

Title (en)
NOVEL CHIRAL LIGANDS, TRANSITION METAL COMPLEXES THEREOF, AND THE CATALYTIC USE OF THE SAME

Title (de)
NEUE CHIRALE LIGANDEN UND DEREN ÜBERGANGSMETALLKOMPLEXE SOWIE DEREN KATALYTISCHE ANWENDUNG

Title (fr)
NOUVEAUX LIGANDS CHIRAUX ET LEURS COMPLEXES DE METAUX DE TRANSITION AINSI QUE LEUR UTILISATION CATALYTIQUE

Publication
EP 1436305 A1 20040714 (DE)

Application
EP 02758238 A 20020618

Priority
• DE 10150335 A 20011015
• EP 0206715 W 20020618

Abstract (en)
[origin: DE10150335A1] Chiral phosphane ligands (I) are new. Chiral phosphane ligands of formula (I) are new. R<1> = H, alkyl, alkenyl, (hetero)aromatic aryl, O-alkyl, NH-alkyl, N-(alkyl)2 where the alkyl groups are optionally bonded to each other via an oxygen bridge, O-aryl, NH-aryl or N-(alkyl)(aryl); R<2> - R<9> = R<1> or O-CO-alkyl, O-CO-aryl, F, Cl, Br, OH, NO2, Si(alkyl)3, CF3, CN, CO2H, COH, SO3H, CONH2, CONH(alkyl), CON(alkyl)2, SO2(alkyl), SO(alkyl), SO(aryl), SO2(aryl), SO3(aryl), S-alkyl, S-aryl, NH-CO(alkyl), CO2(alkyl), CONH2, CO(alkyl), NHCOH, NHCO2(alkyl), CO(aryl), CO2(aryl), CONH2, CO(alkyl), NHCOH, NHCO2(alkyl), CO(aryl).CO2(aryl), CHCH-CO2(aryl), CH=CH-CO2H, PO(aryl)2, PO(alkyl)2, PO3H or PO(o-alkyl)2 where two or more neighboring groups are optionally bonded to form a condensed ring system; alkyl = 1-12C alkyl; alkenyl = optionally unsaturated 2-4C alkenyl optionally substituted by Cl, F, 1-12C alkyl, -1-12C alkoxy, 5-10C aryl, 5-10C aryloxy, NH2, 1-12C alkylamine, 1-12C dialkylamine; and aryl = 5-10C aromatic, optionally substituted by Cl, F, 1-12C alkyl, 1-12C alkoxy, 5-10C aryl(oxy), NH2 or 1-12C (di)alkylamine, where 1-4C atoms of the aromatic groups are substituted by N, O or S to form a 5-10 membered heteroaromatic aryl. Independent claims are also included for the following: (1) catalysts prepared by reaction of a metal salt or a metal complex precursor with a ligand of formula (I); and (2) a process for the production of chiral ligands of formula (I) where enantiomer rich dimethyl compounds of formula (II) are lithiated with alkyl lithium compounds, followed by reaction with aminophosphorus dichlorides, alkyl- or arylphosphorus dichlorides.

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C07F 9/6568

IPC 8 full level
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