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## Phosphorus, Sulfur, and Silicon and the Related Elements

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### 2(2-Chloro-1,3-Alkadiene)-2-Oxo-1,3,2-Dioxaphos-Pholanes and Their Heterocyclization in the Reaction with Electrophilic Reagents

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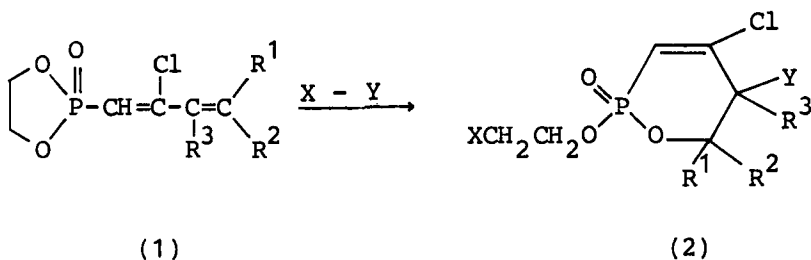
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# 2(2-CHLORO-1,3-ALKADIENE)-2-OXO-1,3,2-DIOXAPHOSPHOLANES AND THEIR HETEROCYCLIZATION IN THE REACTION WITH ELECTROPHILIC REAGENTS

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2-Chloro-1,3-alkadiene-1,3,2-dioxaphospholanes (1) are obtained by substituting the two chlorine atoms in the corresponding dichlorides of 2-chloro-1,3-alkadienephosphonic acids with ethyleneglycol in the presence of triethylamine. In the reaction of compounds (1) with the electrophilic reagents heterocyclization of the 1,3-alkadienylphosphonate system takes place. The process results in the dioxaphospholane ring cleavage and the formation of the six-membered heterocyclic products - 4-chloro-2(2-halogenalkoxy)-5,6-dihydro-2H-1,2-oxaphosphorine 2-oxides (2):



The structure of the compounds has been established by NMR and IR spectra.