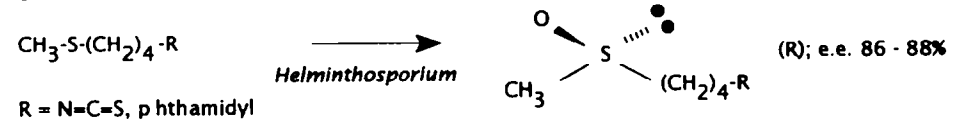
GRAPHICAL ABSTRACTS

Tetrahedron: Asymmetry **1994**, *5*, 1129

Preparation of (*R*)-sulforaphane by biotransformation using *Helminthosporium* species NRRL 4671

Herbert L. Holland, Frances M. Brown and Brett G. Larsen
Department of Chemistry, Brock University, Canada



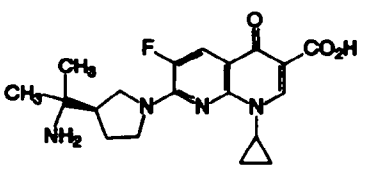
Biotransformation of prochiral sulfides by *Helminthosporium* species NRRL 4671

Tetrahedron: Asymmetry **1994**, *5*, 1131

An Efficient Method For The Synthesis of (*R*)-3-(1-Amino-1-methylethyl)pyrrolidines for the Antiinfective Agent, PD 138312.

Victor Fedij, Edward A. Lenoir III, Mark J. Suto, James R. Zeller, and James Wemple*
Parke-Davis Pharmaceutical Research Division, Warner Lambert Company, Holland, Michigan, 49424, USA

Abstract: Methylcerium dichloride has been found to undergo bis addition to nitriles to produce tertiary carbinamines with retention of optical purity at the *α* position. This result is used in the development of a short, economical synthesis of the 1,8-naphthyridine antiinfective agent, PD 138312.

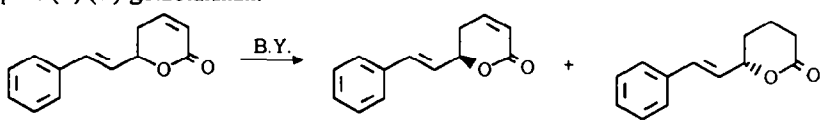


Tetrahedron: Asymmetry **1994**, *5*, 1135

Stereochemistry of Baker's Yeast Mediated Reduction of α,β-Unsaturated δ-Lactones in the Goniothalamin Series.

Claudio Fuganti, Giuseppe Pedrocchi-Fantoni, Antonella Sarra and Stefano Servi
Dipartimento di Chimica del Politecnico, CNR Centro di studio per le Sostanze Organiche Naturali, Via Mancinelli 7 20131 Milano Italy

B.Y. reduction of racemic α,β-unsaturated δ-lactones allows the obtainment of enantiomerically pure (+) (R)-goniotalamin.



Tetrahedron: Asymmetry **1994**, *5*, 1139

Synthesis of Enantiomerically Pure Juvenile Hormone II

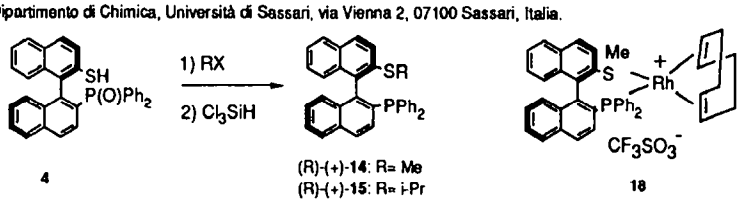
H. Kosugi,* O. Kanno, and H. Uda
Institute for Chemical Reaction Science, Tohoku University, Katahira, Sendai 980, JAPAN

Enantiomerically pure JH II can be synthesized based on the diastereoselective alkylation and carbonyl reduction of an enantiomerically β-keto sulfoxide.

Tetrahedron: Asymmetry **1994**, *5*, 1143

Novel Heterobidentate Ligands for Asymmetric Catalysis: Synthesis and Rhodium-Catalysed Reactions of S-Alkyl (R)-2-Diphenylphosphino 1-1'-binaphthyl-2'-thiol.

S. Gladiali, A. Dore and D. Fabbri
Dipartimento di Chimica, Università di Sassari, via Vienna 2, 07100 Sassari, Italia.



4

(R)-(+)-**14**: R= Me
(R)-(+)-**15**: R= i-Pr

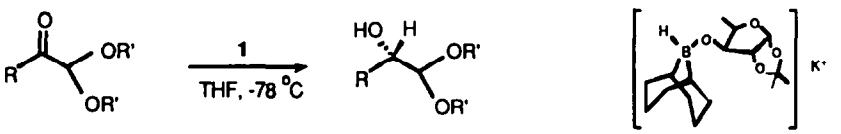
18

Synthesis of atropisomerically pure ligands **14**, **15** and complex **18** and their utilization in asymmetric hydroformylation of styrene and H-transfer reduction of acetophenone is described.

Tetrahedron: Asymmetry **1994**, *5*, 1147

Asymmetric Reduction of α-Keto Acetals with Potassium 9-*O*-(1,2-isopropylidene-5-deoxy-D-xylofuranosyl)-9-boratabicyclo[3.3.1]nonane. Enantioselective Synthesis of α-Hydroxy Acetals with High Optical Purities

Byung Tae Cho* and Yu Sung Chun, Department of Chemistry, Hallym University, Chunchon 200-702, Republic of Korea



87 - 99 % ee

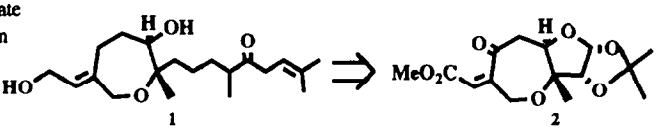
1

Tetrahedron: Asymmetry **1994**, *5*, 1151

An Enantiospecific Approach to an Oxepane related to Zoapatanol via a 1,3-Dipolar Cycloaddition

Tony K. M. Shing* and Ching-Hung Wong
Department of Chemistry, The Chinese University of Hong Kong, Shatin, Hong Kong.

Optically active oxepane **2**, which is a suitable intermediate for a synthesis of zoapatanol **1**, has been constructed from D-glucose involving an intramolecular nitrile oxide cycloaddtion as the key step.



1

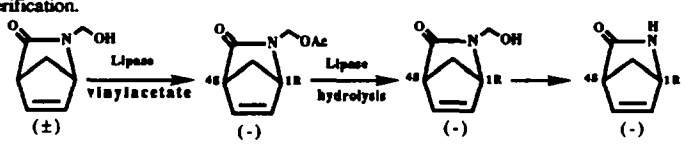
2

Tetrahedron: Asymmetry **1994**, *5*, 1155

A Facile Lipase-Catalyzed Resolution of 2-Azabicyclo-[2.2.1]hept-5-en-3-ones

Hiroto Nakano, Yuko Okuyama, Kazuto Iwasa, and Hiroshi Hongo*
Tohoku College of Pharmacy, 4-4-1 Komatsushima, Aoba-Ku, Sendai 981, Japan

Chiral 2-azabicyclo[2.2.1]hept-5-en-3-ones were obtained conveniently by lipase-catalyzed enantioselective transesterification.



(±)

(-)

(-)

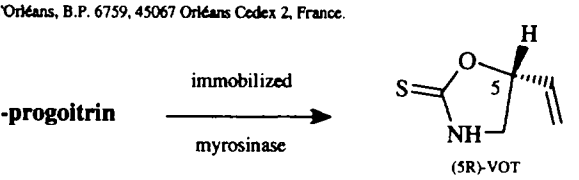
(-)

Preparation of (5R)-5-Vinyloxazolidine-2-thione from Natural Epi-Progoitrin Using Immobilized Myrosinase

Tetrahedron: Asymmetry **1994**, *5*, 1157

Onofrio Leoni[a], Christophe Marot[b], Patrick Rollin[b] and Sandro Palmieri[a]*
a/ Istituto Sperimentale per le Colture Industriali, via di Corticella 133, 40129 Bologna, Italy.
b/ Laboratoire de Chimie Bioorganique et Analytique, associé au CNRS, Université d'Orléans, B.P. 6759, 45067 Orléans Cedex 2, France.

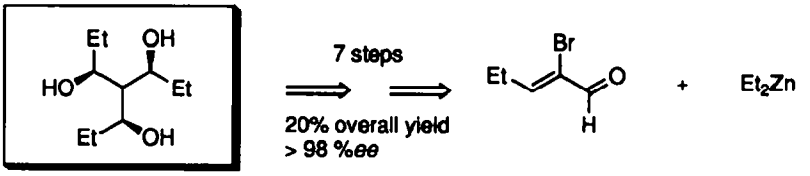
Enantiomerically pure (5R)-VOT was produced in high yield by hydrolysis of epi-progoitrin on immobilized myrosinase.



Enantioselective Preparation of a C_3 Symmetrical Triol

Tetrahedron: Asymmetry **1994**, *5*, 1161

Henning Lütjens and Paul Knochel*
Fachbereich Chemie der Philipps-Universität Marburg
D - 35032 Marburg, Germany

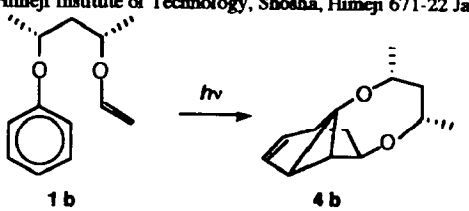


Regio- and Diastereo-Chemically Controlled Photocycloaddition of an Arene and an Alkene Linked by a Chiral Auxiliary.

Tetrahedron: Asymmetry **1994**, *5*, 1163

Takashi Sugimura, Norio Nishiyama, and Akira Tai , Faculty of Science, Himeji Institute of Technology, Kanaji, Kamigori, Ako-gun, Hyogo 678-12 Japan, Tadao Hakushi, Faculty of Engineering, Himeji Institute of Technology, Shosha, Himeji 671-22 Japan

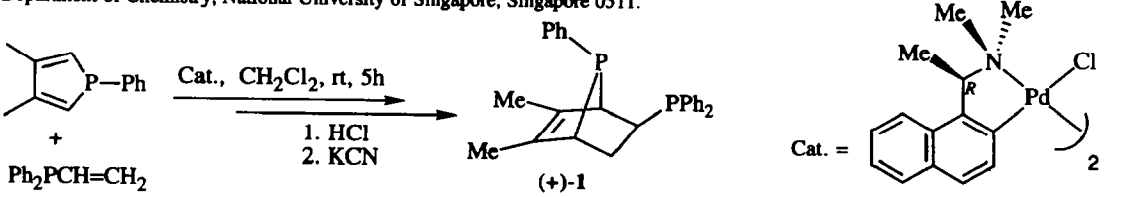
Intramolecular meta-arene-alkene photocycloaddition of **1 b** gave a single diastereomer **4 b**.



A Simple Route To An Enantiomerically Pure Diphosphine Ligand Containing a Phosphorus Stereogenic Centre

Tetrahedron: Asymmetry **1994**, *5*, 1167

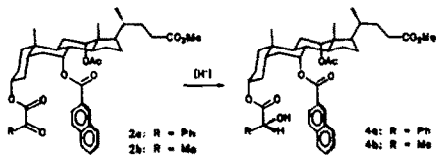
Beng-Hwee Aw and Pak-Hing Leung*
Department of Chemistry, National University of Singapore, Singapore 0511.



Tetrahedron: Asymmetry **1994**, *5*, 1171

Diastereoselective Reduction of α-Keto Esters Derived From Functionalised Cholic Acid

Uday Maitra* and Packiarajan Mathivanan
Department of Organic Chemistry, Indian Institute of Science, Bangalore 560 012, India

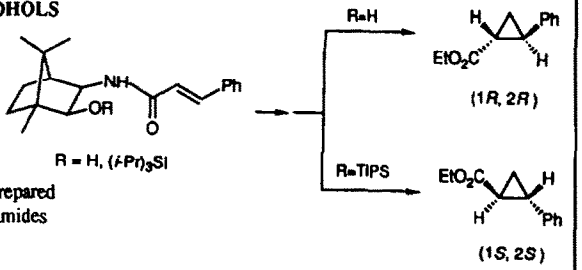


The reduction of phenylglyoxalate **2a** and pyruvate **2b** with $LiBH_4$ in THF at -80°C yield the corresponding α-hydroxy esters with ca. 70% diastereoselectivity.

Tetrahedron: Asymmetry **1994**, *5*, 1175

STEREOCONTROLLED CYCLOPROPANATION OF α,β-UNSATURATED CARBOXAMIDES DERIVED FROM BICYCLIC AMINO ALCOHOLS

Kazuhiko Tanaka, Hiroe Uno, Hideji Osuga, and Hitomi Suzuki
Department of Chemistry, Faculty of Science, Kyoto University
Kitashirakawa, Sakyo 606-01, Japan



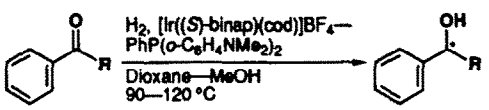
Both enantiomers of *trans*-2-phenylcyclopropanecarboxamides were prepared by the cyclopropanation of the diastereomeric α,β-unsaturated carboxamides derived from D-camphor.

Tetrahedron: Asymmetry **1994**, *5*, 1179

ENANTIOSELECTIVE HYDROGENATION OF ACYCLIC AROMATIC KETONES CATALYZED BY BINAP—Ir(I)—AMINOPHOSPHINE SYSTEMS

Xiaoyong Zhang, Hidenori Kumobayashi,† and Hidemasa Takaya*
Division of Material Chemistry, Graduate School of Engineering, Kyoto University, Sakyo-ku, Kyoto 606-01, Japan
†Central Research Laboratory, Takasago International Corporation, Nishiyawata, Hiratsuka, Kanagawa 254, Japan

Both *ee* and absolute configuration of the alcohol depend on the steric size of the alkyl groups of the ketones in the title reaction.



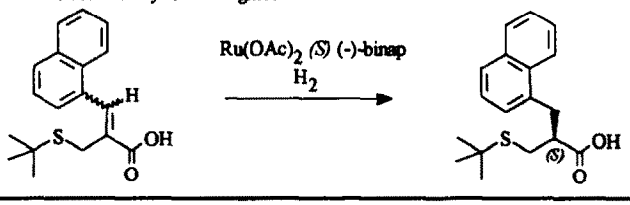
R	Me	*i*-Pr	*t*-Bu	*o*-C_3H_5	*o*-C_6H_{11}
% *ee*	40	84	19	33	79
config	*S*	*R*	*S*	*S*	*R*

Tetrahedron: Asymmetry **1994**, *5*, 1183

ASYMMETRIC C=C - HYROGENATION OF A SUBSTRATE WITH SULFUR FUNCTIONALITY. INFLUENCE OF SOLVENT AND SUBSTRATE CONFIGURATION ON ENANTIOSELECTIVITY.

Heiner Jendralla, Hoechst AG, Postfach 800320, D-65926 Frankfurt /M. 80, Germany

A substrate with sulfur functionality is asymmetrically hydrogenated. The influence of substrate configuration and the nature of the solvent on the enantioselectivity is investigated.

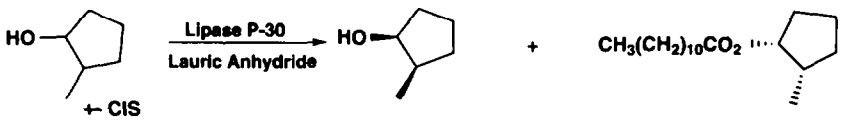


Tetrahedron: Asymmetry **1994**, *5*, 1187

SYNTHESIS OF (1-*S*) AND (1-*R*) *CIS* 2-METHYLCYCLOPENTANOLS THROUGH LIPASE MEDIATED RESOLUTION

Anthony R. Reinhold and Robert L. Rosati
Pfizer Central Research, Groton, CT

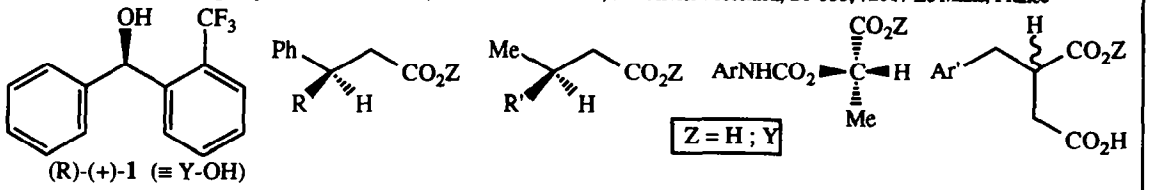
The lipase catalyzed enantioselective transacylation of ± *cis* 2-methylcyclopentanol is described.



Tetrahedron: Asymmetry **1994**, *5*, 1191

Determination of the Enantiomeric Excesses of Chiral Acids by ^{19}F Studies of their Esters deriving from (R)-(+)-2-(Trifluoromethyl)benzhydrol

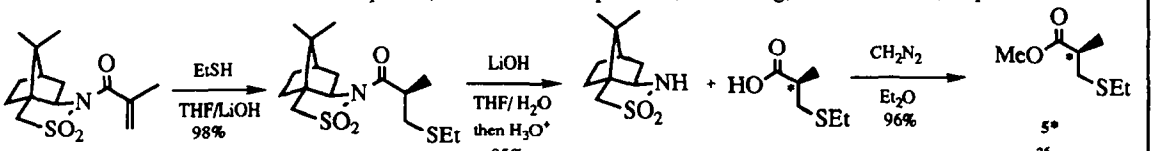
Eric Brown, Christelle Chevalier, François Huet, Christelle Le Grumelec, Antoine Lézé and Joël Touet
Laboratoire de Synthèse Organique (URA-CNRS 482, Faculté des Sciences, av. Olivier Messiaen, BP 535, 72017 Le Mans, France



Tetrahedron: Asymmetry **1994**, *5*, 1195

Asymmetric Michael Addition of Thiols to (1R,2R,4R)-(-)-2,10-*N*-Enoylcamphorsultam

Wen-Jiuan Tsai[a], Yi-Tsong Lin[b], and Biing-Jiun Uang[a]*,
[a]Department of Chemistry, National Tsing Hua University, Hsinchu, Taiwan 30043, Republic of China
[b]New Materials Research and Development, China Steel Corporation, Kaohsung, Taiwan 81233, Republic of China

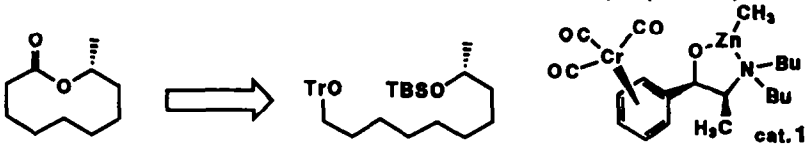


$[\alpha]_D^{25}$ +37.47
(*c* 2, $CHCl_3$)

Tetrahedron: Asymmetry **1994**, *5*, 1199

Catalytic Enantioselective Macrolide Synthesis II: Use of Differential Deprotection Protocols.

Graham B. Jones,* Brant J. Chapman, Robert S. Huber and Reeshemah Beaty. *Department of Chemistry, Clemson University, Clemson, USA.*



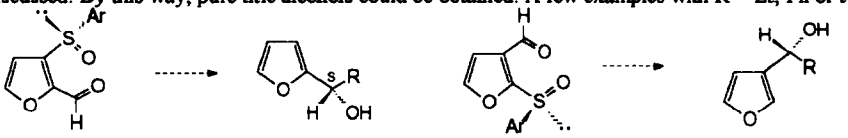
Catalytic enantioselective synthesis of R-(-) Phorcantholide I has been achieved *via* differentially protected 1,9 decanediol, using novel chiral alkylation catalyst **1** to introduce the required stereocenter.

Tetrahedron: Asymmetry **1994**, *5*, 1203

A New Synthetic Route to Optically Active α-Alkyl-2 and -3-Furyl carbinols by Intramolecular Diastereoselectivity

LAURENT D. GIRODIER and FRANCIS P. ROUESSAC, Laboratoire de Synthèse Organique – URA 482 du CNRS, Faculté des Sciences, Université du Maine, 72017 Le Mans CEDEX, France

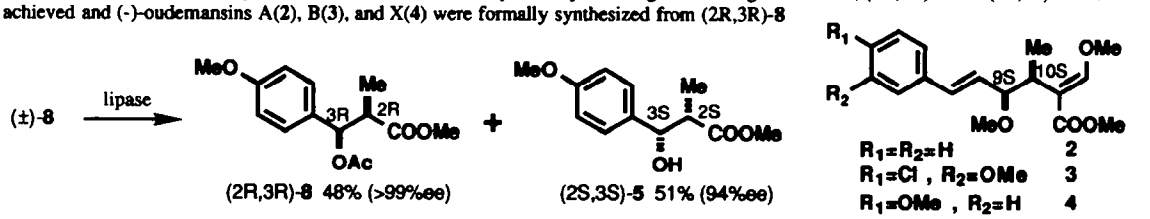
Asymmetric induction in the addition of organometallic compounds (M = Li, Mg, Ti) to optically active furaldehydes shown is discussed. By this way, pure title alcohols could be obtained. A few examples with R = Et, Ph or t-Bu are given.



Tetrahedron: Asymmetry **1994**, *5*, 1207

A Highly Stereoselective Synthesis of the Versatile Chiral Synthons Possessing Two Stereogenic Centers, The Formal Total Synthesis of (-)-Oudemansins A, B, and X. Hiroyuki Akita*, Cheng Yu Chen and Shinji Nagumo, School of Pharmaceutical Science, Toho University, 2-2-1 Miyama, Funabashi, Chiba, 274, Japan

A highly stereoselective synthesis of the versatile chiral synthons possessing two stereogenic centers, (2R,3R)-8 and (2S,3S)-8 was achieved and (-)-oudemansins A(2), B(3), and X(4) were formally synthesized from (2R,3R)-8



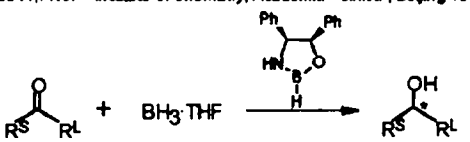
Tetrahedron: Asymmetry **1994**, *5*, 1211

Enantioseletive Reduction of Ketones Catalyzed by new (4S,5R)-4,5-Diphenyl-1,3,2-oxazaborolidine

Jiang Yaozhong[1], Qin Yong[1], Mi Aiqiao[1], and Huang Zhitang[2]

[1]Chengdu Institute of Organic Chemistry,Academia Sinica,Chengdu 610041,PRC. [2]Institute of Chemistry, Academia Sinica, Beijing 100080, PRC

In the presence of 20mol% 1, enantioselectivities with e.e. range from 79.3 to >99% for aromatic ketones have been achieved.

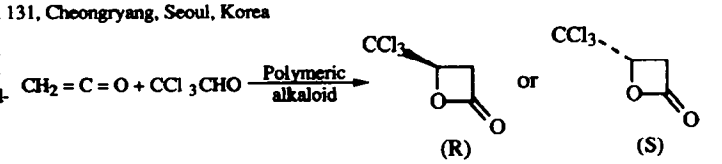


Tetrahedron: Asymmetry **1994**, *5*, 1215

Polymeric Cinchona Alkaloids as Catalysts in the Enantioselective 2,2 -Cycloaddition Reaction of Ketene and Chloral

Choong Eui Song, *Tae Hee Ryu, Eun Joo Roh, In O Kim and Hyun-Joon Ha
Korea Institute of Science and Technology, P.O.Box 131, Cheongryang, Seoul, Korea

Enantioselective cycloaddition of ketene and chloral for the preparation of (*R*)-or-(*S*)-β-(trichloromethyl)-β-propiolactone catalyzed by poly(cinchona alkaloid-*co*-acrylonitrile) **1a-d** or poly(cinchona alkaloid acrylate) **2a-b** is described.



Tetrahedron: Asymmetry **1994**, *5*, 1219

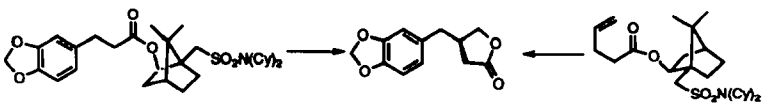
ENANTIOSELECTIVE SYNTHESIS OF (R)-(+)-β-PEPERONYL-γ-BUTYROLACTONE.

H.C.A. Filho[a], U.F.L. Filho[b], S. Pinheiro[c], M.L.A.A. Vasconcellos[b] and P.R.R. Costa[b].

[a] Escola Tecnica Federal de Quimica - Rio de janeiro, RJ, Brazil.

[b] Nucleo de Pesquisas de Produtos Naturais - Universidade Federal do Rio de Janeiro - Centro de Ciencias da Saude, Bloco H, Ilha da Cidade Universitaria - 21941 - Rio de Janeiro, RJ, Brazil.

[c] Departamento de Quimica Organica, Instituto de Quimica, Universidade Federal Fluminense, Niteroi, RJ. Brazil

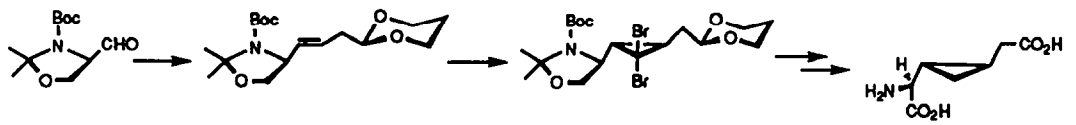


Tetrahedron: Asymmetry **1994**, *5*, 1221

Asymmetric Synthesis of the Natural Diastereoisomer of *trans*-α-(2-Carboxymethylcyclopropyl)glycine isolated from *Blighia unijugata*

Carmen Alcaraz and Manuel Bernabé

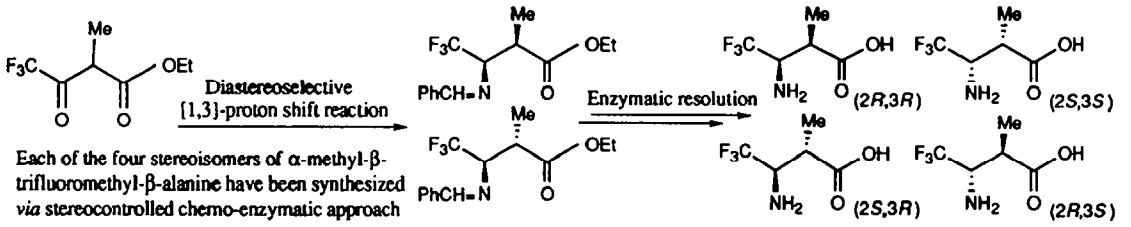
Instituto de Química Orgánica, CSIC, Juan de la Cierva 3, 28006-Madrid (Spain)



Chemo-Enzymatic Approach to the Synthesis of Each of the four Isomers of α-Alkyl-β-Fluoroalkyl-Substituted β-Amino acids

Tetrahedron: Asymmetry **1994**, *5*, 1225

V. A. Soloshonok* *Catalysis Research Center, Hokkaido University, Sapporo 060, Japan;* A. G. Kirilenko, S. V. Galushko V. P. Kukhar *Institute of Bioorganic Chemistry and Petrochemistry, Ukrainian Academy of Sciences, Kiev 253160, Ukraine;* V. K. Švedas *A. N. Belozersky Institute of Physical-Chemical Biology, Moscow University, Moscow 119899, Russia;* G. Resnati *Dipartimento di Chimica, Politecnico di Milano, Milano 20131, Italy.*



Each of the four stereoisomers of α-methyl-β-trifluoromethyl-β-alanine have been synthesized *via* stereocontrolled chemo-enzymatic approach

Tetrahedron: Asymmetry **1994**, *5*, 1229

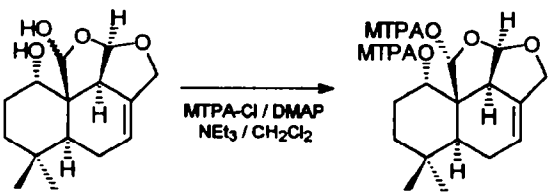
DETERMINATION OF THE ABSOLUTE CONFIGURATION OF A TETRACYCLIC DRIMANE SESQUITERPENOID BY MOSHER'S METHOD

Robert Velten[a], Wolfgang Steglich[a,*] and Timm Anke[b]

[a] Institut für Organische Chemie der Ludwig-Maximilians-Universität, Karlstr. 23, D-80333 München, Germany

[b] Lehrbereich Biotechnologie der Universität, Paul-Ehrlich-Str. 23, D-67663 Kaiserslautern, Germany

High field NMR application of the Mosher Method has been successfully applied to determine the absolute configuration of a tetracyclic dihydroxydrimane derivative

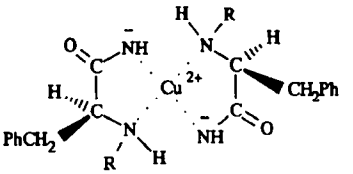


Tetrahedron: Asymmetry **1994**, *5*, 1233

CHIRAL MOLECULAR LAMINATES: CRYSTAL STRUCTURES OF BIS(N^2-n-ALKYL-(S)-PHENYLALANINAMIDATO)COPPER(II) COMPLEXES

Gianni Galaverna[a], Giorgio Pelosi[b], Giovanna Gasparri Fava*[,b], Marisa Belicchi Ferrari[b], Arnaldo Dossena[a] and Rosangela Marchelli*[,a]
[a]Dipartimento di Chimica Organica e Industriale and [b]Dipartimento di Chimica Generale ed Inorganica, Chimica Analitica e Chimica Fisica e Centro di Studio per la Strutturistica Diffrattometrica del CNR, Università di Parma, Viale delle Scienze, 43100 Parma, Italy.

Bis(N^2-n-alkyl-(S)-phenylalaninamidato)copper(II) complexes (1) and (2), which are used successfully as chiral selectors in RP-HPLC, present an interesting bilayer structure in the solid state.



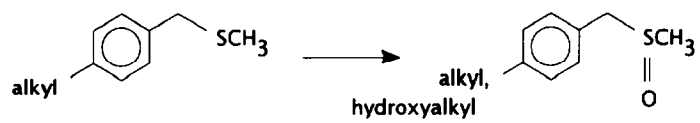
(1): R = C_8H_{17}

(2): R = $C_{12}H_{25}$

Tetrahedron: Asymmetry **1994**, *5*, 1241

Formation of Chiral *para*-Alkyl Benzyl Methyl Sulfoxides by *Helminthosporium* species NRRL 4671

Herbert L. Holland, Frances M. Brown and Brett G. Larsen
Department of Chemistry, Brock University, St. Catharines, Ontario, Canada



(*S*) configurations
Yields 4-77%
E.e.'s 26-95%

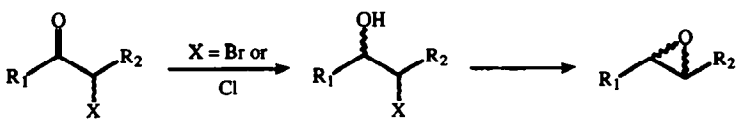
Biotransformation by *Helminthosporium* species NRRL 4671

Tetrahedron: Asymmetry **1994**, *5*, 1249

CHEMOENZYMATIC SYNTHESIS OF CHIRAL EPOXIDES. PREPARATION OF 4-PHENYL-2,3-EPOXYBUTANE AND 1-PHENYL-1,2-EPOXYPROPANE.

P. Besse, M.F. Renard and H. Veschambre, URA 485 du CNRS, Université Blaise Pascal, 63177 Aubière Cedex, France.

Synthesis of all the chiral isomers of 4-phenyl-2,3-epoxybutane and 1-phenyl-2,3-epoxypropane from chiral α-halohydrins.



$R_1 = CH_3$ or Phenyl; $R_2 = CH_3$, Phenyl or Benzyl

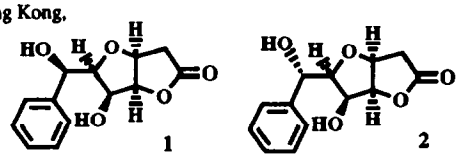
$R_1 = CH_3$, R_2 = Phenyl or Benzyl

Tetrahedron: Asymmetry **1994**, *5*, 1269

Enantiospecific Syntheses of (3*S*,4*R*)- and (3*S*,4*R*,7*S*)-Diastereoisomers of Goniofufurone

Tony K. M. Shing* and Hon-Chung Tsui
Department of Chemistry, The Chinese University of Hong Kong, Shatin, Hong Kong.

D-Mannose has been converted into (3*S*,4*R*)- and (3*S*,4*R*,7*S*)-diastereoisomers of goniofufurone 1 and 2 in seven steps.

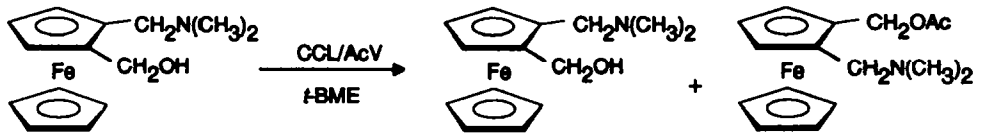


1 2

Tetrahedron: Asymmetry **1994**, *5*, 1275

Enzyme-promoted Kinetic Resolution of 1-Hydroxymethyl-2-dimethylaminomethylferrocene

Giovanni Nicolosi*, Angela Patti, Raffaele Morrone and Mario Piattelli
Istituto CNR Studio Sostanze Naturali, Via del Santuario 110, 95028 Valverde CT, Italy

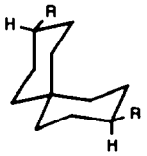


Lipase from *Candida cylindracea* catalysed enantioselective transesterification of title compound

Tetrahedron: Asymmetry **1994**, *5*, 1281

Preparation of Optically Active 3,9-disubstituted Spiro[5.5]undecane Derivatives and the Determination of their Absolute Configuration

U. Böhm, G. Voss, G. Möller and H. Gerlach
Laboratory of Organic Chemistry, University of Bayreuth, D-95440 Bayreuth, Germany



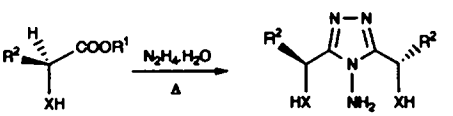
(*aS*) - (–) - **1** R = $-CO_2H$ (*aS*) - (–) - **5** R = $-CH_2Br$ (*aS*) - (–) - **9** R = - OH
(*aS*) - (–) - **2** R = $-CO_2Me$ (*aS*) - (–) - **6** R = - Me (–) - **12** R = (1*S*,4*R*)-camphanoyl-OCH_2-
(*aS*) - (–) - **3** R = $-CH_2OH$ (*aS*) - (+) - **7** R = 4-$MeOC_6H_4$- (+) - **14** R = (1*S*,4*R*)-camphanoyl-OC_6H_4-
(*aS*) - (–) - **4** R = -COMe (*aS*) - (+) - **8** R = 4-HOC_6H_4-

Tetrahedron: Asymmetry **1994**, *5*, 1291

PREPARATION AND ENANTIOMERIC PURITY DETERMINATION OF NEW CHIRAL C_2 BUILDING BLOCKS BASED ON THE 4-AMINO-1,2,4-TRIAZOLE UNIT

M.V. Martínez-Díaz, J. de Mendoza, F. Santos and T. Torres*
Dept. de Química (C-I). Universidad Autónoma de Madrid. 28049-Madrid, Spain.

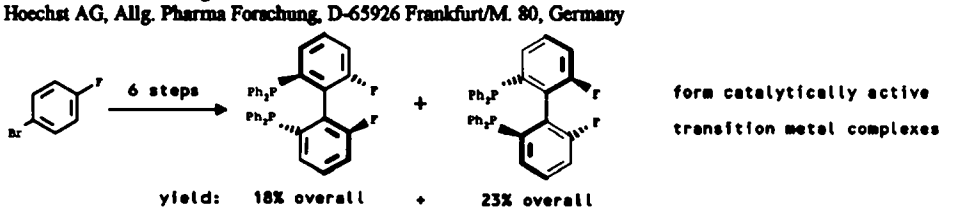
Several new chiral synthons based on the 4-amino-1,2,4-triazole moiety have been prepared by condensation of optically active α-hydroxy- and α-aminoacids with hydrazine. A general method for the determination of the enantiomeric purity of chiral 4-amino-3,5-disubstituted-1,2,4-triazoles based on their oxidation with LTA is described.



Tetrahedron: Asymmetry **1994**, *5*, 1297

Efficient Synthesis of (*R*)- and (*S*)-(6,6'-Difluorobiphenyl-2,2'-diyl)-bis(diphenylphosphine); *Electron-Poor* Biphenyl-Type Ligands for Transition Metal Catalysts.

Heiner Jendralla,* Chang Hua Li and Erich Paulus
Hoechst AG, Allg. Pharma Forschung, D-65926 Frankfurt/M. 80, Germany

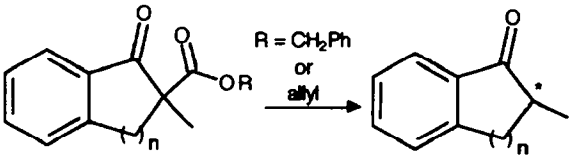


Tetrahedron: Asymmetry **1994**, *5*, 1321

Production of Optically Active Ketones by a Palladium-Induced Cascade Reaction from Racemic β-Ketoesters.

Said Jamal Aboulhoda, Françoise Hénin, Jacques Muzart, Claire Thorey Université de Reims Champagne-Ardenne, France, *Willi Behnen, Jürgen Martens, Thomas Mehler* Universität Oldenburg, Germany.

Multistep reaction from benzyl and allyl β-ketoesters: palladium-catalyzed cleavage / decarboxylation / chiral aminoalcohol-mediated enantioselective protonation.

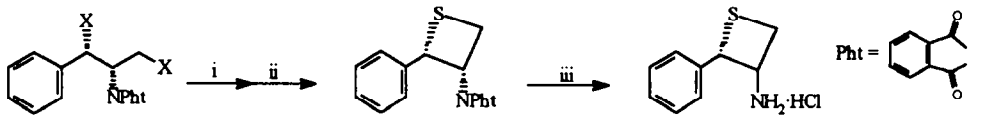


Tetrahedron: Asymmetry **1994**, *5*, 1327

SYNTHESIS OF (2S,3S)-3-AMINO-2-PHENYLTHIETANE

Maria D. Rozwadowska
Faculty of Chemistry, A.Mickiewicz University,60-780 Poznań, Poland

The synthesis of (2S,3S)-3-amino-2-phenylthietane from (1S,2S)-2-amino-1-phenyl-1,3-propanediol *via* the corresponding ditosyl ester or diiodide



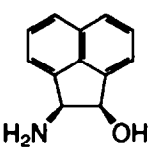
X = OTos, I

(i) EtOCSSK/acetone; (ii) Ac_2O/PyH; (iii) N_2H_4/n-butanol

Tetrahedron: Asymmetry **1994**, *5*, 1333

The Chiral Amino Alcohol, *cis*-2-Amino-1-acenaphthenol: Synthesis, Resolution, and Application to the Diastereoselective [2,3]-Wittig Rearrangement

Atsushi Sudo, Yukihiko Hashimoto, Hiroki Kimoto, Kazuhiro Hayashi, and Kazuhiko Saigo*, Department of Chemistry and Biotechnology, Faculty of Engineering, The University of Tokyo, Hongo, Bunkyo-Ku, Tokyo 113, Japan

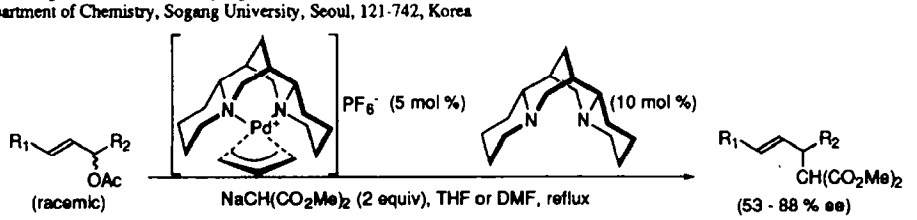


The chiral amino alcohol, *cis*-2-amino-1-acenaphthenol, was synthesized, and resolved by a simple procedure, and applied as a chiral auxiliary to the asymmetric [2,3]-Wittig rearrangement.

Tetrahedron: Asymmetry **1994**, *5*, 1347

(-)-α-Isosparteine as a Chiral Ligand in Asymmetric Allylic Alkylation

Jahyo Kang, Won Oh Cho and Hyung Geun Cho
Department of Chemistry, Sogang University, Seoul, 121-742, Korea

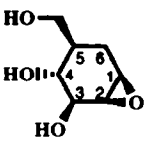


Tetrahedron: Asymmetry **1994**, *5*, 1353

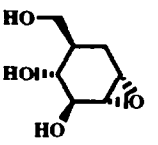
Synthesis and Glycosidase-Inhibitory Activity of Cyclophellitol Analogues

Vincent W.-F. Tai,[a] P.-H. Fung,[b] Y.-S. Wong[b] and Tony K. M. Shing[a]*
[a]Department of Chemistry, The Chinese University of Hong Kong, Shatin, Hong Kong. [b]Department of Biology, The Chinese University of Hong Kong, Shatin, Hong Kong.

The 6-deoxy-1,2-anhydro-analogues of cyclophellitol, **5** and **6**, have been synthesised from (-)-quinic acid. Compounds **5**, **6**, cyclophellitol **1** and its diastereoisomers **2-4** were assayed for inhibitory activity against six glycosidases.



5

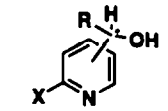


6

Tetrahedron: Asymmetry **1994**, *5*, 1363

Preparation of 1-Pyridinylethanols of High Enantiomeric Purity by Lipase Catalysed Transesterifications

Christian Orrenius[1], Anders Mattson[1], Niklas Öhrner[2], Karl Hult[2], Torbjörn Norin[1]
[1]Department of Chemistry, Organic Chemistry [2]Department of Biochemistry and Biotechnology
Royal Institute of Technology, S-100 44 Stockholm, Sweden



R= Me X= Br, H

1. S-Thiooctanoate
2. *Candida antarctica* B lipase
3. equilibrium displacement

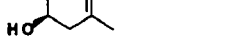
→ (*R*)-ester + (*S*)-alcohol

Tetrahedron: Asymmetry **1994**, *5*, 1367

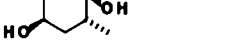
J.A. Haugan, P. Kongsaeree, J. Clardy and S. Liaaen-Jensen

Total synthesis of acetylenic carotenoids. 1. Synthesis of optically active 2-*E*-5-(4*R*)-4-hydroxy-2,6,6-methylcyclohex-1-enyl)-3-methyl-2-penten-4-yn-1-al, a C_{15}-synthon.

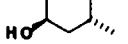
The title compound **A** was synthesized in the optically active form in seven steps via **B** from (4*R*,6*R*)-actinol (**C**) in 34% overall yield. The relative configuration of the C_{15}-key intermediate acetylenic triol, 2-*E*-5-((1*S*,4*R*,6*R*)-1,4-dihydroxy-2,2,6-trimethylcyclohexyl)-3-methyl-2-penten-4-yn-1-ol (**B**), was determined by X-ray crystallographic analysis.



A



B



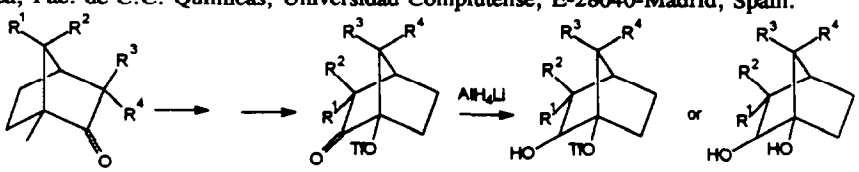
C

Tetrahedron: Asymmetry **1994**, *5*, 1373

Synthesis of Homochiral 1,2-Diols from (-)-fenchone and (+)-camphor

A. García Martínez, E. Teso Vilar, A. García Fraile,
S. de la Moya Cerero, L.R. Subramanian
Dpto. Quím. Orgánica, Fac. de C.C. Químicas, Universidad Complutense, E-28040-Madrid, Spain.

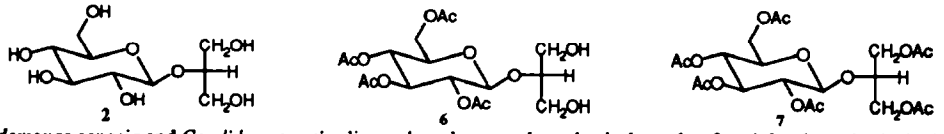
R^1	R^2	R^3	R^4
H	H	CH_3	CH_3
CH_3	CH_3	H	H



Tetrahedron: Asymmetry **1994**, *5*, 1377

Regio- and Diastereoselective Lipase-Catalyzed Preparation of Acetylated 2-*O*-Glucosylglycerols

Diego Colombo,[a] Fiamma Ronchetti,[a]* Antonio Scala,[a] Ida M. Taino,[a] Franca Marinone Albini,[b] and Lucio Toma[b]
[a] Dipartimento di Chimica e Biochimica Medica, Università di Milano, Via Saldini 50, 20133 Milano, Italy
[b] Dipartimento di Chimica Organica, Università di Pavia, Via Taramelli 10, 27100 Pavia, Italy



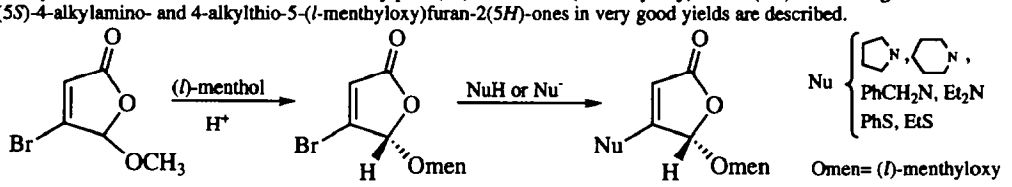
Pseudomonas cepacia and *Candida antarctica* lipases have been used to selectively acylate **2** and **6** and to selectively deacylate **7**.

Tetrahedron: Asymmetry **1994**, *5*, 1385

SYNTHESIS OF HOMOCHIRAL POLYFUNTIONALIZED FURAN-2(5*H*)-ONES

M. Rosario Martín* and Ana I. Mateo
Departamento de Química, Universidad Autónoma de Madrid, Cantoblanco, 28049 Madrid, Spain.

The synthesis of enantio- and diastereomerically pure (5*S*)-4-bromo-5-(*l*-menthyloxy)furan-2(5*H*)-one and a general method to obtain (5*S*)-4-alkylamino- and 4-alkylthio-5-(*l*-menthyloxy)furan-2(5*H*)-ones in very good yields are described.



Tetrahedron: Asymmetry **1994**, *5*, 1393

ENANTIOMERICALLY PURE GUANIDINE-CATALYSED ASYMMETRIC NITROALDOL REACTION

Rafael Chinchilla, Carmen Nájera, and Pablo Sánchez-Agulló
Departamento de Química Orgánica, Facultad de Ciencias, Universidad de Alicante, 03080 Alicante, Spain