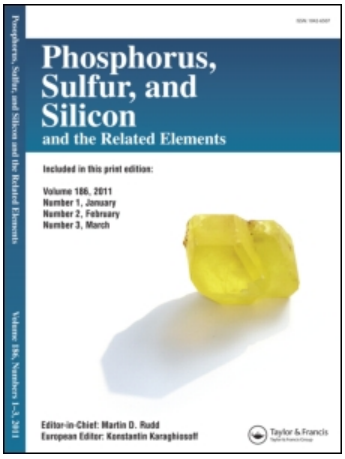

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N-Metalla Hydridophosphazenes: Precursors for Heterobimetallic Complexes and Hydridophosphazene Oligomers and Polymers

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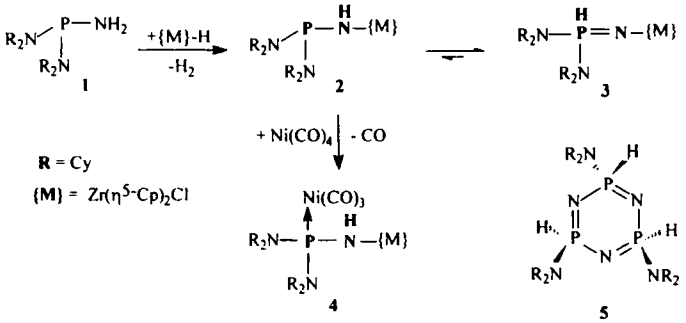
The tautomerisation of NH-aminophosphanes to the corresponding PH-imino-phosphoranes has been the subject of several experimental and theoretical studies[1].
The treatment of aminobis(diorganylamino)phosphane **1**[2] with $Cp_2Zr(H)Cl$ leads to a mixture of the tautomers **2** and **3** in a ratio of 1:20. Subsequent reaction of **3** with teracarbonyl nickel affords in quantitative yield the phosphanylamido-$Ni(CO)_3$-complex **4**, whose formation is presumably preceeded by conversion of **3** into the thermodynamically less favoured tautomer **2**.



The cyclophosphazene **5** is obtained by cleavage of **3** with triethylammonium chloride. Constitution and configuration of this first representative of a trihydridocyclo-phosphazene **5** are unequivocally proven by the results of NMR- and MS-studies. According to our investigations, the previously described compound $[(Me_2N)(N)PN]_3$[3] is no cyclophosphazene, but a hydridophosphazene polymer. The polymeric constitution is confirmed by NMR- and MALDI-TOF-MS-investigations.

References

[1] A. Schmidtpeter, H. Roßknecht, *Angew. Chem. Int. Ed. Engl.*, **1969,** *8,* 614–615.
[2] G. Schick, A. Loew, M. Nieger, E. Niecke, K. Airola, *Chem. Ber.*, **1996,** *129,* 211–217.
[3] A. Schmidtpeter, H. Roßknecht, *Chem. Ber.*, **1974,** *107,* 3146–3148.