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Synthesis of Aminophosphonium Salts and Their Transformation

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SYNTHESIS OF AMINOPHOSPHONIUM SALTS AND THEIR TRANSFORMATION

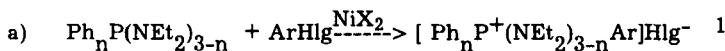
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Abstract Aminophosphonium salts were obtained by two different methods: (1) catalytic phosphorylation of halogen derivatives containing Csp²-Hlg bonds; (2) uncatalytic phosphorylation of bromoacetal. Reactions mechanisms are discussed.

The synthesis of aminophosphonium salts have been achieved by the reaction of amido phosphorus (III) acid with various halogen derivatives (1,2).

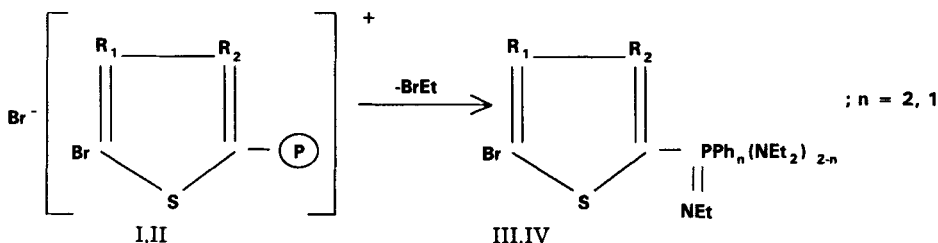
1. Catalytic phosphorylation.



Ar = C₆H₄Y, C₁₀H₇; Y = H, o-, p-CH₃O, m-CH₃, p-C₆H₅O, Br

X = Hlg = Br, Cl; n = 0-2

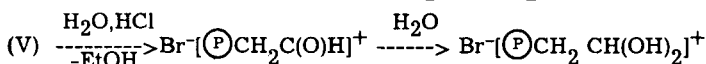
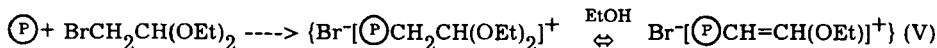
b) It was found that thienylaminophosphonium salts undergo further transformations to the iminophosphin structures:



(I, III) R₁ = Ph, R₂ = Me; (II, IV) R₁ = Me, R₂ = Ph; $\text{P}^+ = \text{Ph}_n\text{P}(\text{NEt}_2)_{3-n}$

c) It was found that electronic factors in styrylaminophosphonium salts promote separation of diethylamin forming polymer structure.

2. Uncatalytic phosphorylation.



REFERENCE

1. V.V.SENTEMOV, E.L.GAVRILOVA, E.A.KRASILNIKOVA, *Zhurn.Obshh.Chim.*, №4,848(1993)..