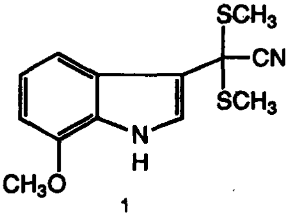
Tetrahedron Lett. **1993**, *34*, 1085

THE SYNTHESIS OF DITHYREANITRILE

Ellen K. Mantus and Jon Clardy*
Department of Chemistry—Baker Laboratory
Cornell University
Ithaca, NY 14853-1301

An efficient synthesis of dithyreanitrile (1), a novel insect antifeedant, is presented.



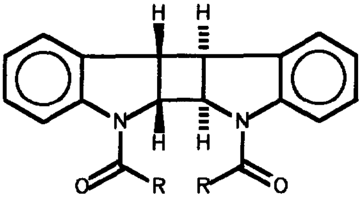
1

Tetrahedron Lett. **1993**, *34*, 1087

PHOTOCHEMICAL DIMERIZATION REACTIONS OF N-ACYLINDOLES

David L. Oldroyd, Nichloas C. Payne, Jagadese J. Vittal, Alan C. Weedon* and Boke Zhang
The Photochemistry Unit, Department of Chemistry, University of Western Ontario, London, Ontario, Canada. N6A 5B7.

The photochemical dimerization of N-acylindoles is reported; the *anti* head-to-head regioisomers are isolated predominantly.

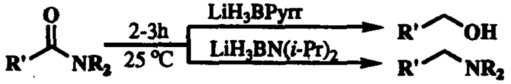


Tetrahedron Lett. **1993**, *34*, 1091

Aminoborohydrides 3. A Facile Reduction of Tertiary Amides to the Corresponding Amines and Alcohols in High Purity Using Lithium Aminoborohydrides. Sterically Controlled Selective C-N or C-O Bond Cleavage.

Gary B. Fisher, Joseph C. Fuller, John Harrison, Christian T. Goralski, and Bakthan Singaram*
Department of Chemistry and Biochemistry, University of California, Santa Cruz, Santa Cruz, Calif. 95064

R = alkyl
R' = alkyl, aryl



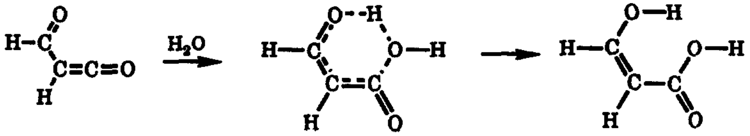
Tertiary amides were reduced selectively and in high yield to the corresponding alcohol or amine using lithium pyrrolidinoborohydride (LiH_3BPyrr) or lithium diisopropylaminoborohydride ($LiH_3BN(i\text{-}Pr)_2$), respectively. The steric bulk of the amide and the $LiABH_3$ used in the reduction allowed almost complete control over C-N versus C-O bond cleavage.

Tetrahedron Lett. **1993**, *34*, 1095

THE UNUSUAL HYDRATION REACTIVITY OF ACYLKETENES: THEORETICAL AND EXPERIMENTAL STUDIES

Annette D. Allen, Michael A. McAllister and Thomas T. Tidwell
Department of Chemistry, University of Toronto, Toronto, Ontario, Canada M5S 1A1

Calculations and experiments support acyl-assisted hydration of acyl ketenes.

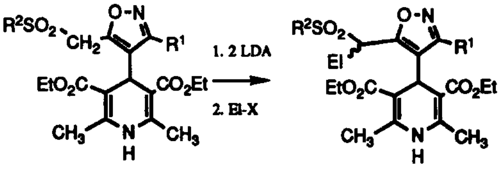


Tetrahedron Lett. **1993**, *34*, 1099

ELECTROPHILIC QUENCHING OF DIANIONS OF 4-[5'-SULFONYLMETHYLISOXAZOLYL]-1,4-DIHYDROPYRIDINES. A DIRECT ROUTE TO FUNCTIONALIZED HANTZSCH ESTERS

T.N. Balasubramaniam and N.R. Natale* Department of Chemistry, University of Idaho, Moscow ID 83843-4144

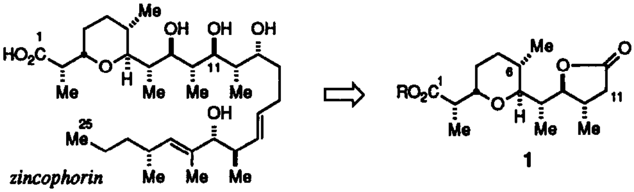
An expedient entry into the preparation of Hantzsch Esters involves dilithiation and selective electrophilic quenching of 4-[5'-Sulfonylmethylisoxazolyl]-1,4-dihydropyridines.



Tetrahedron Lett. **1993**, *34*, 1103

SYNTHETIC STUDIES OF THE IONOPHORE ANTIBIOTIC ZINCOPHORIN. 2. ITERATIVE SIGMATROPIC CONSTRUCTION OF THE C_1-C_{11} SUBUNIT.

Charles L. Cywin and James Kallmerten*, Dept. of Chemistry, Syracuse University, Syracuse NY 13210 USA



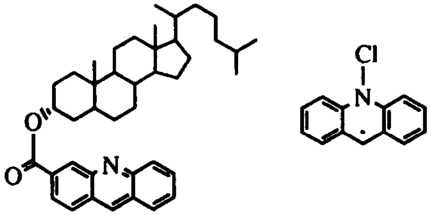
Lactone 1, comprising the C_1-C_{11} fragment of the ionophore antibiotic zincophorin, has been prepared via a scheme incorporating sequential enolate Claisen and [2,3] Wittig rearrangements to establish key structural and stereochemical elements of the title compound.

Tetrahedron Lett. **1993**, *34*, 1107

Quinoline and Acridine Templates in Selective Steroid Chlorinations

Ronald Breslow* and David Wiedenfeld
Department of Chemistry, Columbia University
New York, New York 10027

Quinoline and acridine esters of 3-alpha-cholestanol undergo template directed steroid chlorination just as pyridine esters do, even though the chlorine atom apparently bonds to the quinoline and acridine systems differently from the three-electron bonds seen with pyridine templates.

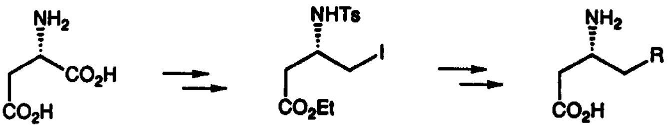


Tetrahedron Lett. **1993**, *34*, 1111

AN ENANTIOSPECIFIC SYNTHESIS OF β-AMINO ACIDS

Charles W. Jefford*, and Jianbo Wang
Department of Organic Chemistry, University of Geneva, 1211 Geneva 4, Switzerland

L-Aspartic acid is converted *via* the iodo-ester into homochiral β-amino acids

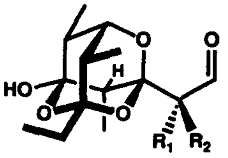


Tetrahedron Lett. **1993**, *34*, 1115

THE ABSOLUTE AND RELATIVE CONFIGURATION OF MUAMVATIN

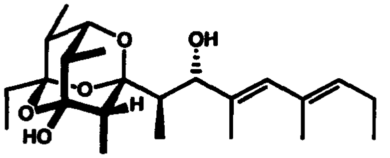
Reinhard W. Hoffmann* and Georg Dahmann, Fachbereich Chemie der Philipps-Universität, Hans-Meerwein-Straße, D - W 3550 Marburg/L.

The aldehydes 17 have been synthesized in an stereodefined manner. This allowed the assignment of the absolute configuration of muamvatin as 19.



17

17a: $R_1 = CH_3$; $R_2 = H$
17b: $R_1 = H$; $R_2 = CH_3$

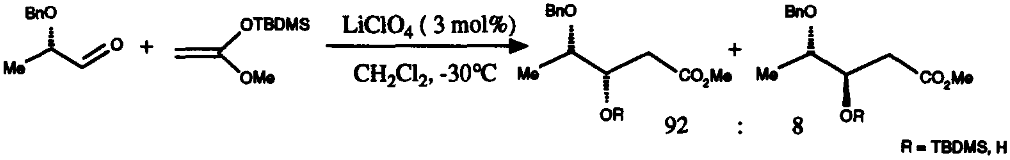


19

Tetrahedron Lett. **1993**, *34*, 1119

Carbon-Carbon Bond Formation Catalyzed by Lithium Perchlorate in Dichloromethane

Manfred T. Reetz*and David N.A. Fox
Max-Planck-Institut für Kohlenforschung, Kaiser-Wilhelm-Platz 1, 4330 Mülheim/Ruhr, Germany

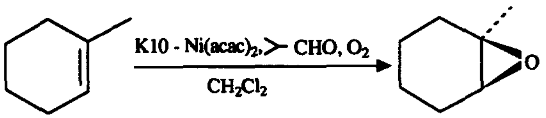


Tetrahedron Lett. **1993**, *34*, 1123

Epoxidation of Olefins by Molecular Oxygen with Clay-Impregnated Nickel Catalysts

Ezzeddine Bouhlel[b], Pierre Laszlo[a*], Michel Levart, Marie-Thérèse Montaufier, and Girij Pal Singh

[a*] Laboratoire de chimie fine, biomimétique et aux interfaces, Ecole Polytechnique, F-91128 Palaiseau, France
[b] Faculté des Sciences de Monastir, Département Chimie, Route de Kairouan, 5019 Monastir, Tunisie

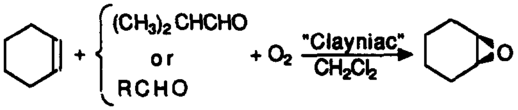


Tetrahedron Lett. **1993**, *34*, 1127

"Clayniac"-Catalyzed Epoxidation: The Role of the Aldehyde as Co-Reducer of Molecular Oxygen

Pierre Laszlo*, Michel Levart

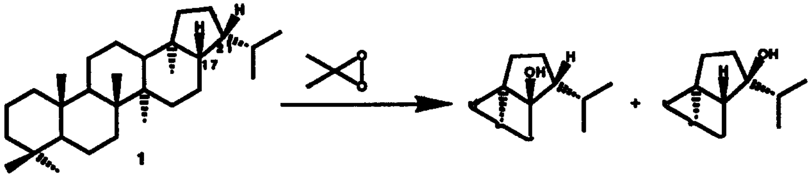
Laboratoire de chimie fine, biomimétique et aux interfaces Ecole Polytechnique, F-91128 Palaiseau, France



Tetrahedron Lett. **1993**, *34*, 1131

DIMETHYLDIOXIRANE OXIDATION OF ISOMERIC TRITERPENES OF THE HOPANE SERIES.

P. Bisseret and M. Rohmer*
Ecole Nationale Supérieure de Chimie de Mulhouse, 3 rue A. Werner, 68093 Mulhouse, France.

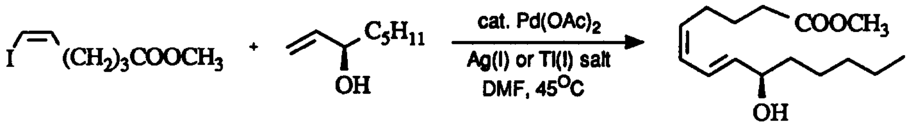


Dimethyldioxirane converted hopane 1 in 80% yield into the above two tertiary alcohols, both valuable precursors to the preparation of geohopanoids; isomers of 1 at C-17 and C-21 were also investigated but appeared much more inert.

Tetrahedron Lett. **1993**, *34*, 1133

PALLADIUM-CATALYSED DIRECT SYNTHESIS OF OPTICALLY ACTIVE DIENOLS.

Tuyêt JEFFERY
Laboratoire de Chimie de l'Ecole Normale Supérieure associé au CNRS, 24 Rue Lhomond - 75231 Paris - France.



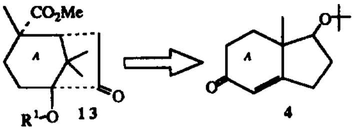
An efficient methodology to stereodefined optically active conjugated dienols is described and illustrated by a short and convenient synthesis of methyl (9R)-9-hydroxytetradeca-5Z,7E-dienoate.

Tetrahedron Lett. **1993**, *34*, 1137

STUDIES TOWARDS THE TOTAL SYNTHESIS OF TAXOIDS. SYNTHESIS OF AN A-RING BUILDING UNIT.

S.Arséniyadis*, D.V.Yashunsky, R.Pereira de Freitas, M.Muñoz Dorado, E.Toromanoff and P.Potier.
Institut de Chimie des Substances Naturelles, CNRS, F-91198 Gif-sur-Yvette(France)

An efficient 11-step synthesis of the optically homogeneous bridged ring system 13, by a SmI_2 mediated reductive pinacol coupling starting from (S)-(+)-4 is presented.

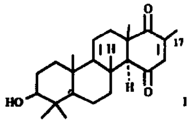


Tetrahedron Lett. **1993**, *34*, 1141

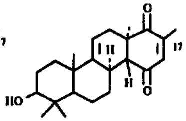
DIELS-ALDER APPROACHES TO PENTACYCLIC TRITERPENES OF THE ARBORANE AND FERNANE FAMILIES.

S.Arseniyadis, R.Rodriguez, J.Camara, E.Guittet and L.Toupet§*
Institut de Chimie des Substances Naturelles, CNRS, F-91198 Gif-sur-Yvette (France)
§URA au CNRS 04804, Universite de Rennes I, 35042 Rennes (France).

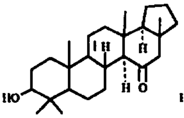
A six-step protocol for the synthesis of isoarborinol (13) and fernenol (19) derivatives, starting from the tetracyclic intermediates 6t and 8t.



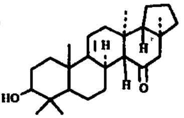
6t



8t



13



19

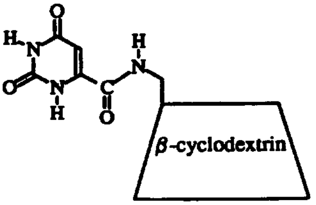
Tetrahedron Lett. **1993**, *34*, 1145

SPECIFIC INTERACTION AND STABILIZATION BETWEEN HOST AND GUEST : COMPLEXATION OF ELLIPTICINE IN A NUCLEOBASE-FUNCTIONNALIZED CYCLODEXTRIN.

F. Djedaïni-Pilard[a], B. Perly[a], S. Dupas[b], M. Miocque[b], H. Galons[b].

[a] SCM, CEN de Saclay, 91191 Gif sur Yvette Cedex (France)
[b] Chimie Organique 2, Université de Paris V, 75006 Paris (France)

A nucleobase-functionnalized cyclodextrin is shown by NMR to exhibit superior properties as transporter for ellipticin by combination of inclusion and charge-transfer complex formation.



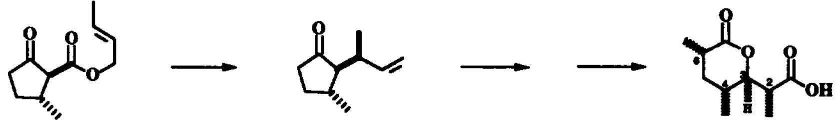
Tetrahedron Lett. **1993**, *34*, 1149

Stereoselective Ester Dienolate Carroll Rearrangement: A New Approach to the Prelog-Djerassi Lactone Framework

Nicole Ouvrard, Jean Rodriguez* and Maurice Santelli

Laboratoire de Synthèse Organique associé au CNRS, Centre de St-Jérôme, Av. Esc. Normandie-Niemen, 13397, Marseille Cedex 13-France.

The stereoselective ester dienolate Carroll rearrangement of (*E*) and (*Z*)-allylic β-ketoesters has been studied and found to be a new attractive approach to the synthesis of the Prelog-Djerassi lactone and related compounds. The synthesis of the optically active lactone (-)-(2*R*, 3*R*, 4*R*, 6*S*)-1 as well as the formal synthesis of its natural occuring isomer are described.



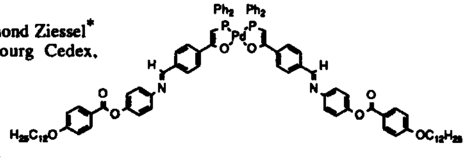
(2*R*, 3*R*, 4*R*, 6*S*)-1

Tetrahedron Lett. **1993**, *34*, 1151

SYNTHESIS AND COORDINATION PROPERTIES OF NOVEL POLYFUNCTIONAL PHOSPHINE LIGANDS

Daravong Soulivong, Dominique Matt* and Raymond Ziessel*
EHICS, 1, rue Blaise Pascal, F-67008 Strasbourg Cedex, France

Laurent Douce and Robert Deschenaux
Université de Neuchâtel, Institut de Chimie,
Av. de Bellevaux 51, 2000 Neuchâtel, Switzerland

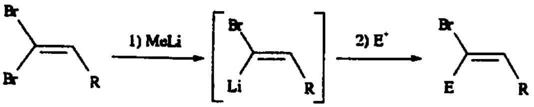


Tetrahedron Lett. **1993**, *34*, 1155

Selective Debromination of 1,1-Dibromoalkenes: A New Access to Di-or Trisubstituted Alkenes.

D. Grandjean, P. Pale*

Laboratoire de chimie organique physique, associé au CNRS
Université de Reims-Champagne-Ardenne
51100 Reims, France.



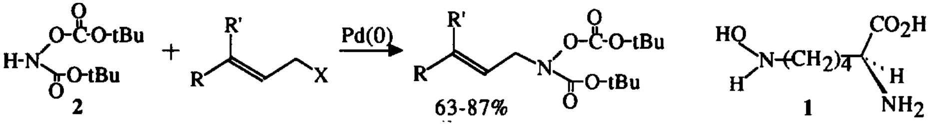
1,1-Dibromoalkenes were selectively debrominated by halogen-metal exchange. Depending on reagents and conditions, E-bromoalkenes can be obtained with very high stereoselectivity.

Tetrahedron Lett. **1993**, *34*, 1159

Palladium (0) Catalyzed Amination with N,O-bis-*ter*-Boc hydroxylamine. Synthesis of (+)-N^6-Hydroxylysine

Jean-Pierre Genêt*, Serge Thorimbert, Anne-Marie Touzin.
Ecole Nationale Supérieure de Chimie de Paris. Laboratoire de Synthèse Organique associé au CNRS.
11, Rue Pierre et Marie Curie - 75231 Paris - France.

Palladium-Catalyzed reaction of allyl esters with (N,O)-bis-*ter*-Boc hydroxylamine 2 gives protected N-allylhydroxylamines. A synthetic application to (+)-N^6-hydroxylysine 1 component of mycobactin T is described.

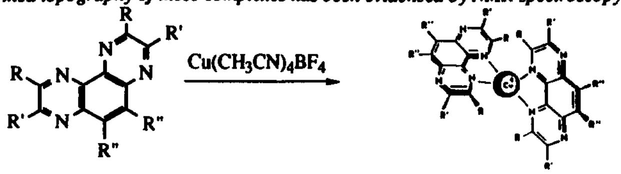


Tetrahedron Lett. **1993**, *34*, 1163

Homoleptic Copper(I) Complexes with New 1,4,5,8-Tetraazaphenanthrene Derivatives.

C.Moucheron*, K.Karlsson, C.Verhoeven and R.Nasielski-Hinkens
Université Libre de Bruxelles, Service de Chimie organique CP 160/08 , Av.F.D.Roosevelt 50, B 1050 Brussels, Belgium

Copper(I) complexes of tetraazaphenanthrene derivatives have been synthesized and characterized. The entwined topography of these complexes has been evidenced by NMR spectroscopy.



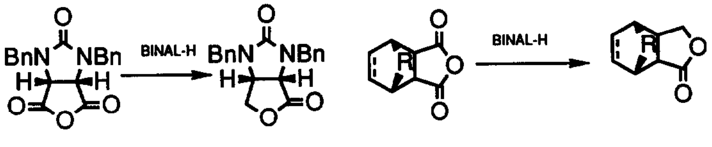
R=Me R'=R"=H
R=R'=Me R"=H
R=R'=R"=Me
R=R'=Ph R"=H
R=R'=Ph R"=Me

Tetrahedron Lett. **1993**, *34*, 1167

HIGHLY ENANTIOSELECTIVE REDUCTION OF *MESO*-1,2-DICARBOXYLIC ANHYDRIDES.

Kenji Matsuki,* Hirozumi Inoue and Mikio Takeda, Organic Chemistry Research Laboratry, Tanabe Seiyaku Co.,Ltd.,2-2-50 Kawagishi, Toda, Saitama 335, Japan.

The reduction of *meso*-1,2-dicarboxylic anhydrides using BINAL-H efficiently proceed to give γ-lactones in a highly enantioselective manner.

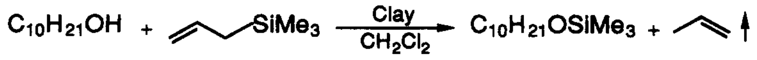


Tetrahedron Lett. **1993**, *34*, 1171

ACIDITY COMPARISON BETWEEN ION-EXCHANGED CLAY MONTMORILLONITES BY USING SILYLATION OF ALCOHOL

Makoto Onaka,* Yasutaka Hosokawa, Katsumi Higuchi, and Yusuke Izumi*
Department of Applied Chemistry, Faculty of Engineering, Nagoya University, Chikusa, Nagoya 464, Japan

Acidities of various ion-exchanged clay montmorillonites were compared by the reaction of 1-decanol with allyltrimethylsilane. Tin ion-exchanged montmorillonite was found to be the most acidic.



Tetrahedron Lett. **1993**, *34*, 1173

Application of Tetrabutylammonium Salt of N-(9-Fluorenylmethoxycarbonyl)cysteic Acid for Solid Phase Peptide Synthesis: Preparation of Endothelin Antagonistic Cyclic Pentapeptides.

Toshio NAGASE,* Uno KUMAGAI, Kenji NIIYAMA, Toshiaki MASE and Kiyofumi ISHIKAWA, *New Drug Discovery Research Laboratories, Tsukuba Research Institute, Banyu Pharmaceutical Co., Ltd. Tsukuba Techno-Park Oho, 3 Okubo, Tsukuba 300-33, Japan*

Using a tetrabutylammonium salt of N-(9-fluorenylmethoxycarbonyl)cysteic acid, highly potent endothelin antagonistic cyclic pentapeptides possessing cysteic acid residue(s) were prepared in solid phase peptide synthesis.

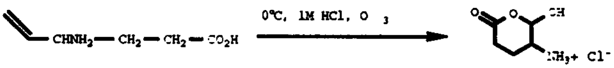
Fmoc-D-Cys(O_3NBu_4)-OH ex. ***cyclo*(-D-Trp(CHO)-D-Cys(O_3Na)-Pro-D-Thg-Leu-)**

Tetrahedron Lett. **1993**, *34*, 1177

5-AMINO-6-HYDROXY-3,4,5,6-TETRAHYDROPYRAN-2-ONE (HAT): A STABLE, CYCLIC FORM OF GLUTAMATE 1-SEMIALDEHYDE, THE NATURAL PRECURSOR FOR TETRAPYRROLES

Peter M. Jordan*, Kwai-Ming Cheung, Ram, P. Sharma* and Martin J. Warren
School of Biological Sciences, Queen Mary & Westfield College University of London, Mile End Road, London E1 4NS

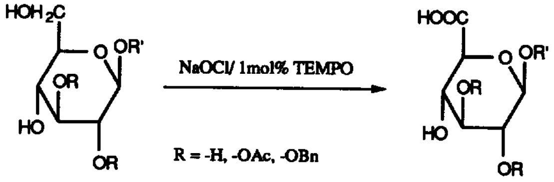
Abstract *Glutamate 1-semialdehyde is shown to exist in a cyclic form, 5-amino-6-hydroxy-3,4,5,6-tetrahydropyran-2-one (HAT), which explains its unexpectedly high stability for an α-aminoaldehyde. It is proposed that the cyclic form is the actual intermediate in the biosynthesis of tetrapyrroles.*



Tetrahedron Lett. **1993**, *34*, 1181

SELECTIVE OXIDATION OF MONOSACCHARIDE DERIVATIVES TO URONIC ACIDS

Nicola J. Davis and Sabine L. Flitsch*, The Dyson Perrins Laboratory, South Parks Road, Oxford OX1 3QY, Great Britain

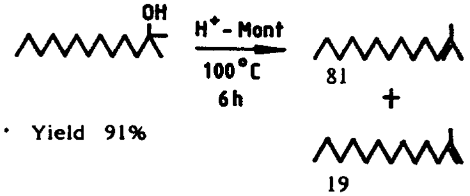


Tetrahedron Lett. **1993**, *34*, 1185

MONTMORILLONITE CATALYZED DEHYDRATION OF TERTIARY ALCOHOLS TO OLEFINS

M. Lakshmi Kantam, P. Lakshmi Santhi and M. Fyyazzuddin Siddiqui

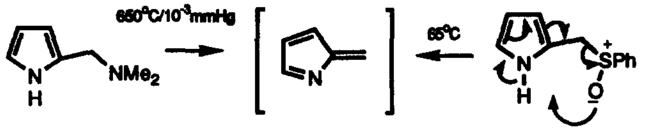
Homogeneous Catalysis Discipline
Indian Institute of Chemical Technology
Hyderabad 500 007, India.



Tetrahedron Lett. **1993**, *34*, 1187

1- AND 2-AZAFULVENES

Richard A. Barcock, Nicholas A. Moorcroft and Richard C. Storr*
School of Chemistry, Liverpool University, P.O. Box 147, Liverpool L69 3BX
John H. Young and Lance S. Fuller
Synthetic Chemicals Ltd., Four Ashes, Wolverhampton, West Midlands WV10 7BP



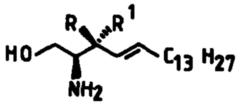
Flash pyrolysis of dialkylaminopyrroles and thermolysis of 2-pyrrylmethyl phenyl sulfoxide at 65°C in solution gave azafulvenes which were trapped with a variety of nucleophiles.

Tetrahedron Lett. **1993**, *34*, 1191

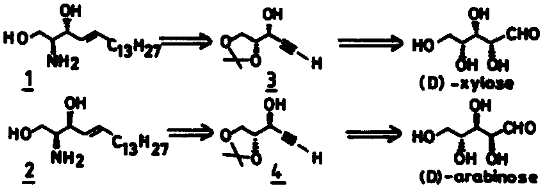
STEREOSELECTIVE SYNTHESIS OF D(+)-ERYTHRO AND L(-)THREO SPHINGOSINES FROM CARBOHYDRATES

J S Yadav , D Vidyanand and D Rajagopal
Indian Institute of Chemical Technology, Hyderabad 500 007, India

Synthesis of the title compounds are described.



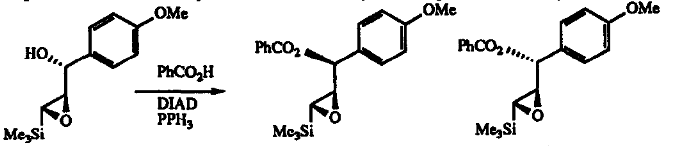
1 R=H, R¹=OH(D)-Erythro
2 R=OH,R¹=H (L)-Threo



Tetrahedron Lett. **1993**, *34*, 1195

The Stereochemical Outcome of the Mitsunobu Reactions of *para*-Oxygenated Benzylic Alcohols

Roger F.C.Brown, W. Roy Jackson and Tom D. McCarthy*
Department of Chemistry, Monash University, Wellington Road, Clayton, 3168, Victoria, Australia.



The stereochemistry of Mitsunobu reactions of benzylic alcohols is influenced by the nature of the *para*-oxygen-bearing substituent

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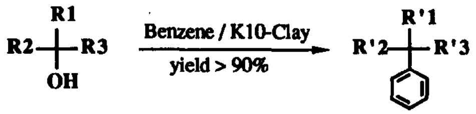
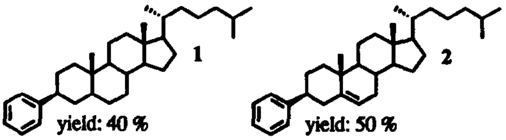
Tetrahedron Lett. **1993**, *34*, 1197

SYNTHESIS OF ALKYLBENZENES BY FRIEDEL-CRAFTS REACTIONS CATALYSED BY K10-MONTMORILLONITE

Odette Sieskind and Pierre Albrecht,* Faculté de Chimie, Université Louis Pasteur, 67000 Strasbourg, France.





R1 : H, CH_3
R2 : H, CH_3
R3 : alkyl chain

R'1 : H, CH_3
R'2 : H, CH_3, alkyl chain
R'3 : alkyl chain

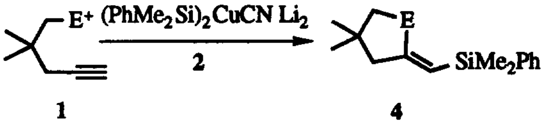
Similarly, 1 and 2 were obtained from cholestanol and cholesterol with remarkable regioselectivity.

Tetrahedron Lett. **1993**, *34*, 1201

SILYL-CUPRATION OF AN ACETYLENE FOLLOWED BY RING-FORMATION

Ian Fleming* and Eduardo Martínez de Marigorta
University Chemical Laboratory, Lensfield Road, Cambridge, CB2 1EW

Carbocyclic ring-formation by silyl-cupration of acetylenes, in the sense **1** + **2** → **4**, takes place with only a limited range of electrophilic groups E$^+$, such as an alkyl tosylate, a methyl ketone and a terminal epoxide.

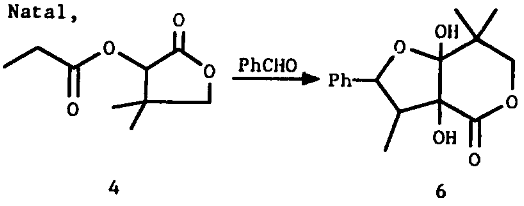


Tetrahedron Lett. **1993**, *34*, 1205

A NOVEL TETRAHYDROFURAN DERIVATIVE VIA A TERTIARY KETOL-TYPE REARRANGEMENT.

Siegfried E. Drewes*, Neville D. Emslie, John S. Field, Abdullah A. Khan and Niyum S. Ramesar. Department of Chemistry, University of Natal, Pietermaritzburg, South Africa.

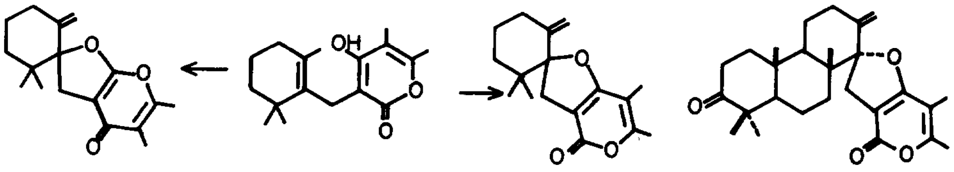
Hexahydro-3a,7a-dihydroxy-3,7,7-trimethyl-2-phenyl-4H-furo[3,2-c]pyran-4-one 6 has been obtained from propanoate ester 4 by rearrangement.



Tetrahedron Lett. **1993**, *34*, 1209

Regiocontrolled Synthesis of Spiro Furopyrone-Cyclohexene Ring Systems : Approach to the Pyranoditerpene Lygodinolide.

Asish K. Banerjee and Basudeb Achari, Indian Institute of Chemical Biology, Calcutta - 700032, India.

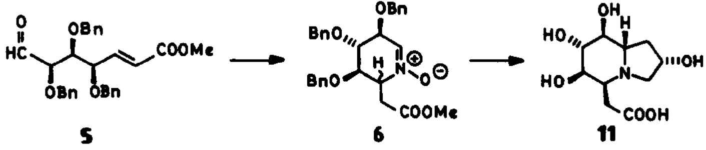


Tetrahedron Lett. **1993**, *34*, 1211

Cycloaddition Reactions of Carbohydrate Derivatives. Part IV. Synthesis of a Tetrahydroxyindolizidine through a Cyclic Nitrone Prepared from D-xylose.

Pál Herczegh,[a]* Imre Kovács,[a] László Szilágyi,[b] Tamás Varga,[a] Zoltán Dinya,[a] Ferenc Sztaricskai[a]*
[a]Research Group for Antibiotics of the Hungarian Academy of Sciences, H-4010 Debrecen, P.O. Box 70, Hungary
[b]Department of Organic Chemistry, Lajos Kossuth University, H-4010 Debrecen, P.O. Box 20, Hungary

Intramolecular conjugate addition of the oxime from aldehyde 5 led to the formation of cyclic nitrone 6. The latter was transformed to tetrahydroxy-indolizidine derivative 11 in five steps.

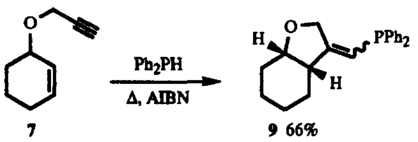


Tetrahedron Lett. **1993**, *34*, 1215

CYCLISATION OF DIENES AND ENYNES USING PHOSPHORUS-CENTRED RADICALS

Julie Brumwell and Nigel S. Simpkins*, Department of Chemistry, University of Nottingham University Park, Nottingham NG7 2RD, UK, and Nicholas K. Terrett, Pfizer Central Research, Sandwich, Kent CT13 9NJ, UK

Reaction of diphenylphosphine with suitable 1,6-diene or enyne systems, under free radical conditions, results in addition of a phosphorus-centred radical and cyclisation to form substituted phosphines and vinyl phosphines respectively, e.g. 7 → 9.

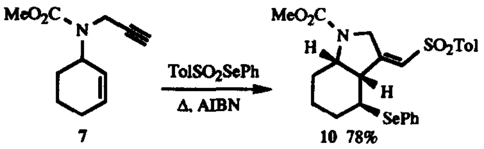


Tetrahedron Lett. **1993**, *34*, 1219

CYCLISATION OF DIENES AND ENYNES USING TolSO$_2$SePh

Julie Brumwell and Nigel S. Simpkins*, Department of Chemistry, University of Nottingham University Park, Nottingham NG7 2RD, UK, and Nicholas K. Terrett, Pfizer Central Research, Sandwich, Kent CT13 9NJ, UK

Reaction of a number of 1,6-diene or enyne systems with TolSO$_2$SePh, under free radical conditions, results in seleno-sulphonylation with concommitant C–C bond formation, to give cyclised alkyl- or vinyl sulphones containing the synthetically useful phenylselenyl functionality, e.g. 7 → 10.



Tetrahedron Lett. **1993**, *34*, 1223

The Ethyne-Ethylidene Rearrangement: Formation of 3-Ethynyl- and 1-Ethynylacenaphthylene on Flash Vacuum Pyrolysis of 1,7-Diethynylnaphthalene

Roger F.C. Brown*, Frank W. Eastwood* and Neil R. Wong
Chemistry Department, Monash University, Clayton, Vic. 3168, Australia