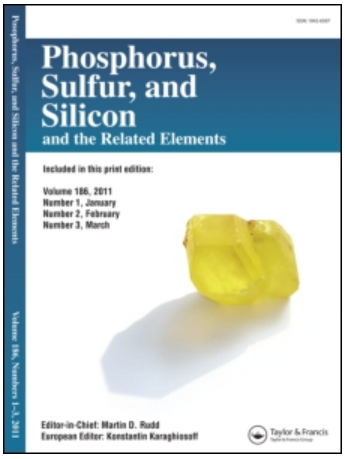

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Alkylation of Hydrothiophosphoryl Compounds by Digalogenoalkanes Under Phase Transfer Caralysis Conditions

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ALKYLATION OF HYDROTHIOPHOSPHORYL COMPOUNDS BY DIGALOGENOALKANES UNDER PHASE TRANSFER CARALYSIS CONDITIONS

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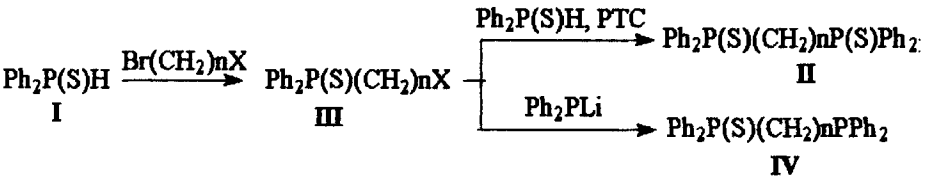
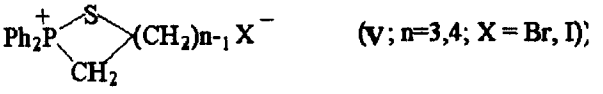
The course of reactions of hydrothiophosphoryl compounds with dihalogenoalkanes under PTC conditions depends both on the nature of halogen atom and the length of the alkylene chain.I reacts with CH_2Br_2 to yield $Ph_2P(S)CH_3$; with ICH_2Cl $Ph_2P(S)CH_2Cl$ is formed.



X = Cl, Br; n=3,4

In the case of $BrCH_2CH_2Br$ only $[Ph_2P(S)]_2$ was isolated. Alkylation of I by ω -dibromoalkanes (n = 3,4; 2:1 ratio) produces disulfides II, whereas the reaction of I with ω -bromochloroalkanes yields ω-chloroalkylphosphine sulfides III. Unsymmetrical bis-phosphorus ligands were prepared from III (X = Cl) and Ph_2PLi. Compounds III (X = Br, I) produce stable cyclic thiaphosphonium salts V. The structures of V were confirmed by X-ray analysis. This work was partially supported by Russian Fundamental Research Foundation (grant no 93-03-04351)



(V; n=3,4; X = Br, I)