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P-Metalated Phosphaalkenes

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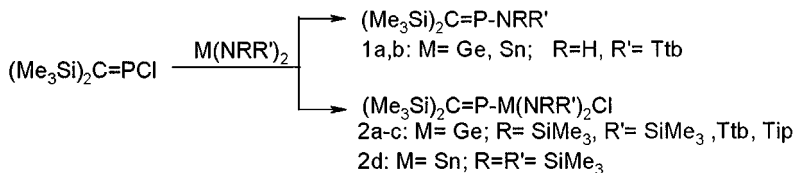
P-METALATED PHOSPHAALKENES

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Structure and reactivity of metalated species resulted from insertion to reactive element-halogen bond is of great interest since their reliability to Grignard reagents, one of the most powerful tools in the arsenal of synthetic chemistry.¹ Here we present the study of reactivity of group 14 carbenoids (germane- and stanenediyls) toward P–Cl bond in iminophosphines and methylenephosphines. Treatment of Mes^{*}N=P–Cl with M(NR₂)₂ gives just common substitution products² of the type Mes^{*}N=P–NR₂. But when (Me₃Si)₂C=P–Cl is used, either substitution proceeds or metal insertion products are isolated in high yields depending on nucleophilic properties of amide substituent:



All the compounds have been characterized by ¹H, ³¹P, ¹³C spectral data, and x-ray structure for **2a** has been determined. Long P–Ge bond implies possible rich scope of reactivity of germetalated phosphaaalkenes.

REFERENCES

- [1] E. Niecke, H. J. Metternich, and R. Streubel, *Chem. Ber.*, **123**, 67 (1990).
- [2] L. N. Markovski, V. D. Romanenko, A. V. Ruban, et al., *Zh. Obsch Khim.*, (Rus.), **50**(2), 2453 (1990).

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