

This article was downloaded by:

On: 29 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>

Selectivity of Complex Formation of Cyclopentant Orgaivophosphorus Complexones

M. I. Kabachnik^a; F. I. Bel'skii^a; I. B. Gorunova^a; S. A. Pisareva^a; A. N. Nesmeyanov^a

^a Institute of Organo-Element Compounds, Academy of Sciences of the USSR, Moscow, USSR

To cite this Article Kabachnik, M. I. , Bel'skii, F. I. , Gorunova, I. B. , Pisareva, S. A. and Nesmeyanov, A. N.(1990) 'Selectivity of Complex Formation of Cyclopentant Orgaivophosphorus Complexones', *Phosphorus, Sulfur, and Silicon and the Related Elements*, 51: 1, 360

To link to this Article: DOI: 10.1080/10426509008040889

URL: <http://dx.doi.org/10.1080/10426509008040889>

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.

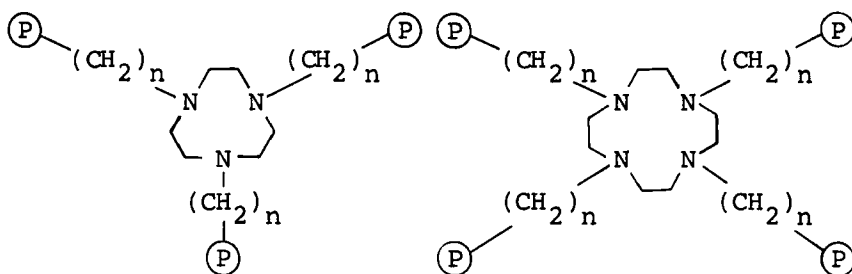
The publisher does not give any warranty express or implied or make any representation that the contents will be complete or accurate or up to date. The accuracy of any instructions, formulae and drug doses should be independently verified with primary sources. The publisher shall not be liable for any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

SELECTIVITY OF COMPLEX FORMATION OF CYCLOPENDANT ORGANOPHOSPHORUS COMPLEXONES

M.I.KABACHNIK, F.I.BEL'SKII, I.B.GORUNOVA, and
 S.A.PISAREVA

A.N.Nesmeyanov Institute of Organo-Element Compounds,
 Academy of Sciences of the USSR, Vavilova Str. 28,
 Moscow 117334, USSR

Synthesis and complexing properties of some poly-N-
 -phosphorylmethyl cyclopendant organophosphorus complexones
 (I) and (II) have been described earlier.



(I) and (II): $n = 1$,

(III) and (IV): $n = 2$

$\textcircled{\text{P}} = \text{P}(\text{O})(\text{OH})_2$

Compound (I) is selective towards metal cations with
 small radius. Compound (II) forms extremely strong com-
 plexes with large radius cations.

In this paper complexing properties of complexones
 (III) and (IV) with β -dihydroxyphosphorylethyl pendant
 groups are described. Acidity and complex-forming proper-
 ties of these compounds were investigated with the pH- and
 ^{31}P -NMR technique. The new ligands (III) and (IV) are more
 selective than (I) and (II) towards some metal cations.