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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>

The Reactions of Hydrophosphoranes with Cyclopentadienones

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To cite this Article Arbuzov, B. A. , Fuzhenkova, A. V. , Tyryshkin, N. I. , Terentyeva, S. A. and Butlerov, A. M.(1990) 'The Reactions of Hydrophosphoranes with Cyclopentadienones', Phosphorus, Sulfur, and Silicon and the Related Elements, 51: 1, 330

To link to this Article: DOI: 10.1080/10426509008040861

URL: <http://dx.doi.org/10.1080/10426509008040861>

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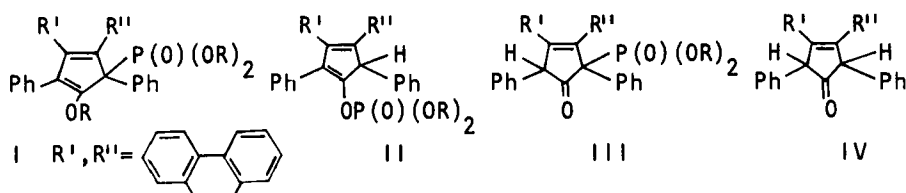
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THE REACTIONS OF HYDROPHOSPHORANES WITH CYCLOPENTADIENONES

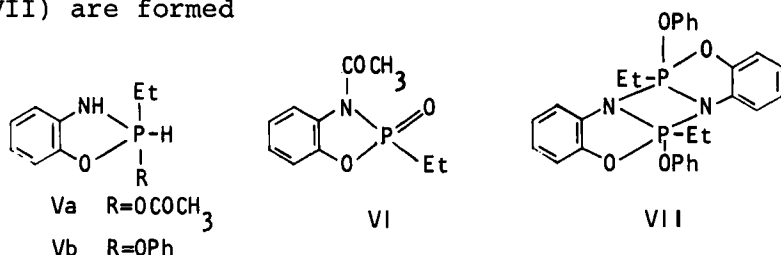
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Phencyclone reacts with trialkylphosphites regiospecifically to give the adduct (I) containing the bond phosphorus - C^2 atom of cyclone. In the presence of carboxylic acids the reaction products were phosphate (II), β -ketophosphate (III) and dihydrophencyclone (IV).



The change of the reaction direction is assumed to be due to the action of hydrophosphorane $(RO)_3-P(H)-OCOR$ being formed from trialkylphosphite and carboxylic acid. In order to check this possibility we carried out the reaction of phencyclone with stable hydrophosphoranes (Va) and (Vb). In these reactions dihydrophencyclone (V) and other N-acetyl-2-oxo-1,3,2-oxazaphospholane (VI) or phosphorane (VII) are formed



Other cyclones react with phosphoranes (Va) and (Vb) in the same manner. The schemes of the reactions are discussed.