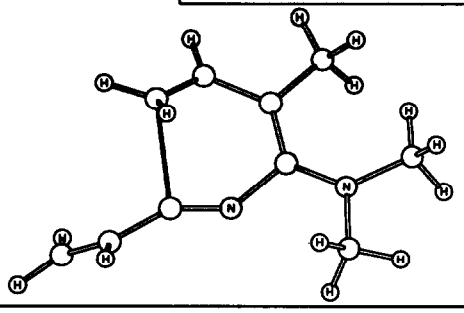
GRAPHICAL ABSTRACTS

PM3 Calculations of Diels-Alder Reactions of "Pull-Push" Activated Isoprenes with Aceto- and Acrylonitrile

Tetrahedron, **1994**, *50*, 10379

Branko S. Jursic* and Zoran Zdravkovski, Department of Chemistry, University of New Orleans, New Orleans, Louisiana 70148

1-dimethylamino-1-iodoisoprene and 1-fluoro-1-dimethylaminoisoprene follow different pathways in the reaction with acrylonitrile. In the former, the C-I bond is initially broken and a two step mechanism is energetically preferred, while in the latter where the C-F bond is more stable, a concerted pathway is predicted.

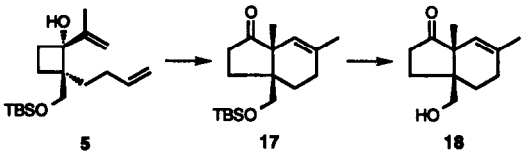


Tandem Ring Expansion and Insertion Reaction of Alkenic Cyclobutanols Mediated by Palladium——A Novel Approach to Bicyclo[4.3.0]nonane Systems

Tetrahedron, **1994**, *50*, 10391

Hideo Nemoto, Motohiro Shiraki and Keiichiro Fukumoto
Pharmaceutical Institute, Tohoku University, Aobayama, Sendai 980-77, Japan

A novel route to bicyclo[4.3.0]nonane system **18** was developed by the palladium mediated tandem ring expansion and insertion reaction of **5** as a key step *via* **17**.



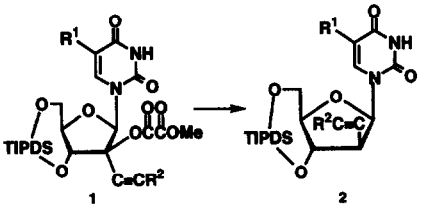
Nucleosides and Nucleotides. 134. Synthesis of 2'-*C*-Alkynyl-2'-Deoxy-1-β-D-Arabinofuranosylpyrimidines via Radical Deoxygenation of *Tert*-Propargyl Alcohols in Sugar Moiety

Tetrahedron, **1994**, *50*, 10397

Tomoharu Iino, Yuichi Yoshimura, and Akira Matsuda*

Faculty of Pharmaceutical Sciences. Hokkaido University,[a] Kita-12, Nishi-6, Kita-ku, Sapporo 060, Japan,

Radical deoxygenation of **1** with Bu_3SnH in the presence of AIBN furnished **2** in a stereospecific manner.

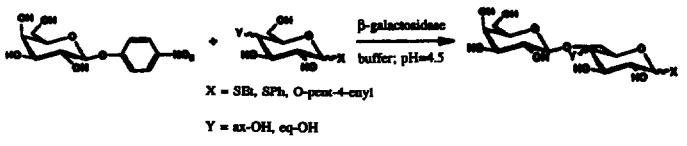


GALACTOSYLATION BY USE OF ß-GALACTOSIDASE: CHEMO-ENZYMATIC SYNTHESES OF DI- AND TRISACCHARIDES

Tetrahedron, **1994**, *50*, 10407

Wolfgang H. Binder, Hanspeter Kählig, and Walther Schmid *
Institut für Organische Chemie der Universität Wien, Währingerstraße 38, A-1090 Vienna, AUSTRIA

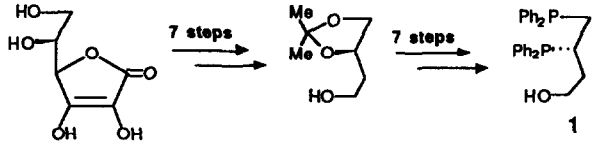
Various disaccharides have been synthesized by utilizing ß-galactosidase from *Aspergillus oryzae*. We applied p-nitrophenyl-ß-D-galactoside as glycosyl donor and investigated different glycosides as acceptor substrates.



Tetrahedron, **1994**, *50*, 10419

SYNTHESIS AND CATALYTIC PROPERTIES OF AN ACYCLIC ANALOGUE OF HYDROXY NORPHOS.

A. BÖRNER*[a], J. WARD[c], W. RUTH[b], J. HOLZ[a], A. KLESS[a], D. HELLER[a], H. B. KAGAN[c*], [a] *Max-Planck-Gesellschaft, AG für Asymm. Katalyse, Buchbinderstr. 5/6,* [c] *Fachber. Chemie d. Univ. Rostock, Universitätsplatz 1; D-18055 Rostock, Germany.* [b] *Laboratoire de Synthèse Asymétrique, URA CNRS 1497, Univ. Paris-Sud, F-91405 Orsay-Cedex, France.*



1

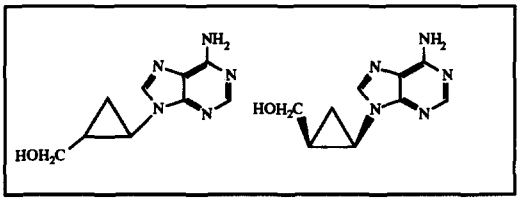
The synthesis of the hydroxy phosphine **1** derived from L-ascorbic acid and its utilization in asymmetric hydrogenation has been described.

Tetrahedron, **1994**, *50*, 10431

SYNTHESIS OF CYCLOPROPYL CARBOCYCLIC NUCLEOSIDES

RENÉ CSUK* and YVONNE VON SCHOLZ
PHARMAZEUTISCH-CHEMISCHES INSTITUT, UNIVERSITÄT HEIDELBERG,
Im Neuenheimer Feld 364, D-69120 Heidelberg, Germany.

As representatives of a novel class of carbocyclic nucleoside analogues (±)-*cis*-, (-)-*cis* and (±)-*trans* 9-(2-hydroxymethylcyclopropyl)-adenine (= [2-(6-amino-purin-9-yl)-cyclopropyl]-methanol) were synthesized from the corresponding dialkyl 1,2-cyclopropane dicarboxylates.

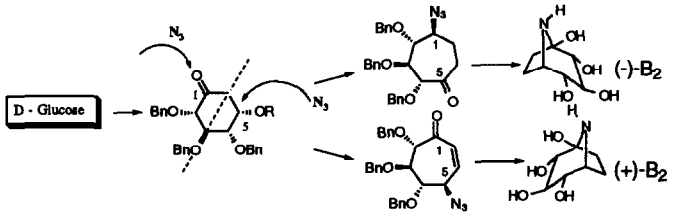


Tetrahedron, **1994**, *50*, 10443

Enantioselective Syntheses of Polyhydroxylated Nortropane Derivatives : Total Synthesis of (+) and (-)-Calystegine B_2

F.D. Boyer [a]and J.Y. Lallemand[b*]

[a]INRA, Unité de Phytopharmacie et Médiateurs Chimiques, CNRA, route de Saint-Cyr, F-78026 Versailles Cedex, France
[b]Laboratoire de Synthèse Organique, Ecole Polytechnique, F-91128 Palaiseau Cedex, France



Tetrahedron, **1994**, *50*, 10459

SYNTHESIS AND PROPERTIES OF TWO TETRAPUS HOST MOLECULES WITH FLUORINATED CHAINS

Jian-She Wang, Han-Zhong Zhang, Wei-Yuan Huang*, Xi-Kui Jiang*
Shanghai Institute of Organic Chemistry, 354 Feng-Lin Lu, Shanghai 200032, China

$C[CH_2O(CH_2)_3(CF_2)_nSO_3^-, Na^+]_4$ + $NpCH_2CH_2O(CH_2)_nR$

tetrapus 1

FP^+, R=N^+Me_3, Br^-

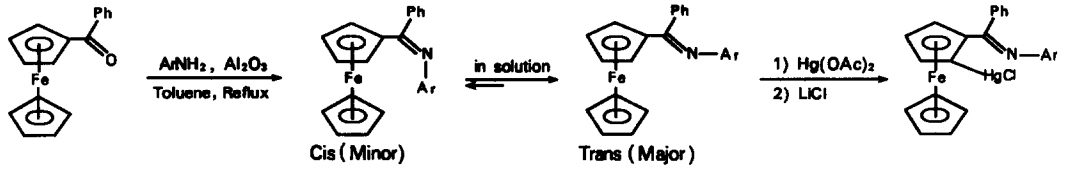
FP^-, R=CO_2^-, Na^+

Host-guest complex. The ($1+FP^+$) complex is much more stable.

Tetrahedron, **1994**, *50*, 10467

SYNTHESIS AND MERCURATION OF ANILS OF BENZOYLFERROCENE

Shou Quan Huo[a], Yang Jie Wu[a]*, Xi An Mao[b], Han Zhen Yuan[b]
[a] Department of Chemistry, Zhengzhou University, Zhengzhou 450052, China. [b] Laboratory of Magnetic Resonance and Atomic and Molecular Physics, Wuhan Institute of Physics, The Chinese Academy of Sciences, Wuhan 430071, China

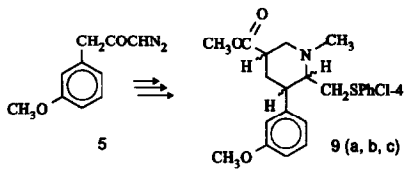


Tetrahedron, **1994**, *50*, 10477

AN APPROACH TO 1-ALKYL-3-PHENYLPIPERIDINE DERIVATIVES CONTAINING 2,5-FUNCTIONALIZED GROUPS: 1-METHYL-2-(4-CHLOROPHENYLTHIOMETHYL)-5-(METHOXYCARBONYL)-PIPERIDINE.

Heleni K. Kotzamani and Christos G. Gourdoupis: Department of Pharmacy, University of Patras, Hellas and **Ioannis K. Stamos**: Institute of Organic and Pharmaceutical Chemistry and the Center for Molecular Analysis, The National Hellenic Research Foundation, 48 V. Konstantinou Ave, Athens 11635, Hellas.

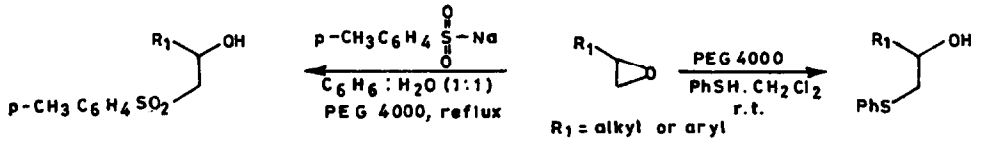
The synthesis of compound 9 (a, b, c) is described.



Tetrahedron, **1994**, *50*, 10483

POLYETHYLENE GLYCOL (PEG) 4000 CATALYSED REGIOSELECTIVE NUCLEOPHILIC RING OPENING OF OXIRANES - A NEW AND CONVENIENT SYNTHESIS OF β -HYDROXYSULFONE AND β-HYDROXYSULFIDE

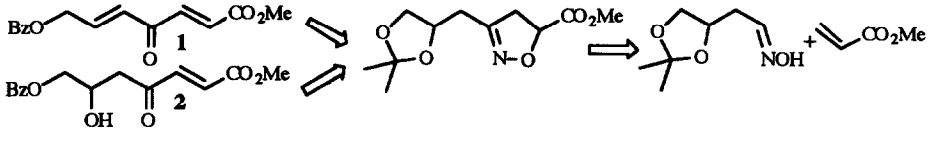
A.K. Maiti and P. Bhattacharyya*
Department of Chemistry, Bose Institute, 93/1, A.P.C. Road, Calcutta 700009, India.



Tetrahedron, **1994**, *50*, 10491

SYNTHESIS OF MELODIENONE AND 7-HYDROXY-6-HYDROMELODIENONE, TWO BIOACTIVE HEPTENES FROM *MELODORUM FRUTICOSUM*.

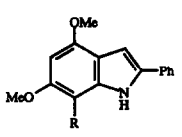
A. Barco[a], S. Benetti[a], C. De Risi[b], G.P. Pollini[b], R. Romagnoli[a], and V. Zanirato[b]. [a]*Dipartimento di Chimica, Via L. Borsari 46, I-44100-Ferrara;* [b]*Dipartimento di Scienze Farmaceutiche, Via Fossato di Mortara 19, I-44100-Ferrara.*

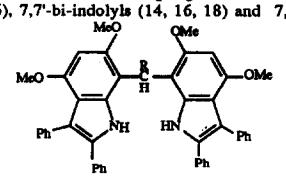


Tetrahedron, **1994**, *50*, 10497

Substitution, Oxidation and Addition Reactions at C-7 of Activated Indoles David St.C . Black[a]*, Michael C. Bowyer, Maria M. Catalano, Andrew J. Ivory, Paul A. Keller, Naresh Kumar and Stephen J. Nugent: [a]*School of Chemistry, University of New South Wales, Sydney, 2052, Australia.*

4,6-Dimethoxy-2,3-diphenylindole (1) undergoes acylation, bromination, oxidative coupling and acid-catalysed addition to aldehydes at C-7 to produce a range of 7-substituted indoles (3-11), indolo-isatin (6), 7,7'-bi-indolyls (14, 16, 18) and 7,7'-di-indolylmethanes (20-31).





Tetrahedron, **1994**, *50*, 10509

ACID-BASE EQUILIBRIA AND DECOMPOSITION OF (N-Cl)-α-AMINO ACIDS.

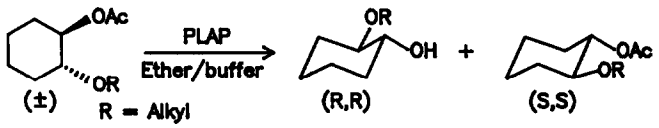
X.L. Armesto, M. Canle L., A.M. Gamper, J.A. Santaballa*.
Departamento de Química Fundamental e Industrial. Facultade de Ciencias. Universidade da Coruña. A Zapateira, s/n. E-15071 ESPAÑA.

The rate constants for the decomposition of secondary (N-Cl)-α-amino acids in acid medium, as well as their macroscopic, microscopic and tautomeric equilibrium constants have been obtained.

Tetrahedron, **1994**, *50*, 10521

PIG LIVER ACETONE POWDER (PLAP) AS BIOCATALYST: ENANTIOSELECTIVE SYNTHESIS OF *trans*-2-ALKOXY-CYCLOHEXAN-1-OLS

Deevi Basavaiah* and Peddinti Rama Krishna, School of Chemistry University of Hyderabad, Hyderabad 500 134, India

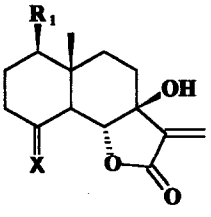


Tetrahedron, **1994**, *50*, 10531

SYNTHESIS OF BIOACTIVE 7-β-HYDROXYEUDESMANOLIDES

Isidro G. Collado*, Miguel S. Alonso, Rosario Hernández-Galán, Jose G. Madero and Guillermo M. Massanet.
Departamento de Química Orgánica. Facultad de Ciencias. Universidad de Cádiz. Apdo 40, 11510 Puerto Real. Cadiz. Spain.

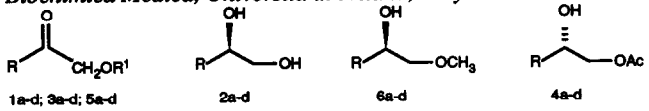
Several eudesmanolides functionalized at C-7 have been synthesized and tested against the fungus Botrytis cinerea for their potential antifungal activity. The strategy followed support the proposed biogenetic route to 7-hydroxy-eudesmanolides.



Tetrahedron, **1994**, *50*, 10539

Baker's Yeast-Mediated Reduction of α-Hydroxy Ketones and Derivatives: The Steric Course of the Biotransformation

PATRIZIA FERRABOSCHI, PARIDE GRISENTI, ADA MANZOCCHI, ENZO SANTANIELLO
Dipartimento di Chimica e Biochimica Medica, Università di Milano, Italy



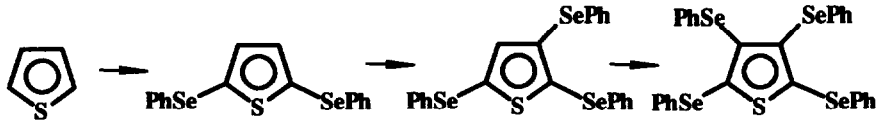
1a-d; 3a-d; 5a-d 2a-d 6a-d 4a-d

The baker's yeast-mediated reduction of the α-hydroxy ketones **1a-d** (R^1=H) and the methyl ethers **5a-d** (R^1=Me) affords (R)-**2a-d** (90-98% ee) and (R)-**6a-d** (64-76% ee), whereas the acetates **3a-d** (R^1=Ac) furnish (S)-**4a-d** (72-94% ee).

Tetrahedron, **1994**, *50*, 10549

ELECTROPHILIC PHENYLSELENENYLATION OF THIOPHENES. SYNTHESIS OF POLY(PHENYLSELENO)THIOPHENES.

Marcello Tiecco,* Lorenzo Testaferri, Marco Tingoli, Francesca Marini and Stefania Mariggiò
Istituto di Chimica Organica, Università di Perugia, 06100 - Perugia, Italy



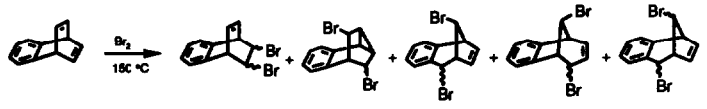
Phenylselenenyl sulfate effects electrophilic substitution reactions on thiophenes. Under controlled experimental conditions, the desired number of PhSe groups can be introduced.

Tetrahedron, **1994**, *50*, 10555

HIGH TEMPERATURE BROMINATION VI: BROMINATION OF BENZOBARRELENE

A. Daştan[a], M. Balcı[a], T. Hökelek[b], D. Ülkü[b], and O. Büyükgüngör[c] : [a]Atatürk University, Erzurum (Turkey), [b]Hacettepe University, Ankara (Turkey), [c]Ondokuzmayıs University, Samsun (Turkey).

Bromination of benzobarrelene at 10 °C gave only rearranged products where aryl- and alkyl shifts are involved. On the other hand, bromination at 150 °C resulted in the formation of non-rearranged products besides the rearranged products. Reaction mechanism is discussed.



Tetrahedron, **1994**, *50*, 10579

LIGNANS AND NEOLIGNANS FROM STEMS OF *PIPER WIGHTII*

Ashok K. Prasad[a], Om Dutt Tyagi[a], Jesper Wengel[a] and Per M. Boll[a]*,
Carl E. Olsen[b], Suman Gupta[c], Nawal K. Sharma[c], Kirpal S. Bisht[c] and Virinder S. Parmar[c]

[a]Department of Chemistry, Odense University, DK-5230 Odense M, Denmark
[b]Department of Chemistry, Royal Veterinary and Agricultural University, DK-1871 Frederiksberg C, Denmark
[c]Department of Chemistry, University of Delhi, Delhi-110 007, India

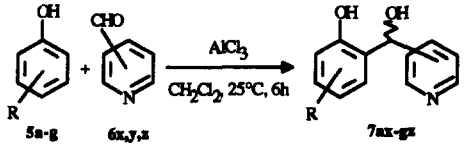
Three new neolignans and one new lignan have been isolated from *Piper wightii*.

Tetrahedron, **1994**, *50*, 10587

METAL-TEMPLATE *ORTHO*-REGIOSELECTIVE SYNTHESIS OF 2'-HYDROXYPHENYLPYRIDINEMETHANOLS

Giovanni Sartori, Raimondo Maggi, Franca Bigi, Attilio Arienti, Cecilia Porta and Giovanni Predieri
Dipartimento di Chimica Organica e Industriale dell'Università,
Viale delle Scienze, I-43100 Parma, Italy

Products **7** are synthesized by *ortho*-regioselective reaction of phenols **5** and pyridinealdehydes **6** in the presence of $AlCl_3$.

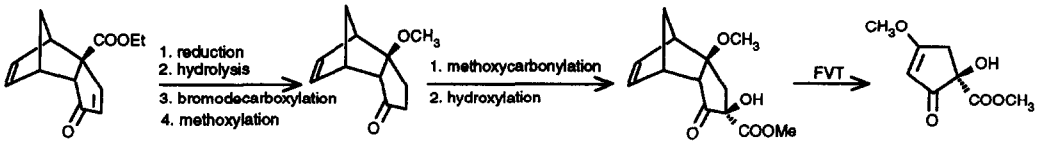


5a-g **6x,y,z** **7ax-gz**

Tetrahedron, **1994**, *50*, 10597

TOTAL SYNTHESIS OF (-)-KJELLMANIANONE FROM TRICYCLODECADIENONE. A REVISION OF ITS ABSOLUTE CONFIGURATION

Jie Zhu, Antonius J.H. Klunder and Binne Zwanenburg*, Department of Organic Chemistry, NSR Center for Molecular Structure, Design and Synthesis, University of Nijmegen, Toernooiveld, 6525 ED Nijmegen, The Netherlands



$[\alpha]_D$= +105 , ee>98%

X-ray

$[\alpha]_D$= -115.0