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New Reactions of Halogenphosphoranes with Quinones

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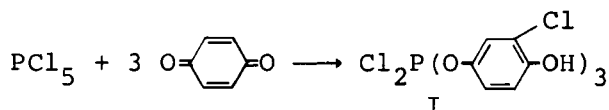
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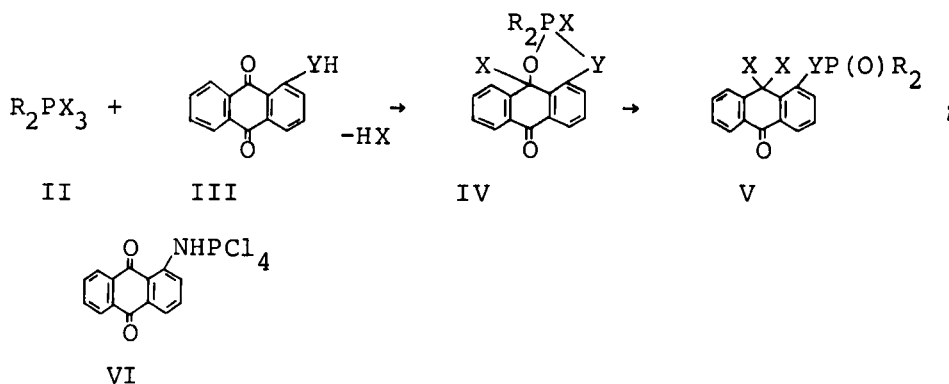
NEW REACTIONS OF HALOGENPHOSPHORANES WITH QUINONES

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It has not been known up to now that PCl_5 and p-benzoquinone can interact and form stable products. We have established that at the first stage of the reaction phosphorane (I) is formed which further undergoes different transformations depending upon the conditions.



It has been proposed in the literature that PCl_5 reacts with 1-amino-9,10-antraquinone forming phosphorane (VI)¹. We have established that the product has the structure (V, R=X=Cl; Y=NH), confirmed by X-ray analysis.



Similar products (V, R=Alk, Cl, Br; X=Cl, Br; Y=O, NH) are formed by interaction of phosphoranes (II) with 1-oxy(ami-
 no)-9,10-antraquinones (III, Y=O, NH). The scheme of the
 reaction involves the phosphorane intermediate (IV).

1. Y.G.Shermolovitch, R.I.Vlyasio, L.N.Markovski,
 Zh. Obshch. Khim. 48, 539, (1976).