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Synthesis of Azaphosphacyclanes on the Basis of Reactions of α -Aminoalkylphosphonates with Bis(chloromethyl)isocyanatophosphinate

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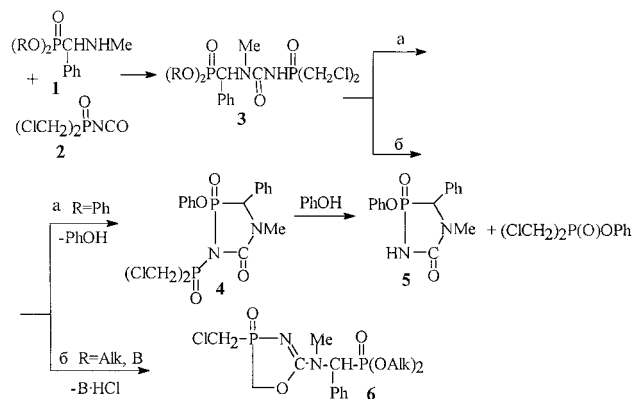
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SYNTHESIS OF AZAPHOSPHACYCLANES ON THE BASIS OF REACTIONS OF α -AMINOALKYLPHOSPHONATES WITH BIS(CHLOROMETHYL)ISOCYANATOPHOSPHINATE

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Phosphorylated ureas **3**, obtained as the result of addition of aminoalkylphosphonates **1** to bis(chloromethyl)isocyanatophosphinate **2** may be cyclized in two ways: a) with the elimination of phenol molecule and formation of diazaphospholidine **4**; the latter under the action of phenol molecule is converted into diazaphospholidine **5**; and b) in the presence of a base intramolecular alkylation of oxygen(sulfur) atoms of (thio)carbonyl fragmen by chloromethyl group takes place with the formation of 1,3,4-(thiaza)oxazaphosphol-2-ines **6**.



SCHEME 1

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