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

A New Heterocycle from the Reaction of N,N'-Dimethylthiourea with Diamino Phosphinoalkines

E. Flucka; P. Kuhmb

 $^{\rm a}$ Gmelin Inst. f. Anorg. Chemie und Grenzgebiete d. Max
- Planck-Gesellschaft, Frankfurt, a.M $^{\rm b}$ Institut f. Anorg. Chemie der Universität, Stuttgart

To cite this Article Fluck, E. and Kuhm, P.(1987) 'A New Heterocycle from the Reaction of N,N'-Dimethylthiourea with Diamino Phosphinoalkines', Phosphorus, Sulfur, and Silicon and the Related Elements, 30: 3, 782

To link to this Article: DOI: 10.1080/03086648708079274 URL: http://dx.doi.org/10.1080/03086648708079274

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.

A New Heterocycle from the Reaction of N,N'-Dimethylthiourea with Diamino Phosphinoalkines

E.FLUCK and P.KUHM+

Gmelin Inst.f.Anorg.Chemie und Grenzgebiete d. Max- Planck-Gesellschaft, Varrentrappstr.40/42, D-6000 Frankfurt a.M. Institut f. Anorg. Chemie der Universität, Pfaffenwaldring 55, D-7000 Stuttgart 80

The reaction of N,N'-dimethylthiourea with bis(dialkylamino)phosphinoalkines proceeds in two steps:
1) a transamination reaction,
2) ring closure by the nucleophilic attack of the sulfur atom at the C≡C triple bond.

The structure of compound II was elucidated by 13C-, 1H- and 31P-NMR-Spectroscopy, as well as EI-Mass-Spectroscopy. Reactions of the new heterocycle will be presented.