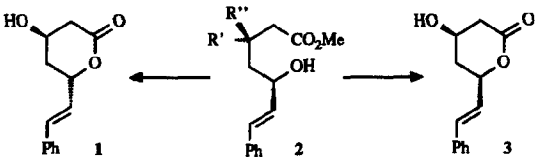
Tetrahedron: Asymmetry **1993**, *4*, 153

ENZYME-CATALYZED LACTONIZATION OF METHYL (±)-(*E*)-3,5-DIHYDROXY-7-PHENYL-6-HEPTENOATES. - A COMPARISON OF THE BEHAVIOUR OF *SYN*- AND *ANTI*-COMPOUNDS

Birgitta Henkel, Annamarie Kunath and Hans Schick*
Centre of Selective Organic Synthesis, Rudower Chaussee 5, D(O)-1199 Berlin-Adlershof, Germany

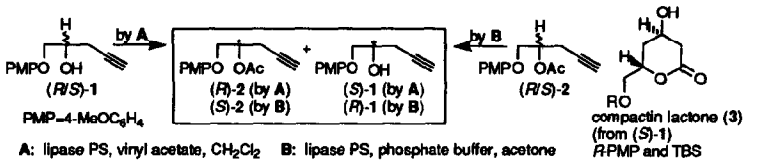
Pancreatin catalyzes the preferential formation of the (3*R*,5*S*)-lactone 1 from the *syn*-diol *rac*-2 (R' = OH; R'' = H), whereas the lipase from *Candida sp. 382* gives rise to the preferential formation of the (3*R*,5*R*)-lactone 3 from the the *anti*-diol *rac*-2 (R' = H; R'' = OH).



Tetrahedron: Asymmetry **1993**, *4*, 157

ENANTIOCOMPLEMENTARY RESOLUTION OF 4-HYDROXY-5-(4-METHOXYPHENOXY)-1-PENTYNE USING THE SAME LIPASE

Seiichi Takano,* Masaki Setoh, and Kunio Ogasawara
Pharmaceutical Institute, Tohoku University, Aobayama, Sendai 980, Japan



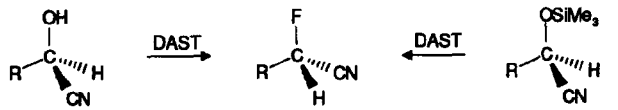
A: lipase PS, vinyl acetate, CH_2Cl_2 B: lipase PS, phosphate buffer, acetone

Tetrahedron: Asymmetry **1993**, *4*, 161

PREPARATION OF 2-FLUORONITRILES

Franz Effenberger* and Uwe Stelzer
Institut für Organische Chemie, Universität Stuttgart, Germany

2-Fluoronitriles were obtained from unprotected or *O*-trimethylsilyl-protected cyanohydrins by fluorination with DAST or by substitution of α-sulfonyloxynitriles with fluoride.

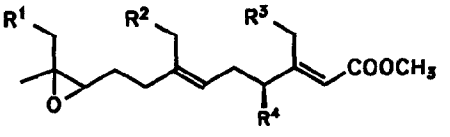


R = n-C_3H_7 , n-C_4H_9 , $(CH_3)_2CHCH_2$, c-C_6H_{11} , C_6H_5

Tetrahedron: Asymmetry **1993**, *4*, 165

DIRECT GAS CHROMATOGRAPHIC ENANTIOMERIC RESOLUTION OF JUVENILE HORMONES I - III

Wilfried A. König*[1], Bärbel Gehrcke[1], Martin G. Peter[2] and Glenn D. Prestwich[3]
[1]Institut für Organische Chemie, Universität Hamburg, D-2000 Hamburg 13, FRG
[2]Institut für Organische Chemie, Universität Bonn, D-5300 Bonn 1, FRG
[3]Department of Chemistry, State University of New York, Stony Brook, NY



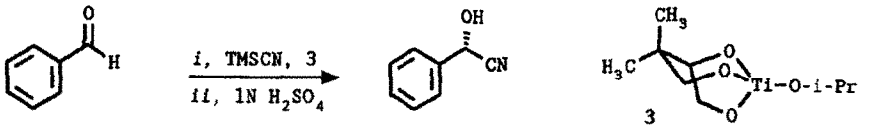
$R^1 = R^2 = R^3 = R^4 = H$ (JH-III)
$R^1 = CH_3$, $R^2 = R^3 = R^4 = H$ (JH-II)
$R^1 = R^2 = CH_3$, $R^3 = R^4 = H$ (JH-I)

Tetrahedron: Asymmetry **1993**, *4*, 185

(S)-3,3-Dimethyl-1,2,4-Butanetriol as Ligand for Titanium Catalysed Silylcyanation

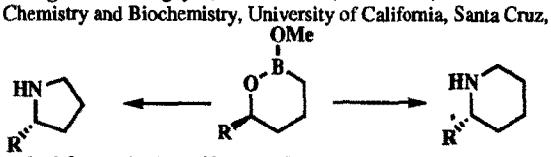
Dominique Callant, Dirk Stanssens and Johannes G. de Vries*
DSM-Research, Dept. CP-IM, p.o. box 18, 6160 MD Geleen, The Netherlands

Asymmetric silylcyanation of benzaldehyde in up to 76% e.e. was catalysed by 3



Tetrahedron: Asymmetry **1993**, *4*, 189

Enantiospecific Synthesis of *N*-Benzyl-2-alkyl Pyrrolidines and Piperidines Mediated by Chiral Organoborane Reagents. Tom Nguyen, Dan Sherman, David Ball, Michael Solow and Bakthan Singaram*
Department of Chemistry and Biochemistry, University of California, Santa Cruz, Santa Cruz,CA 95064, USA



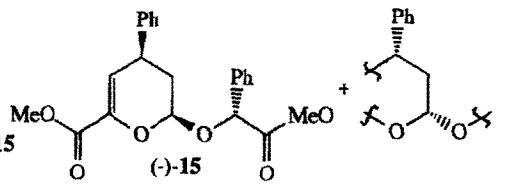
A new general method for synthesizing *N*-benzyl-2-alkylpyrrolidines and *N*-benzyl-2-alkylpiperidines, having very high enantiomeric excess, has been achieved starting from aldehydes and organoborane reagents.

Tetrahedron: Asymmetry **1993**, *4*, 193

ASYMMETRIC SYNTHESES OF SUBSTITUTED DIHYDROPYRANS BY DIELS-ALDER HETEROCYCLOADDITIONS INVOLVING CHIRAL VINYL ETHERS AS DIENOPHILES

Gilles Dujardin, Samira Molato and Eric Brown
Faculté des Sciences, avenue Olivier Messiaen, BP535, 72017 Le Mans, France

Methyl E-benzylidenepyruvate **1** reacted with methyl (R)-(-)-2-vinyloxyphenylacetate **8b** in the presence of $Eu(fod)_3$ as a catalyst, and gave the *endo* adduct (-)-**15** in 83% yield and with 72% diastereomeric excess.

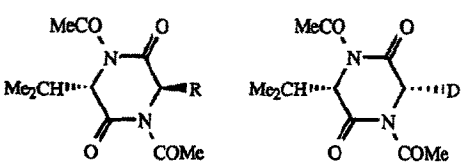


Tetrahedron: Asymmetry **1993**, *4*, 197

A NEW α-HALOGLYCINE TEMPLATE FOR THE ASYMMETRIC SYNTHESIS OF AMINO ACID DERIVATIVES

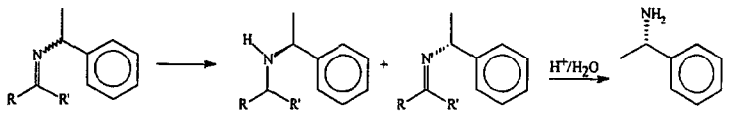
Terry W. Badran, Christopher J. Easton,* Ernst Horn, Katherine Kociuba, Bruce L. May, Darren M. Schliebs, and Edward R. T. Tiekink
Departments of Chemistry, University of Adelaide, GPO Box 498, Adelaide, South Australia 5001, and Chemicals Analysis and Standards Division, National Chemical Laboratory, Tsukuba, Ibaraki 305, Japan

The bromide (**1a**) reacted diastereoselectively with allyltributyltin and deuterium over palladium chloride to give the corresponding α-allyl- and α-deuterio-glycine derivatives (**1b**) and (**2**), respectively.



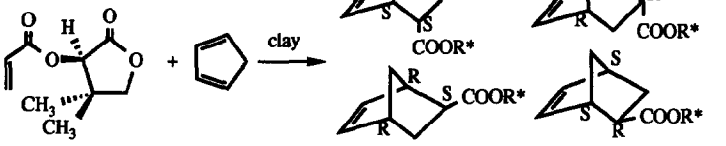
(1a) R = Br
(1b) R = $CH_2CH{=}CH_2$

(2)

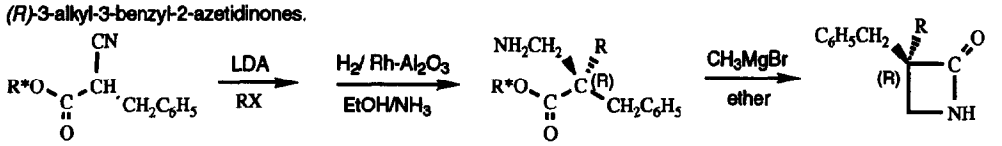


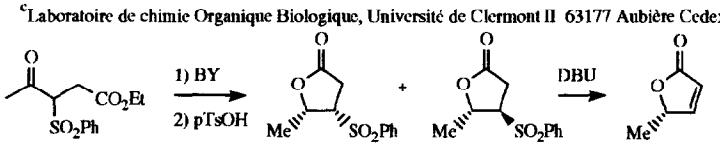
(-)-Menthol and (R)-pantolactone behave as complementary chiral auxiliaries in clay-catalysed Diels-Alder reactions.

endo/exo = 95:5
53% d.e.
(1S,2S,4S) major cycloadduct



Diastereoselective alkylation of chiral 2-cyanoesters, subsequent reduction and cyclization of the β-aminoesters gave *(R)*-3-alkyl-3-benzyl-2-azetidinones.



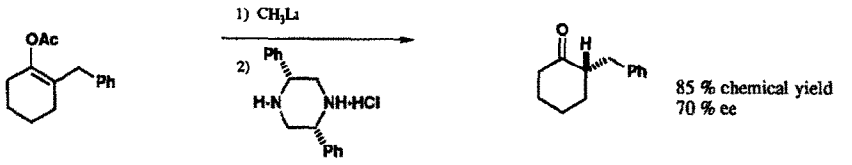


HYDROCHLORIDE OF CHIRAL PIPERAZINE AS A CHIRAL PROTON SOURCE

Tetrahedron: Asymmetry **1993**, *4*, 247

Kaoru Fuji,* Kiyoshi Tanaka and Hisashi Miyamoto
Institute for Chemical Research, Kyoto University, Uji 611, Japan

Asymmetric protonation utilizing hydrochlorides of chiral 2,5-diphenylpiperazine derivatives

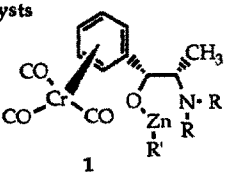


Tetrahedron: Asymmetry **1993**, *4*, 261

Catalytic Asymmetric Induction Part 2: Chiral Tricarbonyl (η6 arene) Chromium (0) Complexes as Enantioselective Catalysts

Graham B. Jones* and Steven B. Heaton, Department of Chemistry, Clemson University, Clemson, SC 29634 - 1905 U.S.A.

Catalysts of type **1** mediate the addition of diethyl zincs to aldehydes in >99% e.e.

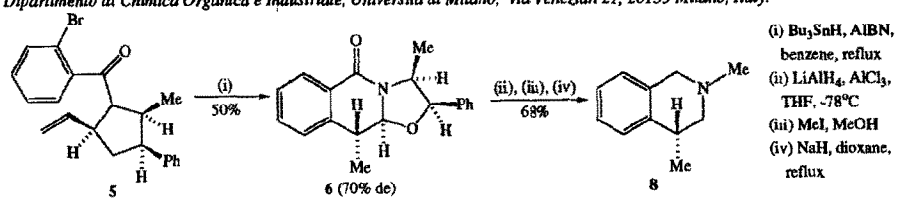


1

Tetrahedron: Asymmetry **1993**, *4*, 273

Stereoselective Radical-Mediated Cyclization of Norephedrine Derived *o*-Bromobenzamides: Enantioselective Synthesis of 4-Substituted 1,2,3,4-Tetrahydroisoquinolines

Laura Belvisi, Cesare Gennari, Giovanni Poli, Carlo Scolastico*, and Barbara Salom,*
Dipartimento di Chimica Organica e Industriale, Universita di Milano, via Venezian 21, 20133 Milano, Italy.



5 **6** (70% de) **8**