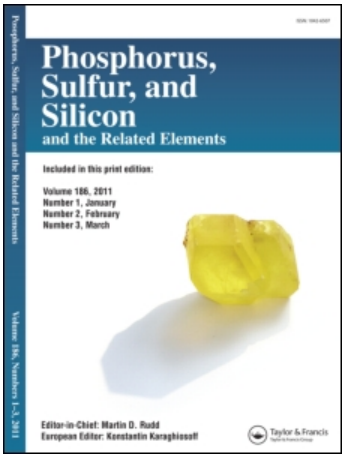

Phosphorus, Sulfur, and Silicon and the Related Elements

Publication details, including instructions for authors and subscription information:
http://www.informaworld.com/smpp/title~content=t713618290

Azaphosphabenzenes and their Classical Valency Isomers

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To cite this Article Regitz, M. , Haber, S. and Hees, U.(1990) 'Azaphosphabenzenes and their Classical Valency Isomers', Phosphorus, Sulfur, and Silicon and the Related Elements, 51: 1, 324
To link to this Article: DOI: 10.1080/10426509008040855
URL: http://dx.doi.org/10.1080/10426509008040855

Phosphorus, Sulfur, and Silicon, 1990, Vols. 51/52, p. 324
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AZAPHOSPHABENZENES AND THEIR CLASSICAL VALENCY ISOMERS

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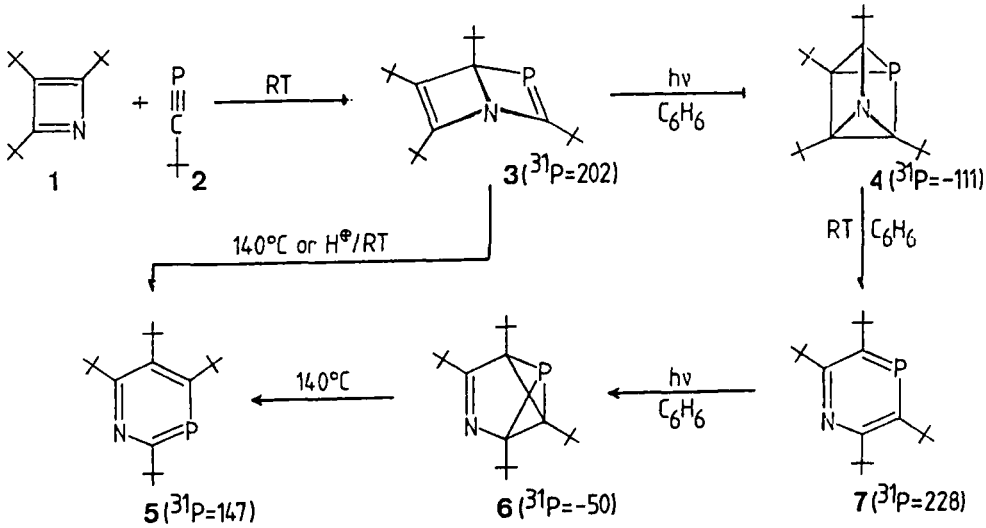
In contrast to phosphabenzenes so far no valency isomers of azaphosphabenzenes have been described in literature. They can be synthesized-starting with the azacyclobutadiene 1 and the phosphaalkyne 2 by a sequence of thermal and photochemical transformations.



The dewar azaphosphabenzene 3 (accessible from 1 and 2 in a regiospecific cycloaddition reaction) can be isomerised by irradiation into the prismane 4, which at 25°C slowly yields the heteroaromatic compound 7. Photochemical excitation of 7 leads to the azaphosphabenzvalene 6. Both, the bicyclic 3 and the tricyclic 6 are extremely stable in the thermal sense: Isomerization into the 1,3-azaphosphabenzene 4 only occurs at 140°C.