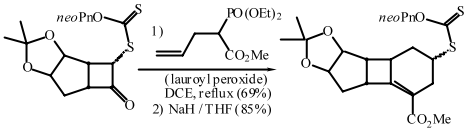
Intermolecular addition of cyclobutanone derived radicals. A convergent, highly efficient access to polycyclic cyclobutane containing structures

Tetrahedron Letters 44 (2003) 7703

Grégori Binot and Samir Z. Zard*

Laboratoire de Synthèse Organique associé au CNRS, Ecole Polytechnique, F-91128 Palaiseau, France

α-Xanthyl cyclobutanones undergo intermolecular radical additions to olefins bearing various functional groups. Adducts containing a phosphonate can be made to cyclise by an internal Horner–Emmons reaction to give cyclohexene and cycloheptene rings fused to the cyclobutane.

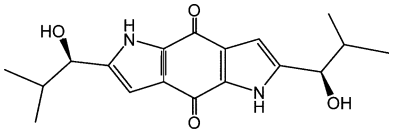


Terreusinone, a novel UV-A protecting dipyrroloquinone from the marine algicolous fungus *Aspergillus terreus*

Tetrahedron Letters 44 (2003) 7707

Sang Mi Lee,[a] Xi Feng Li,[a] Hualiang Jiang,[b] Jia Gao Cheng,[b] Seeyearl Seong,[c] Hong Dae Choi[d] and Byeng Wha Son[a,*]

[a]*Department of Chemistry, Pukyong National University, Busan 608-737, Republic of Korea*
[b]*Department of Medicinal Chemistry, Shanghai Institute of Materia Medica, Chinese Academy of Sciences, Shanghai 200031, People's Republic of China*
[c]*Computer Aided Molecular Design Research Center, Soongsil University, Seoul 156-743, Republic of Korea*
[d]*Department of Chemistry, Dongeui University, Busan 614-714, Republic of Korea*



1

Terreusinone (**1**), a chiral dipyrroloquinone, has been isolated as a potent UV-A protectant from the marine algicolous fungus *Aspergillus terreus*.

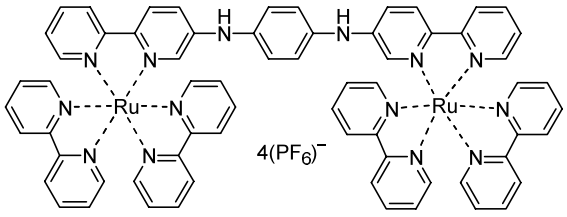
Redox-switchable π-conjugated systems bearing terminal ruthenium(II) complexes

Tetrahedron Letters 44 (2003) 7711

Xiuliang Shen, Toshiyuki Moriuchi and Toshikazu Hirao*

Department of Materials Chemistry, Graduate School of Engineering, Osaka University, Yamada-oka, Suita, Osaka 565-0871, Japan

The *p*-phenylenediamine bearing terminal bipyridyl ruthenium(II) moieties was synthesized to provide a redox-switchable photoinduced electron-transfer system.



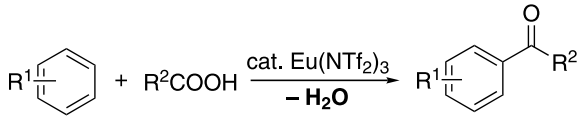
Lewis acid-catalyzed Friedel–Crafts acylation reaction using carboxylic acids as acylating agents

Tetrahedron Letters 44 (2003) 7715

Masato Kawamura, Dong-Mei Cui, Teruyuki Hayashi and Shigeru Shimada*

National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba Central 5, Tsukuba, Ibaraki 305-8565, Japan

Rare-earth metal Lewis acids, in particular $Eu(NTf_2)_3$, were found to be efficient catalysts for Friedel–Crafts acylation reaction using aliphatic as well as aromatic carboxylic acids as acylating agents at high temperature.



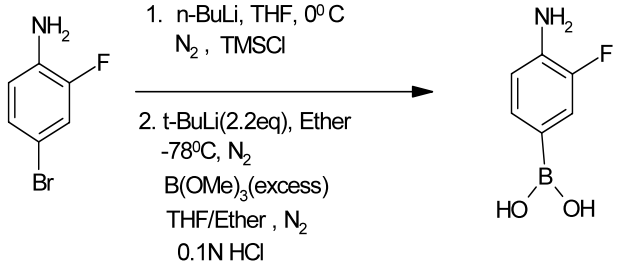
R^1 = alkyl or OMe, R^2 = alkyl or aryl

Tetrahedron Letters 44 (2003) 7719

Synthesis and crystal structure of 4-amino-3-fluorophenylboronic acid

Sasmita Das, Vladimir L. Alexeev, Anjal C. Sharma, Steven J. Geib and Sanford A. Asher*

Department of Chemistry, University of Pittsburgh, Pittsburgh, PA 15260, USA

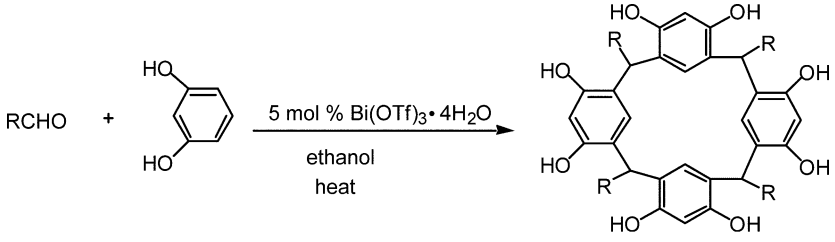


Tetrahedron Letters 44 (2003) 7723

Bismuth compounds in organic synthesis. Synthesis of resorcinarenes using bismuth triflate

Katherine E. Peterson, Russell C. Smith and Ram S. Mohan*

Laboratory for Environment Friendly Organic Synthesis, Department of Chemistry, Illinois Wesleyan University, Bloomington, IL 61701, USA



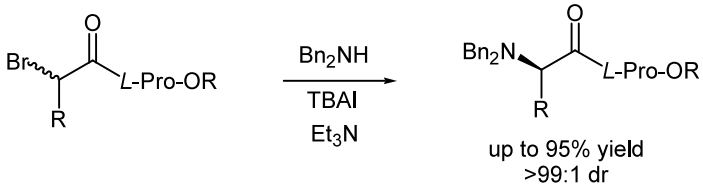
Tetrahedron Letters 44 (2003) 7727

Dynamic kinetic resolution of α-bromo amides for asymmetric syntheses of di- and tripeptide analogues

Jiyoun Nam,[a] Ji-Yeon Chang,[a] Kyung-Soo Hahm[b] and Yong Sun Park[a,*]

[a]*Department of Chemistry, Konkuk University, Seoul 143-701, South Korea*

[b]*Research Center for Proteineous Materials, Chosun University, Kwangju 501-759, South Korea*

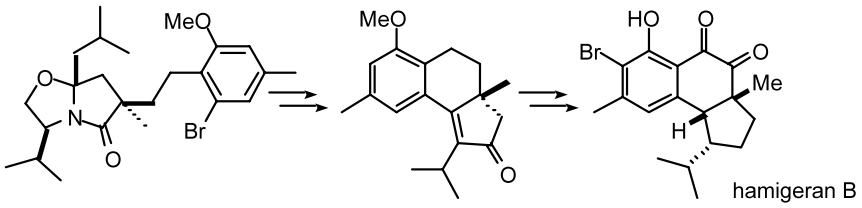


Tetrahedron Letters 44 (2003) 7731

Synthesis of natural (−)-hamigeran B

Derrick L. J. Clive* and Jian Wang

Chemistry Department, University of Alberta, Edmonton, Alberta T6G 2G2, Canada

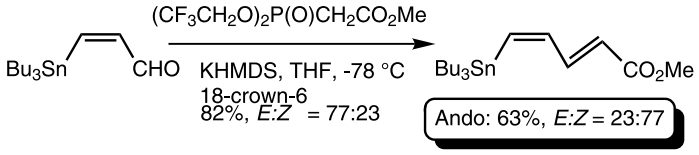


A comparison of the Still–Gennari and Ando HWE-methodologies with α,β-unsaturated aldehydes; unexpected results with stannyl substituted systems

Tetrahedron Letters 44 (2003) 7735

Xavier Franci,[a] Sébastien L. X. Martina,[a] John E. McGrady,[a] Michael R. Webb,[a] Craig Donald[b] and Richard J. K. Taylor[a,*]

[a]*Department of Chemistry, University of York, Heslington, York YO10 5DD, UK*
[b]*AstraZeneca, Alderley Park, Macclesfield SK10 4TG, UK*

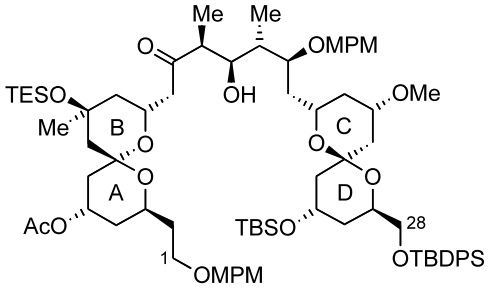


Formal total synthesis of altohyrtin C (spongistatin 2). Part 1: Aldol approach to unite AB and CD spiroacetals

Tetrahedron Letters 44 (2003) 7741

Takeshi Terauchi, Taro Terauchi, Ippei Sato, Wataru Shoji, Tomoharu Tsukada, Takashi Tsunoda, Naoki Kanoh and Masaya Nakata*

Department of Applied Chemistry, Faculty of Science and Technology, Keio University, 3-14-1 Hiyoshi, Kohoku-ku, Yokohama 223-8522, Japan

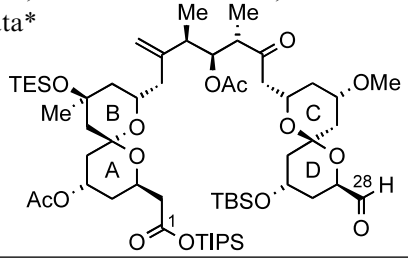


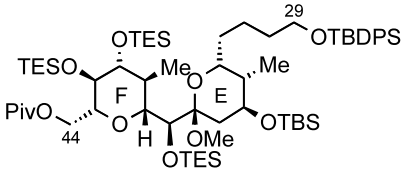
Formal total synthesis of altohyrtin C (spongistatin 2). Part 2: Construction of fully elaborated ABCD and EF fragments

Tetrahedron Letters 44 (2003) 7747

Takeshi Terauchi, Taisaku Tanaka, Taro Terauchi, Masataka Morita, Kyoko Kimijima, Ippei Sato, Wataru Shoji, Yasuhiro Nakamura, Tomoharu Tsukada, Takashi Tsunoda, Gouichirou Hayashi, Naoki Kanoh and Masaya Nakata*

Department of Applied Chemistry, Faculty of Science and Technology, Keio University, 3-14-1 Hiyoshi, Kohoku-ku, Yokohama 223-8522, Japan





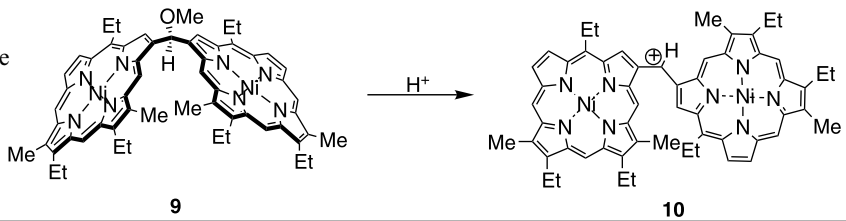
Near-IR absorption of porphyrin methylcarbocations

Tetrahedron Letters 44 (2003) 7753

Yang Xu,[a] Laurent Jaquinod,[a] Anura Wickramasinghe[a] and Kevin M. Smith[a,b,*]

[a]*Department of Chemistry, University of California, Davis, CA 95616, USA*
[b]*Department of Chemistry, Louisiana State University, Baton Rouge, LA 70803, USA*

Synthesis of stabilized meso- and β-carbocations of nickel(II) porphyrins are reported, as well as a novel dimeric porphyrin cation.



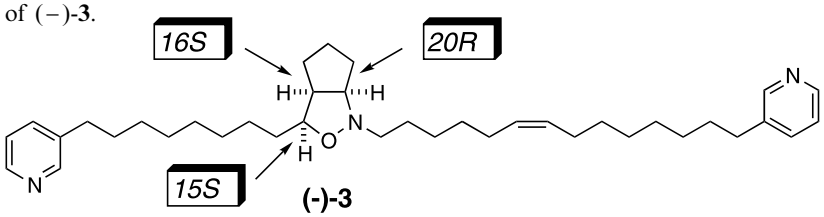
Investigation into the absolute stereochemistry of the marine sponge alkaloid pyrinodemin A

Tetrahedron Letters 44 (2003) 7757

Stuart P. Romeril, Victor Lee,* Jack E. Baldwin,* Timothy D. W. Claridge and Barbara Odell

The Dyson Perrins Laboratory, University of Oxford, South Parks Road, Oxford OX1 3QY, UK

The absolute stereochemistry of the marine sponge alkaloid pyrinodemin A is established to be (15*S*,16*S*,20*R*) through the asymmetric synthesis of (−)-**3**.



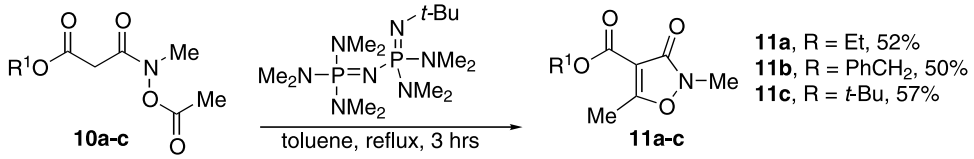
Base-mediated reactions of *N*-alkyl-*O*-acyl hydroxamic acids: synthesis of 3-oxo-2,3-dihydro-4-isoxazole carboxylic ester derivatives

Tetrahedron Letters 44 (2003) 7763

Andrew J. Clark,[a,*] Divya Patel[a] and Michael J. Broadhurst[b]

[a]*Department of Chemistry, University of Warwick, Coventry, CV4 7AL, UK*

[b]*Formerly of Roche Discovery Welwyn, Welwyn Garden City, Hertfordshire, AL7 3AY, UK*

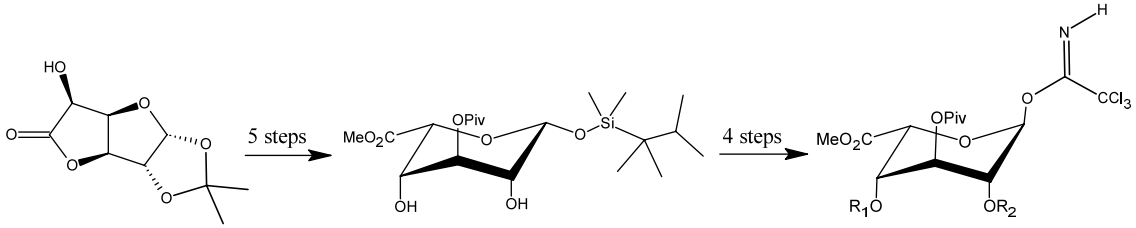


A short route to L-iduronic acid building blocks for the syntheses of heparin-like disaccharides

Tetrahedron Letters 44 (2003) 7767

Weijun Ke, Dennis M. Whitfield,* Manjinder Gill, Suzon Larocque and Siu-Hong Yu

Institute for Biological Sciences, National Research Council, Ottawa, ON, Canada K1A 0R6



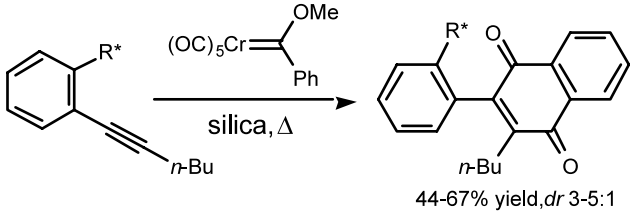
Studies into diastereoselective Dötz benzannulations for the synthesis of axially chiral biaryls

Tetrahedron Letters 44 (2003) 7771

James C. Anderson,[a,*] John W. Cran[a] and N. Paul King[b]

[a]*School of Chemistry, University of Nottingham, Nottingham NG7 2RD, UK*

[b]*GlaxoSmithKline, New Frontiers Science Park, Third Avenue, Harlow, Essex CM19 5AW, UK*

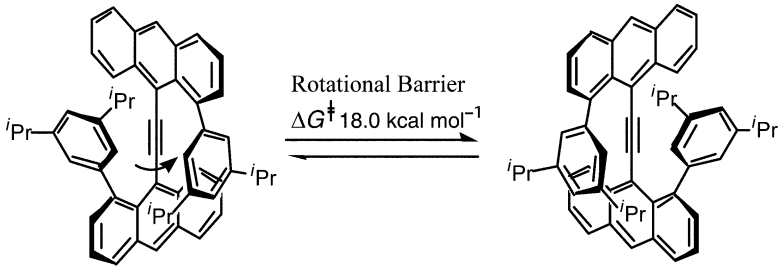


Tetrahedron Letters 44 (2003) 7775

Rotational isomerism involving an acetylenic carbon. Part 5: Restricted rotation about acetylenic axis in sterically crowded bis(1-phenyl-9-anthryl)ethynes

Shinji Toyota* and Toshiaki Makino

Department of Chemistry, Faculty of Science, Okayama University of Science, Ridaicho, Okayama 700-0005, Japan

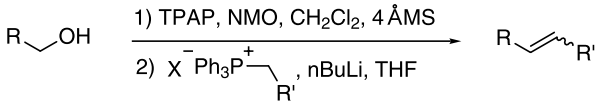


Tetrahedron Letters 44 (2003) 7779

A sequential tetra-*n*-propylammonium perruthenate (TPAP)–Wittig oxidation olefination protocol

Rachel N. MacCoss, Emily P. Balskus and Steven V. Ley*

BP Whiffen Laboratory, Department of Chemistry, University of Cambridge, Lensfield Road, Cambridge CB2 1EW, UK



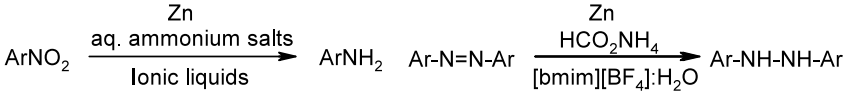
Tetrahedron Letters 44 (2003) 7783

Chemoselective reduction of aromatic nitro and azo compounds in ionic liquids using zinc and ammonium salts

Faiz Ahmed Khan,* Jyotirmayee Dash, Ch. Sudheer and Rakesh Kumar Gupta

Department of Chemistry, Indian Institute of Technology, Kanpur 208 016, India

Zinc-mediated efficient reduction of nitroarenes in ionic liquids as a safe and recyclable reaction medium.



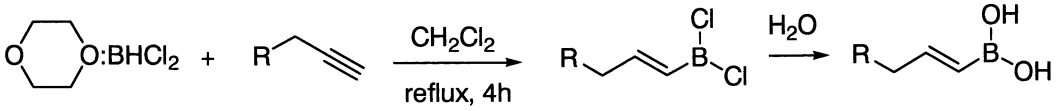
Tetrahedron Letters 44 (2003) 7789

Dichloroborane–dioxane: an exceptional reagent for the preparation of alkenyl- and alkylboronic acids

Kanth V. B. Josyula,* Peng Gao and Chris Hewitt

Aldrich Chemical Company, Inc., 1001 W. Saint Paul Avenue, Milwaukee, WI 53233, USA

Terminal alkynes and alkenes were conveniently hydroborated to the corresponding alkenyl- and alkyldichloroboranes using dichloroborane–dioxane in dichloromethane. These dichloroboranes were hydrolyzed by water to the corresponding alkenyl- and alkylboronic acids in moderate to good yields.

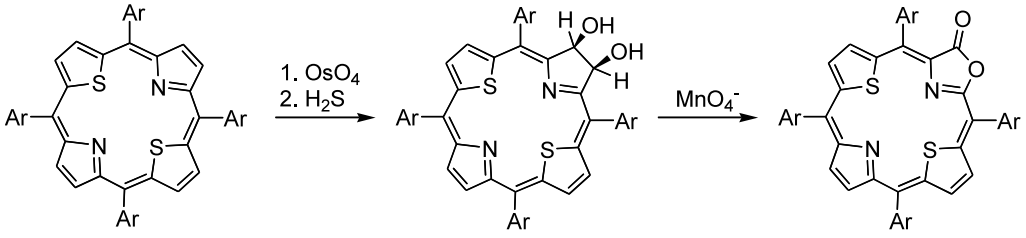


meso-Tetraaryl-7,8-dihydroxydithiachlorins: first examples of heterochlorins

Tetrahedron Letters 44 (2003) 7793

Katherine K. Lara, Christopher R. Rinaldo and Christian Brückner*

Department of Chemistry, University of Connecticut, Storrs, CT 06269-3060, USA

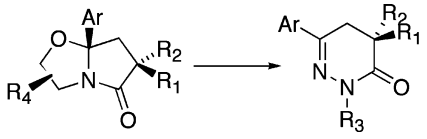


Conversion of γ-bicyclic lactams to 4,5-dihydro-2*H*-pyridazin-3-ones

Tetrahedron Letters 44 (2003) 7799

Yu Jin Lim, Mia Angela and Paul T. Buonora*

Department of Chemistry & Biochemistry, California State University, 1250 Bellflower Blvd., Long Beach, CA 90840-3903, USA

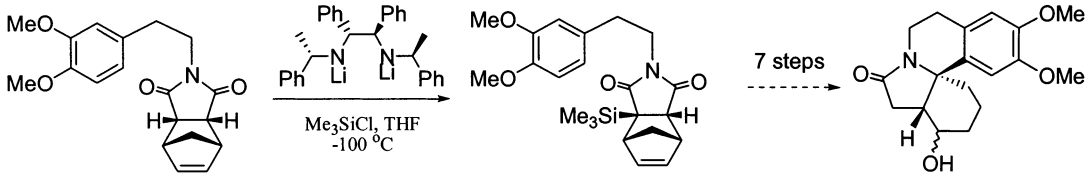


Asymmetric synthesis of the erythrinan alkaloid system using a chiral lithium amide base desymmetrisation as the key step

Tetrahedron Letters 44 (2003) 7803

Christopher Gill, Daniel A. Greenhalgh and Nigel S. Simpkins*

School of Chemistry, The University of Nottingham, University Park, Nottingham NG7 2RD, UK

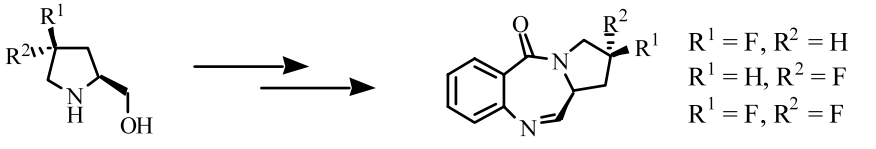


The synthesis and biological activity of *C*2-fluorinated pyrrolo-[2,1-*c*][1,4]benzodiazepines

Tetrahedron Letters 44 (2003) 7809

Ian A. O'Neil,[a,*] Stephen Thompson,[a] S. Barret Kalindjian[b] and Terence C. Jenkins[c]

[a]*Department of Chemistry, University of Liverpool, Crown St, Liverpool L69 7ZD, UK*
[b]*James Black Foundation, 68 Half Moon Lane, Dulwich, London SE24 9JE, UK*
[c]*Yorkshire Cancer Research Laboratory of Drug Design, University of Bradford, West Yorkshire BD7 1DP, UK*



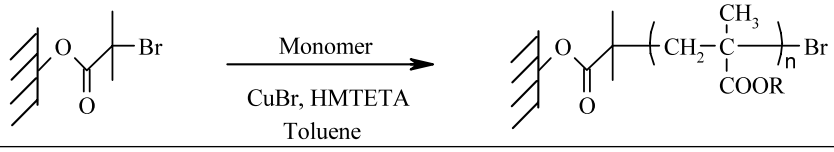
Preparation of high loading PolyHIPE monoliths as scavengers for organic chemistry

Tetrahedron Letters 44 (2003) 7813

Laurence Moine,* Hervé Deleuze and Bernard Maillard

Laboratoire de Chimie Organique et Organométallique, UMR 5802-CNRS, Université Bordeaux 1, 351 cours de la Libération, 33405 Talence Cedex, France

A high loading microcellular polyHIPE monolith has been prepared by an in situ surface polymerization using ATRP and provides a good scaffold for scavenging chemistry.

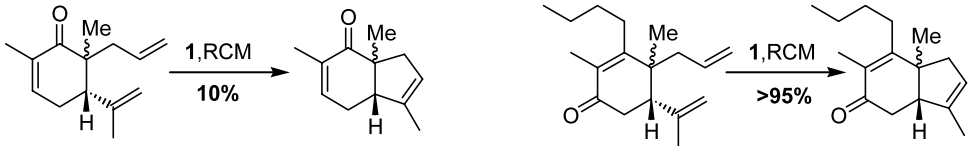


An efficient ring-closing metathesis reaction of geminally disubstituted olefins using first generation Grubbs' catalyst: enantiospecific synthesis of pacifigorgianes

Tetrahedron Letters 44 (2003) 7817

A. Srikrishna* and Dattatraya H. Dethe

Department of Organic Chemistry, Indian Institute of Science, Bangalore 560012, India

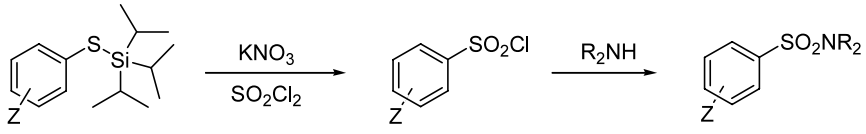


Oxidation of aromatic and aliphatic triisopropylsilanylsulfanyls to sulfonyl chlorides: preparation of sulfonamides

Tetrahedron Letters 44 (2003) 7821

Yves Gareau,* Jonathan Pellicelli, Sébastien Laliberté and Danny Gauvreau

Merck Frosst Canada Inc, Department of Medicinal Chemistry, Autoroute Transcanadienne, Kirkland, Qc, Canada H9H 3L1

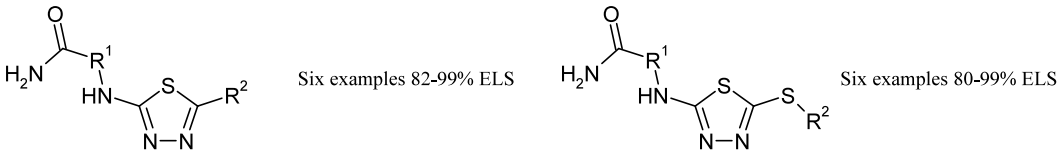


Solid-phase synthesis of substituted 1,3,4-thiadiazoles

Tetrahedron Letters 44 (2003) 7825

John Paul Kilburn,[a,b,*] Jesper Lau[a] and Raymond C. F. Jones[b]

[a]*Medicinal Chemistry Research I, Novo Nordisk A/S, Novo Nordisk Park, 2760 Maaloev, Denmark*
[b]*Chemistry Department, The Open University, Walton Hall, Milton Keynes, MK7 6AA, UK*

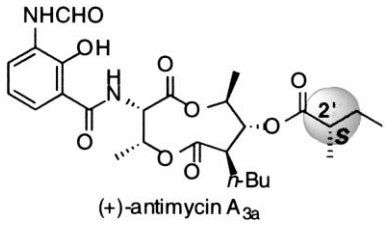


Total synthesis of the (+)-antimycin A_3 family: structure elucidation of (+)-antimycin A_{3a}

Tetrahedron Letters 44 (2003) 7829

Takeshi Nishii, Shiho Suzuki, Katsuyoshi Yoshida, Kozue Arakaki and Tetsuto Tsunoda*

Faculty of Pharmaceutical Sciences, Tokushima Bunri University, Tokushima 770-8514, Japan



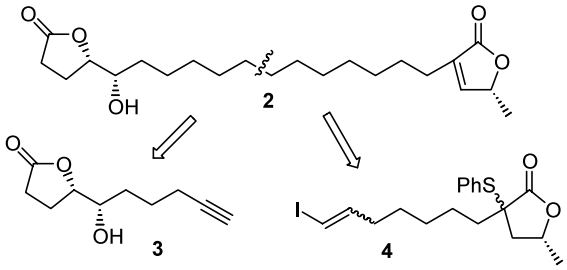
(+)-antimycin A_{3a}

Synthesis of (15*S*,16*S*,21*R*)-4-deoxyrollicosin analog

Tetrahedron Letters 44 (2003) 7833

Jeng-Lin Lee,[a,c] Chi-Fong Lin,[a] Ling-Yu Hsieh,[a] Wan-Ru Lin,[a] Huey-Fen Chiu,[b] Yang-Chang Wu,[b] Kun-Sheng Wang[a] and Ming-Jung Wu[a,c,*]

[a]*School of Chemistry, Kaohsiung Medical University, Kaohsiung, Taiwan, ROC*
[b]*Graduate Institute of Natural Products, Kaohsiung Medical University, Kaohsiung, Taiwan, ROC*
[c]*Graduate Institute of Pharmaceutical Sciences, Kaohsiung Medical University, Kaohsiung, Taiwan, ROC*



Synthesis of 4-deoxy rollicosin analog **2** was completed in nine steps, which was based on palladium-catalyzed coupling of two building blocks **3** and **4**. Lactone **3** was synthesized starting from 5-hexyn-1-ol, and vinyl iodide **4** was accessed from L-glutamate and 1-hexyne.

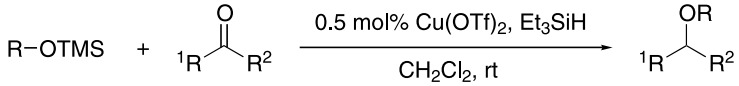
$Cu(OTf)_2$-catalyzed Et_3SiH-reductive etherification of various carbonyl compounds with trimethylsilyl ethers

Tetrahedron Letters 44 (2003) 7837

Wei-Chieh Yang,[b] Xin-An Lu,[a] Suvarn S. Kulkarni[a] and Shang-Cheng Hung[a,*]

[a]*Institute of Chemistry, Academia Sinica, Taipei 115, Taiwan*
[b]*Department of Chemistry, National Tsing Hua University, Hsinchu 300, Taiwan*

A triethylsilane-reductive etherification of the trimethylsilyl ethers with a variety of carbonyl compounds in good yields at room temperature employing 0.5 mol% $Cu(OTf)_2$ as an extremely efficient catalyst is described here.



Solid-phase synthesis of 3-amino-1,2,4-triazoles

Tetrahedron Letters 44 (2003) 7841

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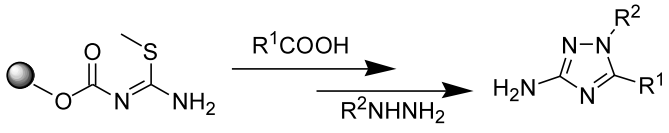

Tetrahedron Letters 44 (2003) 7845

Proton exchange and chemoselectivity in metal cation and hydroxide ion hydrolyses of phosphonoacetate diesters

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