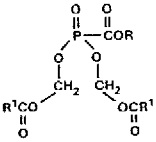
GRAPHICAL ABSTRACTS

Tetrahedron Lett. 30, 7141 (1989)

SYNTHESIS OF ACYLOXYALKYL ACYLPHOSPHONATES AS POTENTIAL PRODRUGS OF THE ANTIVIRAL, TRISODIUM PHOSPHONOFORMATE (FOSCARNET SODIUM)

Radhakrishnan P. Iyer*, Lawrence R. Phillips, Jane A. Biddle, Dhiren R. Thakker, William Egan, S Aoki@ and H. Mitsuya@
Center for Biologics Evaluation and Research, Food and Drug Administration and @Clinical Oncology Program, Division of Cancer Treatment, National Cancer Institute, Bethesda, Maryland 20892.

Synthesis of acyloxyalkyl acylphosphonates **7a-l** is described.



7	R	R¹
a-c	Me	Me,*i*-Pr,*t*-Bu
d-f	Et	Me,*i*-Pr,*t*-Bu
g-i		Me,*i*-Pr,*t*-Bu
j-l		Me,*i*-Pr,*t*-Bu

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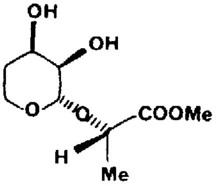
Tetrahedron Lett. 30, 7145 (1989)

HOMOCHIRAL ACETALS IN ORGANIC SYNTHESIS. A GENERAL ENANTIOSELECTIVE ENTRY TO CARBOHYDRATE DERIVATIVES FROM NON-CARBOHYDRATE PRECURSORS

Eugene A. Mash*, Jeffrey B. Arterburn, and James A. Fryling
Department of Chemistry, University of Arizona, Tucson, Arizona 85721

A general chromatographic separation of furanoside and pyranoside acetals derived from esters of lactic acid is disclosed. Application of this separation methodology to rapid syntheses of the diastereomers of (S)-methyl lactyl 4-deoxyribopyranose is described.

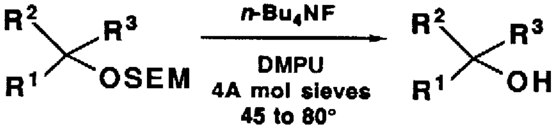


Tetrahedron Lett. 30, 7149 (1989)

DEPROTECTION OF 'SEM' ETHERS: A CONVENIENT, GENERAL PROCEDURE

Bruce H. Lipshutz* and Todd A. Miller
Department of Chemistry, University of California, Santa Barbara, CA 93106

New reaction conditions for removal of SEM ethers are described which are applicable to tertiary alcohols.

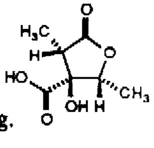


Tetrahedron Lett. 30, 7153 (1989)

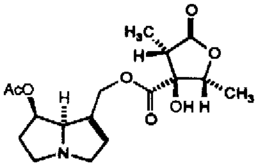
THE ABSOLUTE CONFIGURATIONS OF LONGITUBINE (7-O-ACETYL-9-O-LATIFOLYLRETRONECINE) AND LATIFOLIC ACID

Frank R. Stermitz, Department of Chemistry, Colorado State University, Fort Collins, CO 80523
Håkon Hope, Department of Chemistry, University of California, Davis, CA 95616

A single crystal X-ray study established the absolute configuration of longitubine (7-O-acetyl-9-O-latifolylretronecine) and hence that of latifolic acid. The absolute configuration of latifolic acid conforms with that established chemically by Matsumoto, Okabe and Fukui, and not with that purportedly established through an X-ray study by Roitman and Wong.



latifolic acid



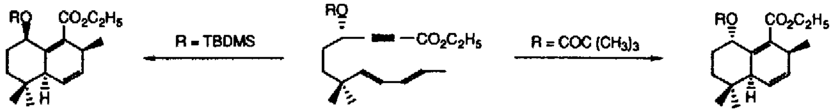
longitubine

Tetrahedron Lett. 30,7157(1989)

An Unusual Stereochemical Directing Effect of Propargylic Oxygen Substituents on an Intramolecular Diels-Alder Reaction

Barry M. Trost* and Ryan C. Holcomb
Departments of Chemistry, University of Wisconsin, Madison, WI 53706
Stanford University, Stanford, CA 94305

The stereochemistry of an intramolecular Diels-Alder cycloadduct derived from a γ-hydroxypropiolate fragment as the dienophile depends upon the oxygen substituent.

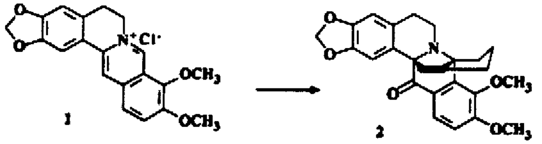


Tetrahedron Lett. 30,7161(1989)

A NOVEL RING SYSTEM ARISING FROM INTRAMOLECULAR OXIDATIVE CYCLIZATION OF 8-(4-PENTENYL)DIHYDROBERBERINE

Mark Cushman,* Donald A. Patrick, Pascal H. Toma, and Stephen R. Byrn,* Department of Medicinal Chemistry and Pharmacognosy, Purdue University, West Lafayette, Indiana 47907

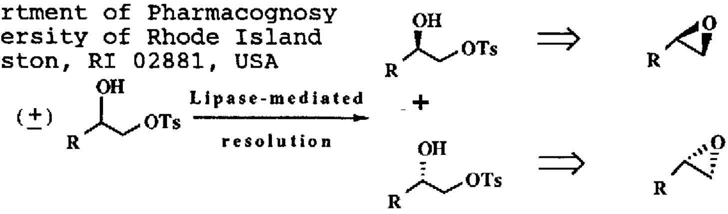
Reaction of 1 with 4-pentenylmagnesium bromide gave the expected pentenyldihydroberberine, which upon attempted recrystallization was transformed to 2.



Tetrahedron Lett. 30,7165(1989)

A CHEMOENZYMATIC ACCESS TO OPTICALLY ACTIVE 1,2-EPOXIDES

Ching-Shih Chen* and Yeuk-Chuen Liu
Department of Pharmacognosy
University of Rhode Island
Kingston, RI 02881, USA

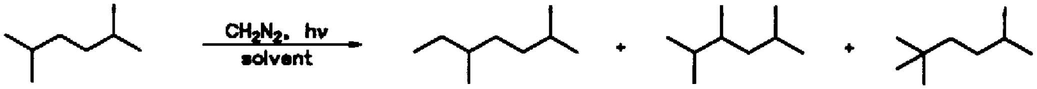


Tetrahedron Lett. 30,7169(1989)

A SOLVENT EFFECT IN REACTIONS OF SINGLET METHYLENE

Susan M. Neugebauer and JoAnn P. DeLuca*
Chemistry Department, Illinois state University, Normal, IL 61761

The effect of several solvents on the selectivity of singlet methylene has been investigated.

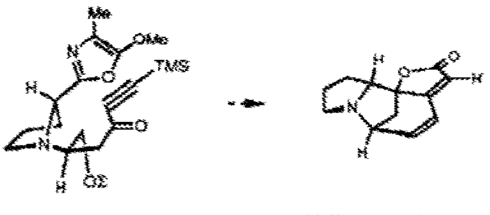


TOTAL SYNTHESIS OF (+)- AND (-)-NORSECURININE

Tetrahedron Lett. 30, 7173 (1989)

Peter A. Jacobi,* Charles A. Blum, Robert W. DeSimone and Uko E. S. Udodong
Hall-Atwater Laboratories, Wesleyan University
Middletown, Connecticut 06457

(-)-Norsecurinine (**1a**) has been prepared in a stereospecific fashion from the acetylenic oxazole **18** by a sequence of steps involving Diels-Alder cyclization, hydrolysis and transannular alkylation. (+)-Norsecurinine (**1b**) has been prepared in identical fashion from *ent*-**18**



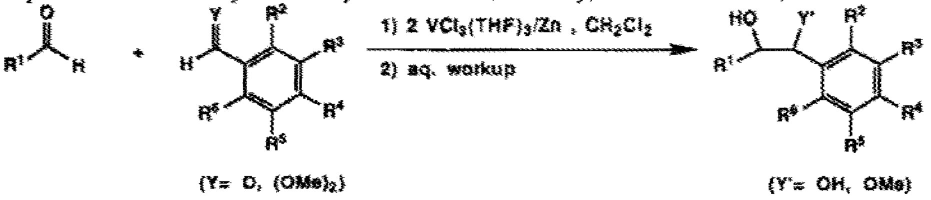
18

(-)-Norsecurinine (1a)

INTERMOLECULAR PINACOL CROSS COUPLING OF ARYL ALDEHYDES OR THEIR DIMETHYL ACETALS WITH NON-ARYL ALDEHYDES.

Tetrahedron Lett. 30, 7177 (1989)

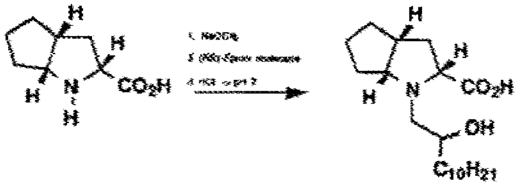
Patricia M. Takahara, John H. Freudenberger, Andrei W. Konradi and Steven F. Pedersen*
Department of Chemistry, University of California, Berkeley, California 94720, USA



SYNTHESIS OF A NEW CHIRAL SELECTOR FOR TLC ENANTIOMERIC RESOLUTION

Tetrahedron Lett. 30, 7181 (1989)

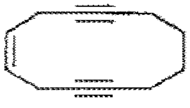
Jürgen Martens*, Stefan Lübben und Ravi Bhushan
Fachbereich Chemie, Universität Oldenburg,
Ammerländer Heerstraße 114-118
D-2900 Oldenburg i. O. / Germany



SYNTHESIS AND PROPERTIES OF MEDIUM SIZED CARBOCYCLIC ENEDIYNES

Tetrahedron Lett. 30, 7183 (1989)

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



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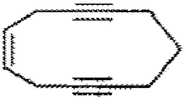

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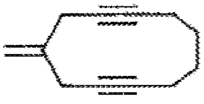

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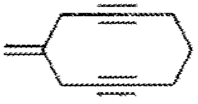

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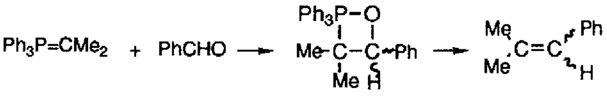
Tetrahedron Lett. 30,7187(1989)

ELECTRON TRANSFER IN THE REACTION OF BENZALDEHYDE WITH A NONSTABILIZED YLIDE

Hiroshi Yamataka,*,[a] Katsushi Nagareda,[a] Terukiyo Hanafusa,[a] and Shigeru Nagase*,[b], [a]The Institute of Scientific and Industrial Research, Osaka University, Osaka 567, and [b]Department of Chemistry, Faculty of Education, Yokohama National University, Yokohama 240, Japan

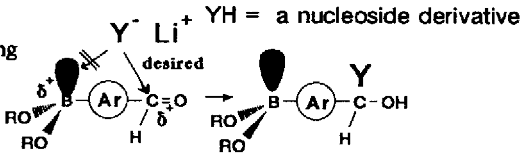
The Wittig reaction of benzaldehyde with isopropylidenetriphenylphosphorane was suggested to proceed via a single electron transfer mechanism.



Tetrahedron Lett. 30,7191(1989)

BORON-10 CARRIERS FOR NCT. A NEW SYNTHETIC METHOD VIA CONDENSATION WITH ALDEHYDES HAVING BORONIC MOIETY

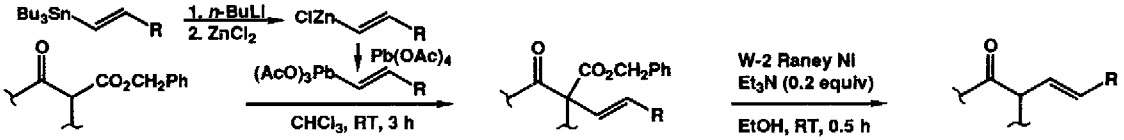
Yoshinori Yamamoto*, Toshiya Seko, FengGuang Rong
and Hisao Nemoto
Department of Chemistry, Tohoku University,
Sendai 980 JAPAN



Tetrahedron Lett. 30,7195(1989)

A CONTROLLED SYNTHESIS OF α-(*E*)-1-ALKENYL KETONES FROM β-KETO BENZYL ESTERS

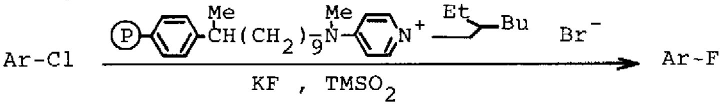
Shun-ichi Hashimoto, Yoji Miyazaki, Tomohiro Shinoda, and Shiro Ikegami*
Faculty of Pharmaceutical Sciences, Teikyo University, Sagamiko, Kanagawa 199-01, Japan



Tetrahedron Lett. 30,7199(1989)

POLYMER-SUPPORTED AMINOPYRIDINIUM SALTS AS VERSATILE CATALYSTS FOR THE SYNTHESIS OF ARYL FLUORIDES

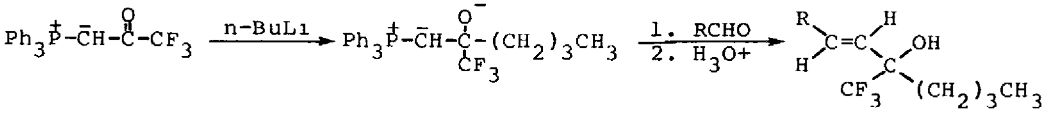
Yasuo Yoshida, Yoshikazu Kimura*, and Masao Tomoi[+]
Research and Development Department, Ihara Chemical Industry Co., Ltd., Fujikawa-cho, Ihara-gun, Shizuoka 421-33, Japan, [+]Department of Applied Chemistry, Faculty of Engineering, Yokohama National University, Yokohama 240, Japan



Tetrahedron Lett. 30, 7203 (1989)

A NOVEL YLIDE–ANION FORMATION RESULTING FROM NUCLEOPHILIC ADDITION. SYNTHESIS OF TRANS-α-TRIFLUOROMETHYL ALLYLIC ALCOHOLS

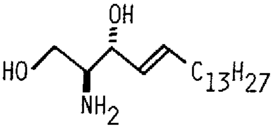
Yanchang Shen,* Tielin Wang
Shanghai Institute of Organic Chemistry, Academia Sinica, Shanghai 200032, China

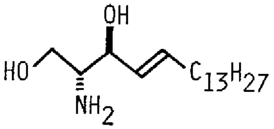


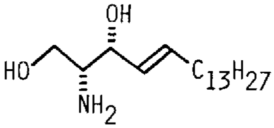
Tetrahedron Lett. 30, 7205 (1989)

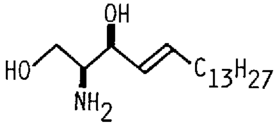
Synthesis of Two Pairs of Enantiomeric C_{18}-Sphingosines

Hirotaka Shibuya, Keiko Kawashima, Masahiko Ikeda, and Isao Kitagawa*
Faculty of Pharmaceutical Sciences, Osaka University, 1-6, Yamada-oka, Suita, Osaka 565, Japan


D-erythro-sphingosine


L-erythro-sphingosine


D-threo-sphingosine

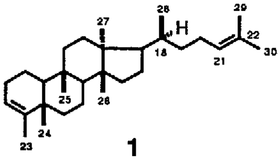

L-threo-sphingosine

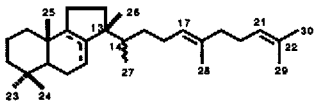
Tetrahedron Lett. 30, 7209 (1989)

FERN CONSTITUENTS: THREE NEW SKELETAL TRITERPENOID HYDROCARBONS ISOLATED FROM POLYPODIODES NIPONICA

Yoko Arai, Masayoshi Hirohara and Hiroyuki Ageta,*
Showa College of Pharmaceutical Sciences, 5-1-8 Tsurumaki, Setagaya-ku, Tokyo 154, JAPAN

Aonena-3,21-diene (1), podioda-7,17,21-triene (2) and podioda-8,17,21-triene (3) were isolated and their structures were established as the members of migrated dammarane and malabaricane series, respectively.

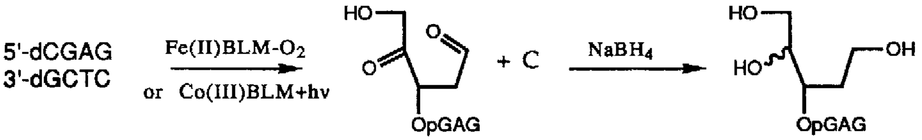

1


2 Δ^7
3 Δ^8

Tetrahedron Lett. 30, 7213 (1989)

METALLO-BLEOMYCIN-MEDIATED DEGRADATION OF DEOXYTETRANUCLEOTIDES. UNUSUAL C-4' HYDROXYLATION AT TERMINAL CYTIDINE

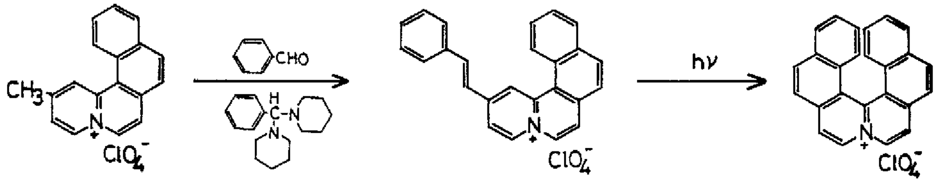
Hiroshi Sugiyama, Takahisa Tashiro, Yukihiro Dannoue, Takuya Miwa, Teruo Matsuura, and Isao Saito*
Department of Synthetic Chemistry, Faculty of Engineering, Kyoto University, Kyoto 606, Japan



Tetrahedron Lett. 30, 7217 (1989)

SYNTHESIS OF AZONIA DERIVATIVE OF HEXAHELICENE

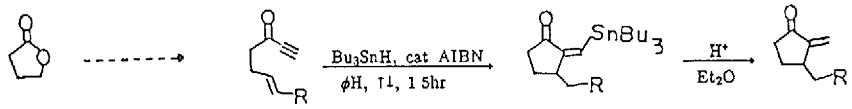
Sadao Arai*, Takuya Yafune, Masaki Ōkubo, and Mitsuhiko Hida*
Department of Industrial Chemistry, Faculty of Technology,
Tokyo Metropolitan University, Setagaya-ku, Tokyo 158, Japan



Tetrahedron Lett. 30, 7219 (1989)

INTRAMOLECULAR CYCLIZATION OF ACETYLENIC HOMOALLYLIC KETONES MEDIATED BY THE ADDITION OF STANNYL RADICALS , A SHORT FACILE PATHWAY TO α-METHYLENE-β-SUBSTITUTED CYCLOPENTANONES.

Eun Lee, Chang-Uk Hur and Jeong-Ho Park*
Department of Chemistry, College of Natural Sciences Seoul National University, Seoul 151-742, Korea

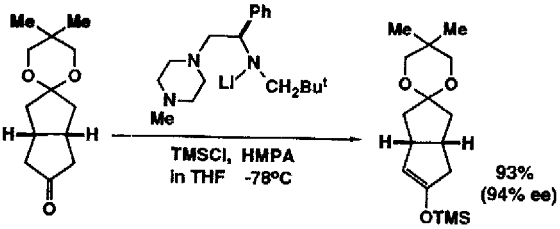


Tetrahedron Lett. 30, 7221 (1989)

ENANTIOSELECTIVE DEPROTONATION OF THE MONO-ACETALS OF BICYCLO[3.3.0]OCTAN-3,7-DIONE. AN APPROACH TO THE ASYMMETRIC SYNTHESIS OF CHIRAL SYNTHONS FOR CARBACYCLINS

Hiroyuki Izawa, Ryuichi Shirai, Hisashi Kawasaki, Hee-doo Kim, and Kenji Koga*

Faculty of Pharmaceutical Sciences,
University of Tokyo,
Hongo, Bunkyo-ku, Tokyo 113, Japan

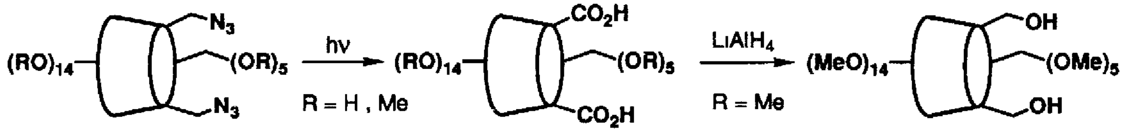


Tetrahedron Lett. 30, 7225 (1989)

$5^A,5^D$-DICARBOXY-β-CYCLODEXTRIN DERIVATIVES - A ROUTE FOR REGIOSELECTIVELY DIFUNCTIONALIZED PERMETHYL-β-CYCLODEXTRIN

Yasuhisa Kuroda,* Osamu Kobayashi, Yasuhiko Suzuki, Hisanobu Ogoshi
Department of Synthetic Chemistry, Kyoto University, Sakyo-ku, Kyoto 606, Japan

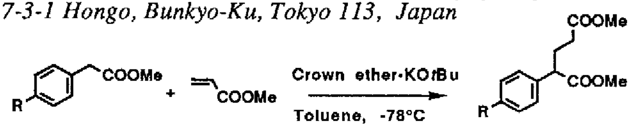
The photo-decomposition of $6^A,6^D$-diazido-β-cyclodextrin derivatives give the corresponding $5^A,5^D$-dicarboxy-β-cyclodextrins.

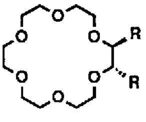


Tetrahedron Lett. 30, 7229 (1989)

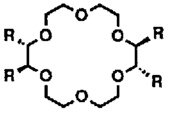
SIMPLE CHIRAL CROWN ETHERS COMPLEXED WITH POTASSIUM *TERT*-BUTOXIDE AS EFFICIENT CATALYSTS FOR ASYMMETRIC MICHAEL ADDITIONS

Shin Aoki, Shigeki Sasaki, and Kenji Koga*
Faculty of Pharmaceutical Sciences, University of Tokyo
7-3-1 Hongo, Bunkyo-Ku, Tokyo 113, Japan





1: $R=CH_3$
3: $R=CH_2OCH_2Ph$



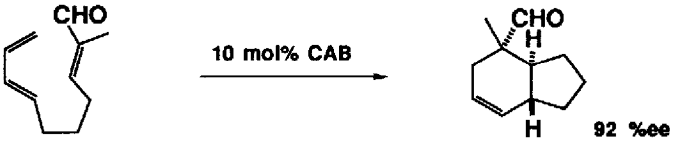
6 $R=CH_3$
7: $R=CH_2OCH_2Ph$

Tetrahedron Lett. 30, 7231 (1989)

Asymmetric Intramolecular Diels-Alder Reaction Catalyzed by Chiral Acyloxyborane Complex.

K. Furuta, A. Kanematsu, and H. Yamamoto, S. Takaoka†
Department of Applied Chemistry, Nagoya University, Chikusa, Nagoya 464-01, Japan
†Minase Research Institute, Ono Pharmaceutical Co., Ltd, 3-1-1 Sakurai Shimamoto-cho, Mishima-gun, Osaka 618, Japan

Intramolecular Diels-Alder reaction of 2-methyl-(E,E)-2,7,9-decatrienal catalyzed by chiral acyloxyborane complex proceeds with high stereo and enantioselectivities.

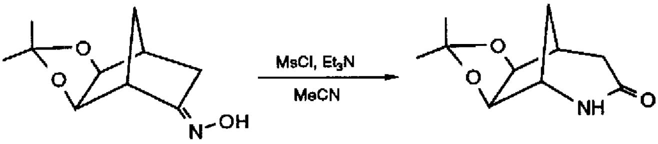


Tetrahedron Lett. 30, 7233 (1989)

BECKMANN REARRANGEMENTS IN THE BICYCLO[2.2.1]HEPTAN-2-ONE SERIES

Peter A. Hunt and Christopher J. Moody* *Department of Chemistry, Imperial College, London SW7 2AY, U K*

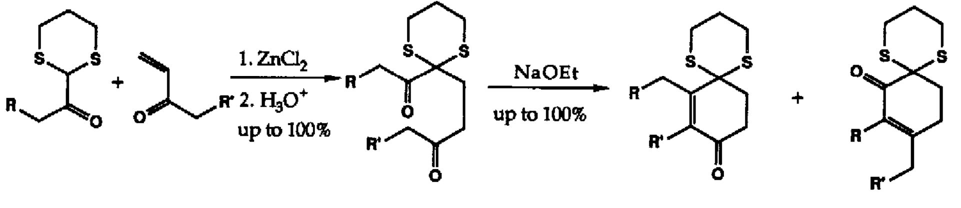
In contrast to norcamphor oxime, the E-oxime derived from the acetonide of 5,6-dihydroxybicyclo[2.2.1]-heptan-2-one, undergoes regiospecific Beckmann rearrangement to give the 2-azalactam



Tetrahedron Lett. 30, 7235 (1989)

REACTIONS OF 2-ACYL-1,3-DITHIANES WITH α,β-UNSATURATED KETONES: SIMPLE PREPARATION OF CYCLOHEXENDIONE MONOACETALS

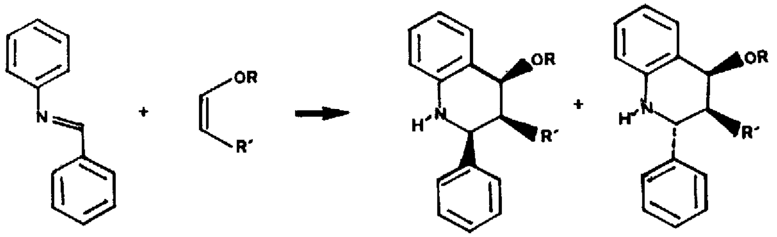
Philip C. Bulman Page[§]*, Shaun A Harkin[‡], and Allan P Marchington[§]
[§]Robert Robinson Laboratories, Department of Chemistry, University of Liverpool, P.O.Box 147, Liverpool, L69 3BX, U.K.
[‡]Shell Research Ltd., Sittingbourne Research Centre, Sittingbourne, Kent, ME9 8AG, U K.



Tetrahedron Lett. 30,7237(1989)

PRODUCT DISTRIBUTION IN DIELS-ALDER ADDITION OF N-BENZYLIDENE ANILINE AND ENOL ETHERS

*Jose Cabral and Pierre Laszlo**
Laboratoire de chimie fine,
biomimétique, et aux interfaces
Ecole Polytechnique,
91128 Palaiseau, France.



Tetrahedron Lett. 30,7239(1989)

SYNTHESIS OF ENANTIOMERICALLY PURE BI- AND TRICYCLIC LACTONES WITH QUATERNARY CHIRAL CENTERS

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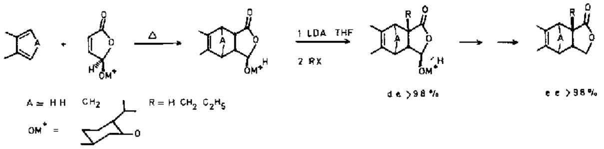

Tetrahedron Lett. 30,7241(1989)

CHIRAL PRODUCTS VIA ASYMMETRIC DEPROTONATION OF 4-TERT-BUTYLCYCLOHEXANONE USING CHIRAL LITHIUM AMIDE BASES

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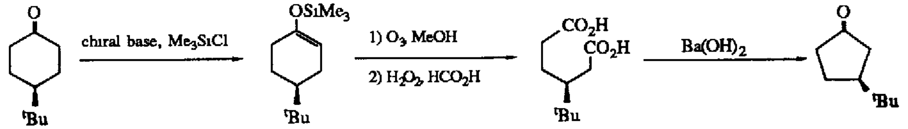
ABSTRACT: The asymmetric deprotonation of 4-*tert*-butylcyclohexanone using chiral lithium amide bases gives derived silyl enol ether products in up to 88% ee.



Tetrahedron Lett. 30,7245(1989)

A NEW OXIDATIVE REARRANGEMENT OF VINDOLINE

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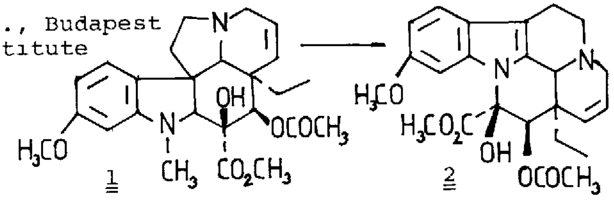
Chemical Works of Gedeon Richter Ltd., Budapest Pf.27. H-1475[a)] Central Research Institute for Chemistry, Hungarian Academy of Sciences, Budapest Pf. 17. H-1525[b)]

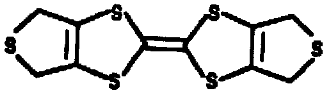
Oxidation of vindoline 1 with MnO_2 yielded a rearranged product, the vincine derivative 2, among other oxidized vindoline derivatives.



Tetrahedron Lett. 30,7249(1989)

BIS(THIODIMETHYLENE)-TETRATHIAFULVALENE (BTDM-TTF). A NEW π-ELECTRON DONOR WITH RELEVANT OXIDATION PROPERTIES.

C. Rovira*, N. Santaló, J. Veciana.
Centro de Investigación y Desarrollo (C.S.I.C.),
Jordi Girona 18-26, 08034 Barcelona, Spain.



Abstract: *The synthesis and some physical properties of a new thioalkyl substituted tetrathiafulvalene, bis(thiodimethylene) tetrathiafulvalene, are reported. Oxidation potentials of BDTM-TTF indicate a low intramolecular Coulomb repulsion energy.*

Tetrahedron Lett. 30,7253(1989)

A NOVEL SYNTHESIS OF UNSYMMETRICAL AZO AROMATICS INACCESSIBLE BY DIAZO-COUPLING REACTION

N. R. Ayyangar*, S.N. Naik and K.V. Srinivasan
National Chemical Laboratory, Pune 411 008, India

A novel synthesis of unsymmetrical azo-aromatics in good yield and high selectivity is reported.

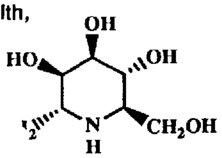
$$Ar_1\text{-NHCOCH}_3 + Ar_2\text{-NO}_2 \xrightarrow[130^\circ C]{\text{Xylene/NaOH/K}_2\text{CO}_3\text{/PTC}} Ar_1\text{-N} = \text{N - }Ar_2$$

Tetrahedron Lett. 30,7257(1989

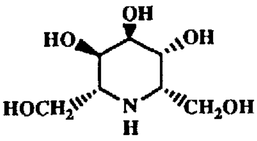
IMINOHEPTITOLS AS GLYCOSIDASE INHIBITORS: SYNTHESIS OF, AND MANNOSIDASE AND FUCOSIDASE INHIBITION BY α-HOMOMANNOJIRIMYCIN AND 6-EPI-HOMOMANNOJIRIMYCIN

I. Bruce,[a] G. W. J. Fleet,[a] I. Cenci di Bello,[b] and B. Winchester[b]
[a]Dyson Perrins Laboratory, South Parks Road, Oxford OX1 3QY, UK.
[b]Department of Clinical Biochemistry, Institute of Child Health,
30 Guilford Street, London WC1N 1EH

The synthesis of and specific mannosidase inhibition by HMJ (1) is reported. The use of protected derivatives of a heptonolactone exemplifies the power of such intermediates in the synthesis of highly functionalised synthetic targets such as (1) and (2).



(1)

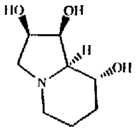


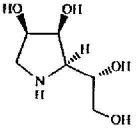
(2)

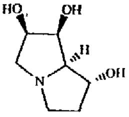
Tetrahedron Lett. 30,7261(1989

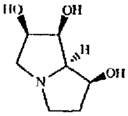
SYNTHESIS OF THE MANNOSIDASE INHIBITORS SWAINSONINE AND 1,4-DIDEOXY-1,4-IMINO-D-MANNITOL AND OF THE RING CONTRACTED SWAINSONINES, (1S, 2R, 7R, 7aR)-1,2,7-TRIHYDROXYPYRROLIZIDINE AND (1S, 2R, 7S, 7aR)-1,2,7-TRIHYDROXYPYRROLIZIDINE.

N. M. Carpenter,[a] G. W J. Fleet,[a] I Cenci di Bello,[b] B. Winchester,[b] L E Fellows,[c] R. J. Nash [c]
[a]Dyson Perrins Laboratory, Oxford University, South Parks Road, Oxford OX1 3QY, UK
[b]Department of Clinical Biochemistry, Institute of Child Health, 30 Guilford Street, London WC1N 1EH, UK
[c]Jodrell Laboratory, Royal Botanic Gardens, Kew, Richmond, Surrey TW9 3DS, UK.







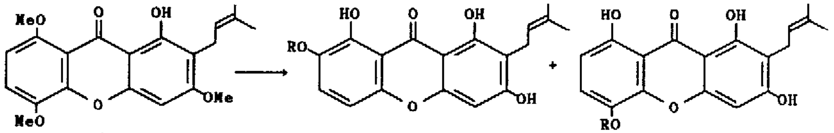


Tetrahedron Lett. 30,7265(1989)

REARRANGEMENT OF 1,3,5,8-TETRAOXYGENATED XANTHONES IN HOT AQUEOUS MORPHOLINE

Graham J. Bennett and Hiok-Huang Lee, Department of Chemistry
National University of Singapore, Singapore 0511

Treatment of 1 with hot aqueous morpholine gave a mixture of 2 and 3



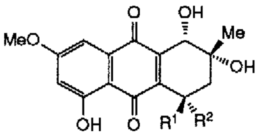
1 2 (R=H or Me) 3

Tetrahedron Lett. 30,7269(1989)

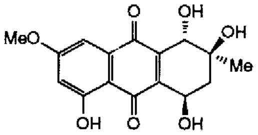
New Trihydroxylated Tetrahydroanthraquinones from Fungi of the Genus Dermocybe

C. J. Burns, M. Gill and A. Gimenez
Department of Organic Chemistry, University of Melbourne, Parkville, Victoria, Australia 3052

The pigments 6, 7 and 8, the first trihydroxylated tetrahydroanthraquinones from Basidiomycetes, have been isolated from an Australian toadstool belonging to Dermocybe; the absolute stereochemistry of each pigment is established by synthesis.



6 $R^1 = OH, R^2 = H$
7 $R^1 = H, R^2 = OH$



8