

This article was downloaded by:

On: 30 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>

### Bis(1,1,3-trihydroperfluoropropyl)isocyanato Phosphite and Tris(1,1,3-trihydroperfluoropropyl) Phosphite in Reactions with Carbonyl Compounds

I. V. Konovalova<sup>a</sup>; L. A. Burnaeva<sup>a</sup>; E. K. Khusnutdinova<sup>a</sup>; A. N. Pudovik<sup>a</sup>

<sup>a</sup> V. I. Ul'yanov-Lenin Kazan State University, Kazan, USSR

**To cite this Article** Konovalova, I. V. , Burnaeva, L. A. , Khusnutdinova, E. K. and Pudovik, A. N.(1987) 'Bis(1,1,3-trihydroperfluoropropyl)isocyanato Phosphite and Tris(1,1,3-trihydroperfluoropropyl) Phosphite in Reactions with Carbonyl Compounds', *Phosphorus, Sulfur, and Silicon and the Related Elements*, 30: 3, 781

**To link to this Article:** DOI: 10.1080/03086648708079273

**URL:** <http://dx.doi.org/10.1080/03086648708079273>

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.

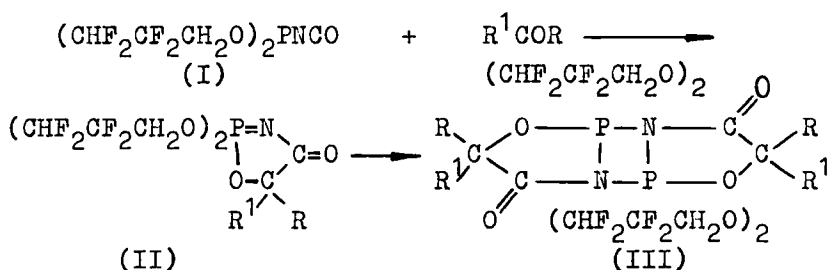
The publisher does not give any warranty express or implied or make any representation that the contents will be complete or accurate or up to date. The accuracy of any instructions, formulae and drug doses should be independently verified with primary sources. The publisher shall not be liable for any 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.

# Bis(1,1,3-trihydroperfluoropropyl)isocyanato Phosphite and Tris(1,1,3-trihydroperfluoropropyl) Phosphite in Reactions with Carbonyl Compounds

Kononova I.V.\*, Burnaeva L.A., Khusnutdinova E.K.,  
Pudovik A.N.

V.I.Ul'yanov-Lenin Kazan State University, Kazan, USSR

Nucleophilicity of (I) in reactions with such carbonyl compounds as chloral, benzyl, ester and nitrile of benzoylformic acid is found to be notably reduced by the electronoaccepting perfluoropropyl groups. Unlike of dialkyl isocyanatophosphites (I) afford the cycloaddition products with  $\text{>P-N-}$  fragment (II) which being unable for the imide-amide rearrangement undergo dimerization into crystalline cyclodiphosphazanes (III) with pentacovalent phosphorus atoms.



Reactions of dialkyl isocyanatophosphites with esters of acetoacetic, trifluoroacetoacetic acids and with hexafluoroacetylacetone may involve either C=O or C=C bond, being depended on constitution of  $\beta$ -dicarbonyl compound. Interaction of (I) and tris(1,1,3-trihydroperfluoropropyl)phosphite with esters of chloro-, bromopiruvic and trichloroacetylphosphonic acids results in the formation of the Perkovic reaction products.