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## Phosphorus, Sulfur, and Silicon and the Related Elements

Publication details, including instructions for authors and subscription information: <a href="http://www.informaworld.com/smpp/title~content=t713618290">http://www.informaworld.com/smpp/title~content=t713618290</a>

## Reactions ANC Rearangements of Carboxamides Phosphorylated by Tervalent Phosphorus Chlorides

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**To cite this Article** Malenko, D. M., Nesterova, L. I., Repina, L. A., Lukjanenko, S. N. and Sinytsa, A. D.(1990) 'Reactions ANC Rearangements of Carboxamides Phosphorylated by Tervalent Phosphorus Chlorides', Phosphorus, Sulfur, and Silicon and the Related Elements, 51: 1, 266

To link to this Article: DOI: 10.1080/10426509008040800 URL: http://dx.doi.org/10.1080/10426509008040800

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REACTIONS AND REARANGEMENTS OF CARBOXAMIDES PHOS-PHORYLATED BY TERVALENT PHOSPHORUS CHLORIDES

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We have found that N-substituted amides of carboxylic or thiocarboxylic acids (I) react with tervalent phosphorus chlorides to give N- and O(S)-phosphorylated derivatives (II) which isomerise into imidoyl(thio)phosphonates (III). The factors determining the ability of the initial products (II) and their iminated derivatives (IV) to participate in diad and triad rearrangements have also been studied.

The phosphorotropic rearrangements of azaallyl phosphites (V) and oxazaphospholines (VI) obtained by scheme (1) have been observed and investigated.

$$R^{1}$$
CNHCH<sub>2</sub> $R^{2}$  + Cl<sub>2</sub> $PR^{3}$   $\xrightarrow{2B}$   $R^{1}$ -C-O PR<sup>3</sup>  $\xrightarrow{R^{2}$  = COOEt  $R^{2}$   $\xrightarrow{R^{2}}$   $\xrightarrow{R^{2$