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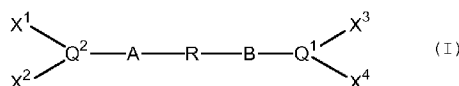
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(54) Title: PROCESS FOR THE CARBOXYLATION OF ETHYLENICALLY UNSATURATED COMPOUNDS, NOVEL CARBOXYLATION LIGANDS AND CATALYST SYSTEMS INCORPORATING SUCH LIGANDS



(57) Abstract: A novel bidentate ligand of general formula (I) is described together with a process for the carbonylation of ethylenically unsaturated compounds. The group X¹ may be defined as a univalent hydrocarbyl radical of up to 30 atoms containing at least one nitrogen atom having a pK_b in dilute aqueous solution at 18°C of between 4 and 14 wherein the said at least one nitrogen atom is separated from the Q² atom by between 1 and 3 carbon atoms. The group X² is defined as X¹, X³ or X⁴ or represents a univalent radical of up to 30 atoms having at least one primary, secondary or aromatic ring carbon atom wherein each said univalent radical is joined via said at least one primary, secondary or aromatic ring carbon atom(s) respectively to the respective atom Q². Q¹ and Q² each independently represent phosphorus, arsenic or antimony.

