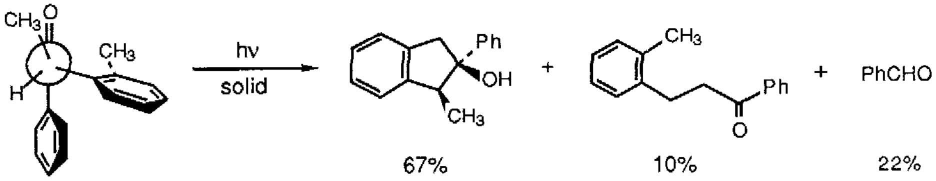
Tetrahedron Lett. 30,5389 (1989)

EFFICIENT SOLID STATE PHOTOCYCLIZATION OF STERICALLY CONGESTED α-(o-TOLYL) KETONES DESPITE "POOR" GEOMETRIES FOR HYDROGEN ABSTRACTION

Peter J. Wagner* and Boli Zhou, Chemistry Department, Michigan State University, E Lansing, MI 48824

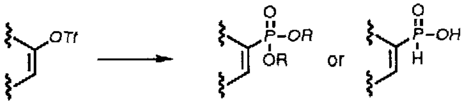


Tetrahedron Lett. 30,5393 (1989)

PALLADIUM-CATALYZED PHOSPHORYLATION OF ALKENYL TRIFLATES

Dennis A. Holt* and Jill M. Erb
Department of Medicinal Chemistry, Smith Kline & French Laboratories, King of Prussia, PA19406

Alkenyl triflates undergo efficient palladium(0)-catalyzed coupling with dialkylphosphites or hypophosphorus acid to produce α,β-unsaturated phosphonic or phosphinic acid derivatives.

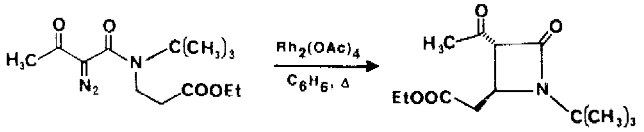


Tetrahedron Lett. 30,5397 (1989)

CONFORMATION AND ELECTRONIC PREFERENCES IN RHODIUM(II) CARBOXYLATE AND RHODIUM(II) CARBONAMIDE CATALYZED CARBON-HYDROGEN INSERTION REACTIONS OF N,N-DISUBSTITUTED DIAZOACETOACETAMIDES.

Michael P. Doyle, Jack Taunton, and Hoan Q. Pho,
Department of Chemistry, Trinity University, San Antonio, Texas 78212

β-Lactams are constructed in exceptionally high yield and with extraordinary stereochemical control by C-H insertion α or β to an ester functional group.

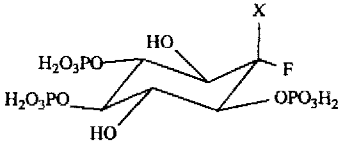


Tetrahedron Lett. 30,5401 (1989)

FLUORINATED ANALOGS OF INS(1,4,5)P_3

James F. Marecek and Glenn D. Prestwich*
Department of Chemistry, State University of New York, Stony Brook, New York 11794-3400

2-Fluoro-2-deoxy-Ins(1,4,5)P_3 (2) and 2,2-difluoro-2-deoxy-Ins(1,4,5)P_3 (3) were synthesized. The monofluoro compound underwent slow defluorination at pH 13, while the difluoro compound was inert.



2, X = H

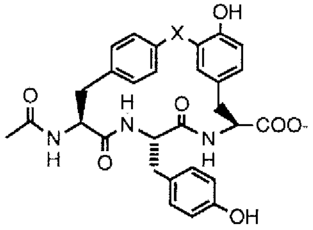
3, X = F

Tetrahedron Lett. 30,5405 (1989)

Synthesis of a Thioether Analog of the Macrotricyclic Tripeptide K-13

D.W. Hobbs and W.C. Still
Department of Chemistry, Columbia University
New York, NY 10027

A sulfur analog (X=S) of K-13 (X=O) was synthesized and its conformation studied by NMR and molecular modeling.

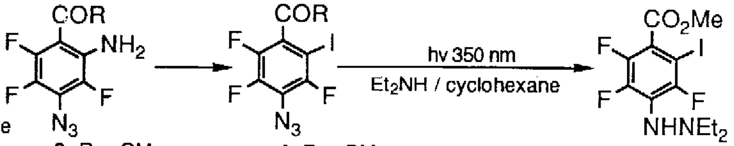


Tetrahedron Lett. 30,5409 (1989)

4-AZIDO-2-IODO-3,5,6-TRIFLUOROPHENYLCARBONYL DERIVATIVES. A NEW CLASS OF FUNCTIONALIZED AND IODINATED PERFLUOROPHENYL AZIDE PHOTOLABELS

*Sui Xiong Cai and John F. W. Keana**
Department of Chemistry
University of Oregon
Eugene, Oregon 97403 USA

Functionalized and iodinated perfluorophenyl azides **4** and **7** were synthesized. Photolysis of **4** gave N-H insertion product **9** (24%).



2, R = OMe
5, R = NHS

4, R = OMe
7, R = NHS

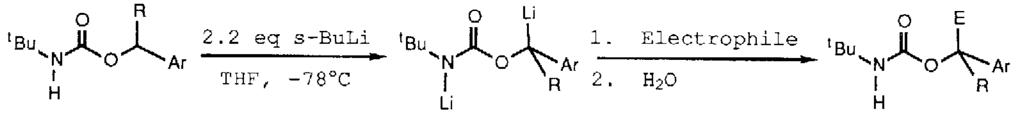
9

Tetrahedron Lett. 30,5413 (1989)

CARBAMATE DIANIONS: GENERATION AND ALKYLATION OF α-OXO CARBANIONS

Bruce A. Barner* and R.S. Mani
Department of Chemistry, University of Wyoming, Laramie, WY 82071

Secondary benzylcarbamates readily form dianions with lithium bases, and undergo alkylations with a variety of electrophiles.

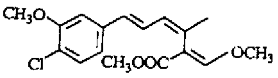


Tetrahedron Lett. 30,5417 (1989)

FIRST TOTAL SYNTHESIS OF STROBILURIN B

Marius Sutter, Research and Development Plant Protection, Agro Division, Ciba-Geigy AG, CH-4002 Basel, Switzerland.

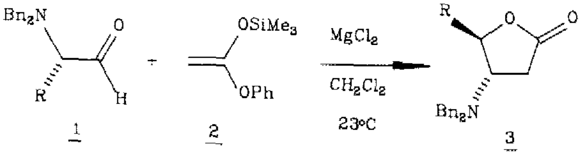
A general approach to the synthesis of strobilurins is outlined with strobilurin B as an example



Tetrahedron Lett. 30, 5421 (1989)

TANDEM ALDOLIZATION/LACTONIZATION/DYOTROPIC REARRANGEMENT OF α-AMINO ALDEHYDES

M.T. Reetz*, A. Schmitz and X. Holdgrün
Fachbereich Chemie der Universität, Hans-Meerwein-Strasse, 3550 Marburg, FRG

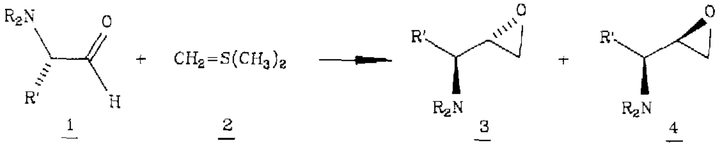


Complete stereoselectivity is observed in the formation of lactones 3.

Tetrahedron Lett. 30, 5425 (1989)

PROTECTIVE GROUP TUNING IN THE STEREOSELECTIVE CONVERSION OF α-AMINO ALDEHYDES INTO AMINOALKYL EPOXIDES

M.T. Reetz* and J. Binder
Fachbereich Chemie der Universität, Hans-Meerwein-Strasse, 3550 Marburg, FRG



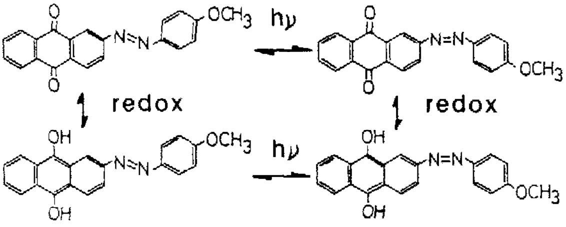
α-Amino aldehydes 1 react with S- and As-ylides to form 3 preferentially.

Tetrahedron Lett. 30, 5429 (1989)

A MULTI-MODE CHEMICAL TRANSDUCER 1 NEW CONJUGATED FUNCTION OF PHOTOCHROMISM AND ELECTROCHROMISM OF AZO-QUINON COMPOUND

Tomokazu Iyoda, Tetsuyuki Saika,
Kenichi Honda, Takeo Shimidzu*

Division of Molecular Engineering,
Graduate School of Engnieering, Kyoto
University, Sakyo-ku, Kyoto 606, Japan

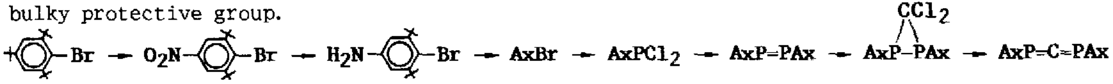


Tetrahedron Lett. 30, 5433 (1989)

A VERSATILE PREPARATION OF 2,6-DI-t-BUTYLBROMOBENZENE. APPLICATION TO STERIC PROTECTION FOR ORGANOPHOSPHORUS COMPOUNDS IN LOW COORDINATION STATES

Masaaki Yoshifuji,* Takashi Niitsu, Daisuke Shiomi, and Naoki Inamoto
*Department of Chemistry, Faculty of Science, Tohoku University, Aoba, Sendai 980, Japan and
Department of Chemistry, Faculty of Science, The University of Tokyo, Hongo, Tokyo 113, Japan

Preparation of the diphosphene and 1,3-diphosphaallene utilizing 2,6-di-t-butylphenyl (Ax) as a bulky protective group.

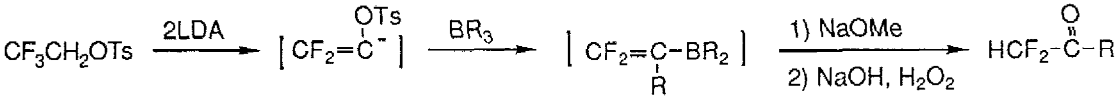


Tetrahedron Lett. 30, 5437 (1989)

A NOVEL SYNTHESIS OF DIFLUOROMETHYL KETONES FROM 2,2,2-TRIFLUOROETHYL p-TOLUENESULFONATE VIA 2,2-DIFLUOROALKENYLBORANES

Junji Ichikawa, Takaaki Sonoda, and Hiroshi Kobayashi
Institute of Advanced Material Study, Kyushu University, Kasuga, Fukuoka 816, Japan

A synthesis of difluoromethyl ketones by oxidation of 2,2-difluoroalkenylboranes



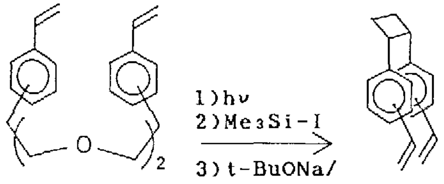
$$CF_3CH_2OTs \xrightarrow{2LDA} [CF_2{=}\overset{OTs}{C}{}^-] \xrightarrow{BR_3} [CF_2{=}\underset{R}{C}{-}BR_2] \xrightarrow[2)\ NaOH,\ H_2O_2]{1)\ NaOMe} HCF_2{-}\overset{O}{\overset{\|}{C}}{-}R$$

Tetrahedron Lett. 30, 5439 (1989)

INTRAMOLECULAR [2 + 2] PHOTOCYCLOADDITION. 6. SYNTHESIS AND PROPERTIES OF OXACYCLOPHANES

J. Nishimura,* Y. Horikoshi, Y. Wada, and H. Takahashi
Dept. of Chem., Gunma Univ., Kiryu 376, Japan
S. Machino and A. Oku, Dept. of Chem.,
Kyoto Inst. of Tech., Kyoto 606, Japan

Oxacyclophanes were prepared by a new photocyclization of styrene derivatives 1d and e. The cyclophanes underwent C-O bond cleavage and gave olefin 6a and b by subsequent transformations, respectively.

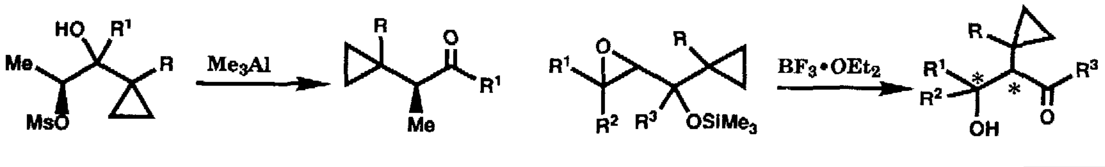


1d,e 6a,b

Tetrahedron Lett. 30, 5443 (1989)

Stereospecific 1,2-Rearrangement of Cyclopropyl Group. Synthesis of Chiral α-Cyclopropyl Ketones and α-Cyclopropyl Aldols

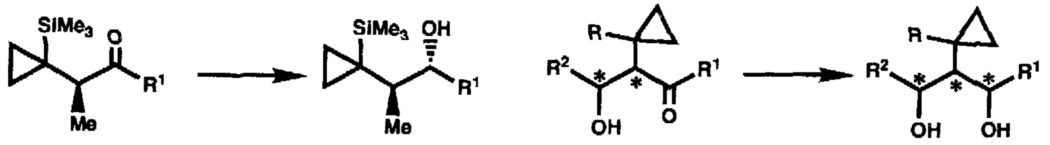
Masato Shimazaki, Hisaaki Hara, and Keisuke Suzuki*
Department of Chemistry, Keio University, Hiyoshi, Yokohama 223, Japan



Tetrahedron Lett. 30, 5447 (1989)

Stereoselective Reduction of α-Cyclopropyl Ketones and α-Cyclopropyl Aldols. Stereo-directing Effect by α-Trimethylsilyl Group

Masato Shimazaki, Hisaaki Hara, and Keisuke Suzuki*
Department of Chemistry, Keio University, Hiyoshi, Yokohama 223, Japan



Tetrahedron Lett. 30,5451(1989)

SULFONATION OF ALKENES WITH SULFUR TRIOXIDE; REVERSIBLE STEREOSPECIFIC β-SULTONE FORMATION

Bert H. Bakker and Hans Cerfontain*
Laboratory for Organic Chemistry, University of Amsterdam,
Nieuwe Achtergracht 129, 1018 WS Amsterdam, The Netherlands

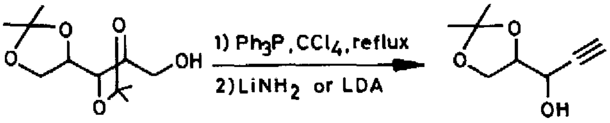
The sulfonation of olefins with SO_3 to β-sultones is reversible. The *seco*-[2+2]-elimination of SO_3 from β-sultones by water proceeds in a stereospecific *syn* fashion.

Tetrahedron Lett. 30,5455(1989)

CARBOHYDRATES AS A PRACTICAL SOURCE OF CHIRAL POLYHYDROXY ACETYLENES

J.S. Yadav*, Madhavi C. Chander and C. Srinivas Rao
Indian Institute of Chemical Technology, Hyderabad 500 007, India.

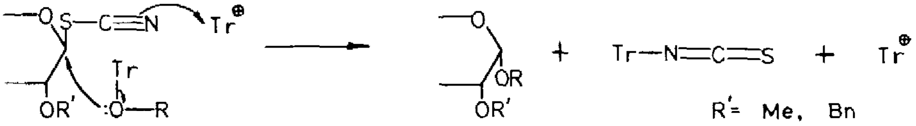
A practical approach for the synthesis of Chiral polyhydroxy acetylenes from carbohydrates is described.



Tetrahedron Lett. 30,5459(1989)

NOVEL HIGHLY STEREOSPECIFIC METHOD OF 1,2-CIS-GLYCOSYLATION. SYNTHESIS OF α-D-GLUCOSYL-D-GLUCOSES.

Nikolay K. Kochetkov, Evgeny M. Klimov, Nelly N. Malysheva
N.D.Zelinsky Institute of Organic Chemistry, Academy of Sciences of the USSR, Moscow, USSR

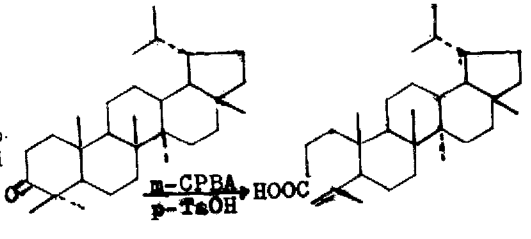


Tetrahedron Lett. 30,5463(1989)

A SINGLE POT SYNTHESIS OF 3,4-SECO ACID FROM 4,4-DIMETHYL-3-KETO TRITERPENOID

Bhim P. Pradhan* and Satyajit Chakraborty
Chemistry Department, P.O. North Bengal University, Darjeeling 734 430 India and
Peter Weyerstahl, Institut für Organische Chemie, Technische Universität Berlin 12.

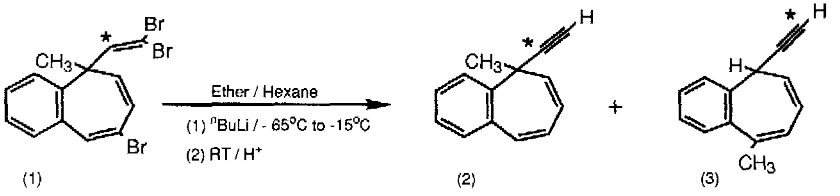
A direct conversion of 4,4-dimethyl-3-keto triterpenoid to 3,4-seco triterpenoid acid by oxidation with m-CPBA in presence of p-TsOH.



Tetrahedron Lett. 30,5467 (1989)

A SOMERSAULTING REARRANGEMENT :
FORMATION OF A REARRANGED ACETYLENE VIA A FOILED CARBENE

David W. Jones* and Robert J. Marmon, School of Chemistry, The University,Leeds. LS2 9JT. U.K.



* = ^{13}C Label

Tetrahedron Lett. 30,5469 (1989)

N.M.R. NONEQUIVALENCE OF DIASTEREOMERIC DIALKYL PHOSPHITES

M. Froneman and T. A. Modro*

Department of Chemistry, University of Pretoria,
Pretoria 0002, South Africa

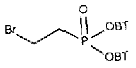
The magnetic nonequivalence of diastereomeric dialkyl phosphites, $(R_1O)(R_2O)P(O)H$ [R_1 = alkyl; R_2 = 2,3-(isopropylidenedioxy)propyl] and $(RO)_2P(O)H$ [R = 2,3-(isopropylidenedioxy)propyl] is demonstrated in the n.m.r. (^1H, ^{13}C, ^{31}P) spectra of these compounds.

Tetrahedron Lett. 30,5473 (1989)

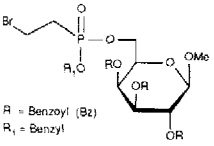
A NEW AND VERSATILE PHOSPHONYLATION APPROACH

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

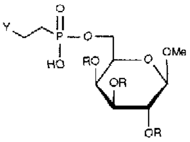
The hydroxybenzotriazole-activated bifunctional phosphonylating reagent 1 proved to be very convenient for the successful preparation, *via* the non-charged phosphonate intermediate 2, of the derivatives 3a-d.



1



2 R = Benzoyl (Bz)
R₁ = Benzyl



3 a: Y = NH₂, R = H
b: Y = NHMe, R = Bz
c: Y = NMe₂, R = Bz
d: Y = N₃, R = Bz

Tetrahedron Lett. 30,5477 (1989)

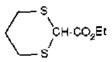
AN EFFICIENT ROUTE TO 3-DEOXY-*MANNO*-2-OCTULOSONIC ACID (KDO) DERIVATIVES *VIA* A 1,4-CYCLIC SULFATE APPROACH

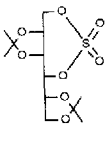
P.A.M. van der Klein, G.J.P.H. Boons, G.H. Veeneman, G.A. van der Marel and J.H. van Boom

Gorlaeus Laboratories, P.O. Box 9502, 2300 RA Leiden, The Netherlands

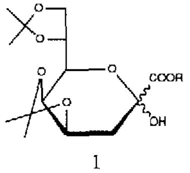
The KDO-derivatives 1 (R=Methyl, Ethyl or Benzyl) are easily accessible starting from 2 and 3.

2





3

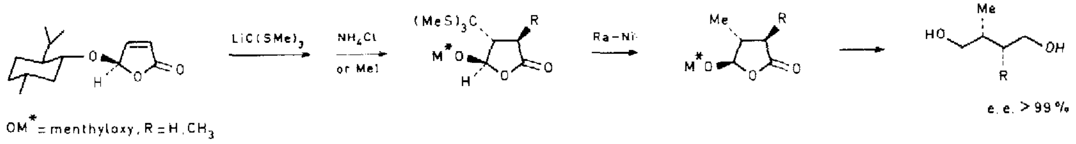


1

Tetrahedron Lett. 30,5481(1989)

ASYMMETRIC 1,4-ADDITIONS TO γ-MENTHYLOXYBUTENOLIDES. ENANTIOSPECIFIC SYNTHESIS OF CHIRAL 1,4-BUTANEDIOLS.

Johan F.G.A. Jansen and Ben L. Feringa*
Department of Organic Chemistry, University of Groningen, Nijenborgh 16, 9747 AG Groningen, The Netherlands

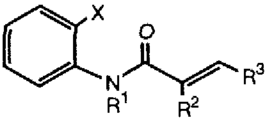


Tetrahedron Lett. 30,5485(1989)

EVIDENCE ON THE NATURE OF COBALT-MEDIATED ARYL RADICAL CYCLISATIONS

Andrew J. Clark and K. Jones*, Dept. of Chemistry, King's College London, Strand, London WC2R 2LS

Regiochemical and stereochemical evidence is presented which indicates that the cobalt-mediated aryl radical cyclisations of 2'-haloacryloylanilides (1) involve simple free radicals.

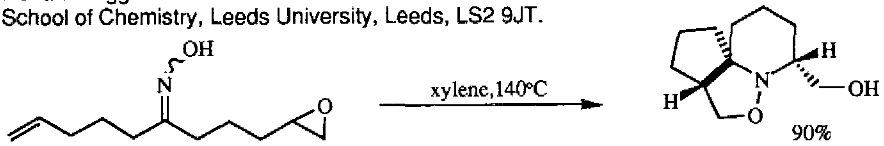


(1)

Tetrahedron Lett. 30,5489(1989)

TANDEM NUCLEOPHILIC SUBSTITUTION -1,3 DIPOLAR CYCLOADDITION REACTIONS OF OXIMES WITH EPOXIDES AND DIPOLAROPHILES.

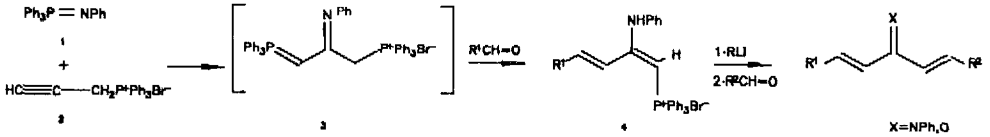
Ronald Grigg* and Jasothara Markandu
School of Chemistry, Leeds University, Leeds, LS2 9JT.



Tetrahedron Lett. 30,5493(1989)

ONE POT SYNTHESIS OF 2-VINYL-1-AZADIENES AND DIVINYLKETONES

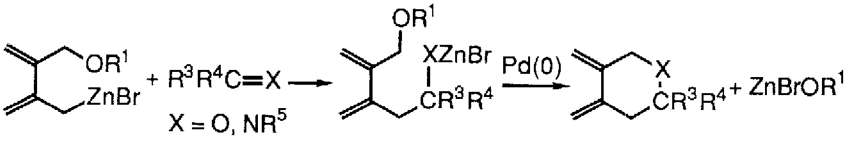
José Barluenga *, Isabel Merino and Francisco Palacios.
Departamento de Química Organometálica, Facultad de Química, Universidad de Oviedo. 33071 Oviedo. Spain.



Tetrahedron Lett. 30, 5497 (1989)

CONJUGATED EXOCYCLIC DIENES BY ADDITION OF 2-(BENZYLOXYMETHYL)-3-(BROMOZINCMETHYL)-1,3-BUTADIENE TO ALDEHYDES, KETONES AND IMINES FOLLOWED BY Pd(0)-CATALYZED CYCLIZATION

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

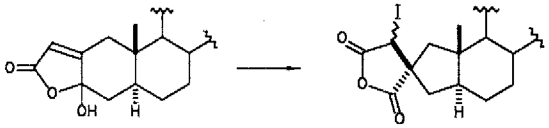


Tetrahedron Lett. 30, 5501 (1989)

HYPERVALENT ORGANOIODINE REAGENTS IN THE β-FRAGMENTATION OF UNSATURATED LACTOLS LEADING TO SPIROCOMPOUNDS

R. Hernández, J.J. Marrero, and E. Suárez
Instituto de Productos Naturales Orgánicos del C.S.I.C., C. La Esperanza 2, 38206-La Laguna, Tenerife, Spain

Treatment of the steroidal unsaturated lactol (1) with (diacetoxyiodo)benzene in the presence of iodine led to β-fragmentaction of the initially formed alkoxy radical to yield spiro[4.4]iodoanhydrides (2) and (3)

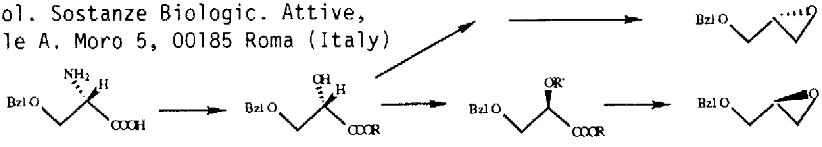


(1) (2) and (3)

Tetrahedron Lett. 30, 5505 (1989)

SYNTHESIS OF (2R) AND (2S)-BENZYL-2,3-EPOXYPROPYL ETHER FROM A COMMON PRECURSOR: O-BENZYL-L-SERINE

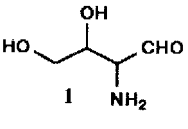
P. De Witt[a], D. Misiti[b], G. Zappia[a]
a) Lab. Ricerca Chimica, Sigma Tau S.p.A.,
Via Pontina km 30,400, 00400 Pomezia (Italy)
b) Dip. Studi Chim. e Tecnol. Sostanze Biologic. Attive,
Univ. "La Sapienza", P.le A. Moro 5, 00185 Roma (Italy)



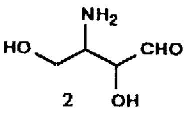
Tetrahedron Lett. 30, 5507 (1989)

STEREOSELECTIVE PREPARATION OF SYNTHETIC EQUIVALENTS OF 2-DEOXY-2-AMINO- AND 3-DEOXY-3-AMINOTETROSES FROM MALIC ACID. APPLICATION TO THE SYNTHESIS OF C_{18}-D-*RIBO*-PHYTOSPHINGOSINE

Giuseppe Guanti,* Luca Banfi, and Enrica Narisano, Istituto di Chimica Organica e C.N.R., Centro di Studio sui Diariloidi, corso Europa 26, 16132 Genova (Italy).



1



2

"Electrophilic amination" with di-*t*-butylazodicarboxylate of a β-hydroxyester derived from malic acid was the key step of the synthesis of new synthetic equivalents of 1 and 2, as well as of their hydrazino analogues. Application of the equivalent of 2 to the total synthesis of C_{18}-D-*ribo*- phytosphingosine is described.

Tetrahedron Lett. 30,5511(1989)

ENANTIOSPECIFIC AND DIASTEREOSELECTIVE PREPARATION OF SYNTHETIC EQUIVALENTS OF 2,4-DEOXY-2-AMINO-L-THREOSE AND L-ERYTHROSE FROM (S) ETHYL β-HYDROXYBUTYRATE. STEREOCHEMICAL COURSE OF THEIR CONDENSATIONS WITH C-NUCLEOPHILES

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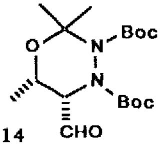
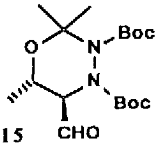


14



15

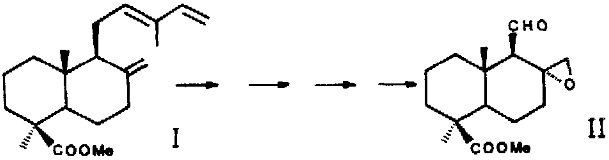
The aldehydes **14** and **15**, which are synthetic equivalents of 2,4-deoxy-2-amino-L-erythrose and -L-threose, as well as of their hydrazino analogues were prepared from (S) ethyl β-hydroxybutyrate. The asymmetric induction in addition of C-nucleophiles to them was studied.

Tetrahedron Lett. 30,5515(1989)

SELECTIVE OZONOLYSIS OF METHYL TRANS-COMMUNATE. SYNTHESIS OF DRIMANES.

Alejandro F. Barrero, Juan F. Sánchez and Joaquín Altarejos C.
Department of Organic Chemistry, Faculty of Sciences, University of Granada, Granada (SPAIN).

The labdanic compound I is transformed to drimane II, in four steps, the first of which is based on selective ozonolysis of the double bond 12,13.



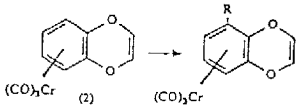
I

II

Tetrahedron Lett. 30,5519(1989)

THE USE OF NOVEL ARENE-CHROMIUM COMPLEXES TO ACHIEVE THE REGIOCONTROLLED ALKYLATION OF 1,4-BENZODIOXINS.

Thomas V. Lee*[a], Alistair J. Leigh[a] and Christopher B. Chapleo[b] Departments of Chemistry,[a]The University, Bristol,[b]Reckitt & Colman plc, Hull, England.



Formation of the η^6-arene chromium complex (2) allows, via metalation and alkylation, functionalisation at the C-5 position in contrast to such reactions proceeding at C-2 in the uncomplexed molecule.