Phosphonite ligands for enantioselective copper(I)-catalysed conjugate addition of diethylzinc to enones

Tetrahedron: Asymmetry *12 (2001) 2497*

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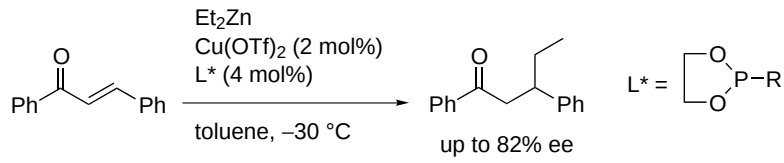
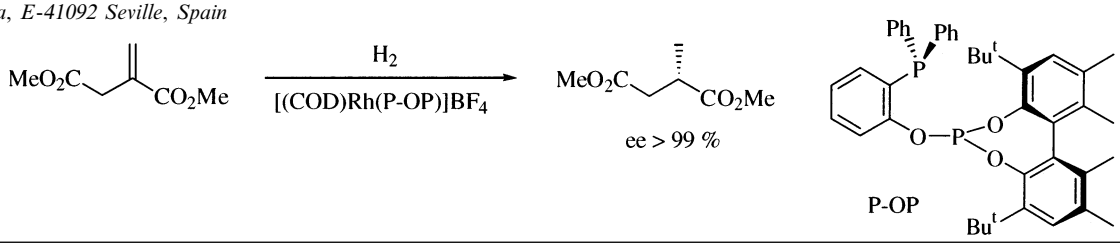


New chiral phosphine–phosphites: a convenient synthesis based on the demethylation of *o*-anisyl phosphines and application in highly enantioselective catalytic hydrogenations

Tetrahedron: Asymmetry *12 (2001) 2501*

Andrés Suárez and Antonio Pizzano*

Instituto de Investigaciones Químicas, Consejo Superior de Investigaciones Científicas-Universidad de Sevilla, c/ Américo Vespucio s/n, Isla de la Cartuja, E-41092 Seville, Spain



L-Selective dipeptide synthesis using novel thermophilic enzyme from *Clostridium* sp.

Tetrahedron: Asymmetry *12 (2001) 2505*

J. S. Yadav,[a,*] H. M. Meshram,[a] A. R. Prasad,[a] Y. S. S. Ganesh,[a] A. Bhaskar Rao,[a] G. Seenayya,[b] M. V. Swamy[b] and M. Gopal Reddy[b]

[a]*Organic Division I, Indian Institute of Chemical Technology, Hyderabad 500 007, India*
[b]*Department of Microbiology, Osmania University, Hyderabad 500 007, India*

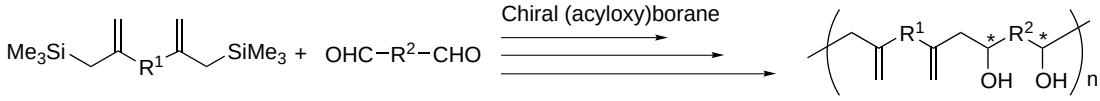
A novel, inexpensive, thermophilic protease type enzyme isolated from *Clostridium* species was used for dipeptide synthesis. The enzyme shows broad substrate selectivity and enantioselectivity towards L-amino acids for peptide bond formation.

Asymmetric allylation polymerization of bis(allylsilane) and dialdehyde containing Si–phenyl linkage

Tetrahedron: Asymmetry *12 (2001) 2509*

Toshihiro Kumagai and Shinichi Itsuno*

Department of Materials Science, Toyohashi University of Technology, Tempaku-cho, Toyohashi 441-8580, Japan

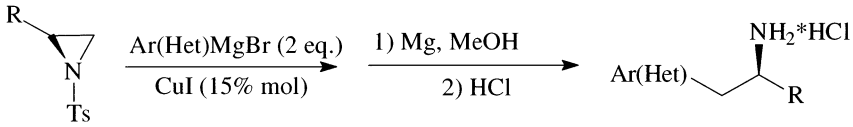


Tetrahedron: Asymmetry *12 (2001) 2517*

A new convenient approach to chiral β-aryl(heteroaryl)-alkylamines

Valentine G. Nenajdenko,* Alexei S. Karpov and Elizabeth S. Balenkova

Department of Chemistry, Moscow State University, Moscow 119899, Russia

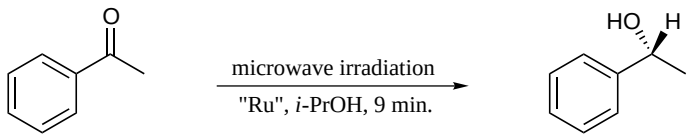


Tetrahedron: Asymmetry *12 (2001) 2529*

Microwave-mediated ruthenium-catalyzed asymmetric hydrogen transfer

Serghey Lutsenko and Christina Moberg*

Department of Chemistry, Organic Chemistry, Royal Institute of Technology, SE-100 44 Stockholm, Sweden



97% yield, 80% e.e.

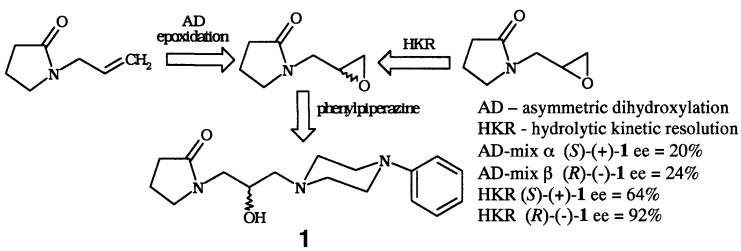
Tetrahedron: Asymmetry *12 (2001) 2533*

Stereocontrolled synthesis of the enantiomers of 1-[2-hydroxy-3-(4-phenyl-1-piperazinyl)-propyl]-pyrrolidin-2-one

Katarzyna Kulig,[a] Ulrike Holzgrabe[b] and Barbara Malawska[a,*]

[a]*Department of Pharmaceutical Chemistry, Collegium Medicum Jagiellonian University, ul. Medyczna 9, 30-688 Kraków, Poland*

[b]*Institut für Pharmazie und Lebensmittelchemie, Universität Würzburg, Am Hubland, 97074 Würzburg, Germany*



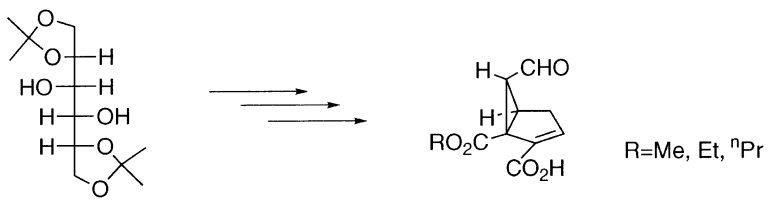
1

Tetrahedron: Asymmetry *12 (2001) 2537*

Asymmetric synthesis of 6-formyl-1-alkoxycarbonylbicyclo-[3.1.0]hex-2-ene-2-carboxylic acids by a novel buffer-mediated rearrangement

Satomi Niwayama* and Jianxiu Liu

Department of Chemistry, Oklahoma State University, Stillwater, OK 74078-3071, USA



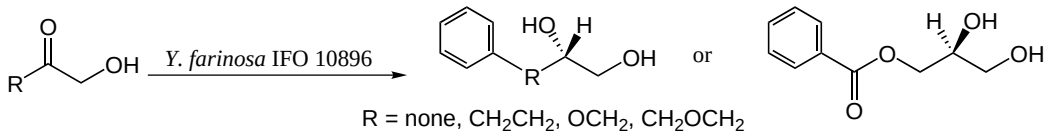
R=Me, Et, ^{n}Pr

Microbial asymmetric reduction of α-hydroxyketones in the anti-Prelog selectivity

Tetrahedron: Asymmetry *12 (2001) 2543*

Toshikuni Tsujigami, Takeshi Sugai and Hiromichi Ohta*

Department of Chemistry, Keio University, 3-14-1 Hiyoshi, Kohoku-ku, Yokohama 223-8522, Japan



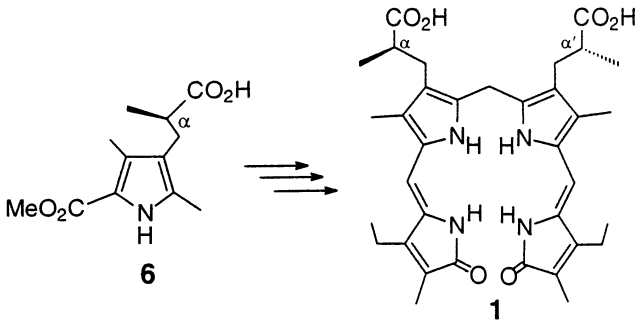
An enantiomerically pure bilirubin. Absolute configuration of (α*R*,α′*R*)-dimethylmesobilirubin-XIIIα

Tetrahedron: Asymmetry *12 (2001) 2551*

Stefan E. Boiadjiev and David A. Lightner*

Department of Chemistry, University of Nevada, Reno, NV 89557, USA

Pyrrole **6**, obtained enantiomerically pure by crystallization of the (1*S*)-camphor sultam amides of *rac*-**6**, was converted to enantiomerically pure (α*R*,α′*R*)-dimethylmesobilirubin-XIIIα (**1**). The absolute configuration of **6** was determined by X-ray crystallography, which firmly established that of **1**. Rubin **1** exhibits intense bisignate CD Cotton effects characteristic of a molecular exciton with ***P*** chirality.

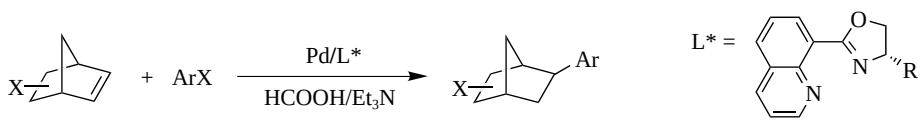


Asymmetric hydroarylation of norbornene derivatives catalyzed by palladium complexes of chiral quinolinyl-oxazolines

Tetrahedron: Asymmetry *12 (2001) 2565*

Xin-Yan Wu,[b] Hua-Dong Xu,[b] Fang-Yi Tang[b] and Qi-Lin Zhou[a,b,*]

[a]*State Key Laboratory and Institute of Elemento-Organic Chemistry, Nankai University, Tianjin 300071, China*
[b]*Institute of Fine Chemicals, East China University of Science and Technology, Shanghai 200237, China*



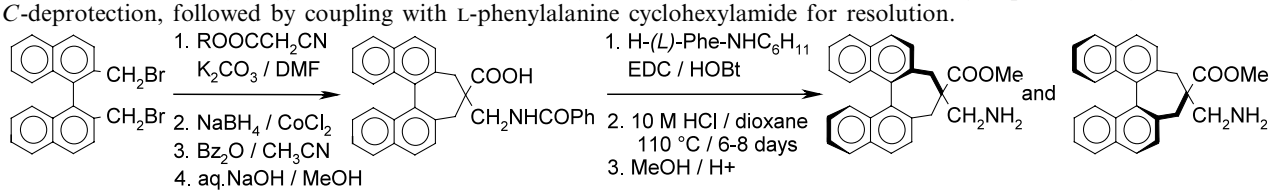
Synthesis and resolution of β^{2,2}-HBin, the first enantiomerically stable β-amino acid with chirality only due to axial dissymmetry

Tetrahedron: Asymmetry *12 (2001) 2571*

Anne Gaucher, Yohan Zuliani, Daniel Cabaret, Michel Wakselman and Jean-Paul Mazaleyrat*

SIRCOB, University of Versailles, F-78000 Versailles, France

Both enantiomers of 2′,1′:1,2;1″,2″:3,4-dinaphthcyclohepta-1,3-diene-6-aminomethyl-6-carboxylic acid (β^{2,2}-HBin) have been synthesized by bis-alkylation of ethyl or methyl cyanoacetate, reduction of the cyano group, *N*-benzoylation and *C*-deprotection, followed by coupling with L-phenylalanine cyclohexylamide for resolution.



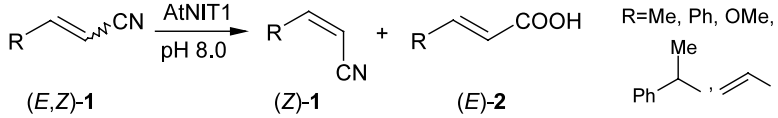
(*E*)-Selective hydrolysis of (*E*,*Z*)-α,β-unsaturated nitriles by the recombinant nitrilase AtNIT1 from *Arabidopsis thaliana*

Tetrahedron: Asymmetry *12 (2001) 2581*

Franz Effenberger* and Steffen Oßwald

Institut für Organische Chemie der Universität Stuttgart, Pfaffenwaldring 55, D-70569 Stuttgart, Germany

AtNIT1 from *Arabidopsis thaliana* shows high stereoselectivity, hydrolysing exclusively the (*E*)-isomer from α,β-unsaturated nitriles (*E*,*Z*)-**1** to the corresponding (*E*)-acid (*E*)-**2**. With β,γ-unsaturated nitriles stereoselectivity was not observed. The (*E*)-selectivity can also be used to prepare isomerically pure (*Z*)-nitriles.

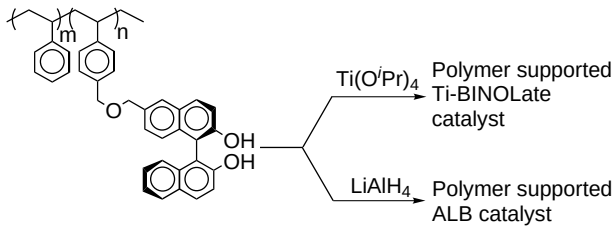


Synthesis and catalytic applications of soluble polymer-supported BINOL

Tetrahedron: Asymmetry *12 (2001) 2589*

Doss Jayaprakash and Hiroaki Sasai*

The Institute of Scientific and Industrial Research, Osaka University, Mihogaoka, Ibaraki, Osaka 567-0047 Japan



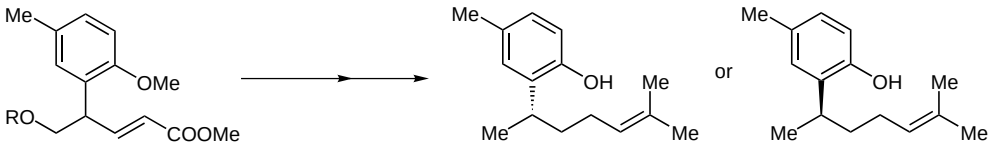
First synthesis of (+) and (–)-elvirol based on an enzymatic function

Tetrahedron: Asymmetry *12 (2001) 2597*

Machiko Ono, Keiko Suzuki, Shin Tanikawa and Hiroyuki Akita*

School of Pharmaceutical Science, Toho University, 2-2-1 Miyama, Funabashi, Chiba 274-8510, Japan

A highly enantioselective synthesis of (*S*)- and (*R*)-4-aryl-5-hydroxy-(2*E*)-pentenoate **1** was achieved based on the enzymatic reaction of an acetate (±)-**2**. An application of (*S*)-**1** and (*R*)-**1** to the total synthesis of (*S*)-(+)- and (*R*)-(–)-elvirol **3**, respectively, is described.



A new chiral oxathiane: synthesis, resolution and absolute configuration determination by vibrational circular dichroism

Tetrahedron: Asymmetry *12 (2001) 2605*

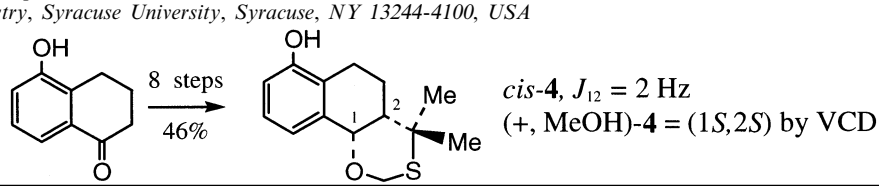
A. Solladié-Cavallo,[a,*] M. Balaz,[a,b] M. Salisova,[b] C. Suteu,[c,*] L. A. Nafie,[d,*] X. Cao[d] and T. B. Freedman[d,*]

[a]*Laboratoire de Stéréochimie Organométallique associé au CNRS, ECPM, Université de Strasbourg, 25 rue Becquerel, 67087 Strasbourg, France*

[b]*Department of Organic Chemistry, Comenius University, Bratislava, Slovakia*

[c]*Chiral Technologies Europe, 67404 Illkirch, France*

[d]*Department of Chemistry, Syracuse University, Syracuse, NY 13244-4100, USA*



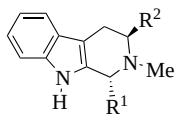
Chiral ligands derived from *abrine*. Part 7: Effect of *O*, *S*, *N* in aromatic ring substituents at C-1 on enantioselectivity induced by tetrahydro-β-carboline ligands in diethylzinc addition to aldehydes

Tetrahedron: Asymmetry *12 (2001) 2613*

H. J. Zhu,[a,*] B. T. Zhao,[b] G. Y. Zuo,[b] C. U. Pittman, Jr.,[a] W. M. Dai[c,*] and X. J. Hao[b,*]

[a]*Department of Chemistry, Mississippi State University, Mississippi State, 39762, MS, USA*
[b]*Kunming Institute of Botany, Chinese Academy of Sciences, Kunming, 650204 Yunnan, PR China*
[c]*Department of Chemistry, HKUST, Clear Water Bay, Kowloon, Hong Kong, PR China*

The effect of *O*, *S* and *N* heteroatoms in the aromatic ring substituents R^1, and the position of *N* within the R^1 pyridyl group on enantioselectivity was studied during addition of diethylzinc to aldehyde. A mechanism was proposed to explain why esters **2c** and **2d** catalyzed the addition of diethylzinc to benzaldehyde to form the *R* and *S* enantiomers of 1-phenyl-1-propanol, respectively. A possible reaction mechanism was proposed to explain why alcohol **3c** induced moderate enantioselectivity while negligible enantioselectivity was induced by **3d**.



Chiral Ligands

2a-f, R^2= -CO_2Me
3a-f, R^2= -C(OH)Et_2
R^1 is: **a** 2-furyl
b 2-thionyl
c 2-pyridyl
d 3-pyridyl
e -phenyl
f -CH_2-*t*-Bu

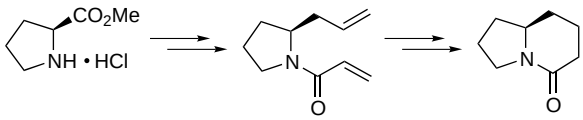
A short and concise synthetic route to (−)-coniceine

Tetrahedron: Asymmetry *12 (2001) 2621*

So Hyun Park, Hyun Jung Kang, Sangwon Ko, Soyoung Park and Sukbok Chang*

Department of Chemistry, Ewha Womans University, Seoul 120-750, South Korea

(−)-Coniceine was formally synthesized with high efficiency starting from a proline ester, in which Ru-catalyzed RCM was used as a key reaction.

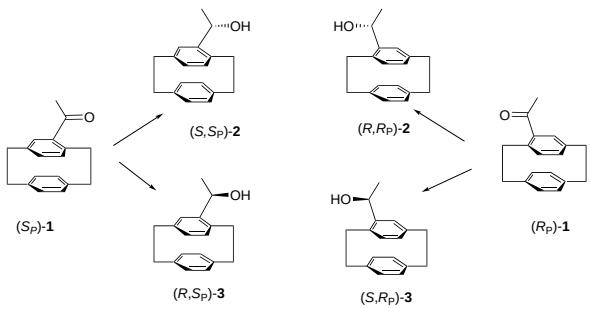


A practical kinetic resolution of 4-acetyl[2.2]paracyclophane

Tetrahedron: Asymmetry *12 (2001) 2625*

Philippe Dorizon,[a] Catherine Martin,[a] Jean-Claude Daran,[b] Jean-Claude Fiaud[a] and Henri B. Kagan[a,*]

[a]*Laboratoire de Catalyse Moléculaire (ESA 8075) Institut de Chimie Moléculaire d'Orsay, Université Paris-Sud, 91405 Orsay, France*
[b]*Laboratoire de Chimie de Coordination du CNRS (UPR 8241), 205 route de Narbonne 31077 Toulouse cedex, France*



First one-pot chemo-, regio- and enantioselective functionalisation of pyridine compounds mediated by BuLi-(*S*)-(−)-*N*-methyl-2-pyrrolidine methoxide

Tetrahedron: Asymmetry *12 (2001) 2631*

Yves Fort,* Philippe Gros and Alain L. Rodriguez

Synthèse Organique et Réactivité, UMR CNRS-UHP 7565, Université Henri Poincaré-Nancy I, BP 239, 54506 Vandoeuvre-Lès-Nancy, France