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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>

### 1,1,2,3-Tetrachloro-1-(2-chloro-2-phenyl)vinyl-1-phosphaindene--The First Example of a Nearly Regular Phosphorus Trigonal Bipyramide with Five-Membered Cycle in the Base Synthesis and Crystal Structure

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Online publication date: 27 October 2010

**To cite this Article** Mironov, Vladimir F. , Shtyrlina, Alfiya A. , Alekseev, Fedor F. , Litvinov, Igor A. , Gubaidullin, Aidar T. and Konovalov, Aleksander I.(2002) '1,1,2,3-Tetrachloro-1-(2-chloro-2-phenyl)vinyl-1-phosphaindene--The First Example of a Nearly Regular Phosphorus Trigonal Bipyramide with Five-Membered Cycle in the Base Synthesis and Crystal Structure', *Phosphorus, Sulfur, and Silicon and the Related Elements*, 177: 8, 2035 — 2036

**To link to this Article:** DOI: 10.1080/10426500213403

**URL:** <http://dx.doi.org/10.1080/10426500213403>

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# 1,1,2,3-TETRACHLORO-1-(2-CHLORO-2-PHENYL)VINYL-1-PHOSPHAINDENE—THE FIRST EXAMPLE OF A NEARLY REGULAR PHOSPHORUS TRIGONAL BIPYRAMIDE WITH FIVE-MEMBERED CYCLE IN THE BASE SYNTHESIS AND CRYSTAL STRUCTURE

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(Received July 29, 2001; accepted December 25, 2001)

Reaction of 1,1,1,2,3-pentachloro-1-phosphaindene **1** with arylacetylenes leads to 1,1,2,3-tetrachloro-1-(2-chloro-2-phenyl)vinyl-1-phosphaindene

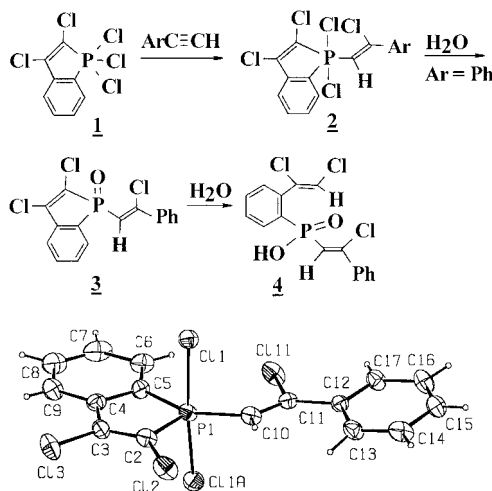


FIGURE 1

The work is supported by the Russian Foundation for Basic Research (grant 00-03-32835).

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**2.** The single crystal x-ray diffraction of the product **2** reveals a first example of a nearly regular phosphorus trigonal bipyramide with five-membered cycle in the base (see Figure 1). The hydrolysis of **2** proceeds via intermediate phosphin oxide **3** and yields phosphinic acid **4**—product of the endocyclic P—C(Cl) bond cleavage.