Übergangsmetall-substituierte Phosphane, Arsane und Stibane, LX [1]. Ferrio-(thiocarbamoyl)phosphane $Cp(OC)_2Fe$-P(Mes)[C(=S)-N(R)H] (R = Me, Et, *t*-Bu): Aufbau aus dem Ferrio-mesitylphosphan $Cp(OC)_2Fe$-P(Mes)H und Organoisothiocyanaten sowie Quaternisierung mit Alkylhalogeniden und Oxidation mit Schwefel

Transition Metal Substituted Phosphanes, Arsanes and Stibanes, LX [1]. Ferrio-(thiocarbamoyl)phosphanes $Cp(OC)_2Fe$-P(Mes)[C(=S)-N(R)H] (R= Me, Et, *t*-Bu): Build-up from the Ferrio-mesitylphosphane $Cp(OC)_2Fe$-P(Mes)H and Organoisothiocyanates, Quaternization with Alkyl Halides and Oxidation with Sulfur

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The ferrio-phosphane $Cp(OC)_2Fe$-P(Mes)H (**4**), obtained by deprotonation of the mesitylphosphane iron complex $\{Cp(OC)_2[H_2(Mes)P]Fe\}BF_4$ (**3**), reacts with the organoisothiocyanates RNCS (R = Me, Et, Ph) (**5a - c**) to give the functionalized ferrio-phosphanes $Cp(OC)_2Fe$-P(Mes)[C(=S)-N(R)H] (**6a - c**). Quaternization of **6a,b** at the phosphorus atom with the alkyl halides R'-Hal (R' = Me, Et, CH_2Ph) (**7a - c**) yields the complexes $\{Cp(OC)_2Fe$-P(Mes)(R')[C(=S)-N(H)(R)]$\}$Hal (**8a - d**), whereas oxidation with elemental sulfur affords the ferrio-thiophosphoranes $Cp(OC)_2Fe$-P(=S)(Mes)[C(=S)-N(R)H] (R = Me, Et) (**10a,b**). **10b** is alkylated with MeI to give $\{Cp(OC)_2Fe$-P(SMe)(Mes)[C(=S)-N(Et)H]$\}$I (**11**). The structure of **8b** has been determined by X-ray analysis.

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