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Synthesis of Phosphorylated Derivatives of Enamino-Carbonyl Compounds

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SYNTHESIS OF PHOSPHORYLATED DERIVATIVES OF ENAMINO-CARBONYL COMPOUNDS

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The reactions of enaminocarbonyl compounds (1) with phosphorylisocyanates have been investigated. Experiment established that the reactions with the participation of amino group and (or) C-2 atom form respectively ureas (2) and (or) their vinylogs (3) depending on the structure (1) i.e. the reactions proceed in two competitive directions.

$$R^{2}=H$$

$$R^{1}=0$$

$$R^{2}=H$$

$$R^{3}R^{4}P-N=C=0$$

$$R^{1}=H$$

$$R^{1}=H$$

$$R^{1}=H$$

$$R^{1}=H$$

$$R^{1}=H$$

$$R^{1}=H$$

$$R^{1}=H$$

$$R^{1}=H$$

$$R^{2}=H$$

$$R^{3}R^{4}PNH$$

$$R^{2}=H$$

$$R^{3}R^{4}=0$$

The possibility of chlorine atom substitution in α -chloro-aminovinylketones with the salts of dialkylthio- and dithiophosphoric acids was also studied.

$$\begin{array}{c}
\text{CH}_{3} \\
\text{R-N} \\
\text{C-CH}_{3}
\end{array}$$

$$\begin{array}{c}
\text{C1} \\
\text{R-N} \\
\text{C-CH}_{3}
\end{array}$$

$$\begin{array}{c}
\text{C2} \\
\text{R-N} \\
\text{C-CH}_{3}
\end{array}$$

$$\begin{array}{c}
\text{C3} \\
\text{R-N} \\
\text{C-CH}_{3}
\end{array}$$

$$\begin{array}{c}
\text{C2} \\
\text{R-N} \\
\text{C-CH}_{3}
\end{array}$$

R = H, Alk, Ar; $R^1 = Alk$; X = O, S; M = Na, K.

The interaction scheme including the consecutive stages of $Ad-S_N^-E$ is proposed.