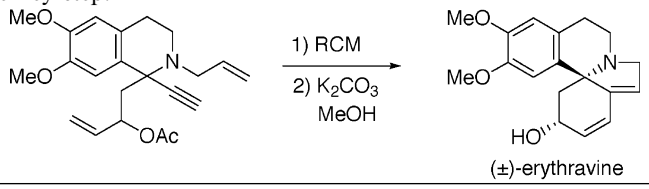
Total synthesis of (±)-erythravine based on ring closing dienyne metathesis

Tetrahedron Letters 44 (2003) 8047

Hironori Fukumoto, Tomoyuki Esumi, Jun Ishihara and Susumi Hatakeyama*

Graduate School of Biomedical Sciences, Nagasaki University, Nagasaki 852-8521, Japan

The first total synthesis of (±)-erythravine was achieved in thirteen steps from 3,4-dimethoxyphenethylamine using ring closing dienyne metathesis as the key step.

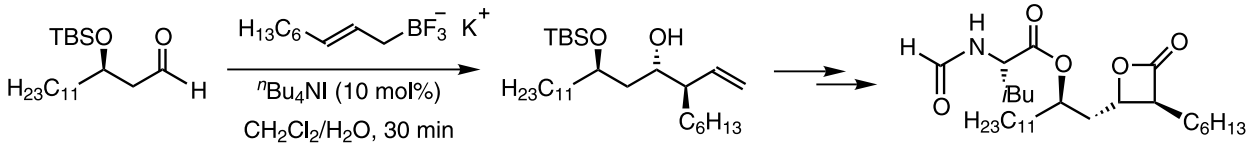


Diastereoselective allylations and crotylations under phase-transfer conditions using trifluoroborate salts: an application to the total synthesis of (−)-tetrahydrolipstatin

Tetrahedron Letters 44 (2003) 8051

Avinash N. Thadani and Robert A. Batey*

Department of Chemistry, 80 St. George Street, University of Toronto, Toronto, Ontario, M5S 3H6, Canada

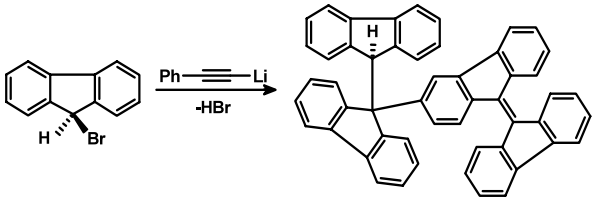


The Gomberg-type dimerization of bifluorenylidene radicals: an X-ray crystallographic investigation

Tetrahedron Letters 44 (2003) 8057

Laura E. Harrington,[a] James F. Britten[a] and Michael J. McGlinchey[a,b,*]

[a]*Department of Chemistry, McMaster University, 1280 Main St. W., Hamilton, ON L8S 1L5, Canada*
[b]*Department of Chemistry, University College Dublin, Belfield, Dublin 4, Ireland*

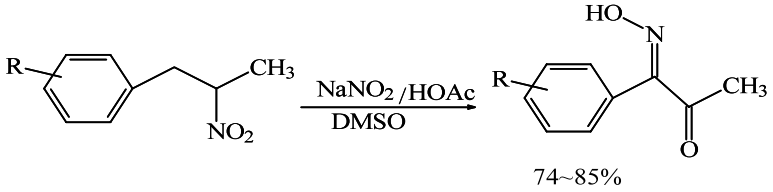


A novel oxidative reaction of 2-nitro-1-phenylpropane with sodium nitrite. A new approach to prepare 1-oximino-1-phenylacetones

Tetrahedron Letters 44 (2003) 8061

Chongzhao Ran,[a,*] Genjin Yang,[b] Taizhi Wu[a] and Meihua Xie[a]

[a]*Shanghai Institute of Pharmaceutical Industry, Shanghai 200437, PR China*
[b]*Pharmacy School, Second Military Medical University, Shanghai 200433, PR China*



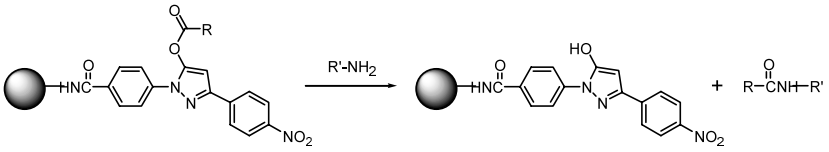
Tetrahedron Letters 44 (2003) 8063

Preparation of polymer-bound pyrazolone active esters for combinatorial chemistry

Jang-Woong Byun, Dong-Hoon Lee and Yoon-Sik Lee*

School of Chemical Engineering, Seoul National University, Seoul 151-744, Republic of Korea

A polymer-bound pyrazolone active ester resin can be used successfully with a fast reactivity and a good reusability in solid-phase combinatorial chemistry.

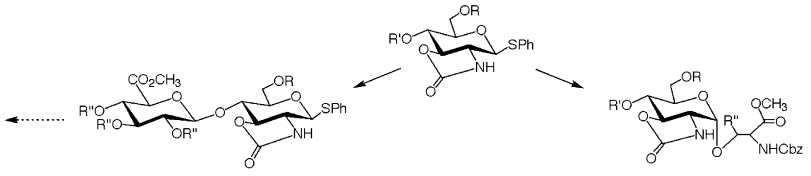


Tetrahedron Letters 44 (2003) 8069

Extended applications and potential limitations of ring-fused 2,3-oxazolidinone thioglycosides in glycoconjugate synthesis

Robert J. Kerns,* Congxiang Zha, Kamel Benakli and Yu-Zeng Liang

Division of Medicinal & Natural Products Chemistry, University of Iowa, Iowa City, IA 52242, USA



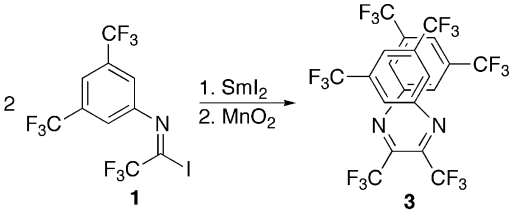
Tetrahedron Letters 44 (2003) 8073

Synthesis of a perfluoroalkyl-substituted α-diimine by Sm-mediated reductive coupling

Joseph P. Sadighi,* Lawrence M. Henling, Jay A. Labinger and John E. Bercaw

Arnold and Mabel Beckman Laboratories of Chemical Synthesis, California Institute of Technology, Pasadena, CA 91125, USA

Samarium(II) iodide mediates the reductive coupling of imidoyl iodide **1** to the corresponding enediamine **2**, which is oxidized by manganese dioxide to 2,3-bis(trifluoromethyl)-1,4-diazabutadiene **3**. Unlike its 2,3-dimethyl analogue, **3** resists formation of chelate complexes with palladium(II) or platinum(II).



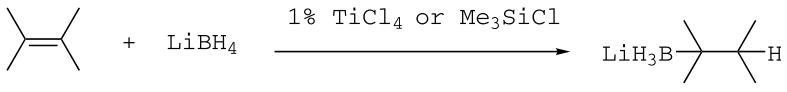
1 **3**

Tetrahedron Letters 44 (2003) 8077

Borane-catalyzed hydroboration of substituted alkenes by lithium borohydride or sodium borohydride

Claude Villiers* and Michel Ephritikhine*

Service de Chimie Moléculaire, DSM, DRECAM, CNRS URA 331, Bat. 125, CEA Saclay, 91191 Gif-sur-Yvette, France

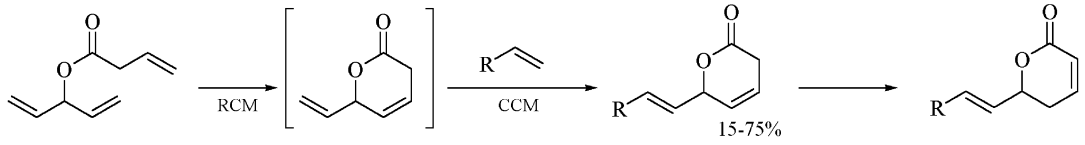


Tetrahedron Letters 44 (2003) 8081

A straightforward synthesis of (*E*)-δ-alkenyl-β,γ-unsaturated δ-lactones by a tandem ring-closing/cross-coupling metathesis process

Marie-Alice Virolleaud, Cyril Bressy and Olivier Piva*

Université Claude Bernard-Lyon I–UMR CNRS 5622, Laboratoire de Chimie Organique-Photochimie et Synthèse, Bat. Raulin-43, Bd du 11 novembre 1918, 69622 Villeurbanne, France

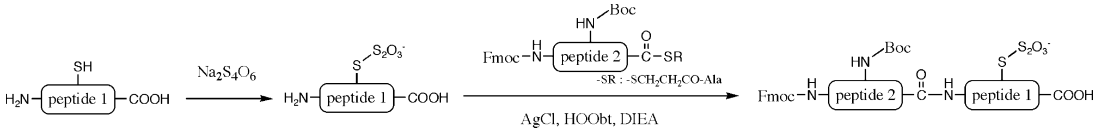


Tetrahedron Letters 44 (2003) 8085

Use of thiosulfonate for the protection of thiol groups in peptide ligation by the thioester method

Takeshi Sato and Saburo Aimoto*

Institute for Protein Research, Osaka University, 3-2 Yamadaoka, Suita, Osaka 565-0871, Japan



Tetrahedron Letters 44 (2003) 8089

Synthesis and polymerisation of lipophilic peptide nucleic acids derived from stearic acid and pentacosa-10,12-diynoic acid

Nicola M. Howarth,* W. Edward Lindsell, Euan Murray and Peter N. Preston*

Chemistry, School of Engineering & Physical Sciences, William H. Perkin Building, Heriot-Watt University, Riccarton, Edinburgh EH14 4AS, UK

$R^1(T)_{10}R^2$ (T = Thyminyl PNA monomer; and related liposomes)

$R^1 = CH_3(CH_2)_{16}CO$; $CH_3(CH_2)_{11}C_4(CH_2)_8CO$; AcAsp

$R^2 = LysNH_2$; $AspNH_2$; $Lys(CO(CH_2)_{16}CH_3)NH_2$; $Lys(CO(CH_2)_8C_4(CH_2)_{11}CH_3)NH_2$

Tetrahedron Letters 44 (2003) 8093

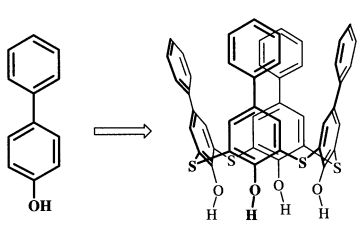
Synthesis of a deep-cavity thiacalix[4]arene

Pavel Lhoták,[a,*] Tomáš Šmejkal,[a] Ivan Stibor,[a] Jaroslav Havlíček,[b] Marcela Tkadlecová[b] and Hana Petříčková[c]

[a]*Department of Organic Chemistry, Institute of Chemical Technology, Technická 5, 166 28 Prague 6, Czech Republic*

[b]*Department of Analytical Chemistry, Institute of Chemical Technology, Technická 5, 166 28 Prague 6, Czech Republic*

[c]*Department of Solid State Chemistry, Institute of Chemical Technology, Technická 5, 166 28 Prague 6, Czech Republic*



A novel thiacalix[4]arene derivative possessing a deep aromatic cavity was prepared using the direct condensation of biphenyl-4-ol with elemental sulphur. The conformational preferences of this compound and simple alkyl derivatives thereof were studied using a combination of NMR and X-ray diffraction techniques.

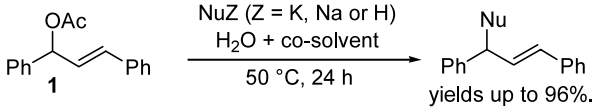
Tetrahedron Letters 44 (2003) 8099

Water-mediated transition-metal-free Tsuji–Trost-type reaction

Carole Chevrin, Jean Le Bras, Françoise Hénin* and Jacques Muzart*

Unité Mixte de Recherche 'Réactions Sélectives et Applications', CNRS, Université de Reims Champagne, Ardenne, BP 1039, 51687 Reims Cedex 2, France

No transition-metal required. The addition of water to various organic solvents mediates the substitution of **1** by C-, O-, S- and N-nucleophiles.

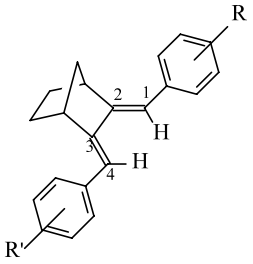


Tetrahedron Letters 44 (2003) 8103

Regioselectivity of *E*/*Z* photoisomerization of fluorinated cisoid (1*E*,3*E*)-1,4-diphenylbutadienes via direct irradiation

Jin Liu,* Eric L. Suits and Kelly J. Boarman

Department of Chemistry, Murray State University, Murray, KY, 42071, USA



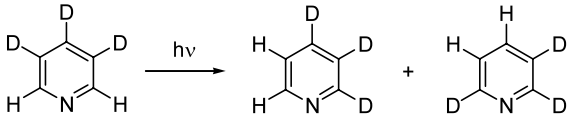
(1*E*,3*E*)-isomer

Tetrahedron Letters 44 (2003) 8109

The photochemistry of 3,4,5-trideuteriopyridine

James W. Pavlik* and Somchoke Laohhasurayotin

Department of Chemistry and Biochemistry, Worcester Polytechnic Institute, 100 Institute Road, Worcester, MA 01609, USA



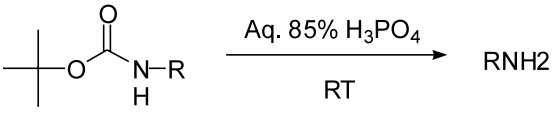
Tetrahedron Letters 44 (2003) 8113

Aqueous phosphoric acid as a mild reagent for deprotection of the *t*-butoxycarbonyl group

Bryan Li,[a,*] Raymond Bemish,[a] Richard A. Buzon,[a] Charles K.-F. Chiu,[a] Stephen T. Colgan,[a] William Kissel,[b] Tung Le,[a] Kyle R. Leeman,[a] Lisa Newell[a] and Joshua Roth[a]

[a]*Chemical Research and Development, Pfizer Global Research and Development, Groton Laboratories, Groton, CT 06340, USA*

[b]*Chemical Research and Development, Pfizer Global Research and Development, 188 Howard Avenue, Holland, MI 49424, USA*

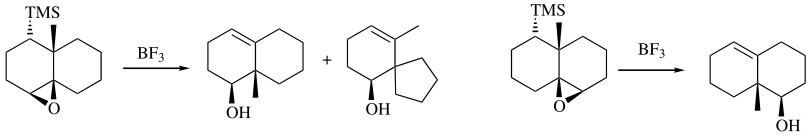


Tetrahedron Letters 44 (2003) 8117

Silicon-guided rearrangement of 10-methyl-4,5-epoxydecalins. Methyl versus methylene migration

Gonzalo Blay, Luz Cardona, Ana M. Collado, Begoña García and José R. Pedro*

Departament de Química Orgànica, Facultat de Química, Universitat de València, E-46100 Burjassot, Spain



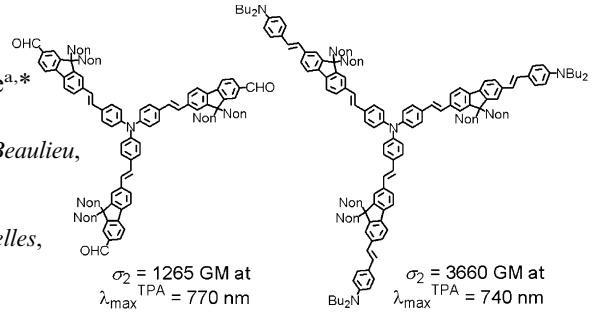
Tetrahedron Letters 44 (2003) 8121

Synthesis and two-photon absorption of highly soluble three-branched fluorenylene-vinylene derivatives

Olivier Mongin,[a,*] Laurent Porrès,[a] Claudine Katan,[a] Thomas Pons,[b] Jerome Mertz[b] and Mireille Blanchard-Desce[a,*]

[a]*Synthèse et ElectroSynthèse Organiques (CNRS, UMR 6510), Université de Rennes 1, Institut de Chimie, Campus Scientifique de Beaulieu, Bât 10A, F-35042 Rennes Cedex, France*

[b]*Neurophysiologie et Nouvelles Microscopies (INSERM EPI 00-02, CNRS FRE 2500), Ecole Supérieure de Physique et Chimie Industrielles, 10 rue Vauquelin, F-75231 Paris Cedex 05, France*



Tetrahedron Letters 44 (2003) 8127

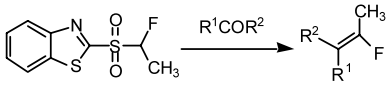
A convenient one-step synthesis of fluoroethylidene derivatives

D. Chevrie,[a] T. Lequeux,[a,*] J. P. Demoute[b] and S. Pazenok[b,*]

[a]*Laboratoire de Chimie Moléculaire et Thioorganique, Université de Caen-ENSICaen, UMR CNRS 6507, 6 Boulevard du Maréchal Juin, 14050 Caen cedex, France*

[b]*Bayer CropScience GmbH, Industriepark Hoechst, G 837, D-65926 Frankfurt am Main, Germany*

The synthesis and the use of α-fluoroethylbenzothiazolylsulfone according to Julia's procedure is reported. This method opens a new route for the one-step preparation of fluoroalkylidene derivatives.



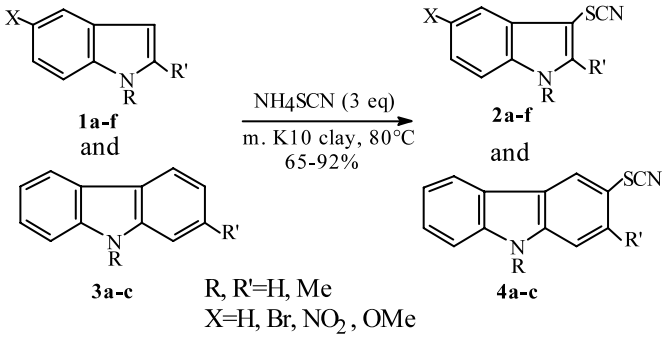
Tetrahedron Letters 44 (2003) 8131

A clay-mediated eco-friendly thiocyanation of indoles and carbazoles

Manas Chakrabarty* and Sandipan Sarkar

Department of Chemistry, Bose Institute, 93/1, A.P.C. Road, Kolkata 700009, India

An efficient solvent-free thiocyanation of indoles **1a**–**f** and carbazoles **3a**–**c** was developed using NH_4SCN on montmorillonite K10 clay.

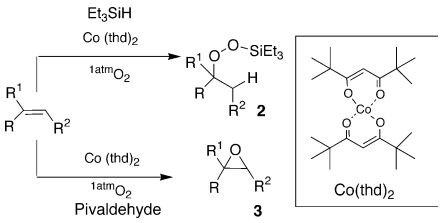


Tetrahedron Letters 44 (2003) 8135

$Co(thd)_2$: a superior catalyst for aerobic epoxidation and hydroperoxysilylation of unactivated alkenes: application to the synthesis of spiro-1,2,4-trioxanes

Paul M. O'Neill,[a,b,*] Stephen Hindley,[a] Matthew D. Pugh,[a] Jill Davies,[c] Patrick G. Bray,[c] B. Kevin Park,[b] Dauda S. Kapu,[c] Stephen A. Ward[c] and Paul A. Stocks[a]

[a]*Department of Chemistry, The Robert Robinson Laboratories, University of Liverpool, Liverpool L69 7ZD, UK*
[b]*Department of Pharmacology, University of Liverpool, Liverpool L69 3GE, UK*
[c]*School of Tropical Medicine, Pembroke Place, University of Liverpool, Liverpool L3 5QA, UK*



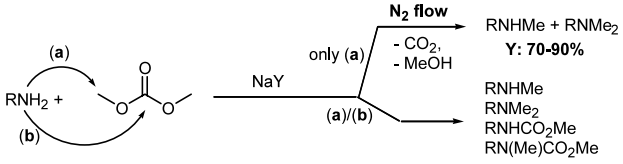
$Co(thd)_2$ is a superior catalyst to $Co(acac)_2$ for aerobic hydroperoxysilylation and epoxidation of unactivated alkenes.

Tetrahedron Letters 44 (2003) 8139

Selective *N*-methylation of primary aliphatic amines with dimethyl carbonate in the presence of alkali cation exchanged Y-faujasites

Maurizio Selva* and Pietro Tundo

Dipartimento di Scienze Ambientali dell'Università Ca' Foscari, Calle Larga S. Marta 2137, 30123 Venezia, Italy

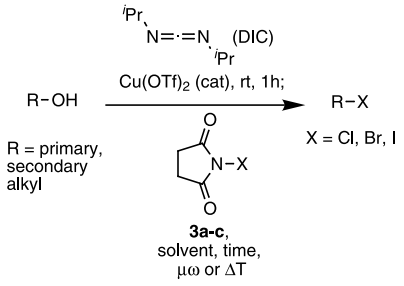


Tetrahedron Letters 44 (2003) 8143

A mild, phosphine-free method for the conversion of alcohols into halides (Cl, Br, I) via the corresponding *O*-alkyl isoureas

Zhengning Li, Stefano Crosignani and Bruno Linclau*

Combinatorial Centre of Excellence, Chemistry Department, University of Southampton, Southampton, SO17 1BJ, UK

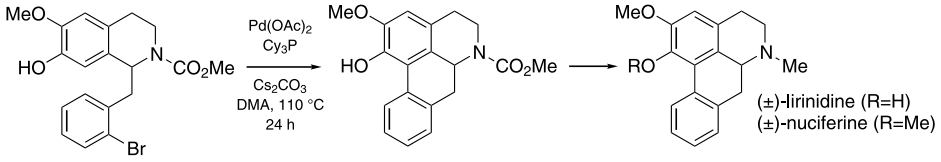


Tetrahedron Letters 44 (2003) 8149

Intramolecular ortho-arylation of phenols utilized in the synthesis of the aporphine alkaloids (±)-lirinidine and (±)-nuciferine

Gregory D. Cuny*

Laboratory for Drug Discovery in Neurodegeneration, Brigham and Women's Hospital and Harvard Medical School, 65 Landsdowne St., Cambridge, MA 02139 USA

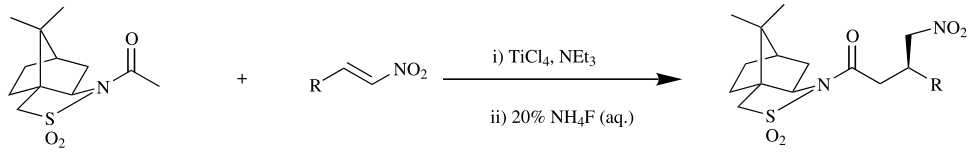


Intermediates in the synthesis of nitrogen heterocycles: addition of acylated camphorsultams to nitroalkenes

Tetrahedron Letters 44 (2003) 8153

Joanna E. Clare,[a] Christine L. Willis,[a,*] Josephine Yuen,[a] Kenneth W. M. Lawrie,[b] Jonathan P. H. Charmant[c] and Anob Kantacha[c]

[a]*School of Chemistry, University of Bristol, Cantock's Close, Bristol, BS8 1TS, UK*
[b]*GlaxoSmithKline, Gunnel's Wood Road, Stevenage, Herts, SG1 2NY, UK*
[c]*Structural Chemistry Laboratory, School of Chemistry, University of Bristol, Cantock's Close, Bristol, BS8 1TS, UK*



Yields 73-85%

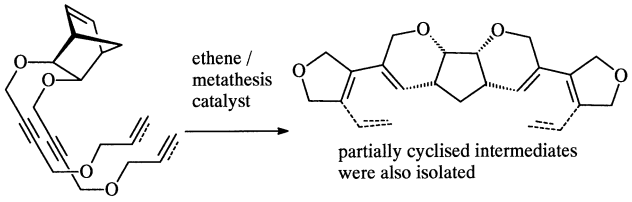
Ene-yne-ene and ene-yne-yne metathesis of norbornene derivatives

Tetrahedron Letters 44 (2003) 8157

Donatella Banti and Michael North*

Department of Chemistry, King's College London, Strand, London WC2R 2LS, UK

Ruthenium based metathesis initiators have been used to convert readily available norbornene derivatives into highly functionalised polycyclic compounds.



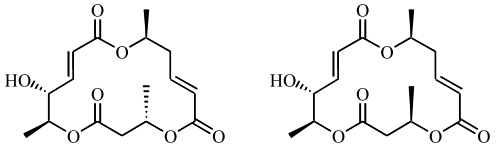
A total synthesis of macrosphelides C and F from L-(+)-arabinose

Tetrahedron Letters 44 (2003) 8161

G. V. M. Sharma* and Ch. Chandra Mouli

D-211, Discovery Laboratory, Organic Chemistry Division III, Indian Institute of Chemical Technology, Hyderabad, 500 007, India

A total synthesis of the 16-membered macrolides, macrosphelides C and F has been achieved starting from L-(+)-arabinose.



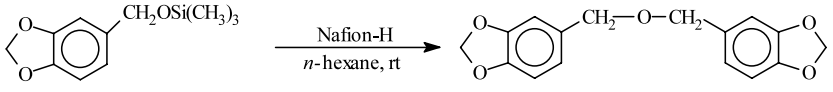
Macrosphelide C (**1**) Macrosphelide F (**2**)

The use of Nafion-H® as an efficient catalyst for the direct conversion of primary and secondary trimethylsilyl ethers to their corresponding ethers under mild and heterogeneous conditions

Tetrahedron Letters 44 (2003) 8165

Mohammad Ali Zolfigol,[a,*] Iraj Mohammadpoor-Baltork,[b] Davood Habibi,[a] BiBi Fatemeh Mirjalili[c] and Abdolhamid Bamoniri[a]

[a]*Chemistry Department, College of Science, Bu-Ali Sina University, Hamadan, Zip Code 65174, Iran*
[b]*Department of Chemistry, Isfahan University, Isfahan, Iran*
[c]*Department of Chemistry, College of Science, Yazd University, Yazd, Iran*

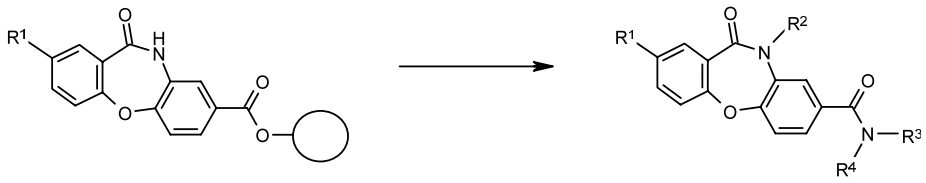


Tetrahedron Letters 44 (2003) 8169

Solid-phase synthesis of dibenzoxazepinones

Neal D. Hone,* James I. Salter and John C. Reader

Millennium Pharmaceuticals Ltd, Granta Park, Great Abington, Cambridge CB1 6ET, UK

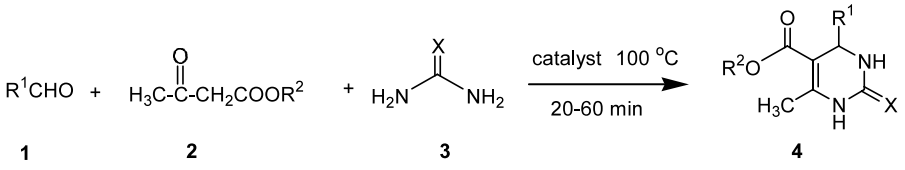


Tetrahedron Letters 44 (2003) 8173

New environmentally friendly solvent free synthesis of dihydropyrimidinones catalysed by *N*-butyl-*N*,*N*-dimethyl-α-phenylethylammonium bromide

K. Rosi Reddy, Ch. Venkateshwar Reddy, M. Mahesh, P. V. K. Raju and V. V. Narayana Reddy*

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



Tetrahedron Letters 44 (2003) 8177

Electronic effects of icosahedral carboranes: mechanistic alteration in solvolysis of α-(*o*-carboranyl)benzyl tosylates by electronic effect of substituents

Yoshiyuki Taoda[a] and Yasuyuki Endo[b,*]

[a]*Graduate School of Pharmaceutical Sciences, University of Tokyo, 7-3-1, Hongo, Bunkyo-ku, Tokyo 113-0033, Japan*
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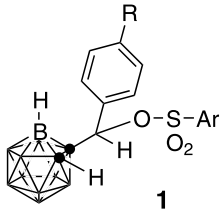
New retentive solvolysis of (*o*-carboranyl)benzyl tosylates was analyzed by kinetic experiments of **1** with a range of substituents R on the aromatic nuclei.



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Synthesis and dual binding character of novel macrocyclic thiourea derivatives

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