

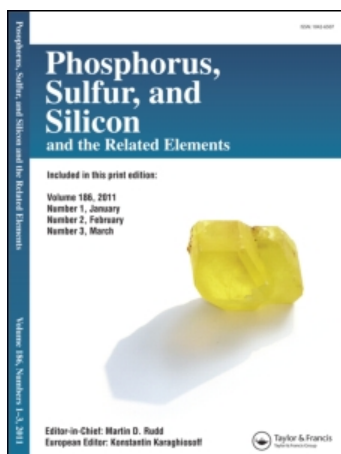
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Phosphorus, Sulfur, and Silicon and the Related Elements

Publication details, including instructions for authors and subscription information:

<http://www.informaworld.com/smpp/title~content=t713618290>

Metallo(alkyl)chlorophosphanes $\text{Cp}(\text{CO})_3 \text{M-P(R)Cl}$ (M=Mo, W; R=Me, Ph, tBu, C_5Me_5) - Novel Sources for Phosphinidenes

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To cite this Article Schemm, R. , Maisch, R. , Luksza, M. and Malisch, W.(1987) 'Metallo(alkyl)chlorophosphanes $\text{Cp}(\text{CO})_3 \text{M-P(R)Cl}$ (M=Mo, W; R=Me, Ph, tBu, C_5Me_5) - Novel Sources for Phosphinidenes', *Phosphorus, Sulfur, and Silicon and the Related Elements*, 30: 3, 788

To link to this Article: DOI: 10.1080/03086648708079280

URL: <http://dx.doi.org/10.1080/03086648708079280>

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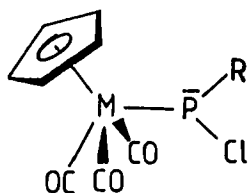
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Metallo(alkyl)chlorophosphanes $\text{Cp}(\text{CO})_3 \text{M-P(R)Cl}$ **(M = Mo, W; R = Me, Ph, tBu, C_5Me_5) - Novel Sources for** **Phosphinidenes**

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Metallation of organodichlorophosphanes RPCl_2 (R = Me, Ph, tBu, C_5Me_5) with $\text{Na}[\text{M}(\text{CO})_3\text{Cp}]$ (M = Mo, W) in benzene yields the thermolabile Metallo(alkyl)chlorophosphanes **1a-g**.



	1a	b	c	d	e	f	g
M	Mo	W	Mo	W	Mo	W	W
R	Me	Me	Ph	Ph	tBu	tBu	C_5Me_5

In solution **1a-d** show a high tendency to decompose to the corresponding metal chloride $\text{Cp}(\text{CO})_3\text{M-Cl}$ with phosphinidene elimination. The rate of decomposition depends on the metal and the phosphorus ligand ($\text{Mo} > \text{W}$, $\text{Me} > \text{Ph} > \text{tBu}$, C_5Me_5).

Treatment of **1f** with Me_3P affords $[\text{Cp}(\text{CO})_3\text{W-P(tBu)PMe}_3]\text{Cl}$ (**2**), which can be described as a cationic phosphinidene-phosphorane complex.