

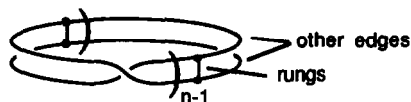
GRAPHICAL ABSTRACTS

Tetrahedron Lett. 29, 731 (1988)

TOPICITY OF VERTICES AND EDGES IN THE MÖBIUS LADDERS: A TOPOLOGICAL RESULT WITH CHEMICAL IMPLICATIONS

David M. Walba,* Jonathan Simon,* and Frank Harary
Department of Chemistry and Biochemistry, University of Colorado, Boulder, Colorado 80309-0215

Some interesting topological properties of the Möbius ladders with 2, 3 and 4 rungs are discussed in the context of possible chemical realizations of the graphs. Thus, when the rungs and other edges are identical, then for the Möbius ladders with two or three rungs, ($n=2, 3$) the rungs and other edges are constitutionally equivalent, while for the ladder with four rungs ($n=4$), the rungs are heterotopic with the other edges. While impossible to prove using molecular models, this interesting result derives directly from inspection of all possible automorphisms of the graphs.



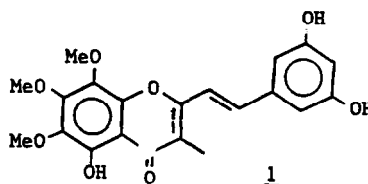
Tetrahedron Lett. 29, 735 (1988)

SYNTHESIS OF HORMOTHAMNIONE

Ricardo Alonso and Arnold Brossi

Medicinal Chemistry Section,
Laboratory of Analytical Chemistry,
NIH, Bethesda, Maryland 20892, U.S.A.

The synthesis of Hormothamnione 1 as well as of some analogs is described.



Tetrahedron Lett. 29, 739 (1988)

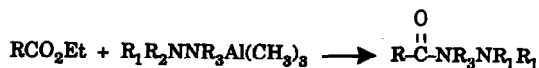
A NEW SYNTHESIS OF CARBOXYLIC ACID HYDRAZIDES VIA ORGANOALUMINUM REAGENTS

A. Benderly^{2*} and S. Stavchansky¹

¹College of Pharmacy, The University of Texas, Austin, TX 78712

²Rohm and Haas, Box 672, Deer Park, TX 77536

Ethyl esters react under mild reaction conditions with dimethylaluminum hydrazides to give the corresponding carboxylic acid hydrazides in moderate to good yield.



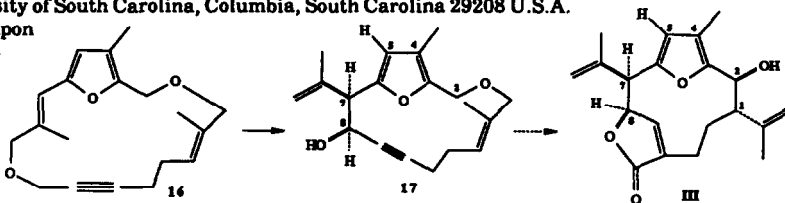
Tetrahedron Lett. 29, 741 (1988)

SYNTHESIS OF A POSSIBLE KALLOLIDE A PRECURSOR VIA [2,3] WITTIG RING CONTRACTION OF A MACROCYCLIC FURAN DIETHER

James A. Marshall and David J. Nelson

Department of Chemistry, University of South Carolina, Columbia, South Carolina 29208 U.S.A.

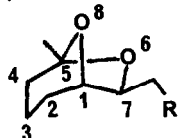
The macrocyclic furan diether 16 upon treatment with lithio 2,2,6,6-tetramethylpiperide underwent [2,3] Wittig ring contraction to the syn alcohol 17, a potential precursor of the pseudopterolide diterpene kallolide A (III).



DETERMINING THE ABSOLUTE CONFIGURATION OF EXO-7
DERIVATIVES OF 5-METHYL-6,8-DIOXABICYCLO[3.2.1]OCTANE BY VCD

R.A. Shaw, N. Ibrahim, and H. Wieser

Department of Chemistry, University of Calgary, Calgary, Alberta, Canada T2N 1N4



R = H, Br, OH, CH₃

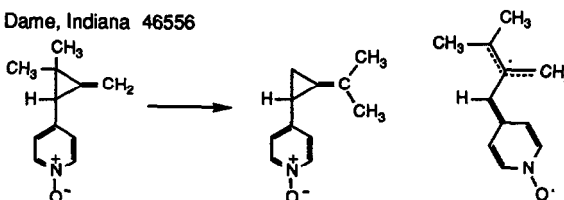
VCD spectra in the region of 1100-1400 cm⁻¹ reveal common features which can be used as configurational markers for the absolute configuration of the bicyclic ketal and smaller rings containing the chiral unit -C*(CH₂R)X-, X = O and S.

THE PYRIDINE N-OXIDE GROUP. A POTENT RADICAL
STABILIZING FUNCTION

Xavier Creary* and M. E. Mehrsheikh-Mohammadi

Department of Chemistry, University of Notre Dame, Notre Dame, Indiana 46556

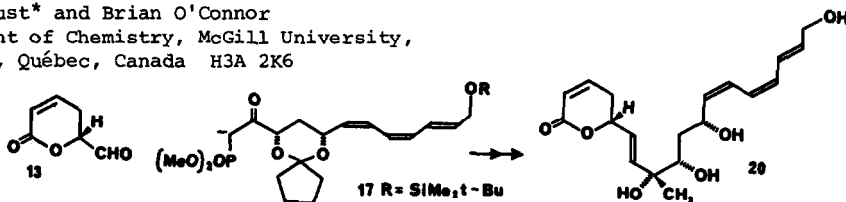
The rate of the thermal methylenecyclopropane rearrangement is greatly enhanced by the 4-pyridyl N-oxide group due to nitroxide radical character in the transition state.



SYNTHESIS OF THE 5R,8R,9S,11R DEPHOSPHORYLATED
DERIVATIVE OF CI-920, A NOVEL ANTITUMOR AGENT.

George Just* and Brian O'Connor

Department of Chemistry, McGill University,
Montréal, Québec, Canada H3A 2K6

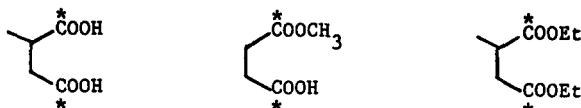


CONFORMATION OF SUCCINIC ACID DERIVATIVES BY DOUBLE
¹³C-LABELLING

F. M Menger* and L. H. Lee

Department of Chemistry, Emory University, Atlanta, Georgia 30322

Rotamer populations in di-¹³C-labelled succinic acid derivatives can be calculated from ³J_{cc} data.

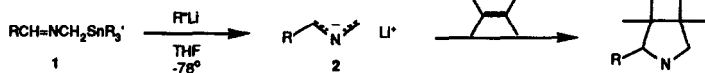


Tetrahedron Lett. 29, 761 (1988)

TRANSMETALLATION OF N-(TRIALKYLSTANNYL)METHYLIMINES. A
NEW METHOD FOR THE GENERATION AND CYCLOADDITION OF 2-
AZAALLYL ANIONS

William H. Pearson*, Daniel P. Szura and William G. Harter
Department of Chemistry, The University of Michigan, Ann Arbor, Michigan 48109

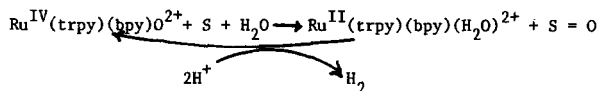
Transmetalation of imines **1** at -78° provided 2-azaallyl anions, **2**, which readily under-
go cycloaddition with olefinic anionophiles, providing pyrrolidines. Unstabilized anions may
be generated for the first time.

Tetrahedron Lett. 29, 765 (1988)

ELECTROCATALYTIC OXIDATION OF OLEFINS AND KETONES BASED ON A $\text{Ru}^{\text{IV}}=\text{O}/$
 $\text{Ru}^{\text{II}}-\text{H}_2\text{O}$ SYSTEM.

J.M. Madurro, G. Chiericato Jr., W.F. De Giovani* and J.R. Romero*. Departamento de Química, Faculdade de Filosofia, Ciências e Letras de Ribeirão Preto, Universidade de São Paulo, 14.049 - Ribeirão Preto - S.P., Brazil.

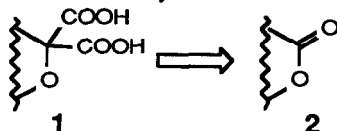
Oxidation of cyclohexene, safrole, isosafrole, isophorone, deoxybenzoin and acetophenone is described. In the
simplified scheme, S is an organic substrate which undergoes a net $2e^-$ oxidation.

Tetrahedron Lett. 29, 769 (1988)

OXIDATIVE BISDECARBOXYLATION OF
 α -ALKOXYMALONIC ACIDS WITH CERIUM(IV)

Robert G. Salomon*, Subhas Roy, and Mary F. Salomon

Ceric ammonium nitrate (CAN) is an excellent reagent for preparing carboxylic esters **2** from α -
alkoxymalonic acids **1** by oxidative bisdecarboxylation.

Tetrahedron Lett. 29, 773 (1988)

ORTHO LITHIATION OF 2-, 3-, AND 4-METHOXPYRIDINE

Daniel L. Comins* and Donald H. LaMunyon

Department of Chemistry and Biochemistry, Utah State University, Logan, Utah 84322-0300

The ortho lithiation of 2-, 3-, and 4-methoxypyridine was effected using mesityllithium as
the metalating base.

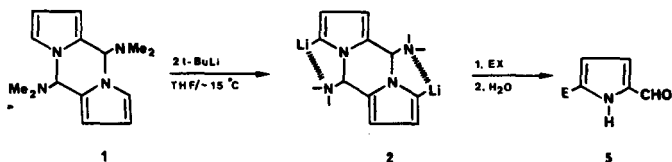


Tetrahedron Lett. 29, 777 (1988)

LITHIATION OF 6-DIMETHYLAMINO-1-AZAFULVENE DIMER.
SYNTHESIS OF 5-SUBSTITUTED PYRROLE-2-CARBOXALDEHYDES.

Joseph M. Muchowski* and Petr Hess
 Syntex Research, Inst. Org. Chem., Palo Alto, CA. 94304

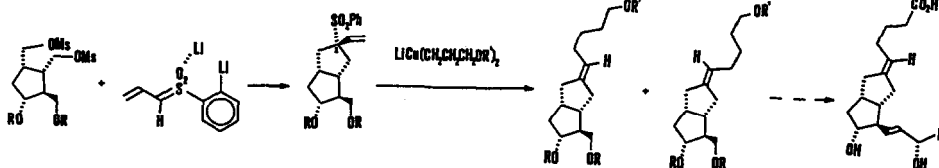
Metalation of the dimer **1**, with t-butyllithium, gave **2**, which after reaction with diverse electrophilic reagents, gave 5-substituted pyrrole-2-carboxaldehydes **5**.



A CONCEPTUALLY NEW ROUTE TO OPTICALLY ACTIVE CARBA-PROSTACYCLINS: SYNTHESIS OF EXOCYCLIC ALKENES VIA DOUBLY LITHIATED ALLYL SULFONES

Hans-Joachim Gais*, Walter A. Ball and Jörg Bund
 Chemisches Laboratorium der Albert-Ludwigs-Universität, D-7800 Freiburg i. Br. (FRG)

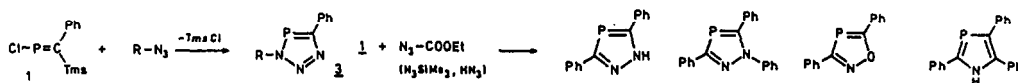
Tetrahedron Lett. 29, 781 (1988)



1,3-DIPOLARE CYCLOADDITIONEN VON 1-CHLOR-2-PHENYL-2-TRIMETHYLSILYL-2-PHOSPHÄETHEN MIT AZIDEN, NITRILIMINEN, NITRILOKSIDEN UND NITRILIMIDEN

G. Märkl, I. Troetsch-Schaller, W. Hölzl
 Institut für Organische Chemie der Universität Regensburg, Universitätsstraße 31, D-8400 Regensburg, BRD
 Regular and irregular 1,3-dipolar cycloaddition reactions of the title compounds are reported.

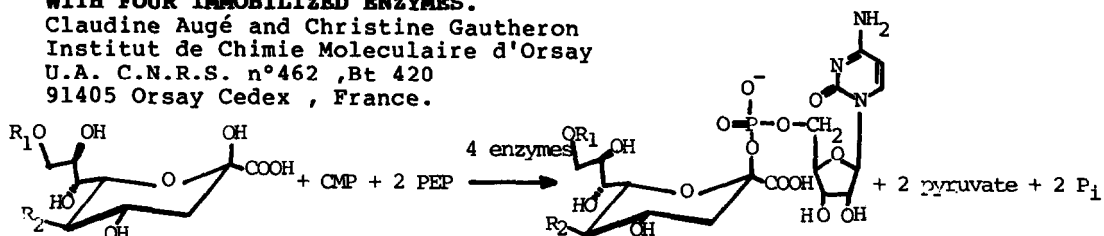
Tetrahedron Lett. 29, 785 (1988)



AN EFFICIENT SYNTHESIS OF CYTIDINE MONOPHOSPHO-SIALIC ACIDS WITH FOUR IMMOBILIZED ENZYMES.

Claudine Augé and Christine Gautheron
 Institut de Chimie Moléculaire d'Orsay
 U.A. C.N.R.S. n°462, Bt 420
 91405 Orsay Cedex, France.

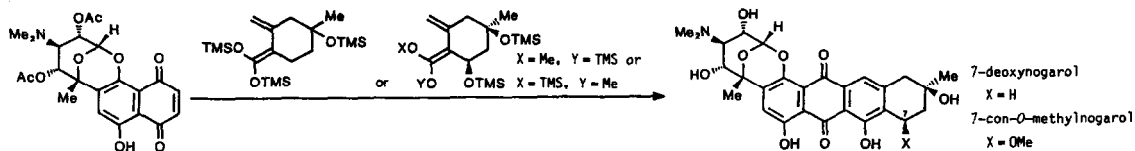
Tetrahedron Lett. 29, 789 (1988)



**FIRST TOTAL SYNTHESSES OF (+)-7-DEOXYNOGAROL
AND (+)-7-CON-O-METHYLNAGAROL**

Tetrahedron Lett. 29, 791 (1988)

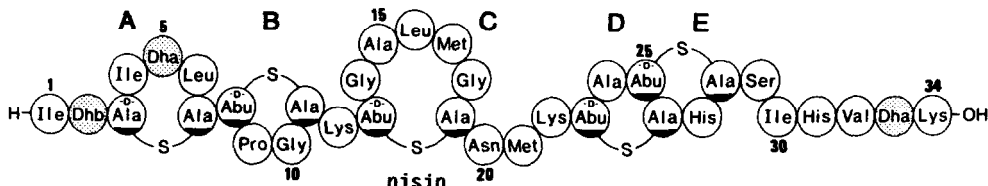
Motoji Kawasaki, Fuyuhiko Matsuda, and Shiro Terashima*
Sagami Chemical Research Center, Nishi-Ohnuma, Sagami-hara, Kanagawa 229, Japan



Tetrahedron Lett. 29, 795 (1988)

TOTAL SYNTHESIS OF PEPTIDE ANTIBIOTIC NISIN

K. Fukase, M. Kitazawa, A. Sano, K. Shimbo, H. Fujita, S. Horimoto, T. Wakamiya, and T. Shiba, Department of Chemistry, Faculty of Science, Osaka University, Toyonaka, Osaka 560, Japan.
Total synthesis of nisin was successfully carried out for the first time.

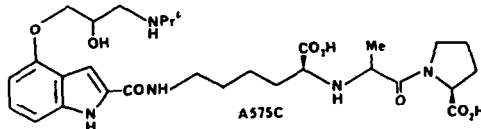


Tetrahedron Lett. 29, 799 (1988)

**SYNTHESIS OF A575C, A COMBINED ANGIOTENSIN CONVERTING
ENZYME INHIBITOR - BETA ADRENOCEPTOR ANTAGONIST.**

George W. Hardy, Donald Bull, Haydn T. Jones, Gail Mills and Geoffrey Allan. The Wellcome Research Laboratories, Langley Court, Beckenham, Kent, United Kingdom, BR3 3BS.

A convergent synthesis of the novel dual-active antihypertensive agent A575C is described.



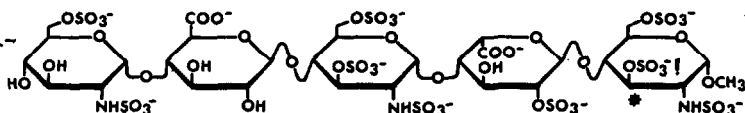
Tetrahedron Lett. 29, 803 (1988)

**SYNTHESIS OF A POTENT ANTITHROMBIN ACTIVATING PENTASACCHARIDE: A NEW
HEPARIN-LIKE FRAGMENT CONTAINING TWO 3-O-SULPHATED GLUCOSAMINES**

C.A.A. van Boeckel, T. Beetz and S.F. van Aelst

Organon Int. B.V., P.O. Box 20, 5340 BH Oss, The Netherlands

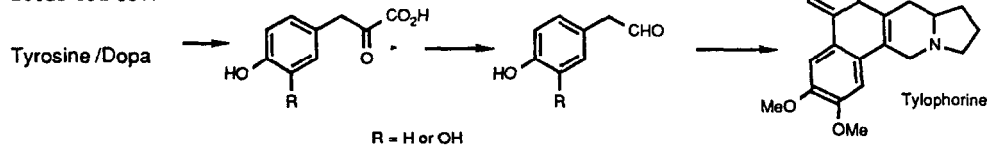
A potent pentasaccharide corresponding to the antithrombin III binding region of heparin, but containing an extra sulphate group (*), has been synthesized.



Tetrahedron Lett. 29, 807 (1988)

THE IMPLICATION OF PHENYLACETALDEHYDES IN THE BIOSYNTHESIS OF THE PHENANTHROINDOLIZIDINE ALKALOID, TYLOPHORINE.

Stuart H. Hedges, Richard B. Herbert, Eric Knagg, and Vinayagar Pasupathy, Department of Organic Chemistry, The University, Leeds LS2 9JT.



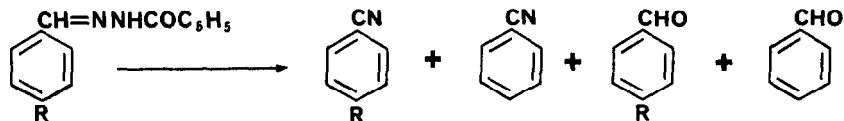
Tetrahedron Lett. 29, 811 (1988)

THERMOLYSIS OF BENZHYDRAZONES IN THE PRESENCE OF COPPER

C.W. Thomas*, L.L. Leveson and H.A. Routley

Organic Chemistry Laboratories, Bristol Polytechnic, Frenchay, Bristol BS16 1QY

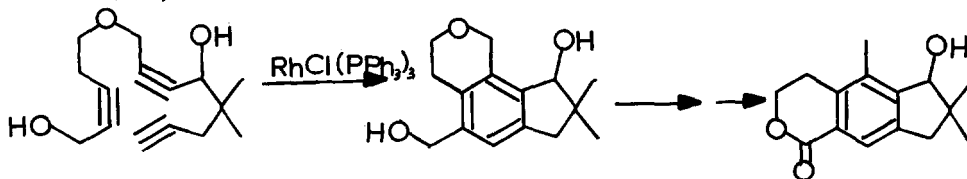
Benzhydrazone derivatives of aromatic aldehydes undergo thermolysis in the presence of copper



Tetrahedron Lett. 29, 813 (1988)

Rhodium Catalysed [2+2+2] Cycloadditions. An Efficient Regiospecific Route to Calomelanolactone

S.J. Neeson and P.J. Stevenson*, Department of Chemistry, Queen's University, Belfast BT9 5AG, Northern Ireland.

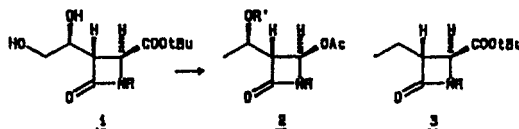


A NEW ENANTIO AND DIASTEREOSELECTIVE SYNTHESIS OF 2-AZETIDINONES AS USEFUL INTERMEDIATES OF β -LACTAM ANTIBIOTICS.

Tetrahedron Lett. 29, 815 (1988)

C. Bonini* and R. Di Fabio*, Centro CNR per lo Studio della Chimica delle Sostanze Organiche Naturali, Università "La Sapienza", 00185 ROMA, Italy

An enantio and diastereoselective route to β -lactam antibiotics is described: two novel key radical reactions from the common synthon **1**, allowed to obtain **2** and **3**, useful intermediates in the synthesis of thienamycin and PS-5.

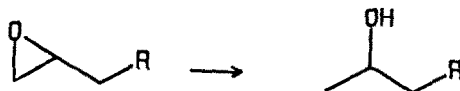


A FACILE CHEMO AND REGIOSELECTIVE OPENING OF
1,2-EPOXIDES VIA FREE RADICAL REACTION

Tetrahedron Lett. 29, 819 (1988)

C. Bonini* and R. Di Fabio*, Centro CNR per lo Studio della Chimica delle
Sostanze Organiche Naturali, Università "La Sapienza", 00185 ROMA, Italy

A novel radical reductive opening of
1,2-epoxides is reported to yield
mainly the secondary alcohols with
good regio and chemoselectivity. The
reaction is easily carried out in DME
with NaI, n-Bu₃SnH and AIBN at 80°C for
1-6 h.



six examples

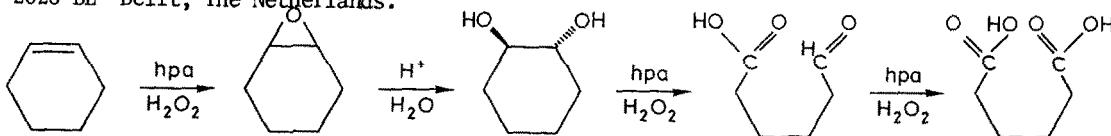
regioselectivity:
from 6: 1 to 99: 1

Tetrahedron Lett. 29, 823 (1988)

HETEROPOLYANIONS AS OXIDATION CATALYSTS IN A 2-PHASE SYSTEM

M. Schwegler, M. Floor and H. van Bekkum

Laboratory of Organic Chemistry, Delft University of Technology, Julianalaan 136,
2628 BL Delft, The Netherlands.

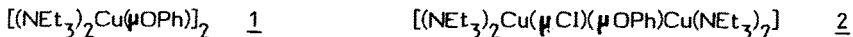


Tetrahedron Lett. 29, 827 (1988)

THE EFFECT OF NITROGEN DONORS ON THE REACTIVITY OF COPPER(I) PHENOXIDES:
SYNTHESIS OF THIONCARBONATES

N. Narasimhamurthy and A.G. Samuelson* Department of Inorganic and Physical Chemistry
Indian Institute of Science, Bangalore 560012, India

Complexes 1 and 2 are easily synthesised and differ markedly from CuOPh in their reactivity.
They provide an easy route to the synthesis of thioncarbonates.

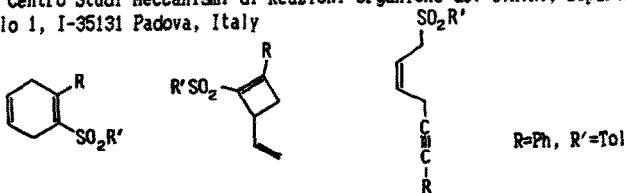


Tetrahedron Lett. 29, 831 (1988)

REACTIVITY OF PHENYL(TOLYLSULFONYL)ACETYLENE TOWARDS DIENES AND
HOMO-DIENES: CYCLOADDITIONS VERSUS FRAGMENTATION-ADDITION REACTIONS

Ottorino De Lucchi*: Dipartimento di Chimica dell'Università', via Vienna 2, I-07100 Sassari
Giulia Licini, Lucia Pasquato and Marina Senta: Centro Studi Meccanismi di Reazioni Organiche del C.N.R., Dipartimento
di Chimica Organica dell'Università', via Marzolo 1, I-35131 Padova, Italy

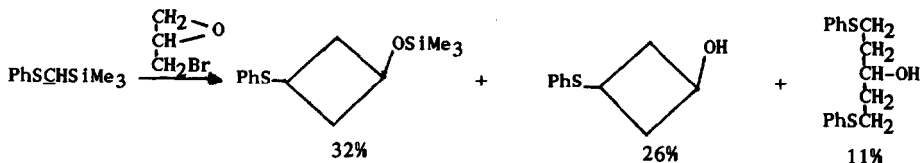
Depending upon the diene, phenyl(tolyl-
sulfonyl)acetylene affords the (4+2), the
(2+2)-cycloadducts or products derived by
1,4-addition of the two fragments from
homolytic cleavage of the carbon-sulfur bond.



MIGRATION AND STABILITY OF THE SILYL GROUP IN THE USE OF PHENYLTHIOMETHYLTRIMETHYLSILANE AS A FORMYL SYNTHON

Paul L. Coe, A. Stanley Jones, Ajit Kumar and Richard T. Walker*

Department of Chemistry, University of Birmingham, P.O. Box 363, Birmingham B15 2TT, U.K.



CYCLISATION OF ALLYLOXY RADICALS

Amanda Johns and John A. Murphy

Department of Chemistry, University of Nottingham.

The cyclic ethers (1) (2) and (3) have been formed by cyclisation of allyloxy radicals (4).

