

Title (en)
METHOD FOR HYDROFORMYLATION

Title (de)
VERFAHREN ZUR HYDROFORMYLIERUNG

Title (fr)
PROCÉDÉ D'HYDROFORMYLATION

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Application
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Abstract (en)
[origin: WO2009059963A1] The invention relates to a method for the hydroformylation of compounds of formula (I), or the salts thereof. In formula (I), X is C, P(RX), P(O-RX) S or S(=O), wherein Rx is H, alkyl, cycloalkyl, heterocycloalkyl, aryl or hetaryl; A is a divalent bridging group comprising between 1 and 4 bridge atoms; and R1 is H, alkyl, alkenyl, alkynyl, cycloalkyl, heterocycloalkyl, aryl or hetaryl. According to said method, the compound of formula (I) is reacted with carbon monoxide and hydrogen in the presence of a catalyst, the catalyst comprising a complex of a metal of the eighth subgroup with a compound of formula (II), wherein Pn is a pnictogen atom; W is a divalent bridging group comprising between 1 and 8 bridge atoms; R2 is a functional group that can form an intermolecular, non-covalent bond with the group -X(=O)OH; R3, R4 is alkyl, cycloalkyl, heterocycloalkyl, aryl or hetaryl; a, b, c are 0 or 1; and Y1, Y2 and Y3 are O, S, NRa or SiRbRc. The method according to the invention is also for hydroformylation of compounds of formula (II.a), wherein W' is a bivalent bridging group comprising between 1 and 5 bridge atoms between the adjacent bonds, Z is O, S, S(=O), S(=O)2, N(RIX) or C(RIX)(RX); and R1 to Rx are independently H, halogen, nitro, cyano, amino, alkyl, etc.; or two radicals RI, RII, RIV, RVII, RVIII and RIX, for the bond part of a covalent bond.

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