

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>

The Synthesis and Utilization of Azacrown Ethers with Phosphorus Function in the Side Chain

György Keglevich^a; Tibor Novák^a; Péter Bakó^a; Tibor Bakó^a; Tímea Imre^a; László Tőke^a

^a Budapest University of Technology and Economics, Hungary

Online publication date: 27 October 2010

To cite this Article Keglevich, György , Novák, Tibor , Bakó, Péter , Bakó, Tibor , Imre, Tímea and Tőke, László(2002) 'The Synthesis and Utilization of Azacrown Ethers with Phosphorus Function in the Side Chain', *Phosphorus, Sulfur, and Silicon and the Related Elements*, 177: 8, 1995

To link to this Article: DOI: 10.1080/10426500213378

URL: <http://dx.doi.org/10.1080/10426500213378>

PLEASE SCROLL DOWN FOR ARTICLE

Full terms and conditions of use: <http://www.informaworld.com/terms-and-conditions-of-access.pdf>

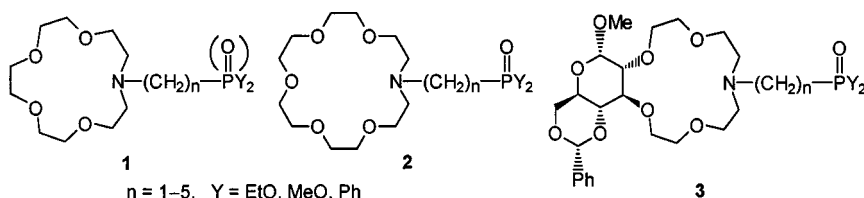
This article may be used for research, teaching and private study purposes. Any substantial or systematic reproduction, re-distribution, re-selling, loan or sub-licensing, systematic supply or distribution in any form to anyone is expressly forbidden.

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.

THE SYNTHESIS AND UTILIZATION OF AZACROWN ETHERS WITH PHOSPHORUS FUNCTION IN THE SIDE CHAIN

György Keglevich, Tibor Novák, Péter Bakó, Tibor Bakó,
 Tímea Imre, and László Tóke
 Budapest University of Technology and Economics, Hungary
 (Received July 29, 2001; accepted December 25, 2001)

Novel azacrown ethers (**1–3**) with phosphonoalkyl-, phosphin-oxidoalkyl-, and phosphinoalkyl side chains were synthesized to study their cation binding ability. In most of the cases, the complex forming ability of lariat ethers **1** and **2** was decreased, at the same time, the selectivity was significantly increased. The D-glucose-based lariat ethers (**3**) were utilized in enantioselective Michael additions.¹ Several representatives of the armed azacrown ethers (**3**) used as phase transfer catalysts induced a record degree in the enantioselectivity.^{2,3}



SCHEME 1

REFERENCES

- [1] P. Bakó, T. Novák, K. Ludányi, B. Pete, L. Tóke, and Gy. Keglevich, *Tetrahedron Asym.*, **10**, 2373 (1999).
- [2] T. Novák, J. Tatai, P. Bakó, Gy. Keglevich, and L. Tóke, *Synlett.*, 424 (2001).
- [3] T. Novák, P. Bakó, Gy. Keglevich, A. Dobó, K. Vékey, and L. Tóke, *J. Incl. Phenom.*, **40**, 207 (2001).

Support from OTKA T 029253 is acknowledged.

Address correspondence to György Keglevich, Department of Organic Chemical Technology, Budapest University of Technology and Economics, Budapest H-1521, Hungary. E-mail: keglevich@oct.bem.hu