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THE HYDROPHOSPHORYLATION OF THE COORDINATED HETERODIENES

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The conjugated heterodienes react with the dialkylphosphoric acids giving the products of the dialkylphosphites' addition toward C=C bonds. Taking in the account, that either η^2 -, η^2 - or η^2 -, η^1 -coordination weakens the conjugation between C=C and C=X bonds, we obtained the α -hydroxy- or α -aminophosphonates, coordinated with the metals' core.

$$\begin{array}{c} R_1 \\ R_2 \\ M(CO) \\ R_1 \\ R_2 \\ M(CO) \\ M(CO) \\ 4 \end{array} \begin{array}{c} (RO)_2 P(O)H \\ R_2 \\ M(CO) \\ M(CO) \\ 4 \end{array} \begin{array}{c} R_1 \\ R_2 \\ M(CO) \\ M(CO) \\ M(CO) \\ 4 \end{array} \begin{array}{c} (RO)_2 P(O)H \\ R_2 \\ M(CO) \\ M(CO)$$

SCHEME 1

The species (A) are in equilibrium with the starting organometallic and the dialkykphosphites when X=0, but can be isolated, when X=N(R).

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