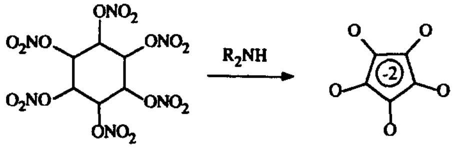
GRAPHICAL ABSTRACTS

Tetrahedron Lett. **1990**, *31*, 1797

THE ACTION OF SECONDARY AMINES ON MYOINOSITOL HEXANITRATE. THE FORMATION OF DIALKYAMMONIUM CROCONATES.

Zaryl Sharshenalievna* and Fedya Pishugan, Institute of Organic Chemistry, Academy of Sciences of the Kirghiz, Frunze, USSR; Guy L. Rosenthal and Michael J. Strauss, Dept. of Chemistry, University of Vermont, Burlington, VT 05401

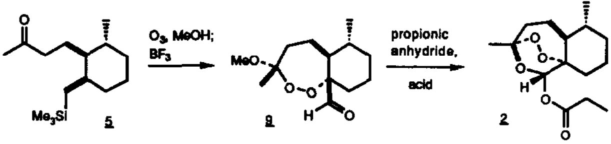


Tetrahedron Lett. **1990**, *31*, 1799

SYNTHESIS OF (+)-8a,9-SECOARTEMISININ AND RELATED ANALOGS

Mitchell A. Avery*, Wesley K. M. Chong, and George Detre
Bio-Organic Chemistry Laboratory, Life Sciences Division, SRI International,
333 Ravenswood Avenue, Menlo Park, California 94025

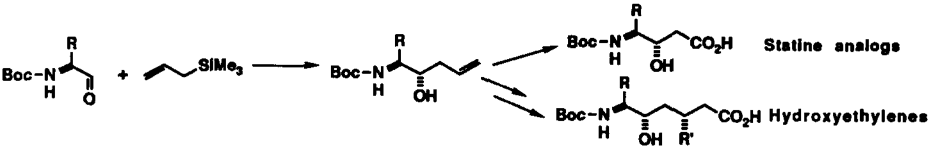
Summary: An efficient synthesis of (+)-8a,9-secoartemisinin 2, a ring-D cleaved, tricyclic analog of the antimalarial (+)-artemisinin 1, has been accomplished. Ozonolysis and subsequent acidification of silane 5 afforded the stable aldehyde 9 which underwent acid catalyzed ring closure in the presence of anhydride to provide the target 2.



Tetrahedron Lett. **1990**, *31*, 1803

Addition of Allylic Metals to α-Aminoaldehydes. Application to the Synthesis of Statine, Ketomethylene and Hydroxyethylene Dipeptide Isosteres

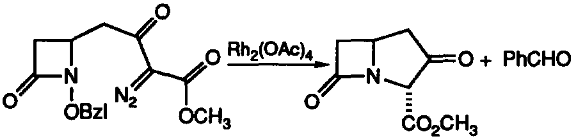
J.V.N. Vara Prasad and Daniel H. Rich* School of Pharmacy, University of Wisconsin-Madison, 425 N. Charter Street, Madison, WI 53706.



Tetrahedron Lett. **1990**, *31*, 1807

SYNTHESIS OF THE CARBAPENAM RING SYSTEM VIA CARBENE MEDIATED REARRANGEMENT OF AN N-BENZYLOXY-β-LACTAM

Matthew A. Williams and Marvin J. Miller*
Department of Chemistry and Biochemistry
University of Notre Dame
Notre Dame, IN 46556



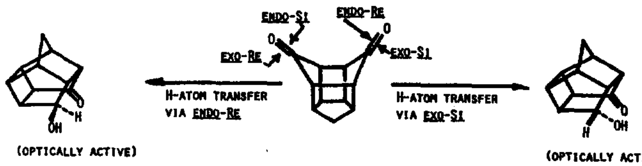
The carbapenam ring system is formed directly when a diazo-N-benzyloxy-β-lactam is treated with catalytic amounts of Rh$_2$(OAc)$_4$.

Tetrahedron Lett. **1990**, *31*, 1811

ENANTIOSELECTIVE MICROBIAL ASYMMETRIC REDUCTION OF PENTACYCLO[5.4.0.0^{2,6}.0^{3,10}.0^{5,9}]UNDECANE-8,11-DIONE

Alan P. Marchand* and G. Madhusudhan Reddy

Department of Chemistry
University of North Texas
Denton, Texas 76203-5068

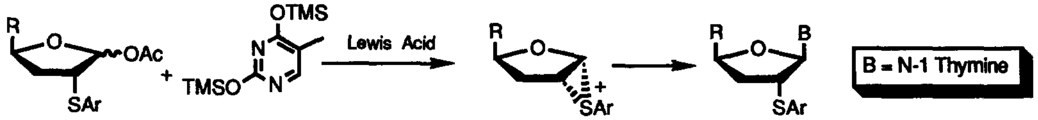


Tetrahedron Lett. **1990**, *31*, 1815

A GENERAL METHOD FOR CONROLLING GLYCOSYLATION STEREOCHEMISTRY IN THE SYNTHESIS OF 2'-DEOXYRIBOSE NUCLEOSIDES

Lawrence J. Wilson and Dennis Liotta*
Department of Chemistry, Emory University, Atlanta, Georgia 30322

Glycosylation reactions of 2-arylsulfinyl-O-acetylribosideswith silylated thymine produce 2'-deoxyribose nucleosides with high β-selectivity. An application of this directing effect in the synthesis of the antiretroviral agent D4T is described.

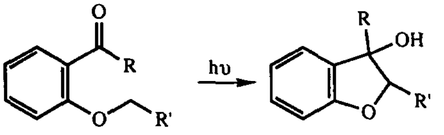


Tetrahedron Lett. **1990**, *31*, 1819

AN APPROACH TO AFLATOXINS USING TYPE II PHOTOCYCLIZATION REACTIONS

George A. Kraus*, P.J. Thomas and Mark D. Schwinden
Department of Chemistry, Iowa State University, Ames, Iowa 50011

The type II photocyclization of 2,6-disubstituted acetophenones affords 3-hydroxydihydrobenzofurans. A key intermediate for aflatoxin synthesis has been prepared.

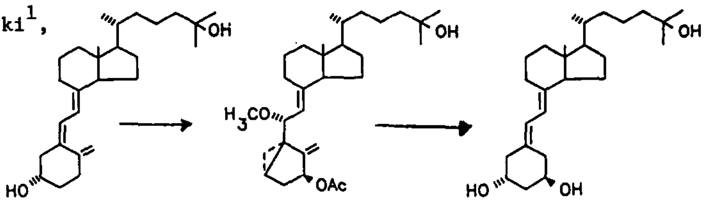


Tetrahedron Lett. **1990**, *31*, 1823

1α,25-DIHYDROXY-19-NOR-VITAMIN D$_3$, A NOVEL VITAMIN D-RELATED COMPOUND WITH POTENTIAL THERAPEUTIC ACTIVITY

Kato L. Perlman, Rafal R. Sicinski[1], Heinrich K. Schnoes, and Hector F. DeLuca*

Department of Biochemistry,
University of Wisconsin-Madison,
Madison, Wisconsin 53706

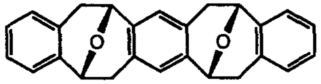


Tetrahedron Lett. **1990**, *31*, 1825

MOLECULAR CLEFTS 2. AN ANALOGUE OF KAGAN'S ETHER AS A MOLECULAR CLEFT: SYNTHESIS AND CLATHRATE FORMATION WITH ETHYL ACETATE

Michael Harmata* and Charles L. Barnes
Department of Chemistry, University of Missouri-Columbia, Columbia, MO 65211

Summary: A convenient synthesis of 5a,8a,14a,17a-5,6,8,9,14,15,17,18-octahydro-5,17:8,14-diepoxydibenzo[e,e']benzo[1,2-a:4,5-a']dicyclooctene (**2**) is described. It forms a clathrate with ethyl acetate which is stable even after 12 hours at .1 Torr.

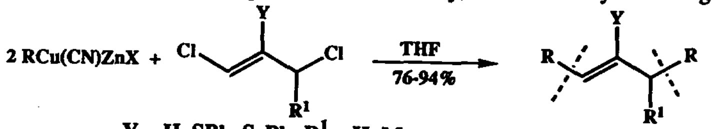


2

Tetrahedron Lett. **1990**, *31*, 1829

S$_N$2' SUBSTITUTIONS OF 1,3-DICHLOROPROPENES WITH THE FUNCTIONALIZED COPPER-ZINC REAGENTS RCu(CN)ZnX

Huai Gu Chen, Jennifer L. Gage, Stephen D. Barrett and Paul Knochel*
The Willard H. Dow Laboratories, Department of Chemistry, The University of Michigan, Ann Arbor, MI 48109

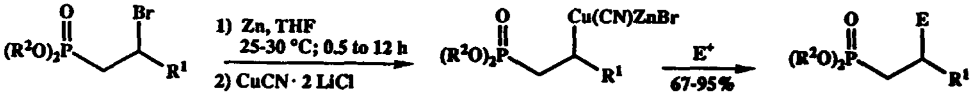


Y = H, SPh, SePh; R^1 = H, Me

Tetrahedron Lett. **1990**, *31*, 1833

PREPARATION AND REACTIVITY OF β-ZINC AND COPPER PHOSPHONATES

Carole Retherford, Tso-Sheng Chou, Robert M. Schelkun and Paul Knochel*
The Willard H. Dow Laboratories, Department of Chemistry, The University of Michigan, Ann Arbor, MI 48109



E: acyl chlorides, allylic and alkynyl halides, aldehydes, acetylenic esters, aldehydes and enones

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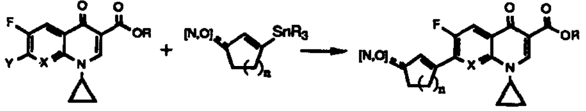
Tetrahedron Lett. **1990**, *31*, 1837

PALLADIUM-CATALYZED INTERMOLECULAR VINYLIC ARYLATION OF CYCLOALKENES. APPLICATIONS TO THE SYNTHESIS OF QUINOLONE ANTIBACTERIALS

Edgardo Laborde*, Lawrence E. Lesheski, and John S. Kiely
Parke-Davis Pharmaceutical Research Division, Warner-Lambert Company, Ann Arbor, Michigan 48105, USA

Cyclic β-tributylstannyl-α,β-unsaturated ketones, alcohols, and amines undergo palladium-catalyzed, vinylic cross-coupling with 7-quinolyltriflates and 7-chloro-1,8-naphthyridines in very good yields.

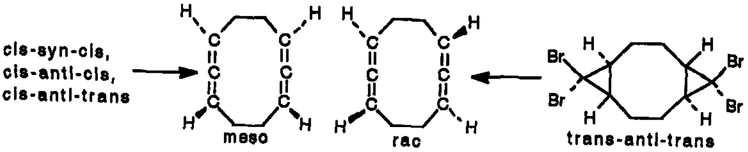


Tetrahedron Lett. **1990**, *31*, 1841

STEREOSELECTIVE FORMATION OF CYCLIC BISALLENES FROM 5,5,10,10-TETRABROMOTRICYCLO[7.1.0.0^{4,6}]-DECANES

Eckehard V. Dehmlow
and Thomas Stiehm

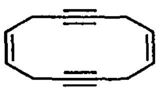
Universität Bielefeld
Fakultät für Chemie
Universitätsstr. 25
4800 Bielefeld 1, West Germany

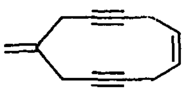


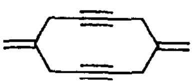
Tetrahedron Lett. **1990**, *31*, 1845

SYNTHESIS AND PROPERTIES OF SKIPPED CYCLIC $C_{12}H_{12}$ DIENEDIYNES

R.Gleiter and R.Merger
Institut für Organische Chemie der Universität Heidelberg
Im Neuenheimer Feld 270, D-6900 Heidelberg





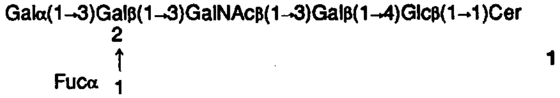


Tetrahedron Lett. **1990**, *31*, 1849

TOTAL SYNTHESIS OF A HEXAOSYL CERAMIDE GLYCOLIPID AS A RECEPTOR FOR MACROPHAGE MIGRATION INHIBITION-FACTOR[1]

P. Zimmermann, U. Greilich, and R. R. Schmidt
Fakultaet Chemie, Universitaet Konstanz, D-7750 Konstanz, Germany

The title compound 1 was obtained from readily available building blocks in fifteen steps. The synthetic strategy is solely based on trichloroacetimidate donors and on hexaosylation of azidosphingosine.



$$\underset{\underset{\text{Fuc}\alpha\ 1}{\uparrow}}{\text{Gal}\alpha(1\rightarrow3)\underset{2}{\text{Gal}}\beta}(1\rightarrow3)\text{GalNAc}\beta(1\rightarrow3)\text{Gal}\beta(1\rightarrow4)\text{Glc}\beta(1\rightarrow1)\text{Cer}$$

1

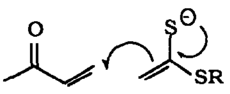
Tetrahedron Lett. **1990**, *31*, 1853

Completely Regioselective Reversals for an Addition Reaction of Ambident Sulphur Nucleophiles to Michael Acceptors

Kafui Kpegba and Patrick Metzner*
Laboratoire de Chimie des Composés Thio-organiques (Associé au CNRS), ISMRA, Université de Caen-Normandie, 14032 Caen, France.

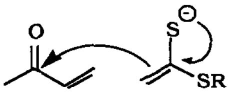
Reaction of titanium enethiolates with α-unsaturated ketones leads selectively to 3-hydroxy 4-unsaturated alkanedithioates, arising from a 1,2-carbon-addition, whereas aluminium enethiolates give oxoketene dithioacetals, from exclusive 1,4-sulphur-addition.

Li ⟶ C-1,4-addition



Al ⟶ S-1,4-addition

Tl ⟶ C-1,2-addition

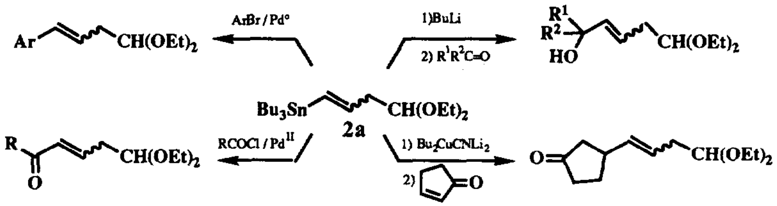


AN EFFICIENT ACCESS TO HOMOALLYL AND HOMOCINNAMYL SKELETONS USING 1-TRIBUTYLSTANNYL-4,4-DIETHOXY-BUT-1-ENE

Tetrahedron Lett. **1990**, *31*, 1857

Jean-Luc PARRAIN[a], Alain DUCHENE[b] and Jean-Paul QUINTARD[a]

a) Laboratoire de Synthèse Organique, URA 475 CNRS, Faculté des Sciences et des Techniques de NANTES,44072 NANTES - Cedex 03. (France).
b) Laboratoire de Synthèse Organique, Faculté des Sciences de TOURS, Parc de Grandmont, 37200 TOURS. (France).

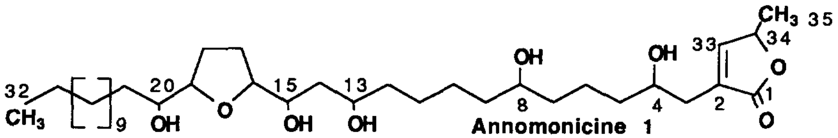


2a : easily prepared
and stored vinyltin

DEUX NOUVELLES ACETOGENINES MONOTETRAHYDROFURANNIQUES CYTOTOXIQUES: L'ANNOMONICINE ET LA MONTANACINE

Tetrahedron Lett. **1990**, *31*, 1861

Akino JOSSANG[1], Béatrice DUBAELE, André CAVÉ, Marie-Hélène BARTOLI[2] et Hélène BERIEL[2]
Laboratoire de Pharmacognosie, associé au CNRS, Faculté de Pharmacie de l'Université de Paris-Sud. [1]Laboratoire de Chimie, associé au CNRS, Muséum National d'Histoire Naturelle. [2]Laboratoire de Physiologie-Pharmacologie I, UFR de Pharmacie de Grenoble.

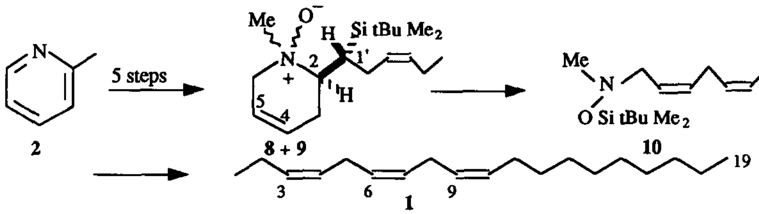


Annomonicine 1

Synthesis of a Pheromone of *Boarmia selenaria via* a Sila-Cope elimination.Stereochemical implications.

Tetrahedron Lett. **1990**, *31*, 1865

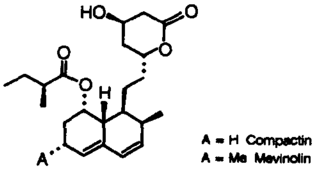
Y. Langlois*, L. Konopski, N.V. Bac, A. Chiaroni and C. Riche.
Institut de Chimie des Substances Naturelles, C.N.R.S., 91198 Gif sur Yvette Cedex France.

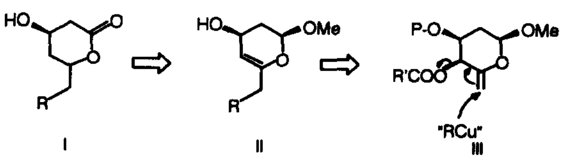


A NEW STRATEGY FOR THE SYNTHESIS OF MEVINIC ACIDS ANALOGUES

Tetrahedron Lett. **1990**, *31*, 1869

Pascal Boquel and Yves Chapleur*
Laboratoire de Chimie Organique 3, Unité associée au CNRS 486,
Université de Nancy I, BP 239, F-54506 Vandoeuvre-les-Nancy, France

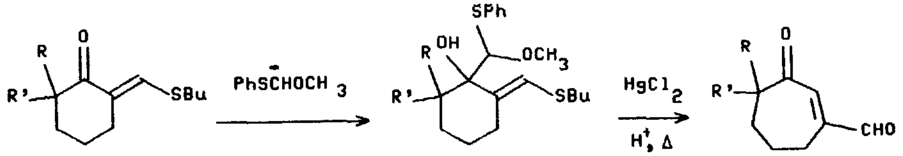




Tetrahedron Lett. **1990**, *31*, 1873

A NEW RING EXPANSION APPROACH TO 3-FORMYL-2-CYCLOHEPTEN-1-ONES

A. Guerrero*, A. Parrilla and F. Camps.
Department of Biological Organic Chemistry, C.I.D. (CSIC)
Jordi Girona Salgado, 18-26. 08034-Barcelona (Spain)

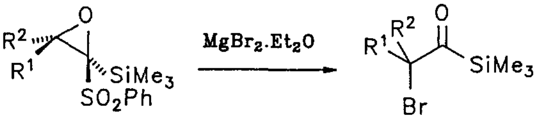


Tetrahedron Lett. **1990**, *31*, 1877

PREPARATION AND RING-OPENING REACTIONS OF 2-PHENYLSULPHONYL-2-TRIMETHYLSILYL OXIRANES

Cheryl T. Hewkin and Richard F.W. Jackson*
Department of Chemistry, Bedson Building, The University, Newcastle upon Tyne, NE1 7RU, U.K.

Reaction of 2-phenylsulphonyl-2-trimethylsilyl oxiranes (2) with $MgBr_2.Et_2O$ gives moderate to good yields of α-bromoacylsilanes (3).



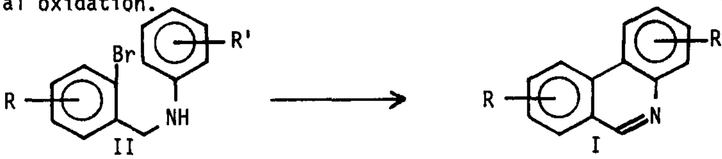
(2) (3)

Tetrahedron Lett. **1990**, *31*, 1881

ARYL-ARYL COUPLING INDUCED BY n-TRIBUTYLSTANNYL HYDRIDE AN EFFICIENT PHENANTHRIDINE SYNTHESIS

A.M.Rosa, S.Prabhakar* and A.M.Lobo
Secção Química Orgânica Aplicada, FCT,UNL,Quinta da Torre, 2825 Monte da Caparica, Portugal

A new route to (I) consists of the cyclisation of (II) by reaction with n-Bu_3SnH - AIBN followed by aerial oxidation.



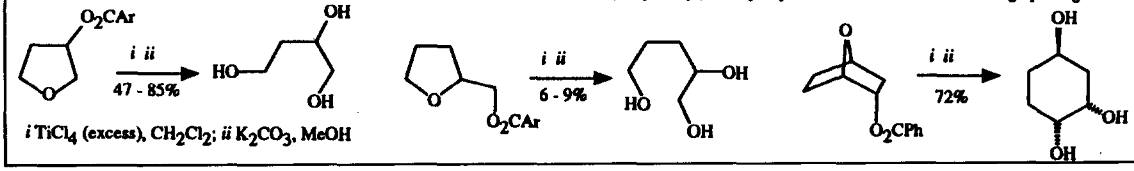
R,R'=H,Alkoxy
μ= 63 - 70%

Tetrahedron Lett. **1990**, *31*, 1885

ANCHIMERICALLY ASSISTED LEWIS ACID CLEAVAGE OF TETRAHYDROFURANS TO FURNISH 1,4-DIOLS

Laurence M. Harwood,*[a] Brian Jackson,[b] Keith Prout,[b] and Fiona J. Witt[a]
a Dyson Perrins Laboratory, University of Oxford, South Parks Road, OXFORD OX1 3QY, b Chemical Crystallography Laboratory, University of Oxford, Parks Road, OXFORD OX1 3PD.

Treatment of 3-aroyloxytetrahydrofurans with $TiCl_4$ results in cleavage of the heterocyclic ring with intervention by the appropriately situated ester group to form intermediates which, on work-up and hydrolysis, furnish 1,4-diols. 2-(Aroyloxymethyl)tetrahydrofurans are more resistant to ring opening.



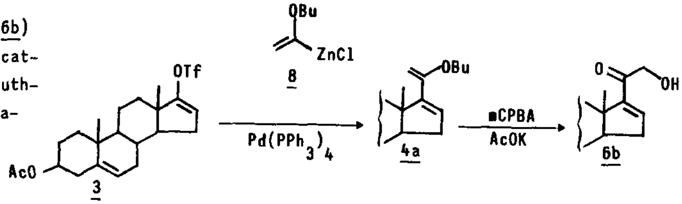
i $TiCl_4$ (excess), CH_2Cl_2; *ii* K_2CO_3, MeOH

Tetrahedron Lett. **1990**, *31*, 1889

A NEW SYNTHESIS OF THE CORTICOSTEROID SIDE CHAIN

Pier Giuseppe Ciattini, Enrico Morera, and Giorgio Ortar*
Dipartimento di Studi Farmaceutici e Centro di Studio per la Chimica del Farmaco del C.N.R.,
Università 'La Sapienza', 00185 Roma, Italy.

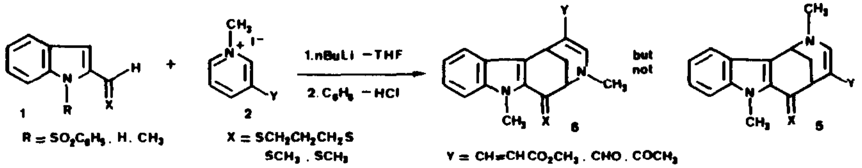
3β-Acetoxy-21-hydroxypregna-5,16-dien-20-one (6b) has been obtained in 55% overall yield via Pd-catalyzed coupling of 17-enol triflate 3 with α-buthoxyethenyl zinc chloride (8), followed by oxidation of the resultant enol ether 4a with m-chloroperbenzoic acid.



Tetrahedron Lett. **1990**, *31*, 1893

NUCLEOPHILIC ADDITION OF 2-INDOLYLACYL ANION EQUIVALENTS TO N-ALKYLPYRIDINIUM SALTS

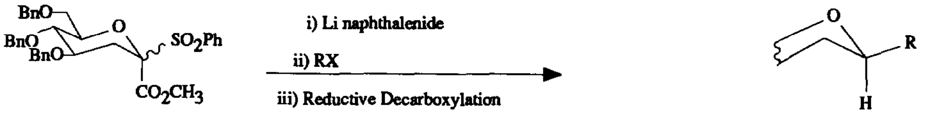
M.-Lluïsa Bennasar,* Ester Zulaica, Antoni Torrens, Angel Pérez, and Joan Bosch*
Laboratory of Organic Chemistry, Faculty of Pharmacy, University of Barcelona, Barcelona 08028, Spain



Tetrahedron Lett. **1990**, *31*, 1897

SYNTHESIS OF 2-DEOXY-β-C-GLUCOSIDES BY DIASTEREOSELECTIVE HYDROGEN ATOM TRANSFER

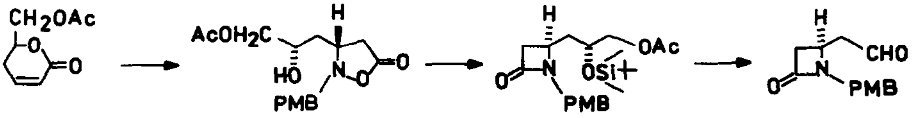
D.Crich and Linda B.L.Lim, Department of Chemistry, University College London,
20 Gordon Street, London WC1H 0AJ, U.K.



Tetrahedron Lett. **1990**, *31*, 1901

SYNTHESIS OF ENANTIOMERICALLY PURE PRECURSORS OF CARBAPENEMS FROM CARBOHYDRATES

Sylwester Maciejewski, Irma Panfil, Czesław Bełzecki, and Marek Chmielewski*
Institute of Organic Chemistry, Polish Academy of Sciences, 01-224 Warsaw, POLAND

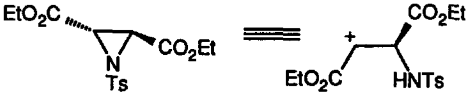


Tetrahedron Lett. **1990**, *31*, 1903

NUCLEOPHILIC RING OPENING OF C_2-SYMMETRIC AZIRIDINES. SYNTHETIC EQUIVALENTS FOR THE β-CATION OF ASPARTIC ACID

David Tanner*, Carin Birgersson and Hardip K. Dhaliwal
Department of Organic Chemistry, University of Uppsala,Box 531, S-751 21, Uppsala, Sweden.

Non-racemic C_2-symmetric aziridine 7 (or enantiomer) is a synthetic equivalent for the β-cation of L- (or D-) aspartic acid:



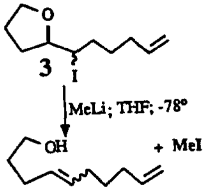
7

Tetrahedron Lett. **1990**, *31*, 1907

THE METHYLLITHIUM-PROMOTED DEHALOGENATIVE RING FISSION OF β-IODOTETRAHYDROFURANS GIVES NO EVIDENCE OF A FREE RADICAL COMPONENT

Vanda Cerè, Claudio Paolucci,* Salvatore Pollicino, Edda Sandri, and Antonino Fava*
Dipartimento di Chimica Organica, Università di Bologna, Viale Risorgimento 4, 40136, Bologna, Italy

Comparison between the product distribution in the eliminative ring fission of *erythro* and *threo* 3 with MeLi or, respectively, with sodium naphthalenide indicate the former reaction does not occur via SET.

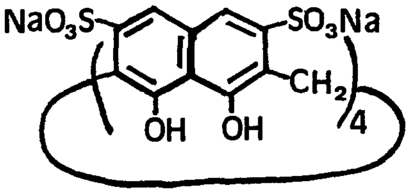


Tetrahedron Lett. **1990**, *31*, 1911

COMPLEXATION OF AROMATIC HYDROCARBONS WITH CYCLOTETRACHROMOTROPYLENE IN AQUEOUS SOLUTION

Bo-Long Poh* and Leeng-Sze Koay
School of Chemical Sciences, Universiti Sains Malaysia
Penang, Malaysia

Cyclotetrachromotropylene (1) solubilizes aromatic hydrocarbons through complexation in aqueous solution



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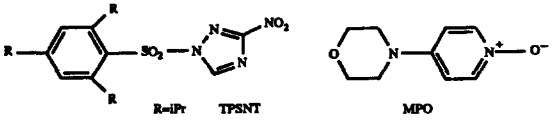
Tetrahedron Lett. **1990**, *31*, 1915

ARENESULPHONYLTRIAZOLIDES AS CONDENSING REAGENTS IN SOLID PHASE PEPTIDE SYNTHESIS.

X.Jorba[1], F.Albericio[1], A.Grandas[1], W.Bannwarth[2] and E.Giralt[1]
[1]Departament de Química Orgànica, Universitat de Barcelona, 08028 Barcelona, Spain
[2]Central Research Units, Hoffmann-La Roche, Grenzacherstrasse, CH-4002 Basel, Switzerland

Use of TPSNT and MPO as an alternative to dicyclohexylcarbodiimide for peptide bond formation is reported.

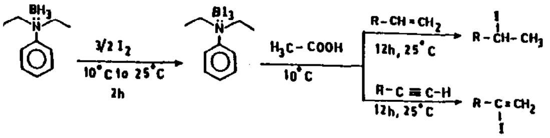


Tetrahedron Lett. **1990**, *31*, 1919

A NEW, SIMPLE PROCEDURE FOR THE GENERATION AND ADDITION OF HI TO ALKENES AND ALKYNES USING BI_3:N,N-DIETHYLANILINE COMPLEX AND ACETIC ACID

Ch.Kishan Reddy and M.Periasamy*, School of Chemistry, University of Hyderabad, Hyderabad 500134, India

Markovnikov addition of HI to alkenes and alkynes can be achieved using BI_3:N,N-diethylaniline and acetic acid under mild conditions.

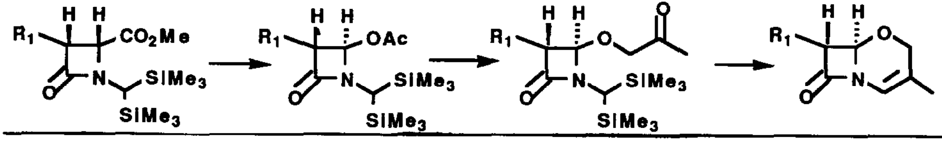


Tetrahedron Lett. **1990**, *31*, 1921

A CONCISE FORMAL APPROACH TO THE OXACEPHEM SKELETON FROM A INTRAMOLECULAR PETERSON TYPE OLEFINATION OF N-[bis(TRIMETHYLSILYL)METHYL]- β -LACTAMS

Claudio Palomo*, Jesus M. Aizpurua, Jesus M. García
Departamento de Química Orgánica. Facultad de Química. Universidad del País Vasco. Aptdo 1072. 20080, San Sebastian.Spain.
Jean Paul Picard, Jacques Dunogues
Laboratoire de Chimie Organometallique. (U.A.-35, CNRS) Université de Bordeaux-I. 33405 Talence. France.

A convenient synthesis of precursors of bicyclic β -lactam compounds from 4-acetoxy-1-(bistrimethylsilylmethyl)azetidin-2-ones is described. A novel method to construct a bicyclic β -lactam ring system through an intramolecular Peterson type alkenation catalyzed by fluoride ion is also made.

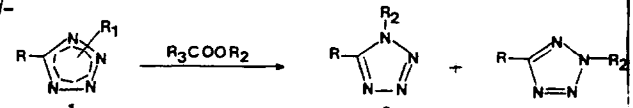


Tetrahedron Lett. **1990**, *31*, 1925

NOVEL REGIOSELECTIVE N-ALKYLATIONS OF 5-SUBSTITUTED-2H-TETRAZOLES

*Marija Prhavc and Jože Kobe**
Boris Kidrič Institute of Chemistry, Hajdrihova 19, 61115 Ljubljana; Krka, Pharmaceutical and Chemical Works, 68000 Novo mesto, Yugoslavia

Regioselective alkylation of 5-substituted-2H-tetrazoles 1 to 2-alkyl derivatives 3 was achieved with alkyl cyanoformates. Lesser selectivity was observed with chloroformates.



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