

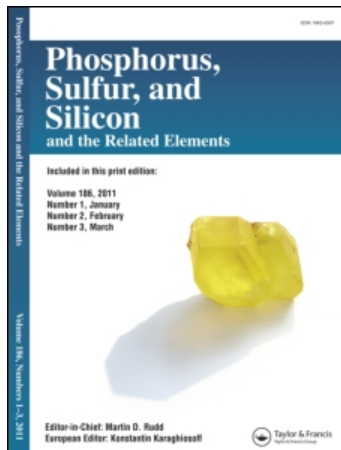
This article was downloaded by:

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 TRANSFORMATIONS OF OPTICALLY ACTIVE α -PHOSPHORYL SULPHOXIDES

M. Mikołajczyk^a

^a Department of Organic Sulphur Compounds, Centre of Molecular and Macromolecular Studies, Polish Academy of Sciences, Poland

To cite this Article Mikołajczyk, M.(1979) 'SYNTHESIS AND TRANSFORMATIONS OF OPTICALLY ACTIVE α -PHOSPHORYL SULPHOXIDES', *Phosphorus, Sulfur, and Silicon and the Related Elements*, 6: 1, 203

To link to this Article: DOI: 10.1080/03086647908080375

URL: <http://dx.doi.org/10.1080/03086647908080375>

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.

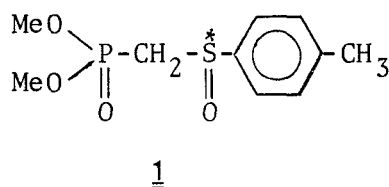
The publisher does not give any warranty express or implied or make any representation that the contents will be complete or accurate or up to date. The accuracy of any instructions, formulae and drug doses should be independently verified with primary sources. The publisher shall not be liable for any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

M. Mikołajczyk

Centre of Molecular and Macromolecular Studies, Polish Academy of Sciences, Department of Organic Sulphur Compounds, 90-362 Łódź, Boczna 5, Poland

As part of a continuing studies of α -phosphoryl sulphoxides, racemic dimethylphosphorylmethyl *p*-tolyl sulphoxide (1) was prepared and resolved into optical isomers. Sulphoxide (+)-1 with the R chirality at sulphur was synthesized stereospecifically by treatment of (-)-menthyl *p*-tolylsulphinate with dimethylphosphorylmethyl lithium. This communication describes some transformations of optically active 1.



Particular attention will be devoted to chlorination of 1 by means of iodobenzene dichloride. This reaction results in the formation of a mixture of diastereoisomeric α -chloro α -phosphoryl sulphoxides. The determination of the absolute configuration of the α -carbon atom in these isomers by X-ray analysis is underway.

A brief summary of the Pummerer-type reactions of α -phosphoryl sulphoxides will be given as well as a new example of asymmetric induction in the reaction between optically active 1 and acetic anhydride will be presented.