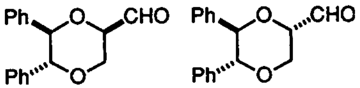
GRAPHICAL ABSTRACTS

Tetrahedron, **1992**, *48*, 9819

(2*S*, 3*S*, 5*S*)- AND (2*S*, 3*S*, 5*R*)-5-CARBOXALDEHYDE-2,3-DIPHENYL-1,4-DIOXANE AS SURROGATES FOR OPTICALLY PURE 2,3-*O*-ISOPROPYLIDENEGLYCERALDEHYDE IN ASYMMETRIC SYNTHESIS.

Jeffrey Aubé,* Craig J. Mossman, and Susan Dickey; Department of Medicinal Chemistry, University of Kansas, Lawrence, KS 66045-2506.

The aldehydes shown are presented as optically active equivalents for glyceraldehyde acetonide in asymmetric synthesis. The synthesis begins with *threo*-hydrobenzoin, which is available as either optical antipode via asymmetric osmylation of *trans*-stilbene.



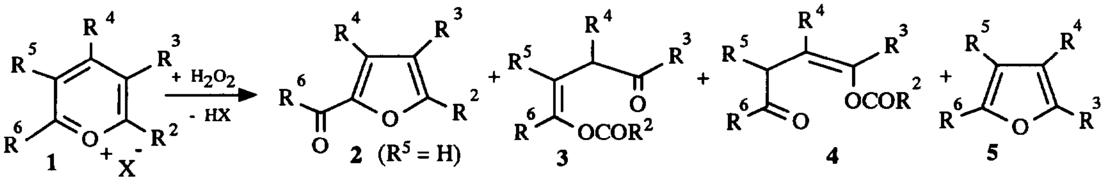
Tetrahedron, **1992**, *48*, 9827

H_2O_2 OXIDATION OF POLYSUBSTITUTED PYRYLIUM SALTS : FORMATION OF ENOL ESTERS AND FURANS

Teodor Silviu Balaban[a,]* and Monika Hiegemann[b]

[a]*Technische Hochschule Darmstadt (FRG),* [b]*Ruhr-University Bochum (FRG)*

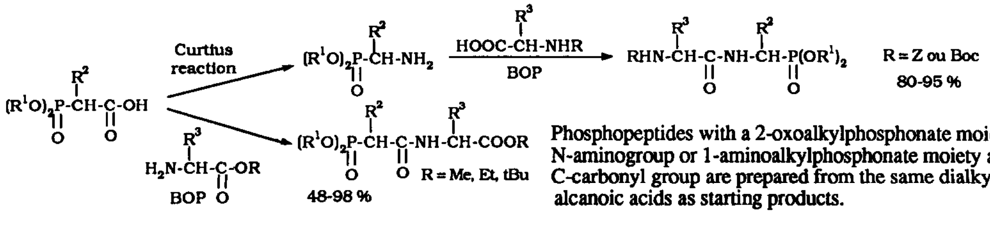
The oxidation of pyrylium salts **1** with hydrogen peroxide has been reinvestigated and it is shown that for 2,4,6-trisubstituted pyrylium salts, beside the major 2-acylfurans **2**, minor products **3-5** are formed. The latter are, however, the major products in the case of tetra- and penta-substituted pyrylium salts. The reaction mechanism is discussed and some properties of the novel enol esters **3** and **4** with a δ-keto group are presented.



Tetrahedron, **1992**, *48*, 9841

SYNTHESE DE PEPTIDES MODIFIES INCORPORANT UN MOTIF PHOSPHORE N OU C TERMINAL

Ph. Coutrot, C. Grison et C. Charbonnier-Gérardin
Laboratoire de Chimie Organique II, URA CNRS 486, Université Nancy I, BP 239, 54506 Vandoeuvre-les-Nancy, France



Phosphopeptides with a 2-oxoalkylphosphonate moiety as terminal N-aminogroup or 1-aminoalkylphosphonate moiety as terminal C-carbonyl group are prepared from the same dialkylphosphonoalcanoic acids as starting products.

Tetrahedron, **1992**, *48*, 9869

LIPASE-MEDIATED ALKOXYCARBONYLATION OF NUCLEOSIDES WITH OXIME CARBONATES.

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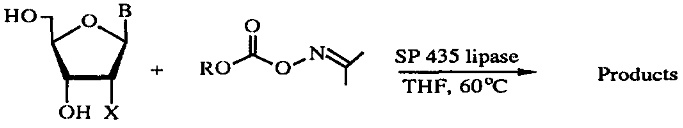
Departamento de Química Orgánica e Inorgánica, Facultad de Química, Universidad de Oviedo, 33071 Oviedo, Spain

Abstract: Oxime carbonates can be used in the enzymatic 5'-*O*-alkoxycarbonylation of nucleosides with a lipase from *Candida antarctica.*



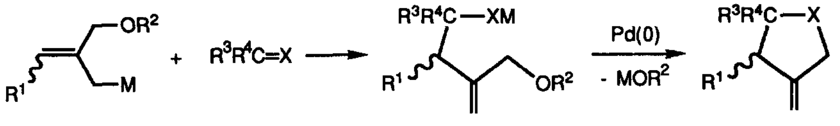
B = U, Ad
X = H, OH

Tetrahedron, **1992**, *48*, 9877

3-METHYLENETETRAHYDROFURANS AND 3-METHYLENE-PYRROLIDINES BY ADDITION OF 2-(BROMOZINCMETHYL)-2-ALKENYL ETHERS OR 2-(CHLOROMAGNESIOMETHYL)-2-ALKENYL ETHERS TO ALDEHYDES, KETONES AND IMINES FOLLOWED BY Pd(0)-CATALYZED CYCLIZATION

J. van der Louw, J.L. van der Baan, H. Stichter, G.J.J. Out, F.J.J. de Kanter, F. Bickelhaupt, and G.W. Klumpp
Scheikundig Laboratorium, Vrije Universiteit, De Boelelaan 1083, 1081 HV Amsterdam, The Netherlands

Addition of 2-(metallomethyl)-2-alkenyl ethers **1** to aldehydes, ketones or imines affords products which undergo Pd(0)-catalyzed cyclization to 3-methylenetetrahydrofurans **4** or 3-methylenepyrrolidines **7**.



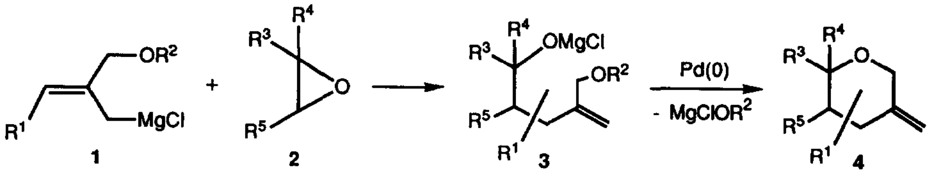
1 M = ZnBr, MgCl **2** X = O **3** X = O, M = ZnBr, MgCl **4** X = O
5 X = NR^5 **6** X = NR^5, M = ZnBr, MgCl **7** X = NR^5

Tetrahedron, **1992**, *48*, 9901

ADDITION OF 2-(CHLOROMAGNESIOMETHYL)-2-ALKENYL ETHERS TO EPOXIDES FOLLOWED BY Pd(0)-CATALYZED CYCLIZATION: A ONE-POT SYNTHESIS OF 3-METHYLENETETRAHYDROPYRANS

J. van der Louw, J.L. van der Baan, G.J.J. Out, F.J.J. de Kanter, F. Bickelhaupt, and G.W. Klumpp*
Scheikundig Laboratorium, Vrije Universiteit, De Boelelaan 1083, 1081 HV Amsterdam, The Netherlands

Addition of 2-(chloromagnesiomethyl)-2-propenyl ethers **1** to epoxides **2** affords ring opening products **3** which are converted by Pd(0) to 3-methylenetetrahydropyrans **4**.



Tetrahedron, **1992**, *48*, 9917

Calix[4]arene Cryptand and New 1,3-Bis-Pyridyl, -Bipyridyl and -Alkylthioether Calix[4]arenes Designed to Coordinate Transition Metal Cations

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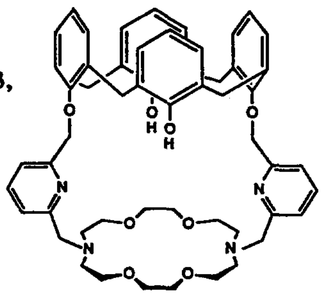
[a]Inorganic Chemistry Laboratory, University of Oxford, South Parks Road, Oxford OX1 3QR (UK).
[b]School of Chemistry, University of Birmingham, P.O. Box 363, Birmingham B15 2TT (UK).
[c]Department of Chemistry, The University, Whiteknights, P.O. Box 224, Reading RG2 6AD (UK).

The syntheses and preliminary transition metal coordination chemistry of a novel calix[4]arene cryptand receptor and new 1,3-bis-pyridyl, -bipyridyl and -alkylthioether calix[4]arenes are described.

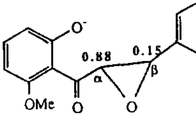


Tetrahedron, **1992**, *48*, 9929

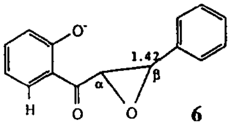
KINETICS AND MECHANISM OF THE CYCLISATION OF SOME 2'-HYDROXYCHALCONE EPOXIDES AND SUBSEQUENT ELIMINATION REACTIONS OF AURONE HYDRATES

Christopher J. Adams and Lyndsay Main*
School of Science, University of Waikato, Hamilton, New Zealand

Rates of α- *vs* β-cyclisation of 2'-hydroxychalcone epoxide monoanions provide insight into the preference for α-cyclisation when a 6'-substituent is present (*e.g.* compound 1) as opposed to β-substitution when there is no 6'-substituent (compound 6).



1



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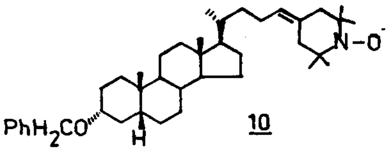
Tetrahedron, **1992**, *48*, 9939

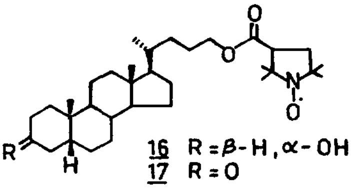
Syntheses of Potential Spin Probes for Biomembranes - Tempo and Proxyl Nitroxides of Lithocholic Acid

Sharmila Banerjee and Girish K. Trivedi*, Department of Chemistry, Indian Institute of Technology, Powai, Bombay 400 076, India.

The syntheses of tempo nitroxide **10** and proxyl nitroxides **16** and **17** are described. Compound **10** is the first example of a tempo nitroxide in a steroidal substrate.



10

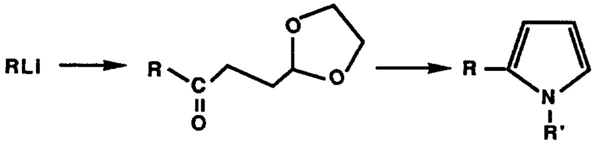


16 R = β-H, α-OH
17 R = O

Tetrahedron, **1992**, *48*, 9951

A SIMPLE WAY TO SEQUENTIALLY CONNECTED POLYCYCLES CONTAINING TERMINAL PYRROLE RINGS: SYNTHESIS OF POSSIBLE PRECURSORS OF MATERIALS FOR NONLINEAR OPTICS

Francesco Lucchesini
Istituto di Analisi e Tecnologie Farmaceutiche ed Alimentari via Brigata Salerno (Ponte) I-16147 Genova



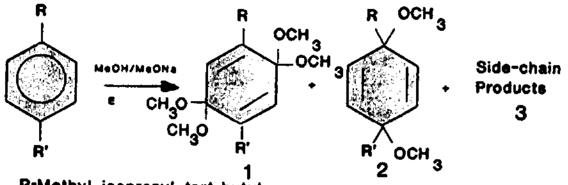
RLi can be an aromatic or heteroaromatic mono or dilithioderivative bearing an electron acceptor group.

Tetrahedron, **1992**, *48*, 9967

ANODIC OXIDATION OF ISOPROPYL AND TERT-BUTYLBENZENES. SYNTHETIC ROUTES TO CERTAIN CYCLOHEXA-1,4-DIENES

Isidoro Barba* and Marcial Tornero
Departamento de Química Orgánica, Universidad de Alicante, Apartado 99, 03080-Alicante, Spain.

The anodic methoxylation of p-cymene and p-tert-butyltoluene afforded 1,2 and 3. The reaction with 1,4-di-tert-butylbenzene afforded only nuclear addition.



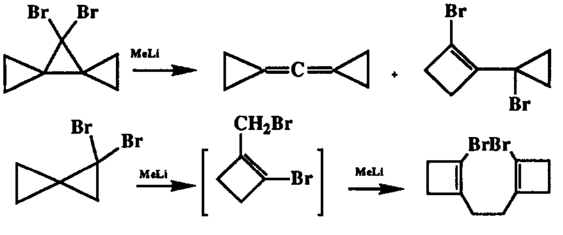
R=Methyl, isopropyl, tert-butyl
R'=Isopropyl, tert-butyl

Tetrahedron, **1992**, *48*, 9977

UNUSUAL REARRANGEMENT OF TRIANGULANE *GEM*-DIBROMIDES IN THE PRESENCE OF METHYLLITHIUM.

Kirill A. Lukin, Nikolai S. Zefirov, Department of Chemistry, Moscow State University, Moscow,119899, Russia.
Dmitri S. Yufit, Yuri T. Struchkov, A.N. Nesmeyanov Institute of Organoelement Compounds, Vavilov St. 28, Moscow, Russia.

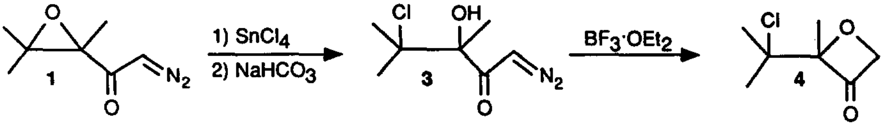
Triangulane *gem*-dibromides in the presence of methyllithium undergo rearrangement of dibromospiropentyl fragment into 1-bromomethyl-2- bromocyclobutenyl one.



Tetrahedron, **1992**, *48*, 9985

An Efficient Synthesis of Oxetanones from α,β-Epoxy Diazomethyl Ketones

L. Thijs, P.J.M. Cillissen and B. Zwanenburg
Department of Organic Chemistry, NSR Center, University of Nijmegen, Toernooiveld, 6525 ED Nijmegen, The Netherlands



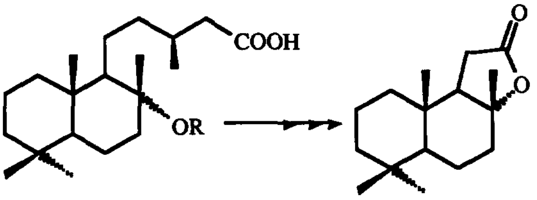
Selective opening of the epoxide ring of **1** leads to β-chloro-α-hydroxy diazoketones **3**. With $BF_3 \cdot OEt_2$ compounds **3** can be readily transformed to the oxetanones **4**.

Tetrahedron, **1992**, *48*, 9991

AMBERGRIS COMPOUNDS FROM LABDANOLIC ACID

J. G. Urones*, P. Basabe, I. S. Marcos, J. L. González,
V. Jiménez,M*. J. Sexmero and A. M. Lithgow
Departamento de Química Orgánica. Universidad de Salamanca.
Plaza de los Caídos 1-5, 37008 Salamanca, SPAIN

Labdanolic acid, the major component of the acid fraction of *C. ladaniferus*, **1a**, is transformed into 12-*nor*-ambreinolide and other related compounds.



Labdanolic acid,**1a**, R=H

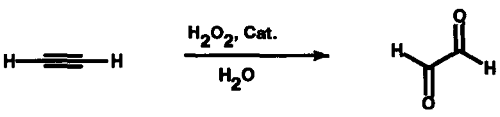
Tetrahedron, **1992**, *48*, 9999

OXIDATION OF ACETYLENE TO GLYOXAL BY DILUTE HYDROGEN PEROXIDE

Francesco P. Ballistreri[a], Salvatore Failla[b] and Gaetano A. Tomaselli*[a]

[a]Dipartimento Scienze Chimiche, University of Catania, V.le A. Doria 6, Catania, Italy 95125
[b]Istituto Chimico, Facoltà Ingegneria, University of Catania, V.le A. Doria 6, Catania, Italy 95125

Acetylene is oxidized to glyoxal by dilute hydrogen peroxide at 25°C in the presence of Mo(VI) or W(VI) salts as catalysts and mercuric acetate as co-catalyst.



Tetrahedron, **1992**, *48*, 10003

THE SYNTHESIS OF CYCLODECYL COMPOUNDS POTENTIALLY OF USE FOR THE CONTRUCTION OF THE ISOMERS OF BICYCLO[4.4.4]TETRADECANE.

David P.G. Hamon* and Guy Y. Krippner
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