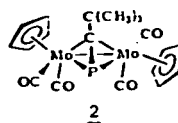
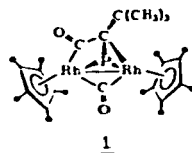


ADDITION OF AN ALKYLIDYNEPHOSPHINE TO METAL METAL MULTIPLE BONDS

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Two years ago some of us [1] have reported the synthesis of 2,2-dimethylpropylidynephosphine via a catalytic decomposition of [2,2-dimethyl-1-(trimethylsiloxy)propylidene]-trimethylsilylphosphine. Elucidating the chemical properties of this remarkable compound it has been treated with transition metal complexes as $\{[\eta^5\text{-C}_5(\text{CH}_3)_5\text{-}\mu\text{-CO}]\text{Rh}\}_2$ and $[(\eta^5\text{-C}_5\text{H}_5)(\text{CO})_2\text{Mo}]_2$, containing a metal metal multiple bond. Analogous to reactions of alkynes the addition products 1 and 2 were isolated. An X-ray structure determination of the dimetalla-phospha-tetrahedrane derivative 2 shows a P-C distance of 172 pm which is characteristic for a P-C double bond [2], see also [3].



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 [3] J.C.T.R. Burckett-St. Laurent, P.B. Hitchcock, H.W. Kroto, M.F. Meidine, and J.F. Nixon, J. Organomet. Chem. 238,C82 (1982).