

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>

Reactions of Phosphorus Sulfides with Organophosphorus Substances

Il'Yas S. Nizamov^a; Rishat R. Gibadullin^a; Il'Nar D. Nizamov^a; Elvira S. Batyeva^a

^a A.E. Arbuzov Institute of Organic and Physical Chemistry, Kazan, RUSSIA

To cite this Article Nizamov, Il'Yas S. , Gibadullin, Rishat R. , Nizamov, Il'Nar D. and Batyeva, Elvira S.(1999) 'Reactions of Phosphorus Sulfides with Organophosphorus Substances', *Phosphorus, Sulfur, and Silicon and the Related Elements*, 147: 1, 19

To link to this Article: DOI: 10.1080/10426509908053490

URL: <http://dx.doi.org/10.1080/10426509908053490>

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.

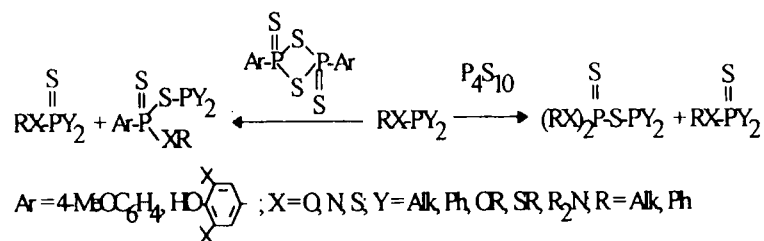
The publisher does not give any warranty express or implied or make any representation that the contents will be complete or accurate or up to date. The accuracy of any instructions, formulae and drug doses should be independently verified with primary sources. The publisher shall not be liable for any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

Reactions of Phosphorus Sulfides with Organophosphorus Substances

IL'YAS S. NIZAMOV, RISHAT R. GIBADULLIN, IL'NAR D.
 NIZAMOV and ELVIRA S. BATYEVA

*A.E. Arbuzov Institute of Organic and Physical Chemistry, Arbuzov str. 8, Kazan
 420088, RUSSIA*

We have found that the reactions of P_4S_{10} and 1,3,2,4-dithiadiphosphetane-2,4-disulfides with phosphites, phosphonites, phosphinites, amidophosphonites, amidophosphinites, trithiophosphites, dithiophosphonites and thiophosphinites proceed under mild conditions via the previous formation of products containing the P(S)-S-P structural fragment which were isolated by column chromatography.



These compounds are thermally rather unstable substances and decompose to form secondary thiation products when prolonged reaction time or elevated temperature were used. Some six and fifth membered cyclic organothiophosphorus intermediates were observed in crude reaction mixtures by ^{31}P NMR and mass spectral methods.