

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>

LD³- and λ^5 -1,3-Diphosphacyclobutadienes by Dimerisation of λ^3 - and λ^5 -Phospha-alkynes

P. Binger^a; R. Milczarek^a; R. Mynott^a; M. Regitz^b; H. Keller^b; W. Rösch^b

^a MPI für Kohlenforschung, Mülheim an der Ruhr, FRG ^b Fachbereich Chemie der Universität Erwin-Schrödinger-Straße, Kaiserslautern, FRG

To cite this Article Binger, P. , Milczarek, R. , Mynott, R. , Regitz, M. , Keller, H. and Rösch, W.(1987) 'LD³- and λ^5 -1,3-Diphosphacyclobutadienes by Dimerisation of λ^3 - and λ^5 -Phospha-alkynes', Phosphorus, Sulfur, and Silicon and the Related Elements, 30: 3, 762

To link to this Article: DOI: 10.1080/03086648708079254

URL: <http://dx.doi.org/10.1080/03086648708079254>

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.

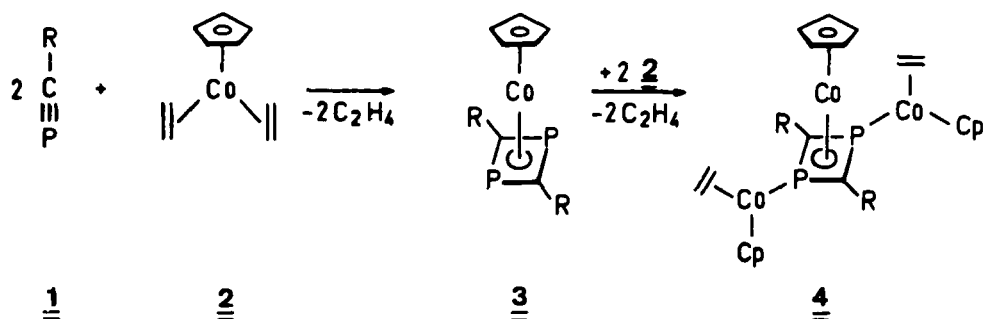
The publisher does not give any warranty express or implied or make any representation that the contents will be complete or accurate or up to date. The accuracy of any instructions, formulae and drug doses should be independently verified with primary sources. The publisher shall not be liable for any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

λ^3 - and λ^5 -1,3-Diphosphacyclobutadienes by Dimerisation of λ^3 - and λ^5 -Phospha-alkynes

P. Binger*, R. Milczarek and R. Mynott
MPI für Kohlenforschung
Kaiser-Wilhelm-Platz 1
D-4330 Mülheim an der Ruhr (FRG)

M. Regitz*, H. Keller and W. Rösch
Fachbereich Chemie der Universität
Erwin-Schrödinger-Straße
D-6750 Kaiserslautern (FRG)

λ^3 -Phosphaalkynes 1 dimerize in the presence of cyclopentadienylcobalt-bis(ethylene) (2) to yield λ^3 -1,3-diphosphacyclobutadienes, which are stabilized by complex formation (3). An excess of 2, finally, is responsible for the formation of the complex 4.



λ^5 -Phosphaalkynes(phosphinocarbenes) (6) - short-lived intermediates arising from the decomposition of the phosphino diazo compounds 5 - dimerize spontaneously to the λ^5 -1,3-diphosphacyclobutadienes 7. The ring formation is accompanied by an unusual P $\rightarrow$ P oxygen-shift.

