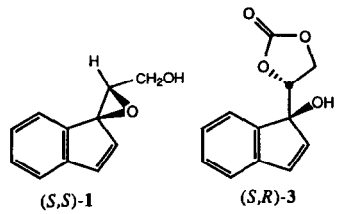
Tetrahedron Lett.29,6389(1988)

DIRECT TRANSFORMATION OF 2,3-EPOXY ALCOHOLS INTO HYDROXY CARBONATES UNDER MILDLY BASIC CONDITIONS

Andrew G. Myers* and Katherine L. Widdowson
Division of Chemistry and Chemical Engineering,
California Institute of Technology, Pasadena, California, 91125

2,3-Epoxy alcohols are transformed into the corresponding C2-inverted hydroxy carbonates upon treatment with cesium carbonate-powdered 3-Å molecular sieves in *N,N*-dimethylformamide under one atmosphere of carbon dioxide at 23-78 °C. The transformation of (*S,S*)-**1** to (*S,R*)-**3** is illustrative.



(*S,S*)-**1** (*S,R*)-**3**

Tetrahedron Lett.29,6393(1988)

REMOVAL OF O- and N-BENZYL GROUPS BY FUNGAL BIOTRANSFORMATION

Herbert L. Holland*, Morgan Conn, P. Chinna Chenchaiah, and Frances M. Brown
Department of Chemistry, Brock University, St. Catharines, Ontario, Canada L2S 3A1

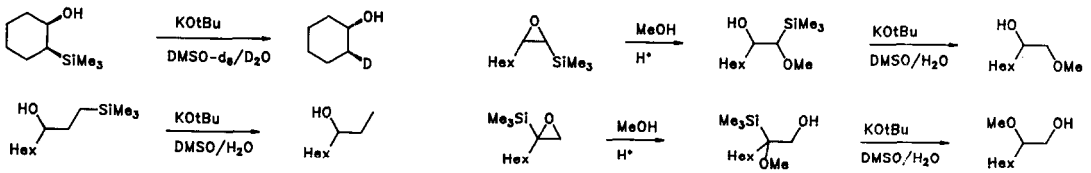
Biotransformation by the fungi Mortierella isabellina NRRL 1757 and Helminthosporium species NRRL 4761 can be used for the removal of O- and N-benzyl groups, respectively, under neutral, room temperature conditions.

$$PhCH_2OR \longrightarrow PhCH_2OH + ROH \quad / \quad PhCH_2NR_2 \longrightarrow PhCH_2OH + HNR_2$$

Tetrahedron Lett.29,6395(1988)

PROTIODESILYLATION REACTIONS OF β- AND γ-HYDROXYSILANES: DEUTERIUM LABELING AND SILICON-DIRECTED EPOXIDE OPENINGS

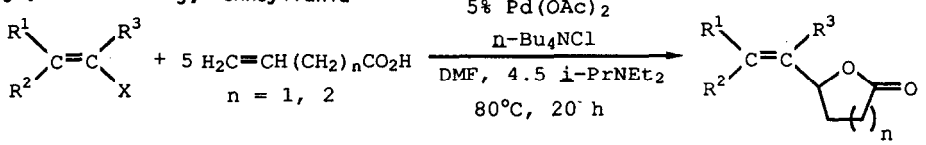
Paul F. Hudrlik,* Peter E. Holmes, and Anne M. Hudrlik
Department of Chemistry, Howard University, Washington, D. C. 20059



Tetrahedron Lett.29,6399(1988)

SYNTHESIS OF VINYLIC LACTONES VIA PALLADIUM-CATALYZED COUPLING OF VINYLIC HALIDES OR TRIFLATES AND UNSATURATED CARBOXYLIC ACIDS

Richard C. Larock, David J. Leuck and L. Wayne Harrison
Department of Chemistry, Iowa State University, Ames, Iowa and Department of Chemistry, Wilson College, Chambersburg, Pennsylvania

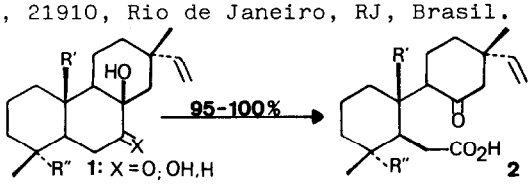


Tetrahedron Lett.29,6403(1988

OXIDATIVE CLEAVAGE OF 1,2-GLYCOLS AND α-HYDROXY KETONES WITH THE JONES REAGENT

R. de A. Epifanio, W. Camargo & A. C. Pinto*
Instituto de Química, UFRJ, CT, Bl A, 21910, Rio de Janeiro, RJ, Brasil.

Ketoacids have been obtained in excellent yields through the Jones oxidation of 15 secondary-tertiary 1,2-glycols and α-hydroxy ketones with terpenoidal structures(e.g.**1**).

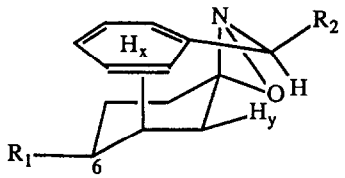


Tetrahedron Lett.29,6407(1988)

UNUSUAL SPECTROSCOPIC AND CONFORMATIONAL PROPERTIES OF SOME SPIROCYCLIC OXAZIRIDINES

Jeffrey Aubé and Yuguang Wang, Department of Medicinal Chemistry, University of Kansas, Lawrence, Kansas 66045-2506

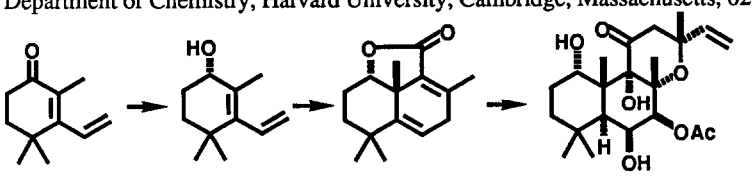
The proton that bears a 1,3-diaxial relationship to the substituted nitrogen atom in some chiral oxaziridines appears in the NMR spectrum at unusually high field. This suggests a highly populated conformation about a flexible nitrogen-carbon bond which places an aromatic group over the plane of a cyclohexyl ring.



Tetrahedron Lett.29,6409(1988)

ENANTIOSELECTIVE ROUTE TO A KEY INTERMEDIATE IN THE TOTAL SYNTHESIS OF FORSKOLIN

E. J. Corey, Paul Da Silva Jardine and Tetsuya Mohri
Department of Chemistry, Harvard University, Cambridge, Massachusetts, 02138

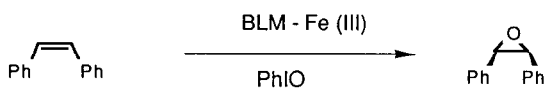


Tetrahedron Lett.29,6413(1988)

DIRECT COMPARISON OF OXYGEN TRANSFER BY IRON BLEOMYCIN AND ZINC BLEOMYCIN

Eric C. Long and Sidney M. Hecht
Departments of Chemistry and Biology, University of Virginia, Charlottesville, Virginia 22903

Admixture of Fe·bleomycin and C_6H_5IO in the presence of cis-stilbene resulted in oxygen transfer to yield cis-stilbene oxide. No analogous oxygen transfer was observed for Zn·bleomycin + C_6H_5IO.



Tetrahedron Lett.29,6417(1988)

A PRIMARY KINETIC ISOTOPE EFFECT FOR THE O-H INSERTION OF DIMETHOXYCARBENE.

R.A. Moss, S. Shen, and M. Włostowski, Department of Chemistry, Rutgers University, New Brunswick, New Jersey 08903.

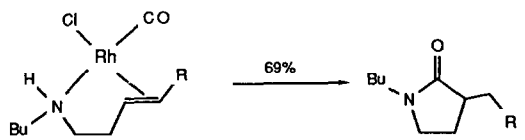
$$(MeO)_2C: + MeOH(D) \xrightarrow{25^\circ C} (MeO)_3CH(D)$$

$$k_2^H/k_2^D = 3.3 \pm 0.5$$

Tetrahedron Lett.29,6421(1988)

REGIOSELECTIVE HYDROCARBOXYLATIONS OF OLEFINIC AMINES: CHARACTERIZATION OF A KEY INTERMEDIATE

Marie E. Krafft,* Lawrence J. Wilson
Department of Chemistry Florida State University, Tallahassee, FL 32306-3006; and Kay D. Onan, Department of Chemistry, Northeastern University, Boston, MA 02115



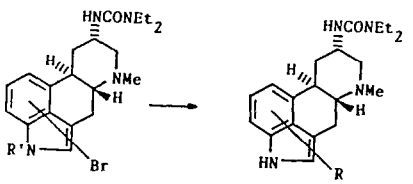
Bidentate olefinic amine Rh(I) complexes undergo hydrocarboxylation to give amino esters or lactams.

Tetrahedron Lett.29,6425(1988)

ELECTROPHILIC SUBSTITUTION OF LITHIATED ERGOLINES

GERHARD SAUER*, JOSEPH HEINDL, and HELMUT WACHTEL

Research Laboratories, Schering AG
Berlin/Bergkamen
Müllerstraße 170-178
D-1000 Berlin 65

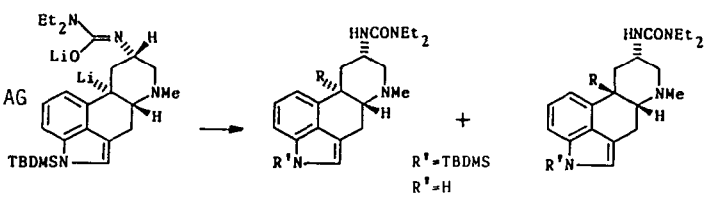


Tetrahedron Lett.29,6429(1988)

STRIKING INFLUENCE OF THE REACTION CONDITIONS ON THE STEREOSELECTIVITY IN ELECTROPHILIC SUBSTITUTION OF A 10-LITHIO-ERGOLINYL-UREA

GERHARD SAUER*, BERND SCHRÖTER, and HERMANN KÜNZER

Research Laboratories, Schering AG
Berlin/Bergkamen
Müllerstraße 170-178
D-1000 Berlin 65

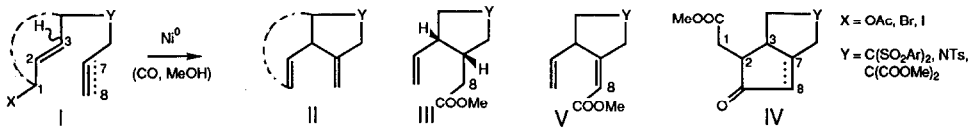


Tetrahedron Lett.29,6433(1988)

NICKEL-CATALYZED INTRAMOLECULAR ALLYLATIONS OF ALKENES AND ALKYNES COUPLED WITH β-ELIMINATION OR CARBONYLATION

Wolfgang Oppolzer*, Manuel Bedoya-Zurita and Christopher Y. Switzer

Département de Chimie Organique, Université de Genève, CH-1211 Genève 4, Switzerland



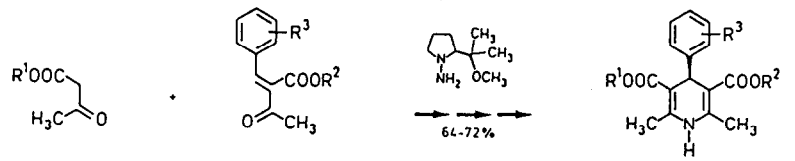
Cyclizations of dienylacetates I → II, dienylhalides I → III + IV and enynylhalides I → V + IV were catalyzed by Ni⁰-complexes without or with CO/MeOH.

Tetrahedron Lett.29,6437(1988)

ENANTIOSELECTIVE HANTZSCH DIHYDROPYRIDINE SYNTHESIS VIA METALATED CHIRAL ALKYL ACETOACETATE HYDRAZONES

DIETER ENDERS*, STEPHAN MÜLLER AND AYHAN S. DEMIR
INSTITUT FÜR ORGANISCHE CHEMIE, RHEINISCH-WESTFÄLISCHE TECHNISCHE HOCHSCHULE, PROF. PIRLET-STR. 1,D-5100 AACHEN, FRG

The asymmetric synthesis of 4-aryl-1,4-dihydropyridines, potent calcium channel blockers, is described.

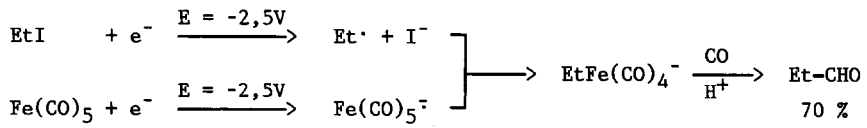


ee = 84- ≥98%

Tetrahedron Lett.29,6441(1988)

CONVERSION OF ORGANIC HALIDES BY CO INTO ALDEHYDES USING ELECTROREDUCED $Fe(CO)_5$

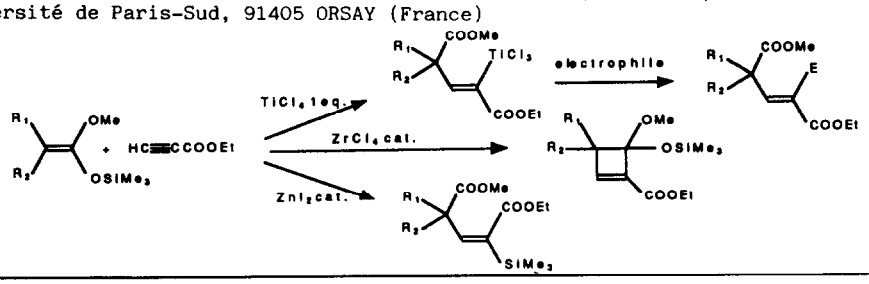
Didier Vanhoye, Fethi Bedioui, André Mortreux and Francis Petit*
Laboratoire de Chimie Organique Appliquée, ENSC Lille,
BP 108 59652 Villeneuve d'Ascq -France-



Tetrahedron Lett.29,6443(1988)

Reaction of ketenealkylsilylacetals with ethyl propiolate.

A. Quendo and G. Rousseau
Laboratoire des Carbocycles (Equipe Associée au CNRS), I.C.M.O., Bâtiment 420
Université de Paris-Sud, 91405 ORSAY (France)

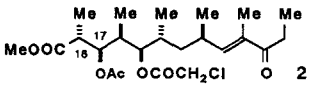


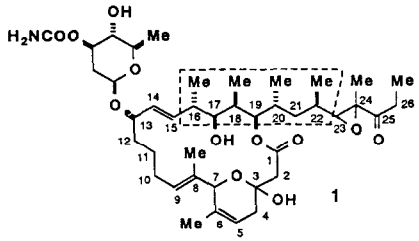
DETERMINATION OF ABSOLUTE STRUCTURE OF C_{16}-C_{22} PART OF IRUMAMYCIN. CHIRAL SYNTHESIS OF DEGRADATION PRODUCT

Tetrahedron Lett. 29, 6449 (1988)

Hiroyuki Akita*, Harutami Yamada, Hiroko Matsukura, Tadashi Nakata, and Takeshi Oishi*
RIKEN (The Institute of Physical and Chemical Research)

Absolute structure of C_{16}-C_{22} part of Irumamycin (1) was determined by comparing the degradation product 2 with the synthetic (+)-2.

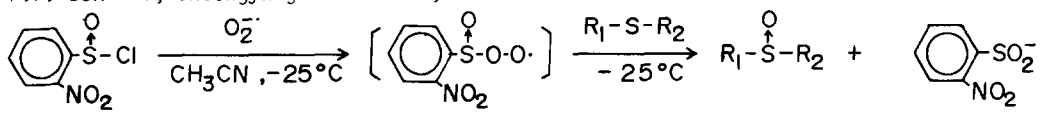




EFFICIENT OXIDATION OF SULFIDES TO THE SULFOXIDES USING A NEW SULFINYLPEROXY INTERMEDIATE GENERATED FROM 2-NITROBENZENESULFINYL CHLORIDE AND SUPEROXIDE

Tetrahedron Lett. 29, 6453 (1988)

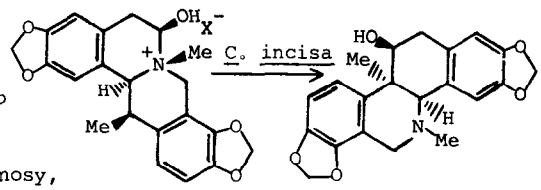
Yong Hae Kim* and Dae Chul Yoon
Department of Chemistry, Korea Advanced Institute of Science & Technology
P.O. Box 150, Cheongyang-Ni 130-650, Seoul Korea



FORMATION OF BENZO[C]PHENANTHRIDINES BY OXIDATIVE C-N BOND FISSION OF PROTOBERBERINES FOLLOWED BY INTRAMOLECULAR RECYCLIZATION IN CELL CULTURES OF CORYDALIS INCISA

Tetrahedron Lett. 29, 6457 (1988)

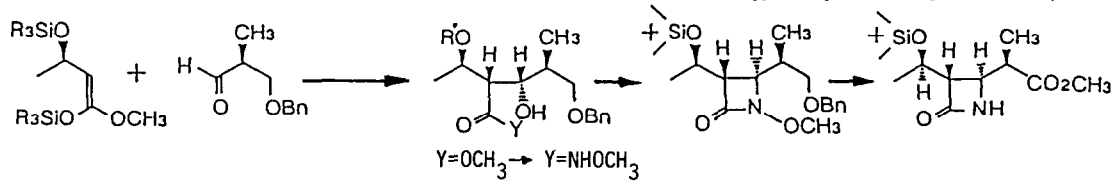
Kinuko Iwasa*[a], Miyoko Kamigauchi[a], Narao Takao[a], Mark Cushman[b], Wai Cheong Wong[b], and Jer-kang Chen[b]
[a]Kobe Women's College of Pharmacy, Motoyamakita, Higashinada, Kobe 658, Japan
[b]Department of Medicinal Chemistry and Pharmacognosy, School of Pharmacy and Pharmacal Sciences, Purdue University, West Lafayette, Indiana 47907, USA



A NOVEL, DOUBLE-ASYMMETRIC ALDOL APPROACH TO THE SYNTHESIS OF A 1-β-METHYL CARBAPENEM ANTIBIOTIC PRECURSOR

Tetrahedron Lett. 29, 6461 (1988)

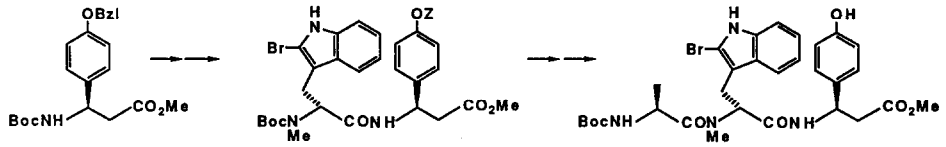
Fumiyuki Shirai and Takeshi Nakai*
Department of Chemical Technology, Tokyo Institute of Technology, Meguro, Tokyo 152, Japan



Tetrahedron Lett.29,6465(1988)

A PRACTICAL SYNTHESIS OF THE PEPTIDE PART OF JASPAMIDE (JASPLAKINOLIDE), A CYCLODEPSIPEPTIDE FROM A MARINE SPONGE

Shinji Kato, Yasumasa Hamada, and Takayuki Shioiri*
Faculty of Pharmaceutical Sciences, Nagoya City University
Tanabe-dori, Mizuho-ku, Nagoya 467, JAPAN

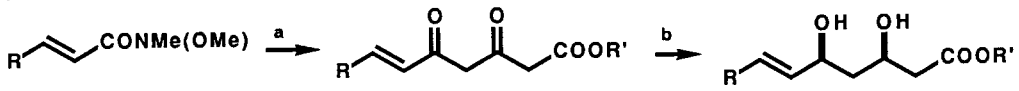


Tetrahedron Lett.29,6467(1988)

A FACILE ENTRY TO β,δ-DIKETO AND *syn*-β,δ-DIHYDROXY ESTERS

Takeshi Hanamoto and Tamejiro Hiyama*
Sagami Chemical Research Center, 4-4-1 Nishiohnuma, Sagamihara, Kanagawa 229, Japan

Reaction of N-*methoxy*-N-*methyl amides with the dianions of acetoacetates gives β,δ-diketo esters in yields of synthetic use, and the diketo esters were selectively reduced to* syn-*β,δ-dihydroxy esters, key intermediates of synthetic HMG-CoA reductase inhibitors.*



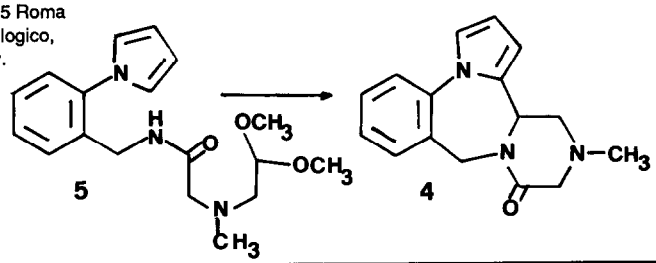
a: $[CH_2COCHCOOR]LiNa$ b: Et_2BOMe, $NaBH_4$, THF-MeOH (4 : 1)

Tetrahedron Lett.29,6471(1988)

SYNTHESIS OF A NEW TETRACYCLIC SYSTEM RELATED TO APTAZAPINE (CGS 7525A) BY ONE-POT DOUBLE ANNELATION

S.Massa* and A.Mai, Dept.Studi Farmaceutici,
Università "La Sapienza", P.le A.Moro 5-00185 Roma
and F.Corelli*, Dept. Farmaco Chimico Tecnologico,
via Banchi di Sotto 55-53100 Siena, Italy.

The one-pot conversion of **5** into the tetracyclic derivative **4** is reported.

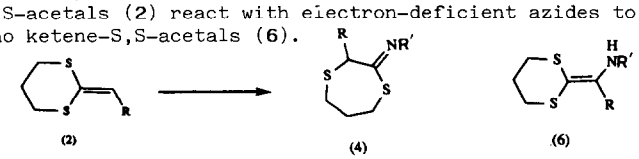


Tetrahedron Lett.29,6475(1988)

Ketene-S,S-acetals as 1,3-Dipolarophiles. Reactivity Towards Electron-deficient Azides.

W.O.Moss,R.H.Bradbury,N.J.Hales and T.Gallagher.
School of Chemistry, Bath University and Imperial Chemicals Industries PLC, Pharmaceuticals Division,Alderly Park.

Ketene-S,S-acetals (2) react with electron-deficient azides to give either 1,4-dithiepanes(4) or β-amino ketene-S,S-acetals (6).



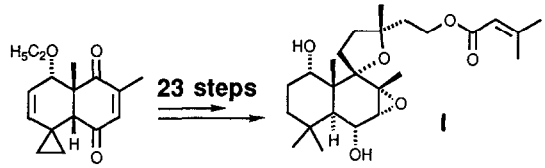
(2) (4) (6)

Tetrahedron Lett.29,6479(1988)

THE TOTAL SYNTHESIS OF (±)ERIGEROL

Frank Kienzle*, Josef Stadlwieser, Werner Rank, and Ingrid Mergelsberg
Central Res. Units and Pharmaceutical Res. Dept., F.Hoffmann-La Roche & Co, AG,
CH 4002 Basel

A total synthesis of (±)Erigerol 1 and several epimers thereof is reported.



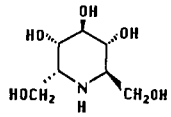
Tetrahedron Lett.29,6483(1988)

α-HOMONOJIRIMYCIN [2,6-DIDEOXY-2,6-IMINO-D-GLYCERO-L-GULO-HEPTITOL] FROM OMPHALEA DIANDRA L.: ISOLATION AND GLUCOSIDASE INHIBITION

G.C.Kite,[a] L.E.Fellows,[a] G.W.J.Fleet,[b] P.S.Liu,[c] A.M.Scofield[d] and N.G.Smith[e]

[a]Jodrell Laboratory, Royal Botanic Gardens, Kew, Richmond, Surrey TW3 3DS, UK
[b]Dyson Perrins Laboratory, Oxford University, South Parks Road, Oxford, UK
[c]Merrell Dow Research Institute, Galbraith Road, Cincinnati, Ohio 45215, USA
[d]Department of Biochemistry and Biological Sciences,Wye College, Ashford,Kent
[e]Smithsonian Tropical Research Institute, Box 2072,Balboa, Republic of Panama

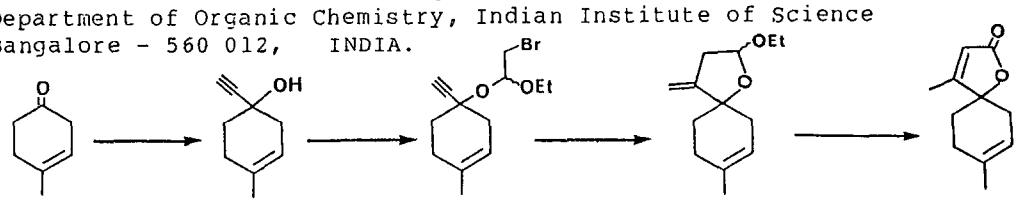
The isolation of α-homonojirimycin [2,6-dideoxy-2,7-imino-D-glycero-L-gulo-heptitol] from Omphalea diandra is described; α-homonojirimycin is an inhibitor of several α-glucosidases.



Tetrahedron Lett.29,6487(1988)

A RADICAL CYCLISATION ROUTE TO (±)-ANDIROLACTONE, A SPIRO-γ-BUTYROLACTONE

A. Srikrishna* and G. Veera Raghava Sharma
Department of Organic Chemistry, Indian Institute of Science
Bangalore - 560 012, INDIA.

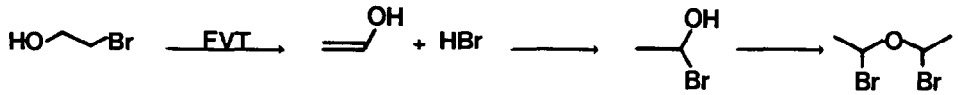


Tetrahedron Lett.29,6489(1988)

FLASH VACUUM THERMOLYSIS OF 2-BROMOETHANOL.FORMATION OF α-BROMOETHYLETHERS VIA 1-BROMOETHANOL.

Leonardus W. Jenneskens[a],Ulfert E. Wiersum[a] and Jean-Louis Ripoll[b]
[a]Akzo Corporate Research,P.O. Box 9300,6800 SB Arnhem,The Netherlands;
[b]UA 480,ISMRA and CNRS,Université de Caen,14032 Caen,France.

Highly reactive 1-Bromoethanol is isolated for the first time by FVT of 2-Bromoethanol.

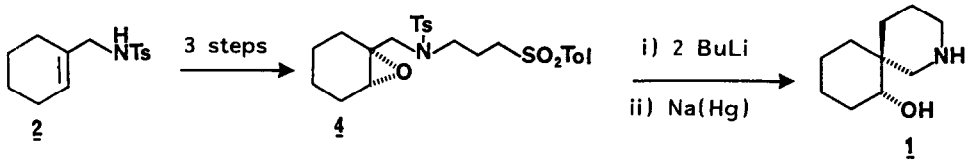


Tetrahedron Lett.29,6493(1988)

Stereocontrolled Synthesis of the Spirocyclic Alkaloid (±)-Nitramine.

David Tanner* He Hua Ming and Mikael Bergdahl (Dept. Organic Chemistry, Uppsala University, Box 531, S-751 21 Uppsala, Sweden.)

The key step in the synthesis of Nitramine, 1, is the spirocyclisation of epoxy sulfone 4:



2 4 1

Tetrahedron Lett.29,6497(1988)

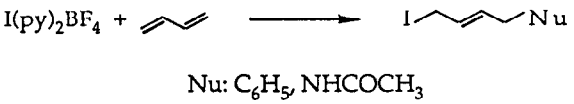
1,4-REGIOSELECTIVE IODOFUNCTIONALIZATIONS OF 1,3-BUTADIENE

José Barluenga, * [a] José M. González, [a] Pedro J. Campos, [a] and Gregorio Asensio [b]

[a] *Departamento de Química Organometálica, Universidad de Oviedo, 33071 Oviedo, Spain*

[b] *Departamento de Química Orgánica, Facultad de Farmacia, Universidad de Valencia, 46010 Valencia, Spain*

$I(py)_2BF_4$ allows the preparation of E-1,4-iodofunctionalized derivatives from 1,3-butadiene



Nu: C_6H_5, $NHCOCH_3$

Tetrahedron Lett.29,6501(1988)

A NOVEL APPROACH TO PERIPLANONE-B INVOLVING AN INTRAMOLECULAR DIELS-ALDER REACTION WITH FURAN-DIENE AND ALLENE-DIENOPHILE.

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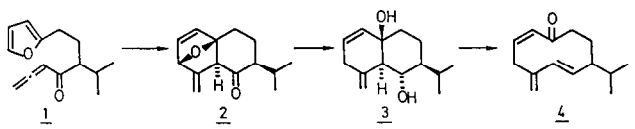
State Univ. Gent, Dept. Org. Chem., Krijgslaan, 281 (S4), B-9000 GENT (Belgium)

A 6-step synthesis of (±)-4, an intermediate for periplanone-B via non-stereoselective IMDAF of 1, appropriate reduction of 2 and in situ Grob fragmentation of 3 is presented :

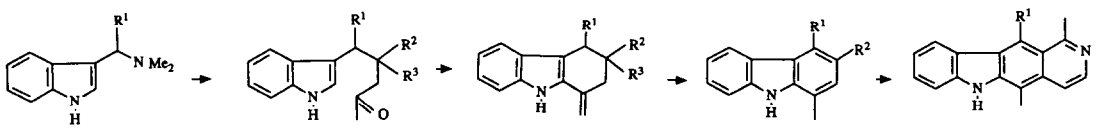


1 2 3 4

Tetrahedron Lett.29,6505(1988)

AN EFFICIENT SYNTHESIS OF 3-ACYLCARBAZOLES AND OBSERVATIONS ON THE FURTHER ELABORATION OF THESE COMPOUNDS TO 6H-PYRIDOCARBAZOLES

Iain Hogan, Paul Jenkins, and Malcolm Sainsbury* School of Chemistry, University of Bath, Claverton Down Bath BA2 7AY, UK.

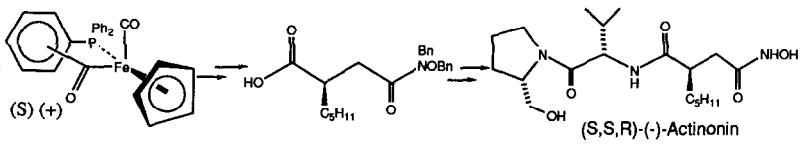


Tetrahedron Lett.29,6509(1988)

THE ASYMMETRIC SYNTHESIS OF (-)-ACTINONIN USING THE IRON CHIRAL AUXILIARY [$(\eta^5\text{-}C_5H_5)Fe(CO)(PPh_3)$]

George Bashiardes and Stephen G. Davies*
The Dyson Perrins Laboratory, South Parks Road, OXFORD OX1 3QY, U.K.

The total synthesis of (-)-Actinonin in 41% overall yield is described.

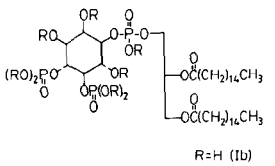


Tetrahedron Lett.29,6513(1988)

SYNTHESIS OF 1-O-(1,2-DI-O-PALMITOYL-*SN*-GLYCERO-3-PHOSPHO)-D-*MYO*-INOSITOL 4,5-*BIS*PHOSPHATE: AN ANALOGUE OF NATURALLY OCCURRING (Ptd)Ins(4,5)P_2

C.E.Dreef, C.J.J. Elie, P. Hoogerhout, G.A. van der Marel and J.H. van Boom
Gorlaeus Laboratories, P.O. Box 9502, 2300 RA Leiden, The Netherlands

The total synthesis of an optically pure analogue (i.e. 1b) of (Ptd)Ins(4,5)P_2 could be accomplished by a phosphite-triester approach.



Tetrahedron Lett.29,6517(1988)

RING SCISSION OF β-HALOGENO-ETHERS WITH SAMARIUM DI-IODIDE : A SYNTHESIS OF (E)- AND (Z)- ENYNOLS

Leslie Crombie and Linda J. Rainbow
Department of Chemistry, University of Nottingham, NG7 2RD.

Replacement of sodium by samarium di-iodide as the electron transfer reagent in the β-halogeno-ether synthesis drastically alters the stereochemistry of the reaction. Highly stereoselective (E)- and (Z)- enyne syntheses result, e.g.: