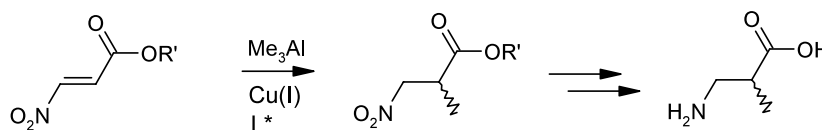


Ionic liquids and chirality: opportunities and challenges*Tetrahedron: Asymmetry 14 (2003) 3081*Christine Baudequin,^a Jérôme Baudoux,^a Jocelyne Levillain,^b
Dominique Cahard,^a Annie-Claude Gaumont^{b,*} and Jean-Christophe Plaquevent^{a,*}^aUMR 6014 de l'IRCOF (Institut de Recherche en Chimie Organique Fine), Université de Rouen, rue Tesnière, F-76821 Mont Saint Aignan Cedex, France^bUMR 6507 Laboratoire de Chimie Moléculaire et Thioorganique, ENSICAEN-ISMRA, Université de Caen, 6 bd du Maréchal Juin, F-14050 Caen, France

This review deals with recent advances in the investigation of ionic liquids (ILs) in the field of chirality, i.e. asymmetric synthesis and new chiral solvents.

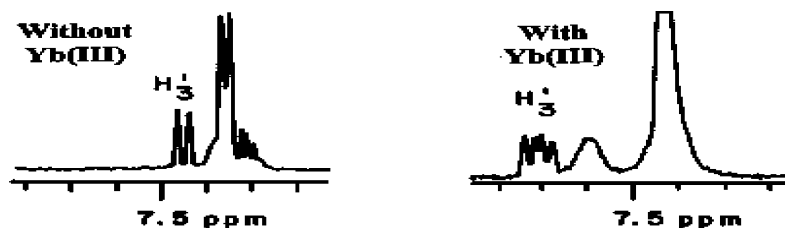
Stereoselective Michael addition of trimethyl aluminium to nitro acrylates: a route to 2-methyl-3-amino propionic acid*Tetrahedron: Asymmetry 14 (2003) 3095*

Uwe Eilitz, Frank Leßmann, Oliver Seidelmann and Volkmar Wendisch*

ChiroBlock[®] Ltd., Andresenstrasse 1a, D-06766 Wolfen, Germany**Sulfated and carboxymethylated cyclodextrins and their lanthanide complexes as chiral NMR discriminating agents***Tetrahedron: Asymmetry 14 (2003) 3099*

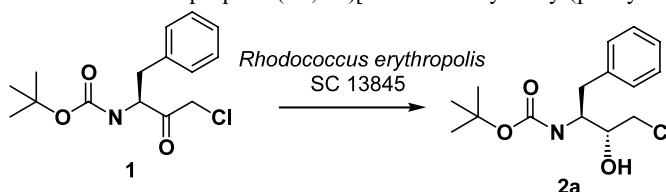
Thomas J. Wenzel,* Edwin P. Amonoo, Sonia S. Shariff and Stella E. Aniagyei

Department of Chemistry, Bates College, Lewiston, ME 04240, USA

**Diastereoselective microbial reduction of (S)-[3-chloro-2-oxo-1-(phenylmethyl)propyl]carbamic acid, 1,1-dimethylethyl ester***Tetrahedron: Asymmetry 14 (2003) 3105*

Ramesh N. Patel,* Linda Chu and Richard Mueller

Process Research and Development, Bristol-Myers Squibb Pharmaceutical, Research Institute, PO Box 191, New Brunswick, NJ 08903, USA

Rhodococcus erythropolis SC 13854 was used to prepare (1*S*,2*R*)[3-chloro-2-hydroxy-(phenylmethyl)propyl]carmanic acid, 1,1-dimethylethylester.

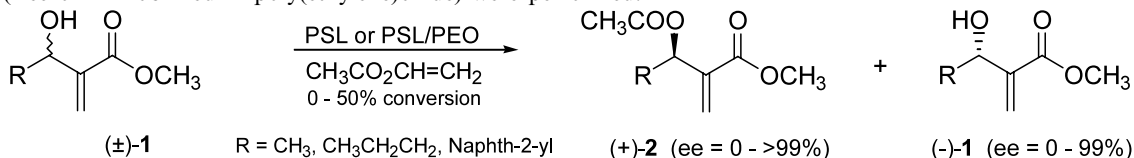
Resolution of α -methylene- β -hydroxy esters catalyzed by free and immobilized *Pseudomonas* sp. lipase

Tetrahedron: Asymmetry 14 (2003) 3111

Maria da Graça Nascimento,* Sandra P. Zanotto, Sílvia P. Melegari, Luciano Fernandes and Marcus Mandolesi Sá

Departamento de Química, Universidade Federal de Santa Catarina, Trindade, Florianópolis, SC, Brazil 88040-900

Kinetic resolutions of Baylis–Hillman adducts **1** by enzymatic enantioselective transesterification with *Pseudomonas* sp. lipase (free or immobilized in poly(ethylene)oxide) were performed.



Determination of the rotational barrier of a chiral biphenyl: Comparison of theoretical and experimental data

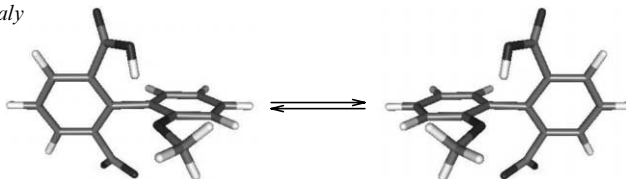
Tetrahedron: Asymmetry 14 (2003) 3117

Francesca Ceccacci,^a Giovanna Mancini,^b Paolo Mencarelli^{a,*} and Claudio Villani^c

^aDipartimento di Chimica, Università degli Studi di Roma "La Sapienza", P. le A. Moro 5, I-00185 Roma, Italy

^bCNR, IMC c/o Dipartimento di Chimica, Università degli Studi di Roma "La Sapienza", P. le A. Moro 5, I-00185 Roma, Italy

^cDipartimento di Studi di Chimica e Tecnologia delle Sostanze Biologicamente Attive, Università degli Studi di Roma "La Sapienza", P. le A. Moro 5, I-00185 Roma, Italy



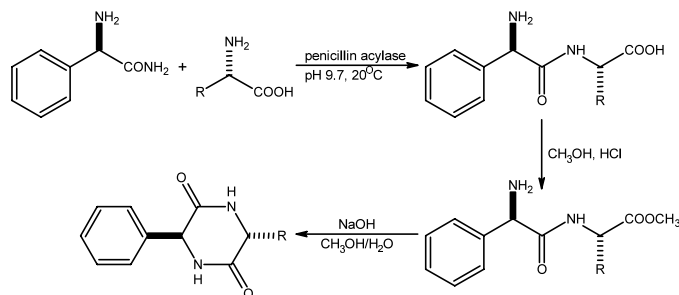
Penicillin acylase-catalyzed peptide synthesis in aqueous medium: a chemo-enzymatic route to stereoisomerically pure diketopiperazines

Tetrahedron: Asymmetry 14 (2003) 3123

Andrei Y. Khimiuk,^a Alexei V. Korennykh,^a Luuk M. van Langen,^b Fred van Rantwijk,^b Roger A. Sheldon^b and Vytas K. Švedas^{a,*}

^aBelozersky Institute of Physicochemical Biology and Department of Bioengineering and Bioinformatics, Lomonosov Moscow State University, 119992 Moscow, Russia

^bLaboratory of Biocatalysis and Organic Chemistry, Delft University of Technology, Julianalaan 136, 2628 BL Delft, The Netherlands

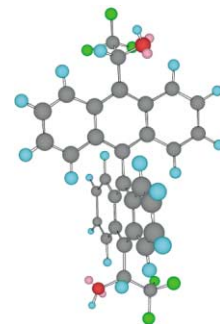


Synthesis and structural study of the enantiomers of α,α' -bis(trifluoromethyl)-10,10'-(9,9'-bianthryl)dimethanol as a chiral solvating agent

Tetrahedron: Asymmetry 14 (2003) 3129

Marta Sánchez-Aris, Carla Estivill and Albert Virgili*

Departament de Química Universitat Autònoma de Barcelona, 08193 Bellaterra, Barcelona, Spain

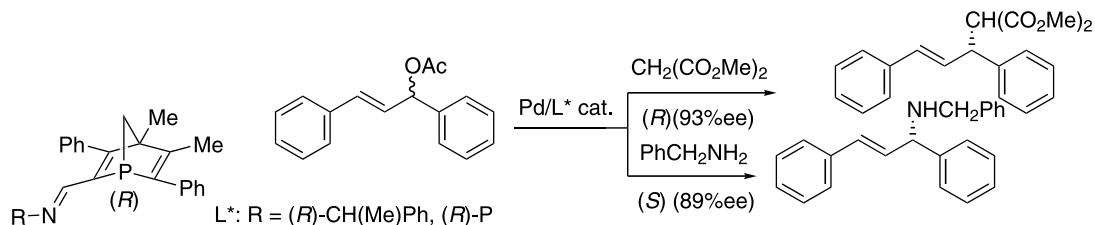


1-Phosphanorbornadiene-imines and amines in enantioselective allylic C- and N-alkylation

Tetrahedron: Asymmetry 14 (2003) 3137

François Mercier,* Franck Brebion, Romain Dupont and François Mathey*

Laboratoire 'Hétéroéléments et Coordination' UMR CNRS 7653, DCPH, Ecole Polytechnique, 91128 Palaiseau Cedex, France

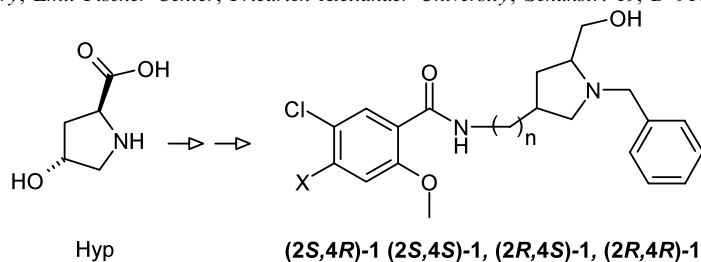


Ex-chiral pool synthesis and receptor binding studies of 4-substituted prolinol derivatives

Tetrahedron: Asymmetry 14 (2003) 3141

Cornelia Heindl, Harald Hübner and Peter Gmeiner*

Department of Medicinal Chemistry, Emil Fischer Center, Friedrich Alexander University, Schuhstr. 19, D-91052 Erlangen, Germany

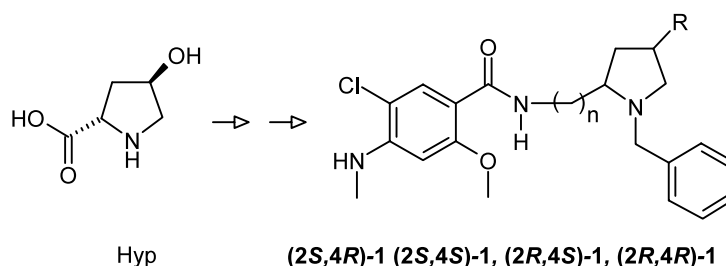


Enantiospecific synthesis and receptor binding of novel dopamine receptor ligands employing natural 4-hydroxyproline as a practical and flexible building block

Tetrahedron: Asymmetry 14 (2003) 3153

Cornelia Heindl, Harald Hübner and Peter Gmeiner*

Department of Medicinal Chemistry, Emil Fischer Center, Friedrich-Alexander University, Schuhstr. 19, D-91052 Erlangen, Germany

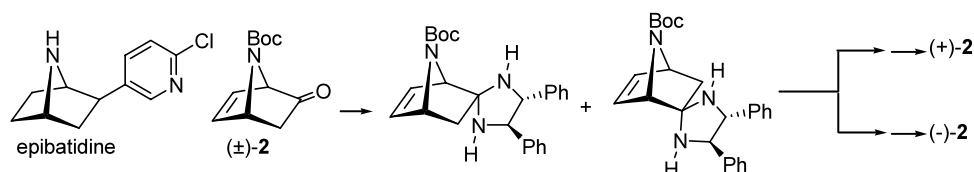


Efficient resolution of N-Boc-7-azabicyclo[2.2.1]hept-5-en-2-one: formal syntheses of natural epibatidine and its enantiomer

Tetrahedron: Asymmetry 14 (2003) 3173

Antonio J. Moreno-Vargas and Pierre Vogel*

Institut de Chimie Moléculaire et Biologique de l'Ecole Polytechnique Fédérale de Lausanne, BCH-EPFL, CH-1015 Lausanne-Dorigny, Switzerland

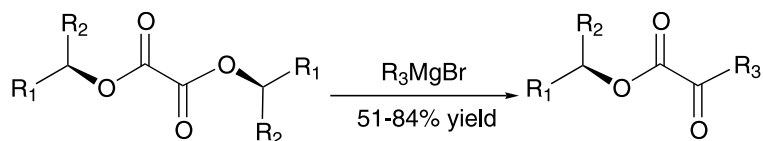


Asymmetric synthesis of chiral α -keto esters via Grignard addition to oxalates

Tetrahedron: Asymmetry 14 (2003) 3177

David I. MaGee,* Tammy C. Mallais and Marijanna Eic

Department of Chemistry, PO Box 45222, University of New Brunswick, Fredericton, N.B., E3B 6E2, Canada



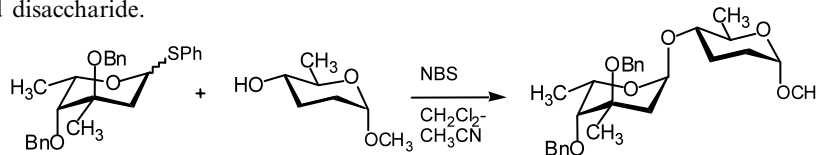
Synthesis of the polyketomycin disaccharide

Tetrahedron: Asymmetry 14 (2003) 3183

Douglas S. Micalizzi, J. Patrick Dougherty, Lincoln A. Noecker, Garry R. Smith and Robert M. Giuliano*

Department of Chemistry, Villanova University, Villanova, PA 19085, USA

The disaccharide found in the antibiotic polyketomycin was synthesized from methyl amicetoside and a thioglycoside derivative of the methyl-branched sugar axenose. Coupling via an *N*-bromosuccinimide activation of the thioglycoside gave the desired α (1 \rightarrow 4) linked disaccharide.



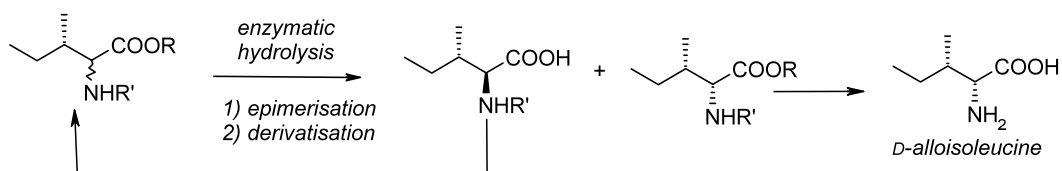
Chemo-enzymatic approach to D-allo-isoleucine

Tetrahedron: Asymmetry 14 (2003) 3189

Mara Cambiè,^{a,*} Paola D'Arrigo,^a Ezio Fasoli,^a Stefano Servi,^a Davide Tessaro,^a Francesco Canevotti^b and Lucio Del Corona^b

^aDipartimento di Chimica, Materiali e Ingegneria Chimica G. Natta, Politecnico di Milano, Via Mancinelli 7, 20131, Milano, Italy

^bFLAMMA SpA, Via Chignolo d'Isola, (BG), Italy



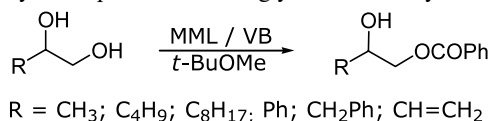
Lipase-catalyzed selective benzylation of 1,2-diols with vinyl benzoate in organic solvents

Tetrahedron: Asymmetry 14 (2003) 3197

Pierangela Ciuffreda, Laura Alessandrini, Giancarlo Terraneo and Enzo Santaniello*

Dipartimento di Scienze Precliniche LITA Vialba-Università degli Studi di Milano, Via G. B. Grassi, 74-20157 Milano, Italy

Lipases from *Mucor miehei* (MML) and *Candida antarctica* (CAL) are able to catalyze the benzylation of the primary hydroxy group of 1,2-diols with vinyl benzoate in organic solvent. We have studied the MML-catalyzed benzylation that proceeds with high regioselectivity and moderate enantioselectivity, whereas in the dibenzylation reaction activity of MML and stereoselectivity of the enzymatic process is strongly influenced by steric factors.

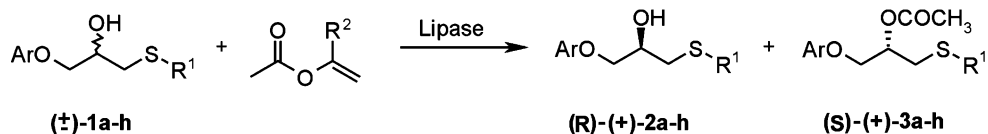


1-Alkylthio-3-aryloxypropan-2-ols: synthesis and enantiomer separation by lipase-catalyzed transesterification

Tetrahedron: Asymmetry 14 (2003) 3203

Monika Wielechowska and Jan Plenkiewicz*

Faculty of Chemistry, Warsaw University of Technology, Noakowskiego 3, 00-664 Warsaw, Poland

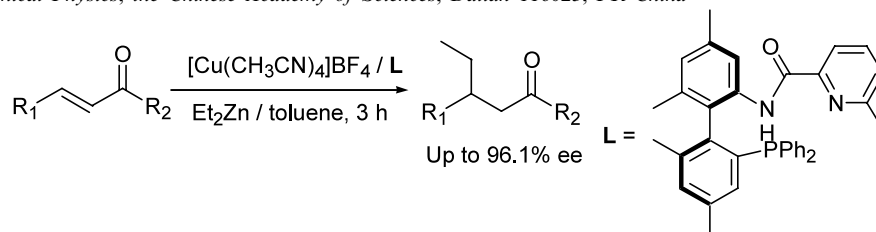


Development of new chiral *P,N* ligands and their applications in enantioselective 1,4-conjugate additions of diethylzinc to chalcones

Tetrahedron: Asymmetry 14 (2003) 3211

Yuxue Liang, Shuang Gao, Huihui Wan, Yuanchun Hu, Huilin Chen, Zhuo Zheng and Xinqian Hu*

Dalian Institute of Chemical Physics, the Chinese Academy of Sciences, Dalian 116023, PR China

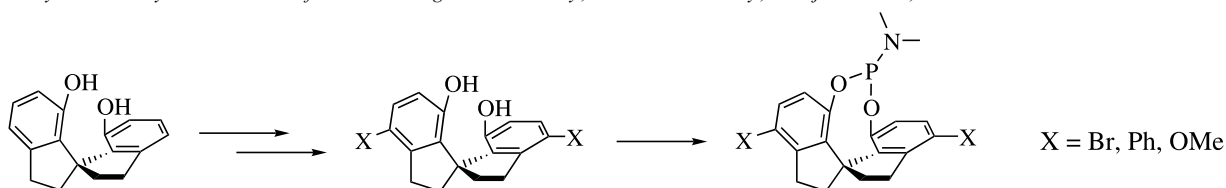


Synthesis of chiral 4,4'-disubstituted 1,1'-spirobiindane-7,7'-diols and related phosphoramidites: the substituent effect of SIPHOS ligands in Rh-catalyzed asymmetric hydrogenation

Tetrahedron: Asymmetry 14 (2003) 3219

Shou-Fei Zhu, Yu Fu, Jian-Hua Xie, Bin Liu, Liang Xing and Qi-Lin Zhou*

State Key Laboratory and Institute of Elemento-organic Chemistry, Nankai University, Tianjin 300071, China



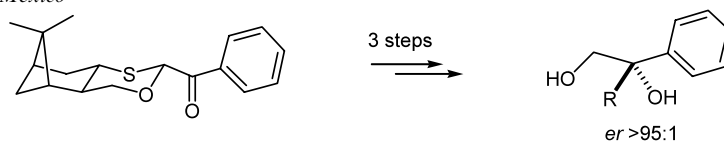
Enantioselective synthesis of 1-alkyl-substituted 1-phenyl-1,2-ethanediols using a myrtenal-derived chiral auxiliary

Tetrahedron: Asymmetry 14 (2003) 3225

María Elena Vargas-Díaz,^a Luis Chacón-García,^a Pedro Velázquez,^a Joaquín Tamariz,^a Pedro Joseph-Nathan^b and L. Gerardo Zepeda^{a,*}

^a*Departamento de Química Orgánica, Escuela Nacional de Ciencias Biológicas, Instituto Politécnico Nacional, Prol. de Carpio y Plan de Ayala, México, D.F., 11340 Mexico*

^b*Departamento de Química, Centro de Investigación y de Estudios Avanzados del Instituto Politécnico Nacional, Apartado 14-740, México, D.F., 07000 Mexico*

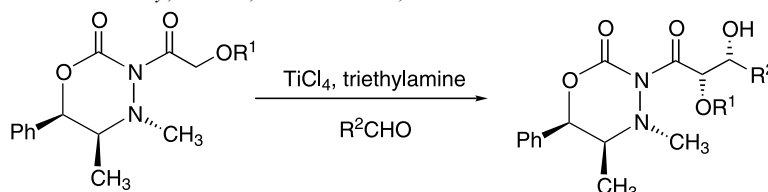


Oxadiazinones as chiral auxiliaries: diastereoselective aldol addition reactions of *N*₃-glycolyl-3,4,5,6-tetrahydro-2*H*-1,3,4-oxadiazin-2-ones

Tetrahedron: Asymmetry 14 (2003) 3233

Trisha R. Hoover and Shawn R. Hitchcock*

Department of Chemistry, Illinois State University, Normal, IL 61790-4160, USA



C-Arylglucoside synthesis: triisopropylsilane as a selective reagent for the reduction of an anomeric *C*-phenyl ketal

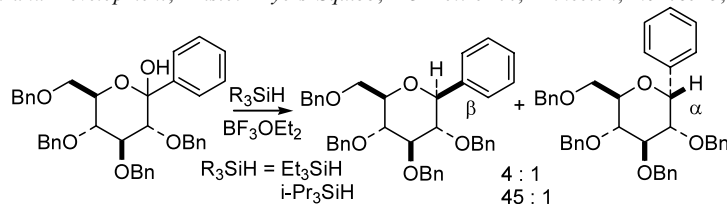
Tetrahedron: Asymmetry 14 (2003) 3243

Bruce A. Ellsworth,^{a,*} Abigail G. Doyle,^a Manorama Patel,^a Janet Caceres-Cortes,^b Wei Meng,^a Prashant P. Deshpande,^c Annie Pullockaran^c and William N. Washburn^a

^aDepartment of Metabolic Disease Discovery Chemistry, Bristol-Myers Squibb, PO Box 5400, Princeton, NJ 08543, USA

^bDepartment of Preclinical Candidate Optimization, Bristol-Myers Squibb, PO Box 5400, Princeton, NJ 08543, USA

^cDepartment of Process Research and Development, Bristol-Myers Squibb, PO Box 5400, Princeton, NJ 08543, USA

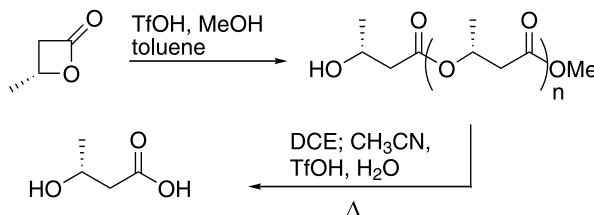


Protic acid-catalyzed polymerization of β -lactones for the synthesis of chiral polyesters

Tetrahedron: Asymmetry 14 (2003) 3249

Firoz A. Jaipuri, Brian D. Bower and Nicola L. Pohl*

Department of Chemistry and the Plant Sciences Institute, Gilman Hall, Iowa State University, Ames, IA 50011-3111, USA



Asymmetric synthesis of γ -butyrolactones by enantioselective hydrogenation of butenolides

Tetrahedron: Asymmetry 14 (2003) 3253

Paulo Marcos Donate,^{a,*} Daniel Frederico,^a Rosangela da Silva,^{a,b} Mauricio Gomes Constantino,^a Gino Del Ponte^b and Pierina Sueli Bonatto^b

^aUniversidade de São Paulo, Departamento de Química, Faculdade de Filosofia, Ciências e Letras de Ribeirão Preto, Avenida Bandeirantes 3900, 14040-901 Ribeirão Preto, SP, Brazil

^bUniversidade de São Paulo, Faculdade de Ciências Farmacêuticas de Ribeirão Preto, Via do Café s/n, 14040-903 Ribeirão Preto, SP, Brazil

