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Synthesis and Reactivity of Aminodiphosphanes

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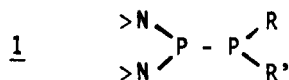
Synthesis and Reactivity of Aminodiphosphanes

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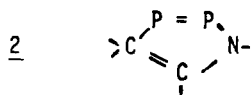
Synthetic routes to various aminodiphosphanes 1 are reported.



$R = N<, R' = H; R = R' = Cl, N<, SiMe_3$

Their synthesis is performed by (i) elimination reactions of secondary diaminophosphanes, (ii) P-P coupling of silyldiaminophosphanes with phosphorus trichloride, (iii) reductive coupling of diaminochlorophosphanes with alkali metals or (iv) reaction of diaminochlorophosphanes with lithium bis(trimethylsilyl)phosphide.

In the case of 1 ($R = N, R' = H$) the thermal decomposition gives the novel cyclic ring-system 2, whose bonding properties will be discussed in light of u.v. and p.e.-spectroscopic measurements.



Furthermore the reaction behaviour of 1 and 2 with transition metal compounds will be reported.