

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>

Synthesis and Some Reactions of the Metal Phosphorus Double-bonded Complexes $C_5R_5(CO)_2Mo=P(NMe_2)_2$

S. Amann^a; K. Jörg^a; W. Malisch^a

^a Institut für Anorganische Chemie der Universität Würzburg, Würzburg, W. Germany

To cite this Article Amann, S. , Jörg, K. and Malisch, W.(1987) 'Synthesis and Some Reactions of the Metal Phosphorus Double-bonded Complexes $C_5R_5(CO)_2Mo=P(NMe_2)_2$ ', *Phosphorus, Sulfur, and Silicon and the Related Elements*, 30: 3, 791

To link to this Article: DOI: 10.1080/03086648708079283

URL: <http://dx.doi.org/10.1080/03086648708079283>

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.

Synthesis and Some Reactions of the Metal Phosphorus Double-bonded Complexes $C_5R_5(CO)_2Mo=P(NMe_2)_2$

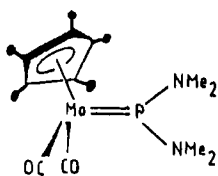
S. Amann, K. Jörg und W. Malisch*

Institut für Anorganische Chemie der Universität Würzburg,
Am Hubland, D-8700 Würzburg, W.-Germany

The reaction of the metalhydrides $C_5R_5(CO)_3Mo-H$ ($R = H$ (**1a**),
Me (**1b**) with $P(NMe_2)_3$ leads to the metal-phosphorus double-
bonded species **2a,b** via the intermediate formation of
 $C_5R_5(CO)_2((Me_2N)_3P)Mo-H$, which can only be identified spec-
troscopically in solution.

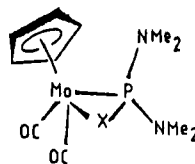
Addition of sulfur, diazomethane or " $Fe(CO)_4$ " to **2a,b** opens
up a new and convenient route for the synthesis of the
metallocyclopropanes **3a-c**. **3a-c** show dynamic behaviour in-
volving a fast olefinic type rotation of the $(Me_2N)_3P=X$ -
unit. The structure analysis of **3c** ist presented.

Moreover the reactions of **2a** with diverse alcohols and
organic acids will be reported.



2a,b

$\bullet = H, Me$



3a-c

$X = S, CH_2, Fe(CO)_4$

E. Groß, K. Jörg, K. Fiederling, A. Göttlein, W. Malisch und
R. Boese, Angew. Chem. **96** (1984) 705; Angew. Chem. Int. Ed.
Engl. **23** (1984) 738.