

Phosphenium-Komplexe, 43 [1].

Ringöffnungsreaktionen der dreigliedrigen Phosphametallacyclen

$\text{Cp}(\text{OC})_2\overline{\text{W-P}(\text{R})_2\text{-Se}}$ { $\text{PR}_2 = \text{P}(o\text{-Tol})_2, \text{P}(\text{Ph})(o\text{-Tol}),$
 $\text{P}(\text{Mes})[\text{C}(\text{S})\text{N}(\text{H})\text{Et}], \text{P}(t\text{-Bu})[\text{C}(\text{O})\text{N}(\text{H})\text{Et}]$ }

Phosphenium Complexes, 43 [1]. Ring-Opening Reactions of the Three-Membered Phosphametallacycles $\text{Cp}(\text{OC})_2\overline{\text{W-P}(\text{R})_2\text{-Se}}$ { $\text{PR}_2 = \text{P}(o\text{-Tol})_2, \text{P}(\text{Ph})(o\text{-Tol}),$
 $\text{P}(\text{Mes})[\text{C}(\text{S})\text{N}(\text{H})\text{Et}], \text{P}(t\text{-Bu})[\text{C}(\text{O})\text{N}(\text{H})\text{Et}]$ }

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The three-membered phosphametallacycles $\text{Cp}(\text{OC})_2\overline{\text{W-P}(o\text{-Tol})(\text{R})\text{-Se}}$ [$\text{R} = o\text{-Tol}$ (**3a**), $\text{R} = \text{Ph}$ (**3b**)] react with the tertiary phosphanes Me_3P (**4a**), Me_2PhP (**4b**) or MePh_2P (**4c**) with ring opening and deselenation to the metallo-phosphanes *trans*- $\text{Cp}(\text{OC})_2(\text{R}_3\text{P})\overline{\text{W-P}(o\text{-Tol})(\text{R})}$ (**5a-d**). Analogous reactions of the P-thioformamido- and formamido-substituted metallacycles $\text{Cp}(\text{OC})_2\overline{\text{W-P}(\text{R})[\text{C}(\text{X})\text{N}(\text{H})\text{Et}]\text{-Se}}$ [$\text{R} = \text{Mes}$, $\text{X} = \text{S}$ (**6a**); $\text{R} = t\text{-Bu}$, $\text{X} = \text{O}$ (**6b**)] with Me_3P (**4a**) yield in the case of **6a** the tungsten-phosphane $\text{Cp}(\text{OC})_2(\text{Me}_3\text{P})\overline{\text{W-P}(\text{Mes})[\text{C}(\text{S})\text{N}(\text{H})\text{Et}]}$ (**7**), while **6b** affords the tungsten-selenophosphorane $\text{Cp}(\text{OC})_2(\text{Me}_3\text{P})\overline{\text{W-P}(\text{Se})(t\text{-Bu})[\text{C}(\text{O})\text{N}(\text{H})\text{Et}]}$ (**8**). Treatment of **7** with hydrogen chloride affords { $\text{Cp}(\text{OC})_2(\text{Me}_3\text{P})\overline{\text{W-P}(\text{H})(\text{Mes})[\text{C}(\text{S})\text{N}(\text{H})\text{Et}]}$ }Cl (**9**). With methyl iodide, **8** is transformed into { $\text{Cp}(\text{OC})_2(\text{Me}_3\text{P})\overline{\text{W-P}(\text{SeMe})(t\text{-Bu})[\text{C}(\text{O})\text{N}(\text{H})\text{Et}]}$ }I (**10**).

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