Tetrahedron Letters 43 (2002) 7655

A novel leaf-movement inhibitor of a nyctinastic weed, *Sesbania exaltata* Cory, designed on a naturally occurring leaf-opening substance and its application to a potential, highly selective herbicide

Noboru Takada,[a] Eisuke Kato,[a] Katsuhiro Ueda,[b] Shosuke Yamamura[a] and Minoru Ueda[a,*]

[a]*Department of Chemistry, Faculty of Science and Technology, Keio University, Hiyoshi, Yokohama 223-8522, Japan*
[b]*Department of Chemistry, Biology and Marine Science, University of The Ryukyus, Nishihara-cho, Okinawa 903-0213, Japan*

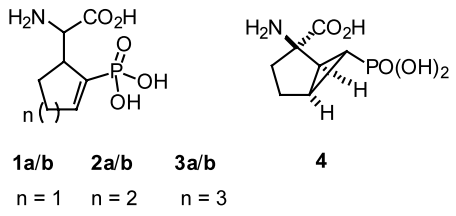
We isolated 4-*O*-β-D-glucopyranosyl-*trans*-*p*-coumarate (**1**), the leaf-opening substance of *Sesbania exaltata* Cory. The leaf-movement inhibitor, designed on the chemical mechanism of nyctinasty, could keep the leaves of *S. exaltata* open till the leaves withered and died.

Tetrahedron Letters 43 (2002) 7659

Synthesis of constrained cycloalkyl analogues of glutamic acid with an ω-phosphonic acid function

Bernard Bessières,[a] Angèle Schoenfelder,[a] Céline Verrat,[a] André Mann,[a,*] Paul Ornstein[b] and Conception Pedregal[c]

[a]*Laboratoire de Pharmacochimie de la Communication Cellulaire, UMR 7081 Faculté de Pharmacie, 74, route du Rhin BP 24, F-67401 Illkirch, France*
[b]*Lilly Research Laboratories, Indianapolis, IN 46285, USA*
[c]*Lilly, SA. Avd. de la industria 30, 28108 Alcobendas, Madrid, Spain*



1a/b **2a/b** **3a/b** **4**

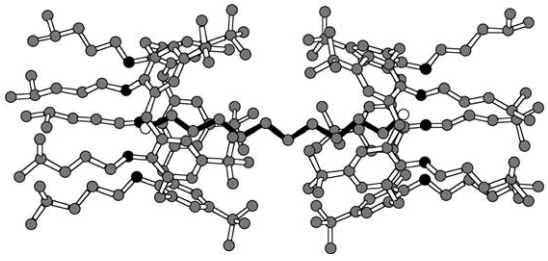
n = 1 n = 2 n = 3

Tetrahedron Letters 43 (2002) 7663

Guest-induced capsular assembly of calix[5]arenes

Domenico Garozzo,[a] Giuseppe Gattuso,[b] Franz H. Kohnke,[b] Paola Malvagna,[c] Anna Notti,[b] Salvatore Occhipinti,[c] Sebastiano Pappalardo,[c] Melchiorre F. Parisi[b,*] and Ilenia Pisagatti[b]

[a]*CNR, ICTMP, Viale A. Doria 6, I-95125 Catania, Italy*
[b]*Dipartimento di Chimica Organica e Biologica, Università di Messina, Salita Sperone 31, I-98166 Messina, Italy*
[c]*Dipartimento di Scienze Chimiche, Università di Catania, Viale A. Doria 6, I-95125 Catania, Italy*

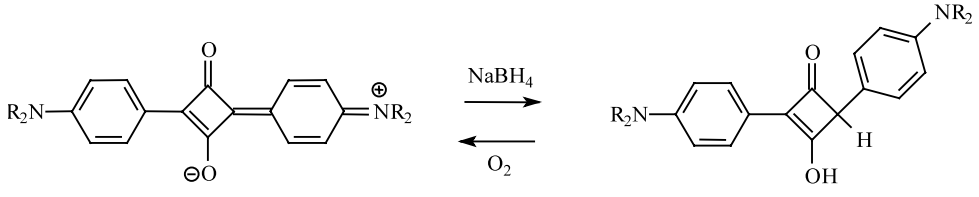


Tetrahedron Letters 43 (2002) 7669

Facile preparative redox chemistry of bis(4-dialkylaminophenyl)-squaraine dyes

John Griffiths* and Sooyoul Park

Department of Colour Chemistry, University of Leeds, Leeds LS2 9JT, UK



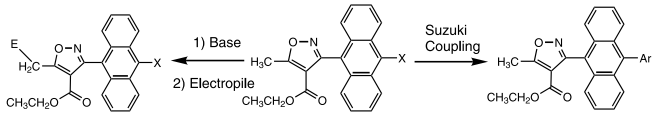
The isoxazole as a linchpin for molecules that target folded DNA conformations: selective lateral lithiation and palladation

Tetrahedron Letters 43 (2002) 7673

Xiaochun Han, Chun Li, Kevin C. Rider, Alex Blumenfeld, Brendan Twamley and N. R. Natale*

301 Renfrew Hall, Department of Chemistry, University of Idaho, Moscow, ID 83844-2343, USA

3-(10′-Halo-9′-anthracenyl)-5-methyl-4-isoxazolecarboxylic acid ethyl esters served as a useful scaffold for highly efficient lateral metalation at the C(5), and Suzuki–Fu palladium catalyzed cross coupling at the C(10′).



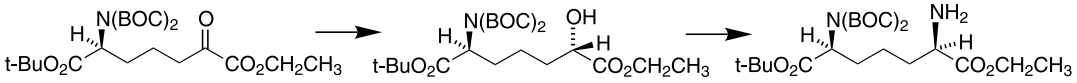
Asymmetric synthesis of differentially protected *meso*-2,6-diaminopimelic acid

Tetrahedron Letters 43 (2002) 7679

John L. Roberts* and Cecil Chan

Discovery Chemistry, Roche Research Center, Hoffmann-La Roche, Nutley, NJ 07110, USA

meso-2,6-Diaminopimelic acid has been prepared differentially protected in a stereospecific manner from both L-aspartic and L-glutamic acids. The key step to establish the second chiral center involves the asymmetric reduction of a pyruvate moiety with Alpine-Borane®.



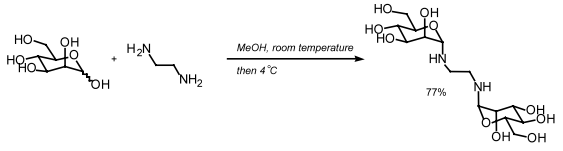
One-pot synthesis of multivalent arrays of mannose mono- and disaccharides

Tetrahedron Letters 43 (2002) 7683

Wayne Hayes,[a] Helen M. I. Osborn,[a,*] Sadie D. Osborne,[a] Robert A. Rastall[b] and Barbara Romagnoli[a]

[a]*School of Chemistry, University of Reading, Whiteknights, Reading RG6 6AD, UK*
[b]*School of Food Biosciences, University of Reading, Whiteknights, Reading RG6 6AP, UK*

The synthesis of multivalent arrays of mannose mono- and disaccharides is achieved by condensation reactions between di- to hexavalent amines with either D-mannose or Man α-1,2-Man or Man α-1,3-Man. Notably, no protecting groups are utilised within this strategy. For example:

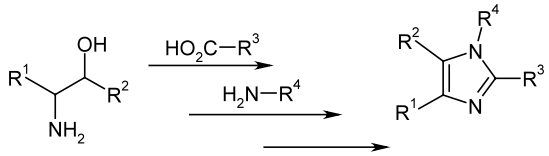


Parallel synthesis of substituted imidazoles from 1,2-aminoalcohols

Tetrahedron Letters 43 (2002) 7687

Konrad H. Bleicher,[a] Fernand Gerber,[a] Yves Wüthrich,[a]
Alexander Alanine[a] and Alfredo Capretta[b,*]

[a]*F. Hoffmann-La Roche AG, CH-4070 Basel, Switzerland*
[b]*Institute of Molecular Catalysis, Department of Chemistry, Brock University, St. Catharines, Ontario, Canada L2S 3A1*

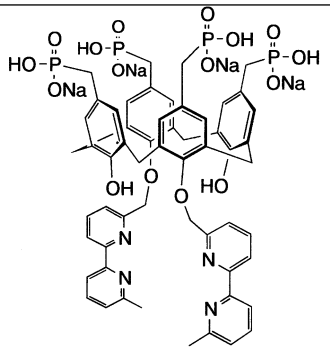


Tetrahedron Letters 43 (2002) 7691

A new water-soluble calix[4]arene podand incorporating *p*-phosphonate groups and 2,2′-bipyridine units

Nicolas Psychogios and Jean-Bernard Regnouf-de-Vains*

GEVSM, UMR 7565 CNRS, Université Henri Poincaré, Faculté de Pharmacie, 5, rue Albert Lebrun, F-54001 Nancy, France



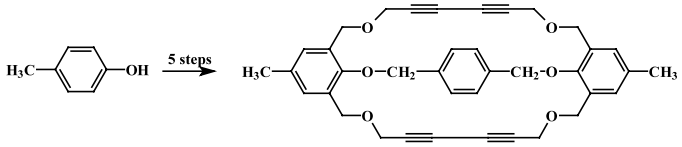
Tetrahedron Letters 43 (2002) 7695

Synthesis and conformational behaviour of new intra-annularly linked cyclophane possessing a 1,6-dioxahexa-2,4-diyne spacer

Perumal Rajakumar* and Venghatraghavan Murali

Department of Organic Chemistry, University of Madras, Guindy Campus, Chennai 600 025, Tamil Nadu, India

New intra-annularly linked cyclophane **1** was synthesized in five steps from *p*-cresol by intramolecular Eglington coupling of precyclophane **5**. Conformational behaviour of cyclophane **1** is also described.



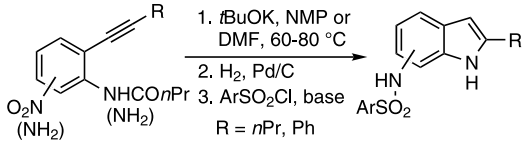
1

Tetrahedron Letters 43 (2002) 7699

Chemistry of aminophenols. Part 2: A general and efficient synthesis of indoles possessing a nitrogen substituent at the C4, C5, C6, and C7 positions

Wei-Min Dai,* Li-Ping Sun and Dian-Shun Guo

Combinatorial Chemistry Laboratory, The Biotechnology Research Institute and Department of Chemistry, The Hong Kong University of Science and Technology, Clear Water Bay, Kowloon, Hong Kong SAR, China

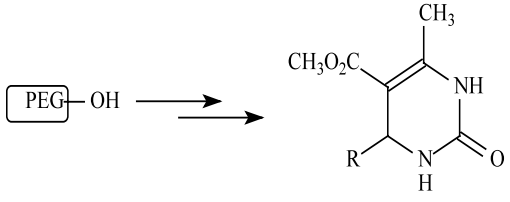


Tetrahedron Letters 43 (2002) 7703

Soluble polymer-supported synthesis of Biginelli compounds

Min Xia and Yan-Guang Wang*

Department of Chemistry, Zhejiang University, Hangzhou 310027, PR China



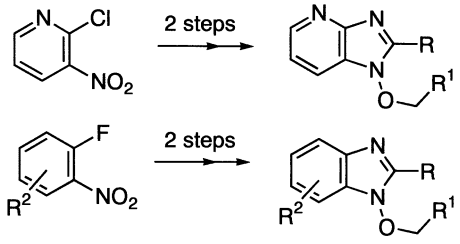
Synthesis of *N*-alkoxybenzimidazoles and *N*-alkoxypyrimidazoles

Tetrahedron Letters 43 (2002) 7707

John M. Gardiner,[a,*] Andrew D. Goss,[a] Tahir Majid,[b]
Andrew D. Morley,[c] Robin G. Pritchard[a] and John E. Warren[a]

[a]*Department of Chemistry, UMIST, Manchester M60 1QD, UK*
[b]*Aventis Pharma US, Route 202-206, Bridgewater, NJ 08807, USA*
[c]*Aventis Pharma, Rainham Road South, Dagenham, Essex RM10 7XS, UK*

2-Fluoronitro aromatics and 2-chloro-3-nitropyridine are converted into new 2-substituted-*N*-alkoxyimidazoles and 4-deazapurines.

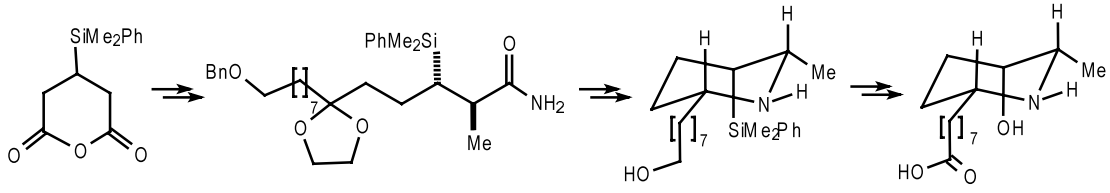


Synthesis of enantiomerically pure all *cis*-2,3,6-trisubstituted piperidine: a silicon mediated total synthesis of (+)-carpamic acid

Tetrahedron Letters 43 (2002) 7711

Rekha Singh and Sunil K. Ghosh*

Bio-Organic Division, Bhabha Atomic Research Centre, Mumbai 400 085, India

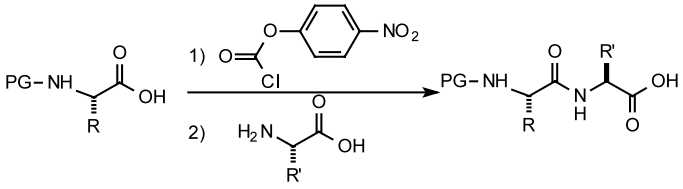


Peptide coupling of unprotected amino acids through in situ *p*-nitrophenyl ester formation

Tetrahedron Letters 43 (2002) 7717

Paul Gagnon, Xicai Huang, Eric Therrien and Jeffrey W. Keillor*

Département de chimie, Université de Montréal, CP 6128, Succursale centre-ville, Montréal, Québec, Canada H3C 3J7

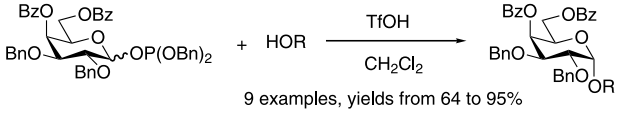


A convenient and highly stereoselective approach for α-galactosylation performed by galactopyranosyl dibenzyl phosphite with remote participating groups

Tetrahedron Letters 43 (2002) 7721

Yu-Pei Cheng,[a] Hui-Ting Chen[a] and Chun-Cheng Lin[a,b,*]

[a]*Institute of Chemistry, Academia Sinica, Nankang, Taipei 115 Taiwan, ROC*
[b]*Department of Chemistry, National Changhua University of Education, Changhua 500, Taiwan, ROC*

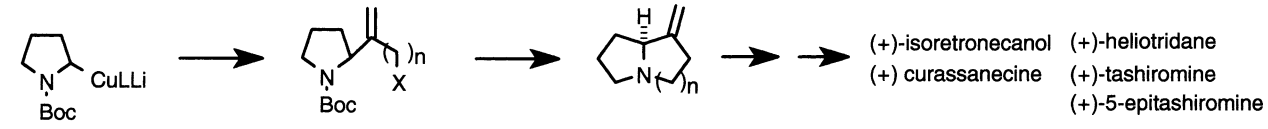


Tetrahedron Letters 43 (2002) 7725

Synthesis of (±)-isoretronecanol, (±)-curassanecine, (±)-heliotridane, (±)-tashiromine and (±)-5-epitashiromine via α-(*N*-carbamoyl)alkylcuprate chemistry

R. Karl Dieter* and Rhett Watson

Department of Chemistry, Hunter Laboratory, Clemson University, Clemson, SC 29634-0973, USA



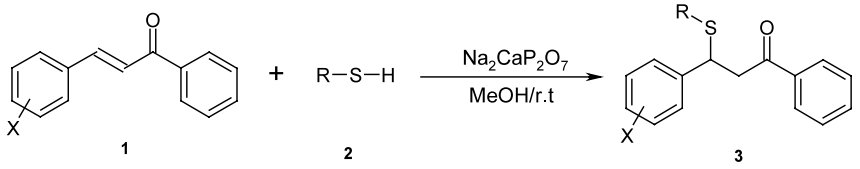
L = CN, *N*-Boc-2-pyrrolidinyl n = 2, 3; X = Br, Cl, OMs

Tetrahedron Letters 43 (2002) 7729

$Na_2CaP_2O_7$, a new catalyst for Michael addition

Mohamed Zahouily,* Younes Abrouki and Ahmed Rayadh

UFR de Chimie Appliquée, Département de Chimie, Faculté des Sciences et Techniques, Université Hassan II, Mohammadia B. P. 146, 20650 Morocco



X = H, *p*-Cl and *m*-NO_2

R = Ph, *o*-NH_2Ph and CH_2-CO_2Et

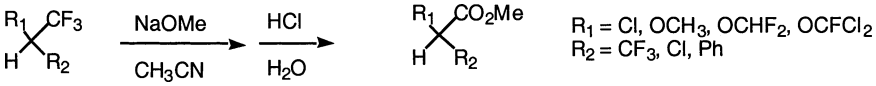
Good to very high yields

Tetrahedron Letters 43 (2002) 7731

Synthesis of esters by selective methanolysis of the trifluoromethyl group

Keith Ramig,* Miriam Englander, Florida Kallashi, Lilia Livchits and Jessica Zhou

Department of Natural Sciences, Baruch College, City University of New York, 17 Lexington Ave., New York, NY 10010, USA

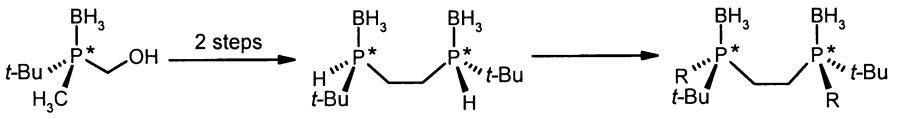


Tetrahedron Letters 43 (2002) 7735

A new optically active secondary diphosphine—its use for the improved synthesis of (*R*,*R*)-1,2-bis(boranato(*tert*-butyl)-methylphosphino)ethane

Karen V. L. Crépy and Tsuneo Imamoto*

Department of Chemistry, Faculty of Science, Chiba University, Yayoi-cho, Inage-ku, Chiba 263-8522, Japan

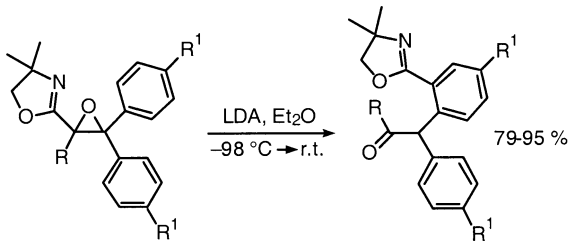


Tetrahedron Letters 43 (2002) 7739

An unexpected base-promoted isomerization of oxazolinylaryl oxiranes: synthesis of oxazolinylaryl alkanones

Filippo M. Perna, Vito Capriati, Saverio Florio* and Renzo Luisi

C.N.R., Istituto di Chimica dei Composti OrganoMetallici 'ICCOM', Sezione di Bari, DipartimentoFarmaco-Chimico, Università di Bari, Via E. Orabona 4, I-70126 Bari, Italy

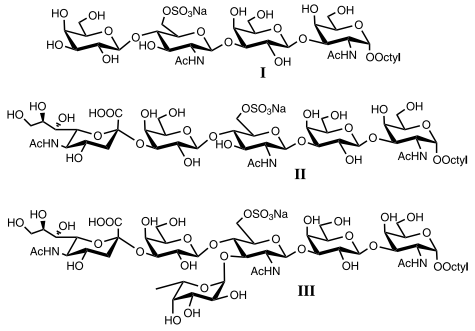


Tetrahedron Letters 43 (2002) 7743

Chemoenzymatic synthesis of sulfated *O*-linked oligosaccharides: epitopes for MECA-79

Frederic Bélot,* David Rabuka, Minoru Fukuda and Ole Hindsgaul

Glycobiology Program, The Burnham Institute, 10901 North Torrey Pines Road, La Jolla, CA 92037, USA

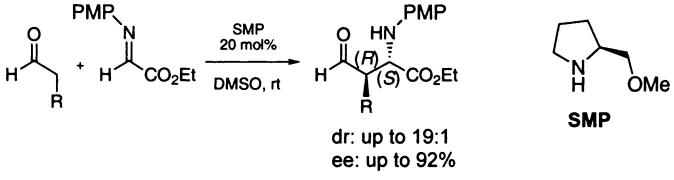


Tetrahedron Letters 43 (2002) 7749

anti-Selective SMP-catalyzed direct asymmetric Mannich-type reactions: synthesis of functionalized amino acid derivatives

Armando Córdova and Carlos F. Barbas, III*

The Skaggs Institute for Chemical Biology and The Department of Molecular Biology, The Scripps Research Institute, 10550 North Torrey Pines Rd, La Jolla, CA 92037, USA

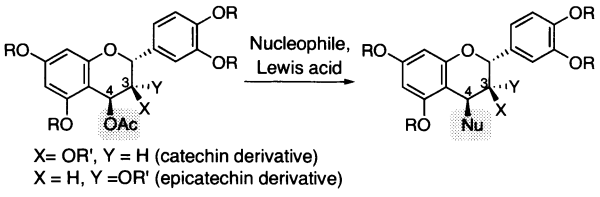


Tetrahedron Letters 43 (2002) 7753

Stereoselective substitution of flavan skeletons: synthesis of dryopteric acid

Ken Ohmori, Naoko Ushimaru and Keisuke Suzuki*

Department of Chemistry, Tokyo Institute of Technology, and CREST, Japan Science and Technology Corporation (JST), O-okayama, Meguro-ku, Tokyo 152-8551, Japan



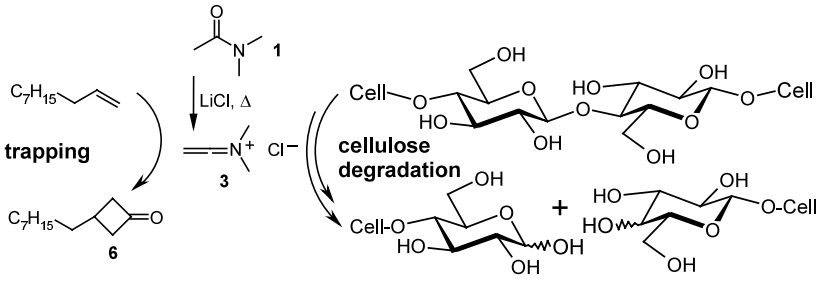
Degradation of cellulosic materials by heating in DMAc/LiCl

Tetrahedron Letters 43 (2002) 7757

Antje Potthast,[a] Thomas Rosenau,[a] Herbert Sixta[b] and Paul Kosma[a,*]

[a]*Christian-Doppler-Laboratory, University of Agricultural Sciences, Muthgasse 18, A-1190 Vienna, Austria*
[b]*R & D Department, Lenzing AG, A-4860 Lenzing, Austria*

N,N-Dimethylketeniminium ions (**3**) are mainly responsible for the degradation of cellulosic materials when heated in DMAc/LiCl. The occurrence of **3** and its precursor **2** was shown by specific trapping; the kinetics of cellulose degradation was monitored by GPC.

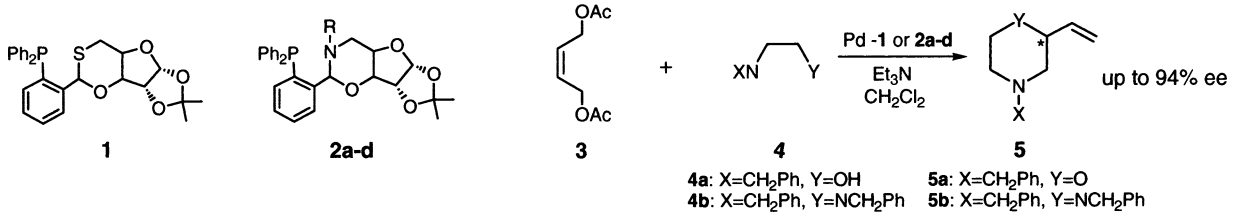


Novel chiral xylofuranose-based phosphinooxathiane and phosphinooxazinane ligands for palladium-catalyzed asymmetric tandem allylic allylation

Tetrahedron Letters 43 (2002) 7761

Hiroto Nakano,* Jun-ichi Yokoyama, Reiko Fujita and Hiroshi Hongo

Tohoku Pharmaceutical University, 4-4-1 Komatsushima, Aoba-ku, Sendai 981-8558, Japan



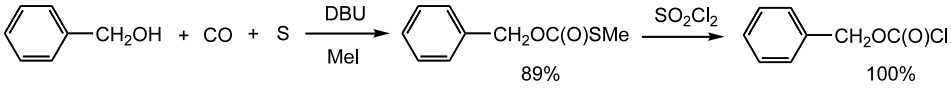
Non-phosgene synthesis of benzyl chloroformate (CbzCl)

Tetrahedron Letters 43 (2002) 7765

Takumi Mizuno,[a,*] Junko Takahashi[b] and Akiya Ogawa[b]

[a]*Osaka Municipal Technical Research Institute, 1-6-50, Morinomiya, Joto-ku, Osaka 536-8553, Japan*
[b]*Department of Chemistry, Faculty of Science, Nara Women's University, Kitauoyanishi-machi, Nara 630-8506, Japan*

Benzyl chloroformate (CbzCl) was synthesized by combining the carbonylation of benzyl alcohol with carbon monoxide and sulfur (or carbonyl sulfide) in the presence of DBU, with the chlorination using sulfuryl chloride.

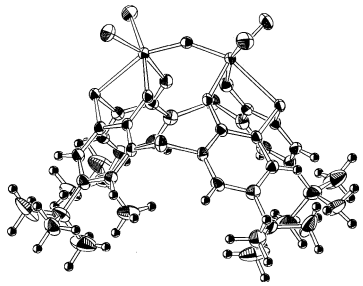


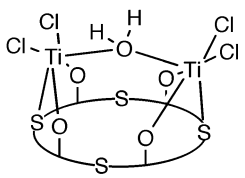
Dinuclear titanium(IV) complex of *p-tert*-butylthiacalix[4]arene as a novel bidentate Lewis acid catalyst

Tetrahedron Letters 43 (2002) 7769

Naoya Morohashi,[a,*] Tetsutaro Hattori,[a] Katsuya Yokomakura,[a] Chizuko Kabuto[b] and Sotaro Miyano[a,*]

[a]*Department of Biomolecular Engineering, Graduate School of Engineering, Tohoku University, Aramaki-Aoba 07, Aoba-ku, Sendai 980-8579, Japan*
[b]*Instrumental Analysis Center for Chemistry, Graduate School of Science, Tohoku University, Aoba, Aoba-ku, Sendai 980-8578, Japan*



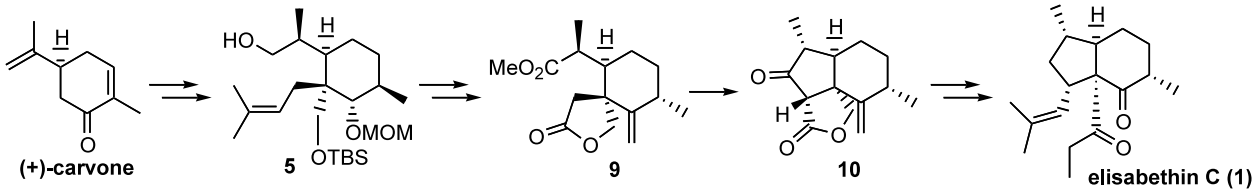


Tetrahedron Letters 43 (2002) 7773

Total synthesis and absolute configuration of marine *bisnor*-diterpenoid elisabethin C

Hiroaki Miyaoka, Daichi Honda, Hidemichi Mitome and Yasuji Yamada*

School of Pharmacy, Tokyo University of Pharmacy and Life Science, 1432-1 Horinouchi, Hachioji, Tokyo 192-0392, Japan

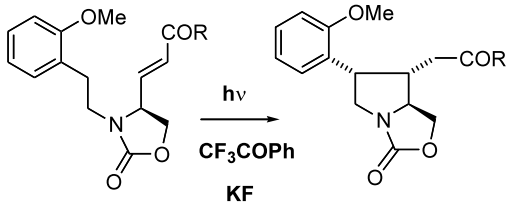


Tetrahedron Letters 43 (2002) 7777

A new synthetic method for an acromelic acid analog, a potent neuroexcitatory kainoid amino acid, via photoinduced benzyl radical cyclization

Satoshi Itadani, Shigeyuki Takai, Chieko Tanigawa, Kimiko Hashimoto* and Haruhisa Shirahama

School of Science, Kwansei Gakuin University, Uegahara, Nishinomiya 662-8501, Japan

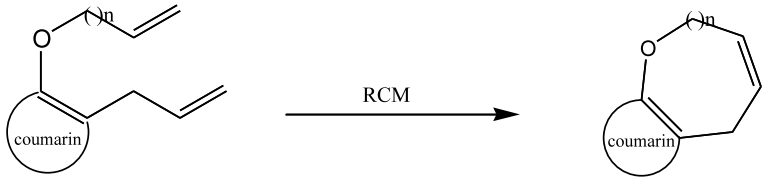


Tetrahedron Letters 43 (2002) 7781

Combined Claisen rearrangement and ring-closing metathesis as a route to oxepin- and oxocin-annulated coumarins

Shital K. Chattopadhyay,* Susama Maity and Srikanta Panja

Department of Chemistry, University of Kalyani, Kalyani-741235, West Bengal, India



Tetrahedron Letters 43 (2002) 7785

Anion sensors based on β,β′-disubstituted porphyrin derivatives

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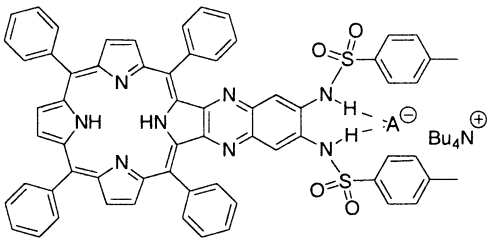
An anion sensor was designed that is characterized by the attachment of an anion binding site to a porphyrin chromophore through a planar, polycyclic, conjugated spacer.



Rhodium-catalyzed reactions of arylbismuth and aryllead reagents with a chiral glyoxylate hydrate in air and water: water-promoted diastereoselectivity enhancement

Tetrahedron Letters 43 (2002) 7789

Rui Ding,[a] Cheng-Sheng Ge,[a] Yong-Jun Chen,[a] Dong Wang[a,*] and Chao-Jun Li[b,*]

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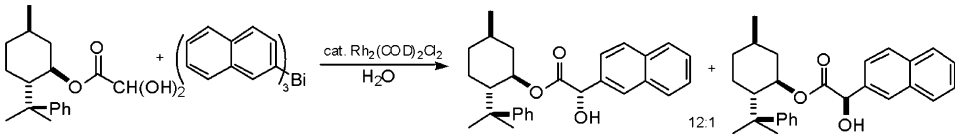

TFA-NHS as bifunctional protecting agent: simultaneous protection and activation of amino carboxylic acids

Tetrahedron Letters 43 (2002) 7793

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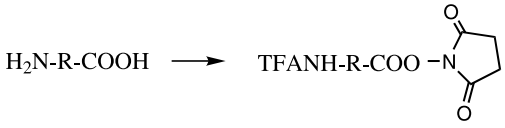
Reaction of amino carboxylic acids with TFA-NHS gives the corresponding protected active NHS esters.



Metallocyclodextrin catalysts for hydrolysis of phosphate triesters

Tetrahedron Letters 43 (2002) 7797

Lorna Barr,[a] Christopher J. Easton,[a,*] Kitty Lee,[a] Stephen F. Lincoln[b] and Jamie S. Simpson[a]

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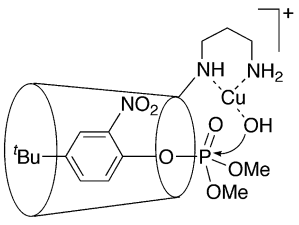
[b]*Department of Chemistry, University of Adelaide, Adelaide, SA 5005, Australia*

Cyclodextrins substituted with Cu(II)-coordinated ligands catalyse the hydrolysis of an organophosphate triester.



Interactions of diaryl-polyamines with nucleic acids. Allosteric effects with dinuclear copper complexes

Tetrahedron Letters 43 (2002) 7801

Nino Lomadze,[a] Eliso Gogritchiani,[a] Hans-Jörg Schneider,[a,*] Mª Teresa Albelda,[b] Juan Aguilar,[b] Enrique García-España[b,*] and Santiago V. Luis[c,*]

[a]*FR Organische Chemie der Universität des Saarlandes, Stadtwald, D 66041 Saarbrücken, Germany*
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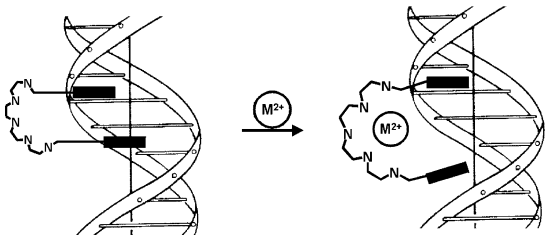

A highly convergent approach for the synthesis of disaccharide repeating units of peptidoglycan

Tetrahedron Letters 43 (2002) 7805

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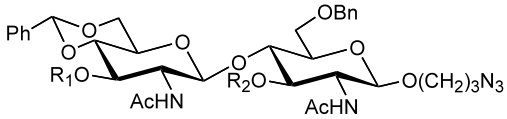
Use of orthogonal protecting groups (TBDMS and PMB) in combination with a two directional glycosylation strategy led to a convergent synthesis of two alternative repeating units of peptidoglycan.



R_1= $CH(CH_3)COOH$, R_2= PMB
R_1= TBDMS, R_2= $CH(CH_3)COOH$

Use of benzyloxycarbonyl (Z)-based fluorophilic tagging reagents in the purification of synthetic peptides

Tetrahedron Letters 43 (2002) 7809

Dmitri V. Filippov,[a] Dirk J. van Zoelen,[a] Steven P. Oldfield,[a] Gijs A. van der Marel,[a] Herman S. Overkleeft,[a] Jan W. Drijfhout[b] and Jacques H. van Boom[a,*]

[a]*Leiden Institute of Chemistry, Leiden University, PO Box 9502, 2300 RA Leiden, The Netherlands*
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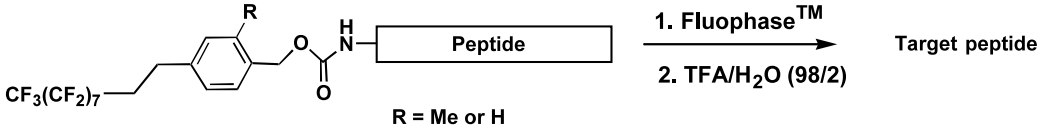


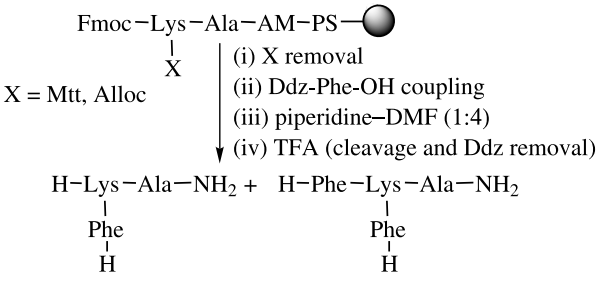
Undesired removal of the Fmoc group by the free ε-amino function of a lysine residue

Tetrahedron Letters 43 (2002) 7813

Josep Farrera-Sinfreu, Miriam Royo* and Fernando Albericio*

Barcelona Biomedical Research Institute at the Barcelona Science Park and Departament of Organic Chemistry, University of Barcelona, E-08028 Barcelona, Spain

In solid-phase peptide synthesis, a side-reaction consisting of the premature and undesired removal of the Fmoc group has been detected. This can be caused by a primary amine of sufficient basicity, such as the ε-amino of the Lys, present in the peptide resin. This side-reaction can be prevented by a coupling/neutralization protocol in the case of Mtt protection or by a tandem deprotection–coupling reaction for the case of the Alloc protection.

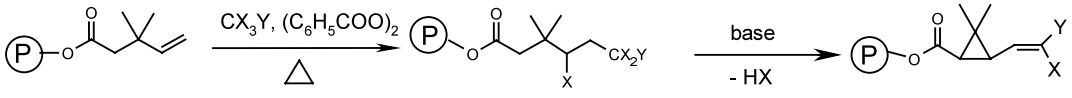


Free radical addition of haloalkanes to polymer bound olefins and its application to the solid-phase synthesis of pyrethroids

Tetrahedron Letters 43 (2002) 7817

H. M. Sampath Kumar,* P. Pawan Chakravarthy, M. Shesha Rao, P. Sunder Ram Reddy and J. S. Yadav

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



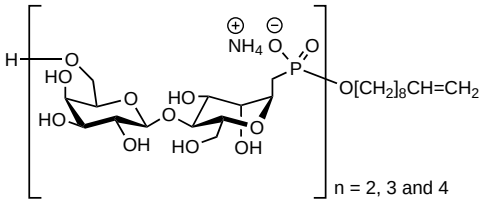
P = Merrifield or Wang Resin
X = Cl, Br. Y =Cl, Br, CF_3, Ph
Base : NaOMe, KO^{t}Bu

Synthesis of oligomeric phosphono analogues of *Leishmania* lipophosphoglycan fragments

Tetrahedron Letters 43 (2002) 7821

Vladimir S. Borodkin,[a] Fiona C. Milne,[b] Michael A. J. Ferguson[b] and Andrei V. Nikolaev[a,*]

[a]*University of Dundee, School of Life Sciences, Division of Biological Chemistry and Molecular Microbiology, Carnelley Building, Dundee DD1 4HN, UK*
[b]*University of Dundee, School of Life Sciences, Division of Biological Chemistry and Molecular Microbiology, Wellcome Trust Building, Dundee DD1 4HN, UK*

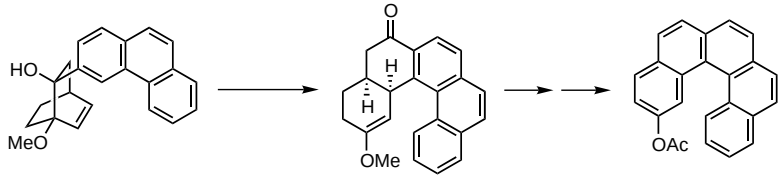


Synthesis of 2-acetoxy[5]helicene by sequential double aromatic oxy-Cope rearrangement

Tetrahedron Letters 43 (2002) 7827

Yasushi Ogawa,[a] Tetsuya Ueno,[a] Michinori Karikomi,[a,*] Katsura Seki,[b] Kazuo Haga[a] and Tadao Uyehara[a]

[a]*Department of Applied Chemistry, Faculty of Engineering, Utsunomiya University, Utsunomiya 321-8585, Japan*
[b]*Center for Instrumental Analysis, Utsunomiya University, Utsunomiya 321-8585, Japan*



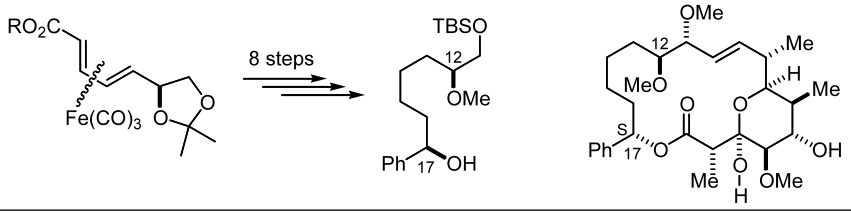
Enantioselective synthesis of the C11–C17 segment of soraphen $A_{1\alpha}$ via organoiron methodology

Tetrahedron Letters 43 (2002) 7831

Yeyu Cao, Ahmad Farouk Eweas and William A. Donaldson*

Department of Chemistry, Marquette University, PO Box 1881, Milwaukee, WI 53201-1881, USA

The C11–C17 segment of the antifungal agent soraphen A1α, with required inverted stereochemistry at C17, was prepared. The C12 stereocenter is derived from glyceraldehyde, while the C17 stereocenter is introduced by 1,6-asymmetric induction via a coordinated $Fe(CO)_3$.

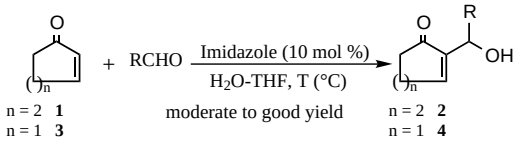


Imidazole-catalysed Baylis–Hillman reactions: a new route to allylic alcohols from aldehydes and cyclic enones

Tetrahedron Letters 43 (2002) 7835

Rafik Gatri and Mohamed Moncef El Gaïed*

Laboratoire de Chimie Organique, Faculté des Sciences de Tunis, Campus Universitaire, 1060 Tunis, Tunisia



Tetrahedron Letters 43 (2002) 7837

Allylic bromination of anhydrodihydroartemisinin and of its 10-trifluoromethyl analogue: a new access to 16-substituted artemisinin derivatives

Fabienne Grellepois, Fatima Chorki, Michèle Ourévitch, Benoit Crousse, Danièle Bonnet-Delpon* and Jean-Pierre Bégué

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