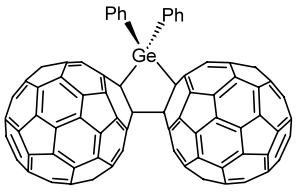
Mechanochemical synthesis of a novel C_{60} dimer connected by a germanium bridge and a single bond

Tetrahedron Letters 44 (2003) 8199

Yasujiro Murata, Aihong Han and Koichi Komatsu*

Institute for Chemical Research, Kyoto University, Uji, Kyoto 611-0011, Japan



Novel Fullerene Dimer

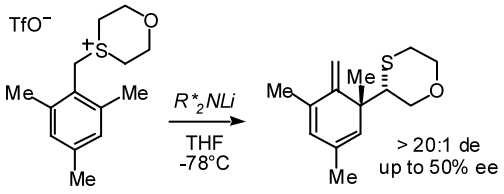
Application of chiral lithium amide bases to the thia-Sommelet dearomatization reaction

Tetrahedron Letters 44 (2003) 8203

Casey C. McComas and David L. Van Vranken*

Department of Chemistry, University of California, Irvine, CA 92697-2025, USA

Quaternary centers can be inserted into aromatic rings in up to 50% ee.

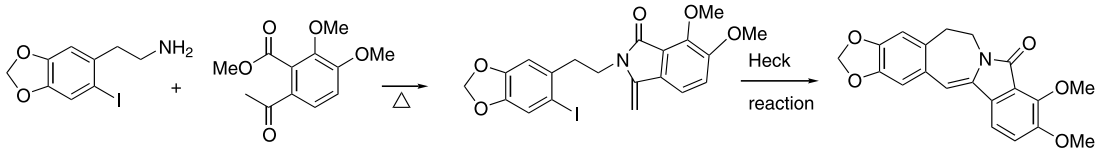


Intramolecular Heck reaction of methylenephthalimidine derivatives: a simple route to lennoxamine and chilenine

Tetrahedron Letters 44 (2003) 8207

Guncheol Kim,* Jin Hee Kim, Won-jeong Kim and Yeon Ah Kim

Department of Chemistry, College of Natural Sciences, Chungnam National University, Daejon 305-764, Republic of Korea

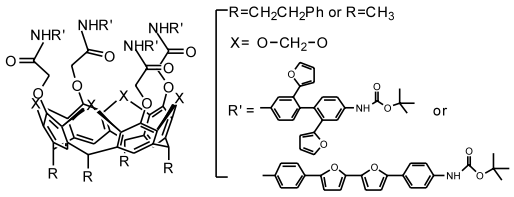


Cavitands bearing four fluorophores

Tetrahedron Letters 44 (2003) 8211

Moonhor Ree,[a,*] Jong-Seong Kim,[a] Jae Jung Kim,[a] Byeang Hyean Kim,[a] Juyoung Yoon[b] and Heesoo Kim[c]

[a]*Department of Chemistry, Center for Integrated Molecular Systems, Division of Molecular and Life Sciences, and BK21 Program, Pohang University of Science and Technology, Pohang 790-784, Republic of Korea*
[b]*Department of Chemistry, Ewha Womans University, Daeshing-dong, Seodaemoon-gu, Seoul 120-750, Republic of Korea*
[c]*Department of Microbiology, Dongguk University College of Medicine, 707 Seokjang-dong, Gyeongju 780-714, Republic of Korea*



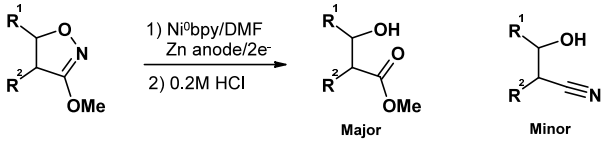
The synthesis of novel cavitands containing four fluorophores [*tert*-butoxycarbonyl protected 2,2′-bis(furyl)benzidine (*t*-BOC FurylBz) or 5,5′-bis(4-aminophenyl)-2,2′-bifuryl (*t*-BOC PFDA)] and ionophoric functional groups on the upper-rim is reported.

Tetrahedron Letters 44 (2003) 8217

Preparation of β-hydroxyesters from isoxazolines. A selective Ni^0bpy-catalyzed electrochemical method

Viviane F. Caetano, F. W. Joachim Demnitz,* Flamarion B. Diniz, Ronaldo M. Mariz, Jr. and Marcelo Navarro

Departamento de Química Fundamental, CCEN-Universidade Federal de Pernambuco, Cidade Universitária CEP: 50670-901, Recife, PE, Brazil

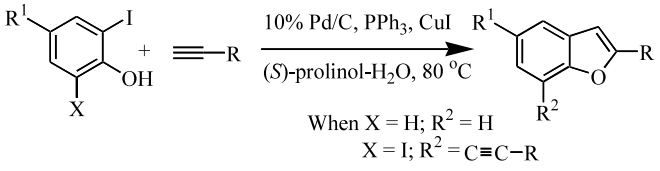


Tetrahedron Letters 44 (2003) 8221

Pd/C mediated synthesis of 2-substituted benzo[*b*]furans/ nitrobenzo[*b*]furans in water

Manojit Pal,* Venkataraman Subramanian and Koteswar Rao Yeleswarapu*

Chemistry-Discovery Research, Dr. Reddy's Laboratories Ltd., Bollaram Road, Miyapur, Hyderabad 500050, India

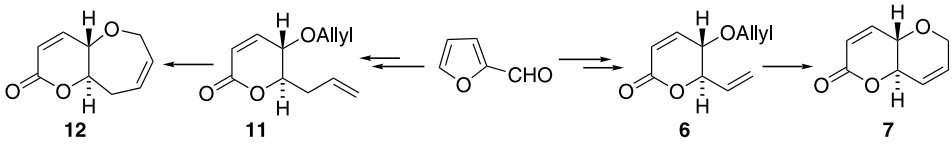


Tetrahedron Letters 44 (2003) 8227

A furan route to the asymmetric synthesis of *trans*-fused polyether building blocks

Urlam Murali Krishna, G. S. C. Srikanth and Girish K. Trivedi*

Department of Chemistry, Indian Institute of Technology Bombay, Powai, Mumbai 400076, India

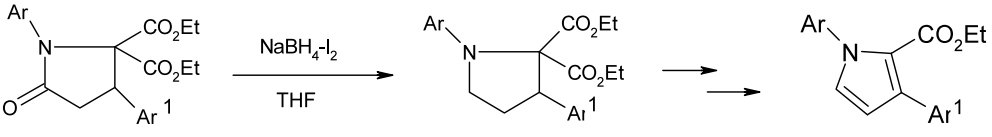


Tetrahedron Letters 44 (2003) 8229

Chemoselective reduction of a lactam carbonyl group in the presence of a *gem*-dicarboxylate by sodium borohydride and iodine: a facile entry to *N*-aryl trisubstituted pyrroles

Pranab Haldar and Jayanta K. Ray*

Department of Chemistry, Indian Institute of Technology, Kharagpur 721302, India



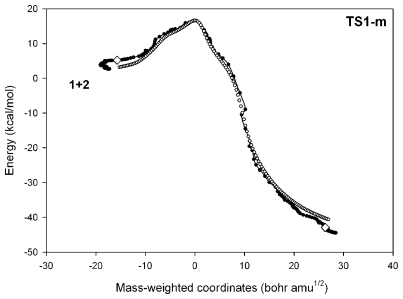
Tetrahedron Letters 44 (2003) 8233

QRC: a rapid method for connecting transition structures to reactants in the computational analysis of organic reactivity

Jonathan M. Goodman* and María A. Silva

Unilever Centre for Molecular Informatics, Department of Chemistry, Lensfield Road, Cambridge CB2 1EW, UK

The QRC procedure is suitable for studies of organic reactivity. It is more convenient and faster than IRC calculations at the expense of some precision.



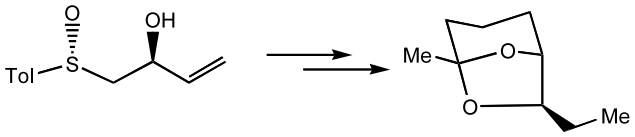
Tetrahedron Letters 44 (2003) 8237

A novel and stereospecific synthesis of (+)-*exo*-brevicomin†

Sadagopan Raghavan* and Suju C. Joseph

Organic Division I, Indian Institute of Chemical Technology, Hyderabad 500 007, India

A concise and stereospecific synthesis of (+)-*exo*-brevicomin is disclosed.



(+)-*exo*-Brevicomin

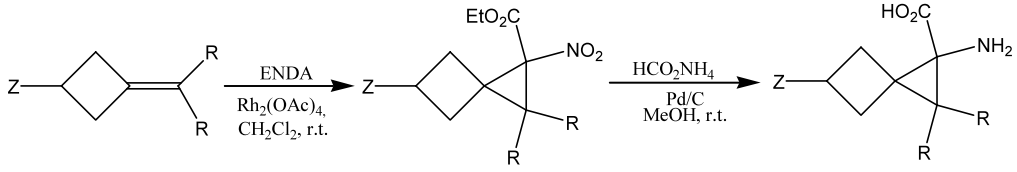
Tetrahedron Letters 44 (2003) 8241

Catalytic cyclopropanation of methylenecyclobutanes using ethyl nitrodiazoacetate. Synthesis of spirohexane amino acids

Nikolai V. Yashin, Elena B. Averina, Sergei M. Gerdov, Tamara S. Kuznetsova* and Nikolai S. Zefirov

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

The reaction of ethyl nitrodiazoacetate with the series of methylenecyclobutanes was studied and both [1+2]- and [2+3]-cycloaddition pathways were observed depending on olefin structure. Amino acids of a spirohexane type were synthesized from methylenecyclobutanes by a three-step synthesis.

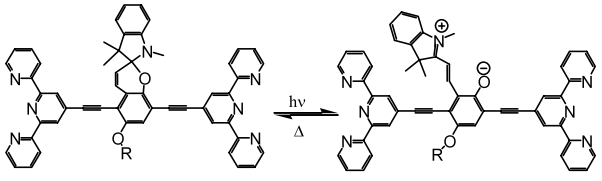


Tetrahedron Letters 44 (2003) 8245

Towards molecular T-junction relays

Ata Amini, Katie Bates, Andrew C. Benniston,*
Donald J. Lawrie and Estelle Soubeyrand-Lenoir

Molecular Photonics Laboratory, School of Natural Sciences (Chemistry), University of Newcastle, Newcastle upon Tyne, NE1 7RU, UK

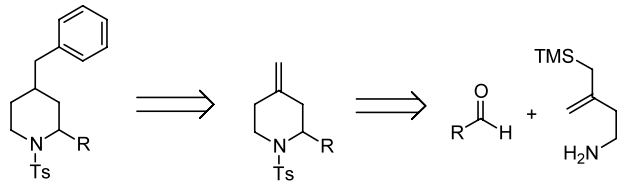


Tetrahedron Letters 44 (2003) 8249

An efficient route to 4-(substituted benzyl)piperidines

Bartłomiej Furman* and Magdalena Dziedzic

Institute of Organic Chemistry, Polish Academy of Sciences, 01-224 Warsaw, Poland



Tetrahedron Letters 44 (2003) 8253

Synthesis of tetrahydrofurans via silicon promoted Pummerer type reaction

Sadagopan Raghavan,* A. Rajender, M. Abdul Rasheed and S. Ramakrishna Reddy

Organic Division I, Indian Institute of Chemical Technology, Hyderabad 500 007, India

A novel, unprecedented transformation of δ-hydroxysulfoxides into substituted tetrahydrofurans by a silicon promoted Pummerer type reaction is disclosed.

and other examples

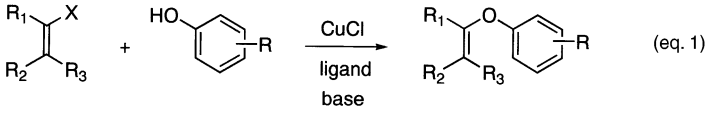
Tetrahedron Letters 44 (2003) 8257

Vinyl aryl ethers from copper-catalyzed coupling of vinyl halides and phenols

Zhonghui Wan,* Chauncey D. Jones, Thomas M. Koenig, Y. John Pu and David Mitchell

Global Chemical Process R&D, Eli Lilly and Company, Lilly Corporate Center, Indianapolis, IN 46285, USA

Vinyl aryl ethers were formed in good to excellent yields by direct coupling of vinyl halides and phenols under mild Ullmann-type reaction conditions.



(eq. 1)

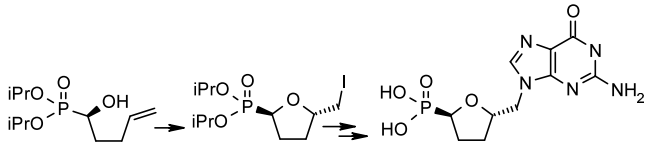
Tetrahedron Letters 44 (2003) 8261

A stereoselective route to bioactive nucleotide phosphonate analogs

Monica Bubenik,* Patrice Préville, Josée Dugas, Giorgio Attardo and Laval Chan

Shire BioChem Inc., 275 Armand-Frappier Blvd., Laval, Québec, Canada, H7V 4A7

We describe a stereoselective route where the key step involves an iodoetherification of a α-hydroxyphosphonate to generate the trans tetrahydrofuran with high stereoselectivity.



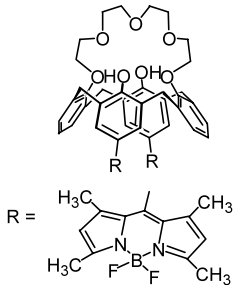
Tetrahedron Letters 44 (2003) 8265

New ON–OFF type Ca^{2+}-selective fluoroionophore having boron–dipyrromethene fluorophores

Na Ri Cha, So Youn Moon and Suk-Kyu Chang*

Department of Chemistry, Chung-Ang University, Seoul 156-756, South Korea

A new fluorogenic ionophore has been prepared by conjugating calix[4]-crown-5 ether with boron–dipyrromethene fluorophore. The ionophore exhibited a pronounced selective ON–OFF type response toward Ca^{2+} ions over other physiologically important metal ions of Na^+, K^+, and Mg^{2+} in aqueous 95% MeOH solution.

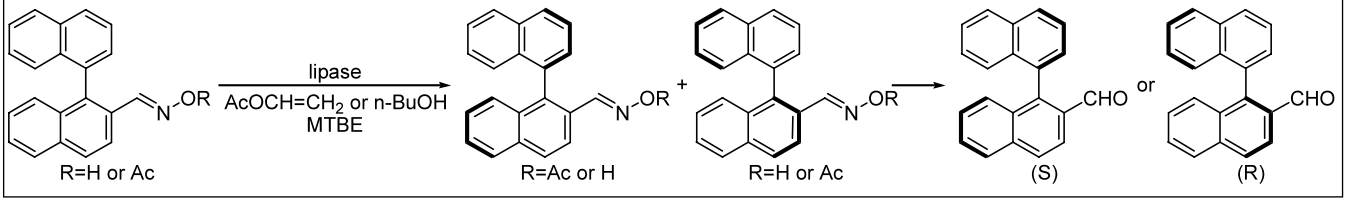


Tetrahedron Letters 44 (2003) 8269

Facile synthesis of chiral 2-formyl-1,1′-binaphthyl via lipase-catalyzed acylation and hydrolysis of 1,1′-binaphthyl oximes

Naoto Aoyagi,* Tomoyuki Ohwada and Taeko Izumi

Department of Chemistry and Chemical Engineering, Graduate School of Science and Engineering, Yamagata University, Jyonan, Yonezawa, Yamagata 992-8510, Japan

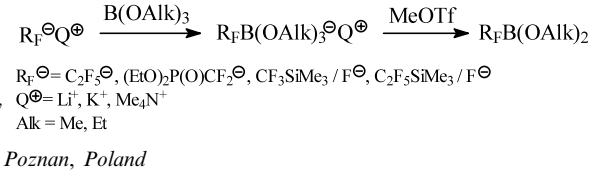


Tetrahedron Letters 44 (2003) 8273

Perfluoroalkyl borates and boronic esters: new promising partners for Suzuki and Petasis reactions

Alexander A. Kolomeitsev,[a,*] Alexander A. Kadyrov,[b] Joanna Szczepkowska-Sztolcman,[c] Magdalena Milewska,[c] Henryk Koroniak,[c] German Bissky,[d] Jan A. Barten[e] and Gerd-Volker Röschenthaler[d,*]

[a]*Institute of Organic Chemistry, Ukrainian National Academy of Sciences, Murmanskaya 6, 02094 Kiev, Ukraine*
[b]*A.N. Nesmeyanov Institute of Organoelement Compounds, Russian Academy of Sciences, Vavilova 28, Moscow, Russia*
[c]*Faculty of Chemistry, Adam Mickiewicz University, Grunwaldzka 6, 60-780 Poznan, Poland*
[d]*Institute of Inorganic & Physical Chemistry, University of Bremen, Leobener Strasse, 28334 Bremen, Germany*
[e]*Hansa Fine Chemicals, Leobener Strasse, 28334 Bremen, Germany*

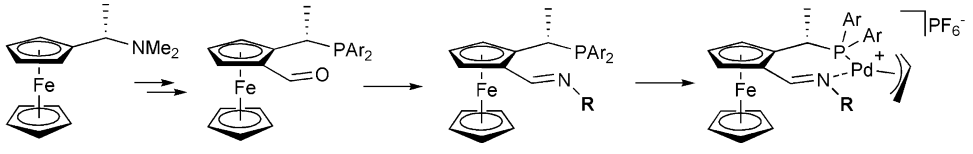


Tetrahedron Letters 44 (2003) 8279

Novel chiral ferrocenyl-imino phosphine ligands and their use in palladium catalyzed allylic alkylations

Pierluigi Barbaro,[a,*] Claudio Bianchini,[a] Giuliano Giambastiani[a,*] and Antonio Togni[b]

[a]*Istituto di Chimica dei Composti Organo Metallici (ICCOM-CNR), Florence Research Area, Via Madonna del Piano, 50019-Sesto Fiorentino-Firenze, Italy*
[b]*Department of Chemistry, Swiss Federal Institute of Technology, ETH Hönggerberg, CH-8093 Zürich, Switzerland*

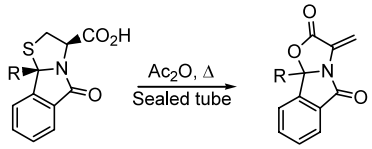


Tetrahedron Letters 44 (2003) 8285

Synthesis of novel tricyclic isoindole derivatives

Teresa M. V. D. Pinho e Melo,[a,*] Catarina I. A. Santos,[a]
António M. d'A. Rocha Gonsalves,[a] José A. Paixão,[b] Ana M. Beja[b] and Manuela Ramos Silva[b]

[a]*Departamento de Química, Universidade de Coimbra, 3004-535 Coimbra, Portugal*
[b]*Departamento de Física, Universidade de Coimbra, 3004-516 Coimbra, Portugal*

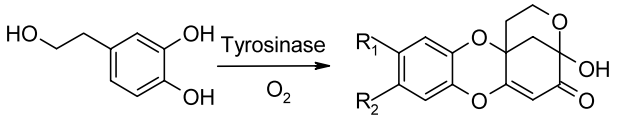


Tetrahedron Letters 44 (2003) 8289

Oxidative chemistry of hydroxytyrosol: isolation and characterisation of novel methanooxocinobenzodioxinone derivatives

Davide Vogna, Alessandro Pezzella, Lucia Panzella, Alessandra Napolitano* and Marco d'Ischia

Department of Organic Chemistry and Biochemistry, University of Naples 'Federico II', Via Cinthia 4, I-80126 Naples, Italy



1

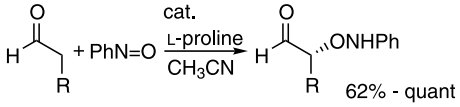
2a: R_1 = H, R_2 = $-CH_2CH_2OH$
2b: R_1 = $-CH_2CH_2OH$, R_2 = H

Tetrahedron Letters 44 (2003) 8293

Direct proline catalyzed asymmetric α-aminooxylation of aldehydes

Yujiro Hayashi,* Junichiro Yamaguchi, Kazuhiro Hibino and Mitsuru Shoji

Department of Industrial Chemistry, Faculty of Engineering, Tokyo University of Science, Kagurazaka, Shinjuku-ku, Tokyo 162-8601, Japan



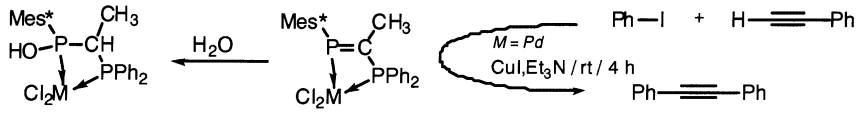
62% - quant
95 - 98% ee

Tetrahedron Letters 44 (2003) 8297

Preparation, properties, and catalytic activity of transition-metal complexes containing a ligated 2-methyl-3,3-diphenyl-1,3-diphosphapropene skeleton

Hongze Liang, Katsunori Nishide, Shigekazu Ito and Masaaki Yoshifuji*

Department of Chemistry, Graduate School of Science, Tohoku University, Aoba, Sendai 980-8578, Japan



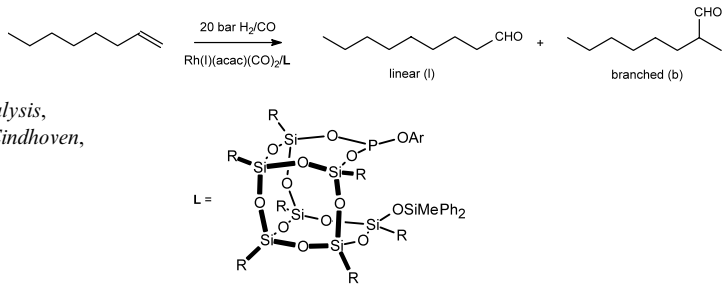
M = Pd, Pt; Mes* = 2,4,6-*t*-$Bu_3C_6H_2$

Tetrahedron Letters 44 (2003) 8301

POSSphites—monophosphites derived from incompletely condensed silsesquioxanes

Jarl Ivar van der Vlugt, Michiel M. P. Grutters, Jens Ackerstaff, Rob W. J. M. Hanssen, Hendrikus C. L. Abbenhuis and Dieter Vogt*

Schuit Institute of Catalysis, Laboratory of Homogeneous Catalysis, Eindhoven University of Technology, PO Box 513, 5600 MB Eindhoven, The Netherlands

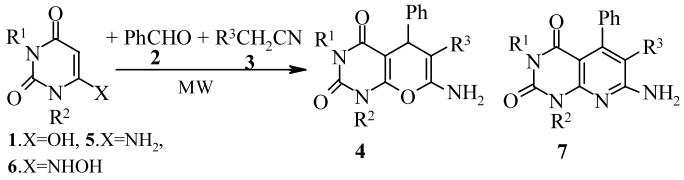


Tetrahedron Letters 44 (2003) 8307

A novel three-component one-pot synthesis of pyrano[2,3-*d*]-pyrimidines and pyrido[2,3-*d*]pyrimidines using microwave heating in the solid state

Ipsita Devi,[a] B. S. D. Kumar[b] and Pulak J. Bhuyan[a,*]

[a]*Medicinal Chemistry Division, Regional Research Laboratory, Jorhat 785 006, Assam, India*
[b]*Soil Microbiology Division, Regional Research Laboratory, Jorhat 785 006, Assam, India*



Microwave-assisted three-component cyclocondensation of barbituric acids **1**, benzaldehyde **2** and alkyl nitriles **3** proceeds in the absence or presence of triethylamine to afford pyrano[2,3-*d*]pyrimidines **4** and 6-aminouracils **5** or 6-hydroxyaminouracils **6** react with **2** and **3** under identical conditions to yield pyrido[2,3-*d*]pyrimidines **7**, all in high yields.

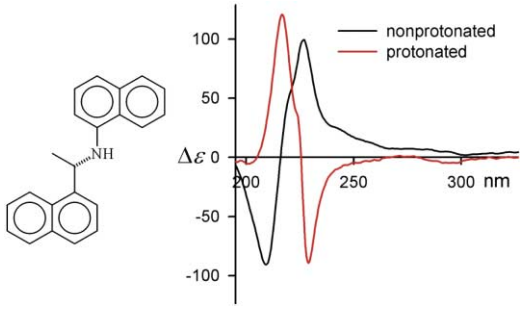
Tetrahedron Letters 44 (2003) 8311

A circular dichroism detection of stereostructural change due to amine protonation

Marcin Kwit and Jacek Gawronski*

Department of Chemistry, Adam Mickiewicz University, 60780 Poznan, Poland

Circular dichroism measurements have been used to visualise the effect of conformational change caused by amine protonation.

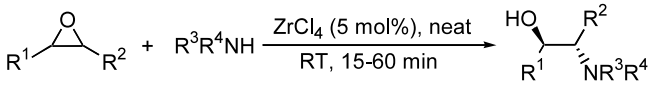


Tetrahedron Letters 44 (2003) 8315

$ZrCl_4$ as a new and efficient catalyst for the opening of epoxide rings by amines

Asit K. Chakraborti* and Atul Kondaskar

Department of Medicinal Chemistry, National Institute of Pharmaceutical Education and Research (NIPER), Sector 67, S. A. S. Nagar, Punjab 160 062, India



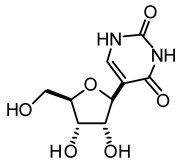
Tetrahedron Letters 44 (2003) 8321

A highly stereocontrolled and efficient synthesis of α- and β-pseudouridines

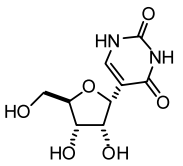
Stephen Hanessian* and Roger Machaalani

Department of Chemistry, Université de Montréal, C. P. 6128, Succ. Centre-Ville, Montréal, P. Q., Canada, H3C 3J7

A five-step practical and stereocontrolled synthesis of α- and β-pseudouridines from D-ribonolactone is described. The key step involves a highly stereoselective reduction of a hemiketal *C*-nucleoside intermediate in each case. Multi-gram quantities of β-pseudouridine can be now made available.



β-pseudouridine



α-pseudouridine

Tetrahedron Letters 44 (2003) 8325

A concise synthesis of arabinogalactan with β-(1→6) galactopyranose backbone and α-(1→2) arabinofuranose side chains

Ying Zeng, Aixiao Li and Fanzuo Kong*

Research Center for Eco-Environmental Sciences, The Chinese Academy of Sciences, PO Box 2871, Beijing 100085, PR China

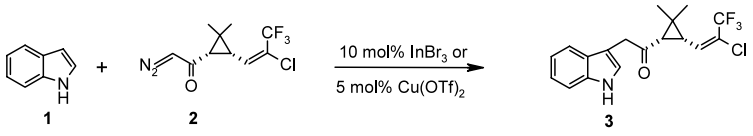
β-Gal*p*-(1→6)-[α-Ara*f*-(1→5)-α-Ara*f*-(1→2)-]β-Gal*p*-(1→6)-β-Gal*p*-1→OMP
β-Gal*p*-(1→6)-[α-Ara*f*-(1→5)-α-Ara*f*-(1→2)-]β-Gal*p*-(1→6)-β-Gal*p*-(1→6)-[α-Ara*f*-(1→5)-α-Ara*f*-(1→2)-]β-Gal*p*-1→OMP

Tetrahedron Letters 44 (2003) 8331

$InBr_3/Cu(OTf)_2$-catalyzed *C*-alkylation of pyrroles and indoles with α-diazocarbonyl compounds

J. S. Yadav,* B. V. S. Reddy and G. Satheesh

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



1 2 3

Tetrahedron Letters 44 (2003) 8335

The structure of velutinoside A: a pregnane pentasaccharide from *Mandevilla velutina*

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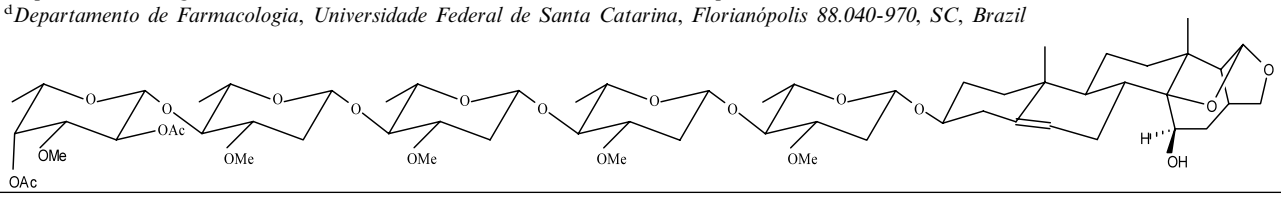

An efficient synthesis of α-aryl β-(*N*-tosyl)amino phosphonate derivatives from α-diazophosphonate

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α-Aryl β-(*N*-tosyl)amino phosphonates are prepared from aryl *N*-tosylimine in three catalytic reactions.