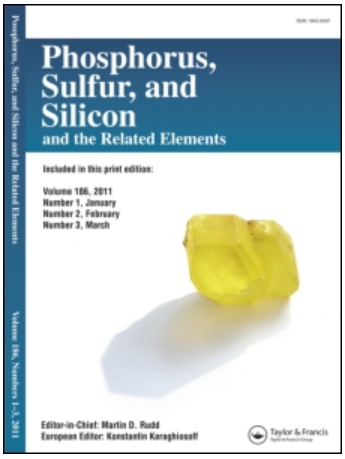

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1,3,2-Dlheterophosphacyclanes in Rhodium(I) Complexes

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1,3,2-DIHETEROPHOSPHACYCLANES IN RHODIUM(I) COMPLEXES

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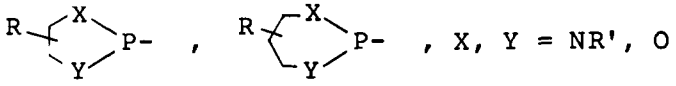
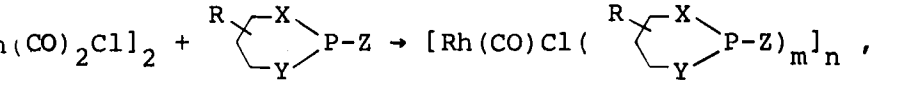
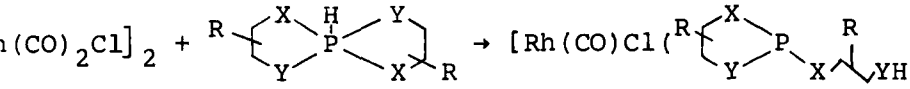
The paper is concerned with rhodium(I) complexes of the type acacRh(CO)L, $Rh(CO)ClL_2$, $[Rh(CO)LCl]_2$, $[acacRh(CO)]_2L$ and $[Rh(CO)LCl]_n$, where L: P are monodentate, P,N- and P,P-bidentate ligands including 1,3,2-diheterophospholane and phosphorinane cycles



In our studies two synthetic approaches were used, viz. the interaction of tricoordinated phosphorus derivatives with the starting rhodium substrate proceeding via the associative mechanism



and the reaction of pentacoordinated phosphorus derivatives (hydrospirophosphoranes)



^{31}P, ^{1}H, ^{13}C NMR, IR spectroscopy as well as X-ray and chemical studies of rhodium-coordinated 1,3,2-diheterophosphacyclanes were carried out. The properties of these organophosphorus ligands were shown to depend on the nature and configurational rigidity of the substituents X, Y, Z at the phosphorus atom. This is illustrated by the dependence of $^{1}J(Rh, P)$ and ν (CO) on the size of the phosphorus ring and the position of the heteroatoms (O, N) in the ligand molecule.