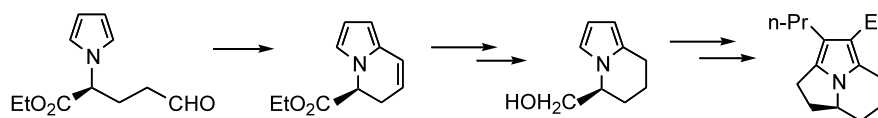
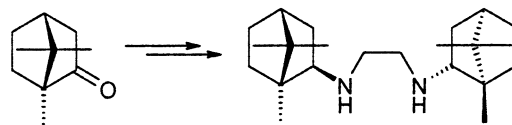
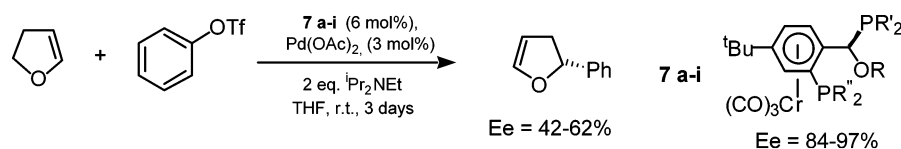


Kinetic resolution strategies using non-enzymatic catalysts*Tetrahedron: Asymmetry 14 (2003) 1407*

Diane E. J. E. Robinson and Steven D. Bull*

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Recent advances in the use of non-enzymatic chiral catalysts for the kinetic resolution or dynamic kinetic resolution of racemic substrates are described. Successful protocols that afford recovered starting material or products in high enantiomeric excess are included, and mechanistic detail is discussed where appropriate. Relevant examples illustrate the wide range of different reaction scenarios where kinetic resolution has recently been employed as a strategy for the efficient synthesis of enantiopure compounds.

Intramolecular cyclodehydration of (4*S*)-(+)-4-carboxyethyl-4-(pyrrol-1-yl)butanal as the key step in the formal synthesis of (*S*)-(-)-Myrmicarin 217*Tetrahedron: Asymmetry 14 (2003) 1447*Roberta Settambolo,^a Giuditta Guazzelli^b and Raffaello Lazzaroni^{b,*}^a*ICCOM-CNR, Sezione di Pisa, Via Risorgimento 35, 56126 Pisa, Italy*^b*Dipartimento di Chimica e Chimica Industriale, Università di Pisa, Via Risorgimento 35, 56126 Pisa, Italy***Synthesis of *C*₂-symmetrical diamine based on (1*R*)-(+)-camphor and application to oxidative aryl coupling of naphthols***Tetrahedron: Asymmetry 14 (2003) 1451*Alessandro Caselli,^a Giovanni B. Giovenzana,^b Giovanni Palmisano,^{c,*} Massimo Sisti^{c,*} and Tullio Pilati^d^a*Dipartimento di Chimica Organica e Industriale, Università degli Studi di Milano, Via Venezian 21, I-20133 Milano, Italy*^b*Dipartimento di Scienze Chimiche Alimentari Farmaceutiche e Farmacologiche, Università del Piemonte Orientale 'A. Avogadro', Via Bovio 6, I-28100 Novara, Italy*^c*Dipartimento di Scienze Chimiche Fisiche e Matematiche, Università degli Studi dell'Insubria, Via Valleggio 11, I-2210 Como, Italy*^d*CNR-Istituto di Scienze e Tecnologie Molecolari, Via Golgi 19, I-20133 Milano, Italy***A versatile route to planar chiral diphosphines and their application in the asymmetric Heck reaction***Tetrahedron: Asymmetry 14 (2003) 1455*Susan E. Gibson,^{*} Hasim Ibrahim, Corinne Pasquier and Vishwanath M. Swamy*Department of Chemistry, King's College London, Strand, London WC2R 2LS, UK*

The classical Kagan's amides are still practical NMR chiral shift reagents: determination of enantiomeric purity of *P*-chirogenic phospholene oxides

Tetrahedron: Asymmetry 14 (2003) 1459

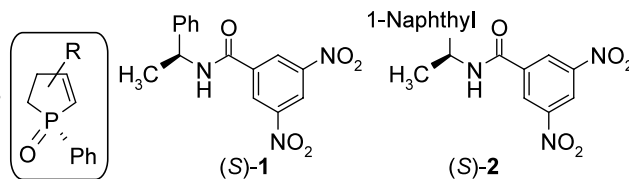
Zbigniew Pakulski,^a Oleg M. Demchuk,^a Renata Kwiatosz,^b Piotr W. Osiński,^a Wioleta Świerczyńska^a and K. Michał Pietrusiewicz^{a,b,*}

^a*Institute of Organic Chemistry, Polish Academy of Sciences, Kasprzaka 44/52, 01-224 Warszawa, Poland*

^b*Department of Organic Chemistry, Maria Curie-Skłodowska University, Gliniana 33, 20-614 Lublin, Poland*

¹H and ³¹P NMR spectra of the 2-phospholene derivatives in the presence of amides **1** or **2** showed well resolved signals of individual enantiomers and allowed the measurement of the ee's effectively.

An experimental rule for determination of the absolute configuration was also proposed.

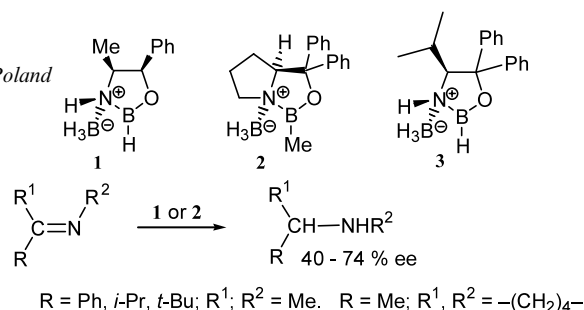
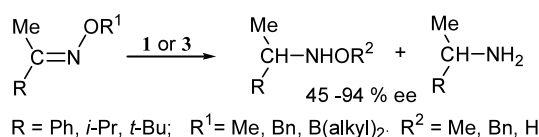


Asymmetric reduction of ketoxime derivatives and *N*-alkylketimines with borane-oxazaborolidine adducts

Tetrahedron: Asymmetry 14 (2003) 1463

Marek P. Krzeźmiński and Marek Zaidlewicz*

Department of Chemistry, Nicolaus Copernicus University, 87-100 Toruń, Poland

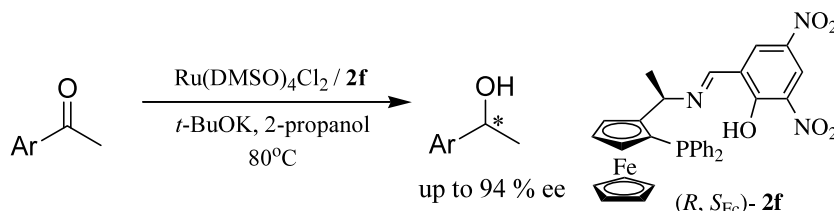


New efficient *P,N,O*-tridentate ligands for Ru-catalyzed asymmetric transfer hydrogenation

Tetrahedron: Asymmetry 14 (2003) 1467

Huicong Dai, Xiangping Hu, Huilin Chen,* Changmin Bai and Zhuo Zheng*

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



A two-step method for the preparation of homochiral cathinones

Tetrahedron: Asymmetry 14 (2003) 1473

Mauricio Osorio-Olivares,^a Marcos Caroli Rezende,^{a,*} Silvia Sepúlveda-Boza,^b Bruce K. Cassels,^c Ricardo F. Baggio^d and Juan C. Muñoz-Acevedo^e

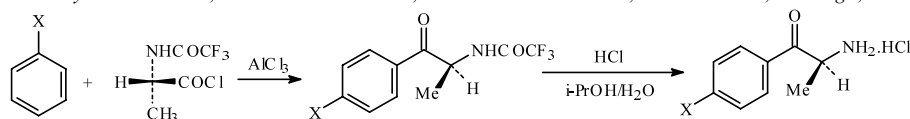
^a*Facultad de Química y Biología, Universidad de Santiago, Casilla 40, Correo 33, Santiago, Chile*

^b*Facultad de Ciencias Médicas, Universidad de Santiago, Av. B. O'Higgins 3363, Santiago, Chile*

^c*Millennium Institute for Advanced Studies in Cell Biology and Biotechnology and Departamento de Química, Facultad de Ciencias, Universidad de Chile, Las Palmeras 3425, Santiago, Chile*

^d*Departamento de Física, Comisión Nacional de Energía Atómica, Avenida del Libertador 8250, 1429, Buenos Aires, Argentina*

^e*Facultad de Ciencias Físicas y Matemáticas, Universidad de Chile, Blanco Encalada 2008, Casilla 487-3, Santiago, Chile*



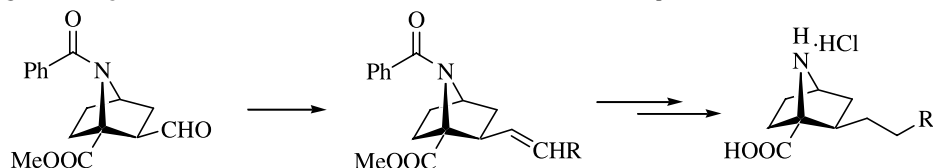
Olefination of methyl (1*S*,2*R*,4*R*)-*N*-benzoyl-2-formyl-7-azabicyclo[2.2.1]heptane-1-carboxylate, a synthetic approach to new conformationally constrained prolines

Tetrahedron: Asymmetry 14 (2003) 1479

Ana M. Gil,^a Elena Buñuel,^b María D. Díaz-de-Villegas^a and Carlos Cativiela^{a,*}

^aDepartamento de Química Orgánica, ICMA, Universidad de Zaragoza-CSIC, 50009 Zaragoza, Spain

^bDepartamento de Química Orgánica, Universidad Autónoma de Madrid, 28049 Madrid, Spain

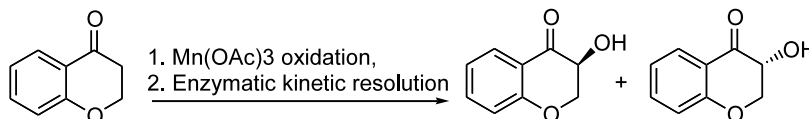


Chemoenzymatic synthesis of both enantiomers of 3-hydroxy-2,3-dihydro-4*H*-chromen-4-one

Tetrahedron: Asymmetry 14 (2003) 1489

Ayhan S. Demir,^{*} Asuman Aybey, Özge Sesenoglu and Fatos Polat

Department of Chemistry, Middle East Technical University, 06531 Ankara, Turkey



Optically active 1-(benzofuran-2-yl)ethanols and ethane-1,2-diols by enantiotopic selective bioreductions

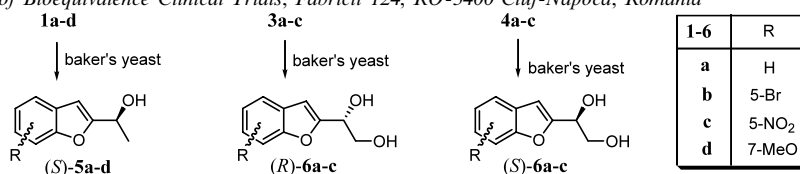
Tetrahedron: Asymmetry 14 (2003) 1495

Csaba Paizs,^a Monica Toşa,^a Cornelia Majdik,^a Paula Moldovan,^a Lajos Novák,^b Pál Kolonits,^b Adriana Marcovici,^c Florin-Dan Irimie^{a,*} and László Poppe^{b,*}

^aDepartment of Biochemistry and Biochemical Engineering, Babes-Bolyai University, Arany János 11, RO-3400 Cluj-Napoca, Romania

^bInstitute for Organic Chemistry and Research Group for Alkaloid Chemistry of the Hungarian Academy of Sciences, Budapest University of Technology and Economics, H-1111 Budapest, Gellért tér 4., Hungary

^cTerapia S.A., Department of Bioequivalence Clinical Trials, Fabricii 124, RO-3400 Cluj-Napoca, Romania

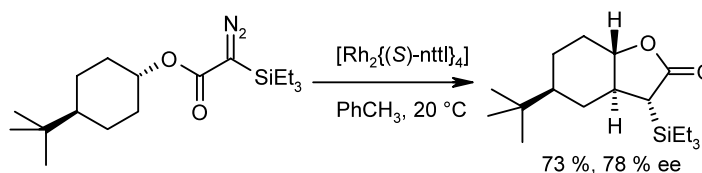


Rhodium(II)-catalyzed enantioselective intramolecular CH insertion with alkyl diazo(trialkylsilyl) acetates

Tetrahedron: Asymmetry 14 (2003) 1503

Paul Müller,^{*} Fabienne Lacrampe and Gérald Bernardinelli

Department of Organic Chemistry, University of Geneva, 30, Quai Ernest Ansermet, CH-1211 Geneva 4, Switzerland

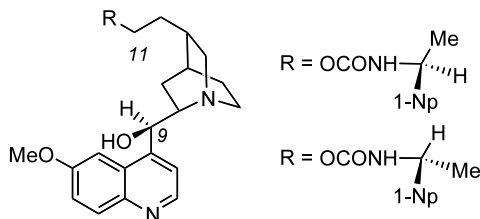


C11 versus C9 carbamoylation of quinine: a new class of versatile polyfunctional chiral solvating agents

Tetrahedron: Asymmetry 14 (2003) 1511

Gloria Uccello-Barretta, Francesca Mirabella, Federica Balzano and Piero Salvadori*

Dipartimento di Chimica e Chimica Industriale, Università di Pisa, via Risorgimento 35, 56126 Pisa, Italy



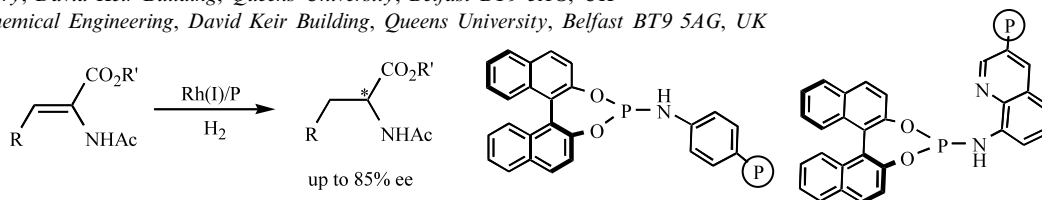
Polymer-supported phosphoramidites: highly efficient and recyclable catalysts for asymmetric hydrogenation of dimethylitaconate and dehydroamino acids and esters

Tetrahedron: Asymmetry 14 (2003) 1517

Simon Doherty,^{a,*} Edward G. Robins,^{a,b} Ibolya Pál,^a Colin R. Newman,^a Christopher Hardacre,^a David Rooney^b and Damian A. Mooney^b

^a*School of Chemistry, David Keir Building, Queens University, Belfast BT9 5AG, UK*

^b*Department of Chemical Engineering, David Keir Building, Queens University, Belfast BT9 5AG, UK*



Asymmetric synthesis of 2-substituted chroman-4-ones using lipase-catalyzed kinetic resolutions

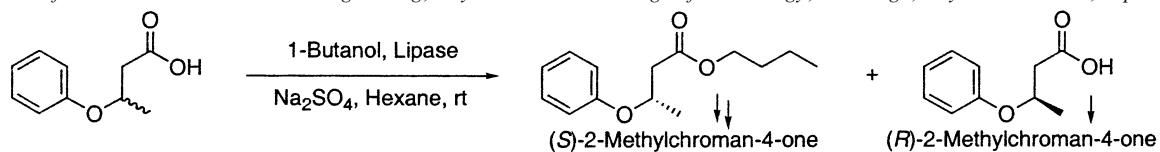
Tetrahedron: Asymmetry 14 (2003) 1529

Masashi Kawasaki,^{a,*} Hiroko Kakuda,^b Michimasa Goto,^c Shigeki Kawabata^a and Tadashi Kometani^c

^a*Department of Liberal Arts and Sciences, Faculty of Engineering, Toyama Prefectural University, 5180 Kurokawa, Kosugi-Machi, Toyama-Ken 939-0398, Japan*

^b*Laboratory of Chemistry, Toyama Medical and Pharmaceutical University, 2630 Sugitani, Toyama 930-0194, Japan*

^c*Department of Chemical and Biochemical Engineering, Toyama National College of Technology, 13 Hongo, Toyama 939-8630, Japan*

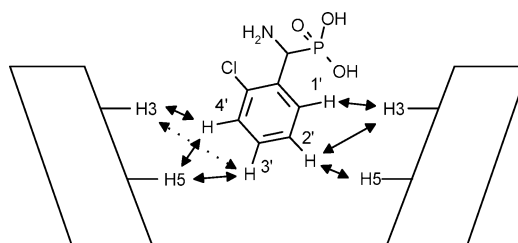


Enantiodifferentiation of aminophosphonic and aminophosphinic acids with α - and β -cyclodextrins

Tetrahedron: Asymmetry 14 (2003) 1535

Łukasz Berlicki, Ewa Rudzińska and Paweł Kafarski*

Institute of Organic Chemistry, Biochemistry and Biotechnology, Wrocław University of Technology, Wybrzeże Wyspiańskiego 27, 50-370 Wrocław, Poland



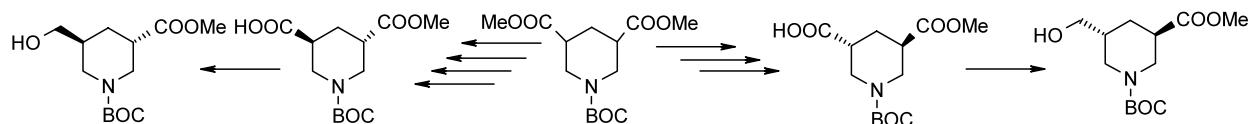
Chemoenzymatic preparation of non-racemic *N*-Boc-piperidine-3,5-dicarboxylic acid 3-methyl esters and their 5-hydroxymethyl derivatives

Tetrahedron: Asymmetry 14 (2003) 1541

Hans Iding,^{a,*} Beat Wirz^a and Rosa-María Rodríguez Sarmiento^b

^aNon-clinical Development-Biotechnology, F. Hoffmann-La-Roche Ltd, Basel, Switzerland

^bPharmaceutical Research Basel—Discovery Chemistry, F. Hoffmann-La-Roche Ltd, Basel, Switzerland



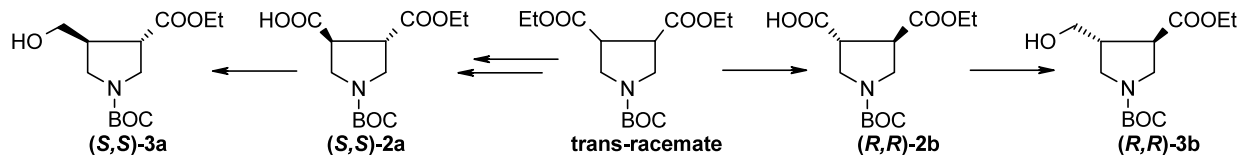
Chemoenzymatic preparation of non-racemic *N*-Boc-pyrrolidine-3,4-dicarboxylic acid 3-ethyl esters and their 4-hydroxymethyl derivatives

Tetrahedron: Asymmetry 14 (2003) 1547

Rosa María Rodríguez Sarmiento,^{a,*} Beat Wirz^b and Hans Iding^b

^aPharmaceutical Research Basel Discovery – Medicinal Chemistry, F. Hoffmann-La Roche Ltd., Basel, Switzerland

^bNon-clinical Development-Biotechnology, F. Hoffmann-La Roche Ltd., Basel, Switzerland



Synthesis and transport studies of a new class of cage-annulated chiral macrocycles

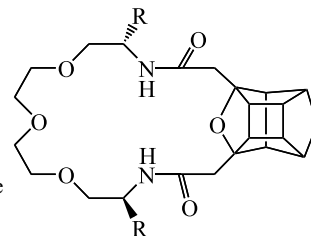
Tetrahedron: Asymmetry 14 (2003) 1553

Thavendran Govender,^a Humcha K. Hariprakasha,^b Hendrik G. Kruger^{a,*} and Alan P. Marchand^b

^aSchool of Pure and Applied Chemistry, University of Natal, Durban, South Africa

^bDepartment of Chemistry, University of North Texas, Denton, TX 76203-5070, USA

The synthesis of a new class chiral cage annulated macrocycles is reported. The ability of the chiral hosts to transport racemic phenylglycine methylester enantioselectively through a chloroform membrane in a U-tube was compared to that of related pyridine macrocycles. The cage annulated macrocycles showed weak to moderate enantioselectivity and very high rates of transport compared to previous systems reported using the same counter ion (PF_6^-). The rate of transport was slowed by changing to a relatively harder counter ion (Cl^-).

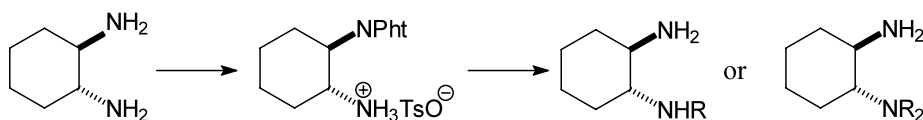


Facile monoprotection of *trans*-1,2-diaminocyclohexane

Tetrahedron: Asymmetry 14 (2003) 1559

M. Kaik and J. Gawroński*

Department of Chemistry, A. Mickiewicz University, Poznań, Poland



Asymmetric oxidation of 3-alkyl-1,2-cyclopentanediones.

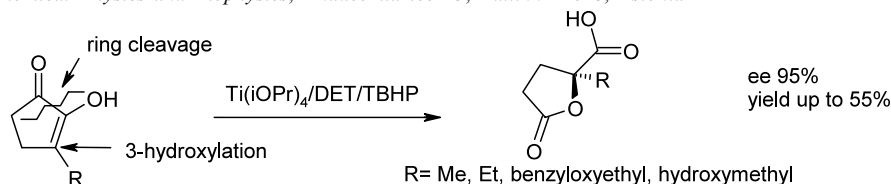
Tetrahedron: Asymmetry 14 (2003) 1565

Part 2: Oxidative ring cleavage of 3-alkyl-1,2-cyclopentanediones: synthesis of 2-alkyl- γ -lactone acids

Anne Paju,^a Tõnis Kanger,^a Tõnis Pehk,^b Rasmus Lindmaa,^a Aleksander-Mati Müürisepp^a and Margus Lopp^{a,*}

^aDepartment of Chemistry, Tallinn Technical University, Ehitajate tee 5, Tallinn 19086, Estonia

^bNational Institute of Chemical Physics and Biophysics, Akadeemia tee 23, Tallinn 12618, Estonia

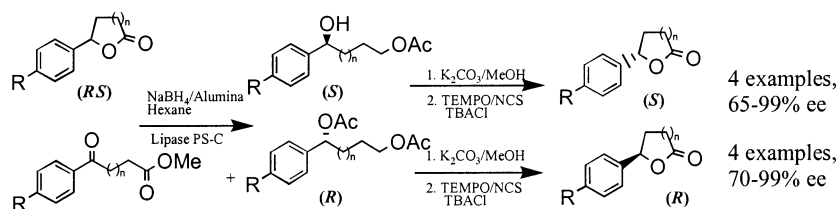


Application of a one-pot lipase resolution strategy for the synthesis of chiral γ - and δ -lactones

Tetrahedron: Asymmetry 14 (2003) 1575

Ahmed Kamal,^{*} Mahendra Sandbhor and Ahmad Ali Shaik

Biotransformation Laboratory, Division of Organic Chemistry, Indian Institute of Chemical Technology, Hyderabad 500 007, India



Lipase-catalyzed dynamic kinetic resolution of hemiaminals

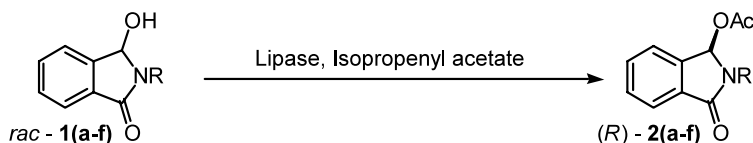
Tetrahedron: Asymmetry 14 (2003) 1581

Mohd. Sharfuddin,^a Atsushi Narumi,^c Yuko Iwai,^b Keiko Miyazawa,^b Shinji Yamada,^b Toyoji Kakuchi^c and Harumi Kaga^{a,*}

^aInstitute for Biological Resources and Functions, National Institute of Advanced Industrial Science and Technology (AIST), Sapporo 062-8517, Japan

^bDepartment of Chemistry, Faculty of Science, Ochanomizu University, Tokyo 112-8610, Japan

^cDivision of Molecular Chemistry, Graduate School of Engineering, Hokkaido University, Sapporo 060-8628, Japan



Enantioselective epoxidation of α,β -unsaturated ketones using polymer-supported lanthanoid-BINOL complexes

Tetrahedron: Asymmetry 14 (2003) 1587

Doss Jayaprakash, Yukari Kobayashi, Shizue Watanabe, Takayoshi Arai and Hiroaki Sasai^{*}

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

