it is attached is an optionally substituted 2-phospha-tricyclo [3.3.1.1{3,7}] -decyl group or a derivative thereof in which one or