This article was downloaded by:

On: 28 January 2011

Access details: Access Details: Free Access

Publisher Taylor & Francis

Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



Phosphorus, Sulfur, and Silicon and the Related Elements

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

Synthesis and Reaction Peculiarities of Phosphorylated Trifluoroethane Imines

Nikolai V. Kolotylo^a; Peter P. Onys'ko^a; Alexei A. Sinitsa^a Institute of Organic Chemistry, National Academy of Sciences, KIEV, UKRAINE

To cite this Article Kolotylo, Nikolai V., Onys'ko, Peter P. and Sinitsa, Alexei A.(1996) 'Synthesis and Reaction Peculiarities of Phosphorylated Trifluoroethane Imines', Phosphorus, Sulfur, and Silicon and the Related Elements, 111: 1, 104

To link to this Article: DOI: 10.1080/10426509608054733 URL: http://dx.doi.org/10.1080/10426509608054733

PLEASE SCROLL DOWN FOR ARTICLE

Full terms and conditions of use: http://www.informaworld.com/terms-and-conditions-of-access.pdf

This article may be used for research, teaching and private study purposes. Any substantial or systematic reproduction, re-distribution, re-selling, loan or sub-licensing, systematic supply or distribution in any form to anyone is expressly forbidden.

The publisher does not give any warranty express or implied or make any representation that the contents will be complete or accurate or up to date. The accuracy of any instructions, formulae and drug doses should be independently verified with primary sources. The publisher shall not be liable for any loss, actions, claims, proceedings, demand or costs or damages whatsoever or howsoever caused arising directly or indirectly in connection with or arising out of the use of this material.

Printed in Malaysia

SYNTHESIS AND REACTION PECULIARITIES OF PHOSPHORYLATED TRIFLUOROETHANE IMINES.

NIKOLAI V. KOLOTYLO, PETER P. ONYS'KO, ALEXEI A. SINITSA

Institute of Organic Chemistry, National Academy of Sciences, Kiev 252660, 5 Murmanskaya St, Ukraine

Convenient methods for C,N - mono- and biphosphorylated trifluoroethane imines have been developed. These are reactive synthons allowing important derivatives of aminophosphonic acids, fluorine- and phosphorus-containing heterocycles, vinylamides, etc. A rare example of a Perkov-type reaction involving trifluoromethyl group has been discovered.

The property differences of imines obtained and imines of hexafluoroacetone are discussed.

$$CI O (EtO)_2P(O)H CI O CF_3-C-N-P(OEt)_2 \longrightarrow CF_3-C-NH-P(OEt)_2 O=P(OEt)_2$$

$$CF_3-C-N-P(OEt)_2 \longrightarrow CF_3-C-N-P(OEt)_2 \longrightarrow CF_3-C-N-$$

$$(EtO)_{2}P(O)$$

$$CF_{2}=C-N-P(O)(OEt)_{2}$$

$$O=P(OEt)_{2}$$

$$OR O$$

$$CF_{3}-C-NH-P(OEt)_{2}$$

$$O=P(OEt)_{2}$$

The rearrangement, $-C(Cl)=NP(O)Ph_2 \rightarrow -C(O)-N=P(Cl)Ph_2$, new for phosphorus chemistry, has been found for N-phosphorylatyed imidoyl chlorides.