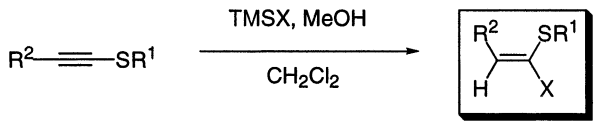
A stereoselective synthesis of α-halo vinyl sulfides and their applications in organic synthesis

Tetrahedron Letters 42 (2001) 3771

Mei Su, Wensheng Yu and Zhendong Jin*

Division of Medicinal and Natural Products Chemistry, College of Pharmacy, The University of Iowa, Iowa City, IA 52242, USA

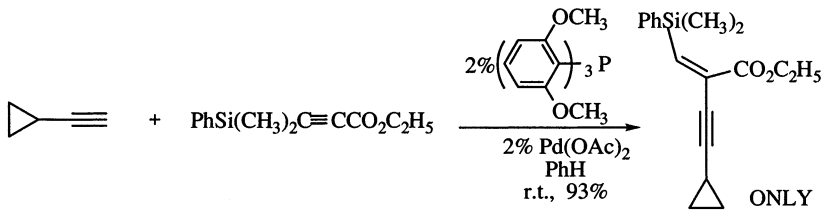


An unusual regioselectivity in the Pd-catalyzed cross coupling of alkynes. A correction

Tetrahedron Letters 42 (2001) 3775

Barry M. Trost,* Janet L. Gunzner and Tatsuro Yasukata

Department of Chemistry, Stanford University, Stanford, CA 94305-5080, USA

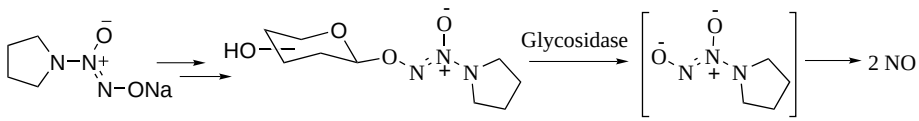


Glycosylated diazeniumdiolates: a novel class of enzyme-activated nitric oxide donors

Tetrahedron Letters 42 (2001) 3779

Xuejun Wu, Xiaoping Tang, Ming Xian and Peng George Wang*

Department of Chemistry, Wayne State University, Detroit, MI 48202, USA

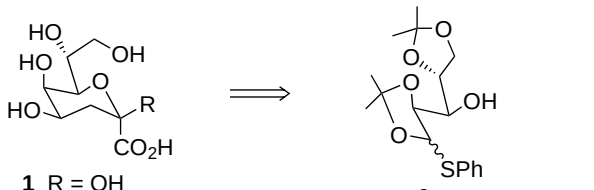


Synthesis of KDO and analogues from a novel mannose-derived precursor

Tetrahedron Letters 42 (2001) 3783

Govindaraj Kumaran and David R. Mootoo*

Department of Chemistry, Hunter College/CUNY, 695 Park Avenue, New York, NY 10021, USA



1 R = OH
2 R = H
3 R = $(CH_2)_{16}CH_3$

6

four steps from D-Mannose

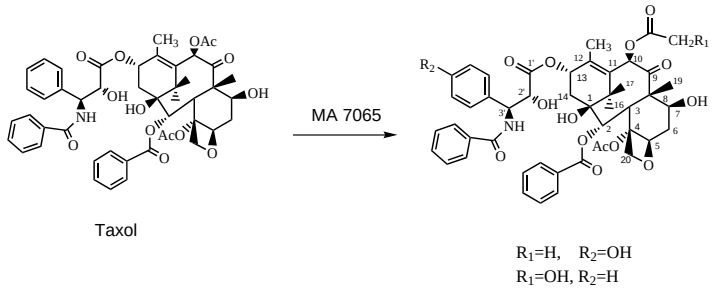
Biotransformation of taxol

Tetrahedron Letters 42 (2001) 3787

Tom S. Chen,[a,*] Xiaohua Li,[a] Dan Bollag,[a] Yeuh-chuen Liu[b] and Ching-jer Chang[b]

[a]*Merck Research Laboratories, Rahway, NJ 07065, USA*
[b]*Department of Medicinal Chemistry and Molecular Pharmacology, Purdue University, W. Lafayette, IN 47907, USA*

Bioconversion of taxol by *Streptomyces* sp. MA 7065 resulted in hydroxylation on the 10-acetyl methyl group in 60% yield and on the benzene ring at the *para* position of the phenylisoserine side chain in 10% yield.

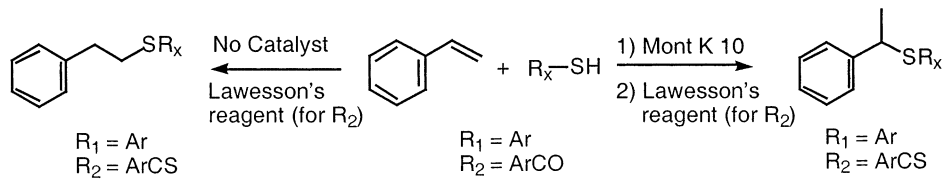


Montmorillonite K 10-catalyzed regioselective addition of thiols and thiobenzoic acids onto olefins: an efficient synthesis of dithiocarboxylic esters

Tetrahedron Letters 42 (2001) 3791

Subbareddy Kanagasabapathy, Arumugam Sudalai and Brian C. Benicewicz*

NYS Center for Polymer Synthesis and Department of Chemistry, Rensselaer Polytechnic Institute, Troy, NY 12180, USA

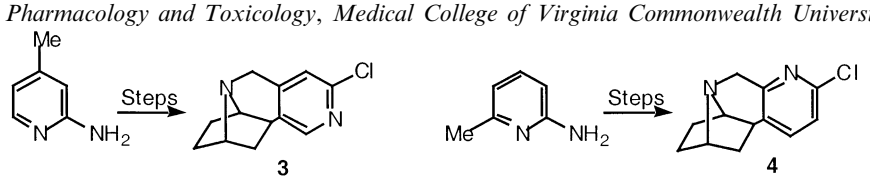


Synthesis of bridged analogs of epibatidine. 3-Chloro-5,7,8,9,9a,10-hexahydro-7,10-methanopyrrolo[1,2-*b*]-2,6-naphthyridine and 2-chloro-5,5a,6,7,8,10-hexahydro-5,8-methanopyrrolo[2,1-*b*]-1,7-naphthyridine

Tetrahedron Letters 42 (2001) 3795

Lawrence E. Brieaddy,[a] S. Wayne Mascarella,[a] Hernán A. Navarro,[a] Robert N. Atkinson,[a] M. I. Damaj,[b] Billy R. Martin[b] and F. Ivy Carroll[a,*]

[a]*Chemistry and Life Sciences, Research Triangle Institute, PO Box 12194, Research Triangle Park, NC 27709, USA*
[b]*Department of Pharmacology and Toxicology, Medical College of Virginia Commonwealth University, Richmond, VA 23298, USA*

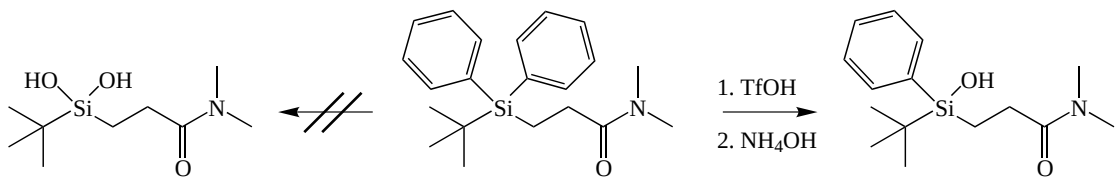


Studies in silanol synthesis: internal nucleophiles and steric hindrance

Tetrahedron Letters 42 (2001) 3799

Athanasios Glekas and Scott McN. Sieburth*

Department of Chemistry, State University of New York at Stony Brook, Stony Brook, NY 11794-3400, USA

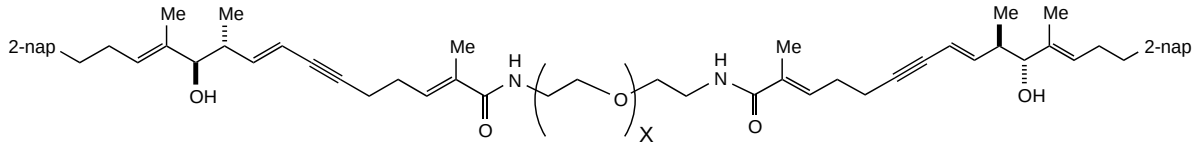


Synthesis and analysis of polyethylene glycol linked P-glycoprotein-specific homodimers based on (−)-stipiamide

Tetrahedron Letters 42 (2001) 3819

Merritt B. Andrus,[a,*] Timothy M. Turner,[a] Emily P. Updegraff,[a] Zuben E. Sauna[b] and Suresh V. Ambudkar[b]

[a]*Brigham Young University, Department of Chemistry and Biochemistry, C100 BNSN, Provo, UT 84602-5700, USA*
[b]*National Cancer Institute, NIH, Laboratory of Cell Biology, Division of Basic Sciences, Building 37, Room 1B-17 37 Convent Dr., MSC4255 Bethesda, MD 20878-4255, USA*



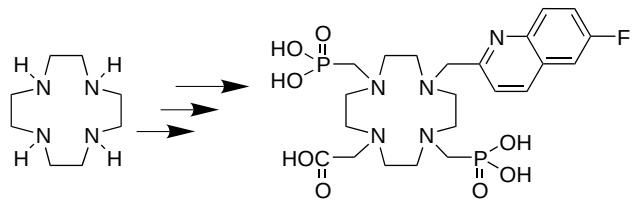
Simple, high yielding synthesis of trifunctional fluorescent lanthanide chelates

Tetrahedron Letters 42 (2001) 3823

John M. M. Griffin, Anna M. Skwierawska, H. Charles Manning, John N. Marx and Darryl J. Bornhop*

Department of Chemistry and Biochemistry, Texas Tech University, Lubbock, TX 79409-1061, USA

A simple and efficient route to trifunctional-bioconjugable, lanthanide chelates.

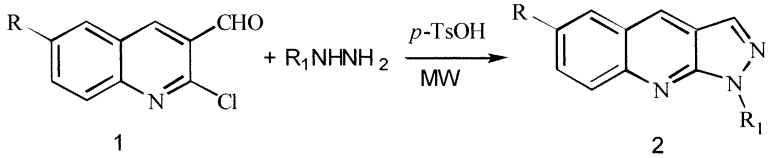


Microwave assisted solvent-free synthesis of pyrazolo[3,4-*b*]-quinolines and pyrazolo[3,4-*c*]pyrazoles using *p*-TsOH

Tetrahedron Letters 42 (2001) 3827

Satya Paul,[a] Mukta Gupta,[a] Rajive Gupta[a,*] and André Loupy[b]

[a]*Department of Chemistry, University of Jammu, Jammu 180 006, India*
[b]*Laboratoire des Réactions Sélectives sur Supports, CNRS UMR 8615, Université Paris-Sud, 91405 Orsay, France*



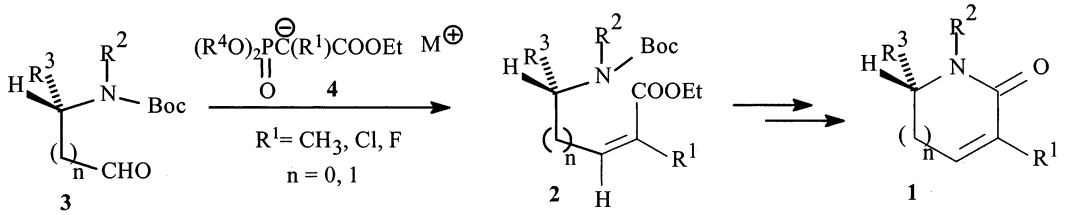
1 2

Enantioselective synthesis of α,β-unsaturated γ- and δ-lactams

Tetrahedron Letters 42 (2001) 3831

Claude Grison,* Stéphane Genève and Philippe Coutrot

Laboratoire de Chimie Organique Biomoléculaire, I.N.CM.FR CNRS 1742, UMR 7565, Université Henri Poincaré-Nancy I, BP 239, 54506 Vandoeuvre, France



3 2 1

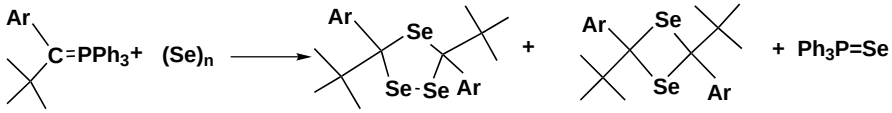
Novel formation of 1,2,4-triselenolanes by the reaction of *tert*-butylarylmethylenetriphenylphosphoranes with elemental selenium

Tetrahedron Letters 42 (2001) 3881

Kentaro Okuma[a,b,*] and Tomoaki Kubota[a]

[a]*Department of Chemistry, Fukuoka University, Jonan-ku, Fukuoka 814-0180, Japan*
[b]*Advanced Materials Institute, Fukuoka University, Jonan-ku, Fukuoka 814-0180, Japan*

Reaction of *tert*-butylarylmethylenetriphenylphosphoranes with elemental selenium afforded the corresponding 1,2,4-triselenolanes, 1,3-diselenetanes, and triphenylphosphine selenide.



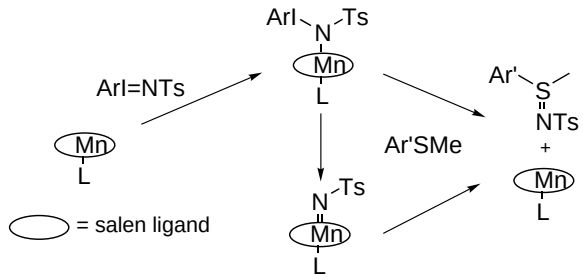
Mn(salen)-catalyzed sulfimidation: what are the real active species in sulfimidation?

Tetrahedron Letters 42 (2001) 3885

Chisa Ohta and Tsutomu Katsuki*

Department of Chemistry, Faculty of Science, Graduate School, Kyushu University 33, Hakozaki, Higashi-ku, Fukuoka 812-8581, Japan

Based on the unusual temperature effect on enantioselectivity observed in Mn(salen)-catalyzed sulfimidation, it was proposed that both the Mn–ArINTs adduct and the Mn–nitrenoid take part in the sulfimidation, depending on the reaction conditions.



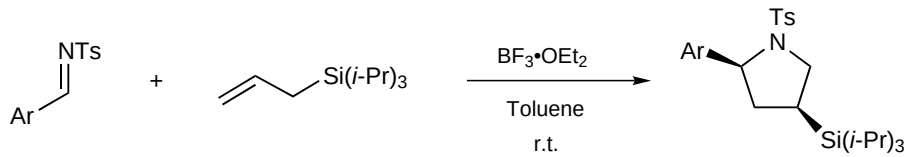
Lewis acid-mediated [3+2] cycloaddition of allyltriisopropylsilane to *N*-sulfonyl aldimines

Tetrahedron Letters 42 (2001) 3889

Takahiko Akiyama,* Megumi Sugano and Hirotaka Kagoshima

Department of Chemistry, Faculty of Science, Gakushuin University, 1-5-1, Mejiro, Toshima-ku, Tokyo 171-8588, Japan

$BF_3{\cdot}OEt_2$-mediated [3+2] cycloaddition of allyltriisopropylsilane to *N*-sulfonyl aldimine afforded silyl substituted pyrrolidines in good yields. Excellent *cis* selectivity was observed with aromatic aldimines.

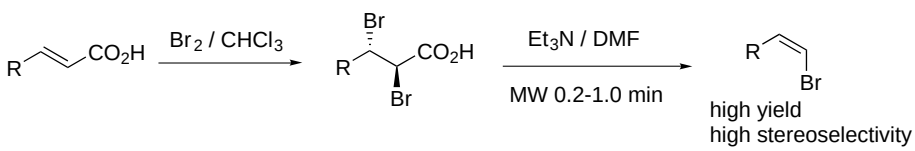


Convenient and stereoselective synthesis of (*Z*)-1-bromo-1-alkenes by microwave-induced reaction

Tetrahedron Letters 42 (2001) 3893

Chunxiang Kuang, Hisanori Senboku and Masao Tokuda*

Division of Molecular Chemistry, Graduate School of Engineering, Hokkaido University, Sapporo 060-8628, Japan



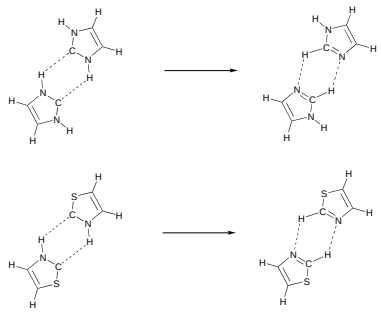
Intermolecular hydrogen transfers in 2,3-dihydroimidazol-2-ylidene and 2,3-dihydrothiazol-2-ylidene: a theoretical study

Tetrahedron Letters 42 (2001) 3897

Mu-Jeng Cheng[a] and Ching-Han Hu[b,*]

[a]*Department of Chemistry, National Tsing Hua University, Hsinchu 30043, Taiwan*
[b]*Department of Chemistry, National Changhua University of Education, Changhua 50058, Taiwan*

The prototype heterocyclic carbenes (2,3-dihydroimidazol-2-ylidene and 2,3-dihydrothiazol-2-ylidene) undergo intermolecular hydrogen transfers with very low activation barriers. Unlike their alkyl-substituted analogues, these carbenes cannot be isolated at room temperature.



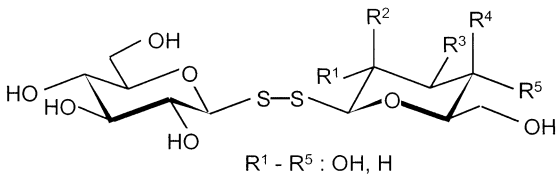
Elaboration of a novel type of interglycosidic linkage: syntheses of disulfide disaccharides

Tetrahedron Letters 42 (2001) 3901

László Szilágyi,[a,*] Tünde-Zita Illyés[a] and Pál Herczegh[b]

[a]*Department of Organic Chemistry, University of Debrecen, H-4010 Debrecen, pf. 20., Hungary*
[b]*Antibiotics Research Group of the Hungarian Academy of Science, H-4010 Debrecen, pf. 20., Hungary*

Unsymmetrical disulfide disaccharides represent a novel class of glycomimetics.



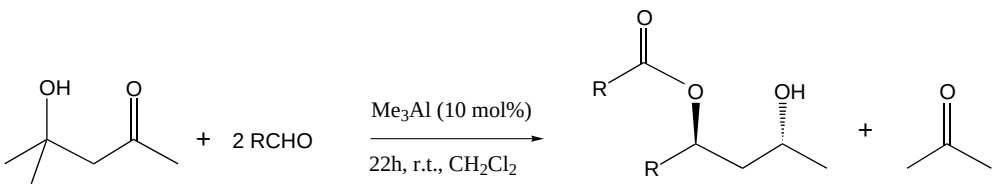
R^1 - R^5 : OH, H

Tandem aldol-transfer–Tischtschenko reaction of aldehydes and β-hydroxyketones catalyzed by trimethylaluminum

Tetrahedron Letters 42 (2001) 3905

Ilkka Simpura* and Vesa Nevalainen

Department of Chemistry, PO Box 55 (A.I. Virtasen aukio 1), University of Helsinki, FIN-00014 Helsinki, Finland



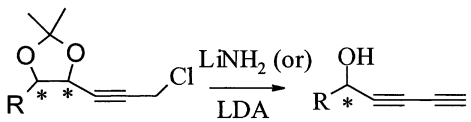
80% yield (R = *n*-Propyl)

A highly efficient and practical method for the synthesis of chiral polyhydroxy diacetylenic alcohols

Tetrahedron Letters 42 (2001) 3909

J. S. Yadav* and Arup Maiti

Organic Chemistry Division-1, Indian Institute of Chemical Technology, Hyderabad 500007, India



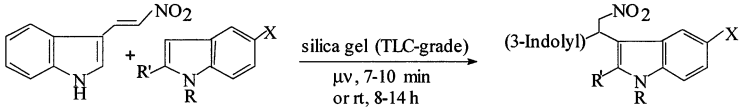
Microwave-assisted Michael reactions of 3-(2′-nitrovinyl)indole with indoles on TLC-grade silica gel. A new, facile synthesis of 2,2-bis(3′-indolyl)nitroethanes

Tetrahedron Letters 42 (2001) 3913

Manas Chakrabarty,* Ramkrishna Basak and Nandita Ghosh

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

Compound **1** underwent the first ever Michael reactions with indoles as nucleophiles on TLC-grade silica gel. Diindolylnitroethanes (**3a**–**f**) were formed very quickly under microwave irradiation and much more slowly at room temperature.



1 **2a-f** **3a-f**

R=H, Me, Et, *i*Pr; R'=H, Me ; X=H, Br

μv : 70-86%; rt : 69-84%

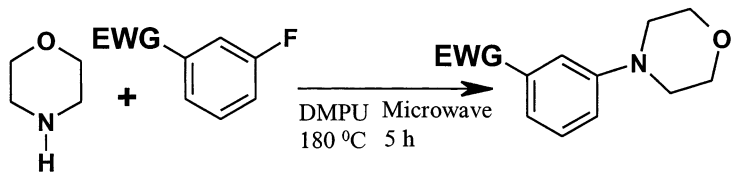
Improved yields of *meta*-amination and symmetrical and unsymmetrical diamination of benzenes

Tetrahedron Letters 42 (2001) 3917

George R. Brown,* Alan J. Foubister, Craig A. Roberts, Stuart L. Wells and Robin Wood

AstraZeneca, Alderley Park, Macclesfield, Cheshire SK10 4TG, UK

Amination of fluorobenzenes with an electron-withdrawing group proceeds in DMPU at 180°C over 5 h (sealed tube) in a microwave oven (300 W) with yields up to 93%.



Grob-type fragmentation of *N*-alkyl-2-cyano-5-bromopiperidines to unsaturated imidoyl cyanides

Tetrahedron Letters 42 (2001) 3921

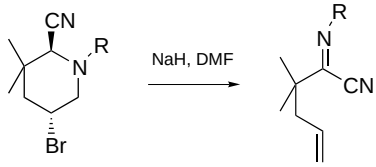
Erick Rosas Alonso,[a] Kourosch Abbaspour Tehrani,[a,] Mark Boelens,[a] David W. Knight,[b] Valentina Yu[c] and Norbert De Kimpe[a,*]

[a]*Department of Organic Chemistry, Faculty of Agricultural and Applied Biological Sciences, Ghent University, Coupure Links 653, B-9000 Ghent, Belgium*

[b]*Department of Chemistry, Cardiff University, PO Box 912, Cardiff CF10 3TB, UK*

[c]*Institute of Chemical Sciences, Department of Physiologically Active Substances, Chokan Valihanov Street, 480100 Almaty, Kazakhstan*

N-Alkyl-2-cyano-5-bromopiperidines **2** underwent a Grob-type ring opening elimination when treated with a slight excess of sodium hydride in DMF.



2 **3**

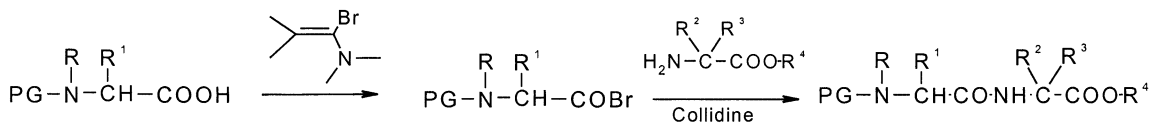
N-Protected amino acid bromides: efficient reagents for the incorporation into peptides of extremely hindered α,α-dialkyl- and α-fluoroalkyl-amino acids

Tetrahedron Letters 42 (2001) 3925

Alma DalPozzo,* Roberto Bergonzi and Minghong Ni

Istituto di Ricerche Chimiche e Biochimiche G. Ronzoni, via Colombo 81, 20133 Milan, Italy

Amino acid bromides prepared in situ afforded pure peptides with very hindered amino acid esters, in high yields and without any detectable racemization.

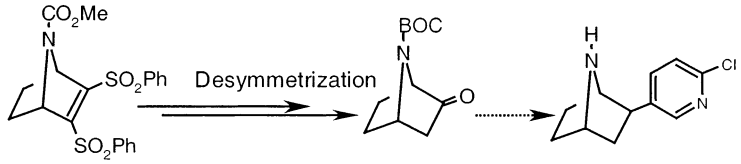


A short and efficient synthesis of enantiopure (+)-*N*-Boc-7-azabicyclo[2.2.1]heptan-2-one utilizing an asymmetric desymmetrization protocol: formal total synthesis of (−)-epibatidine

Tetrahedron Letters 42 (2001) 3947

Ganesh Pandey,[a,*] Shashi Kant Tiwari,[a] Ram Shanker Singh[a] and Raghao S. Mali[b,*]

[a]*Division of Organic Chemistry (Synthesis), National Chemical Laboratory, 411008 Pune, India*
[b]*Department of Chemistry, University of Pune, 411007 Pune, India*

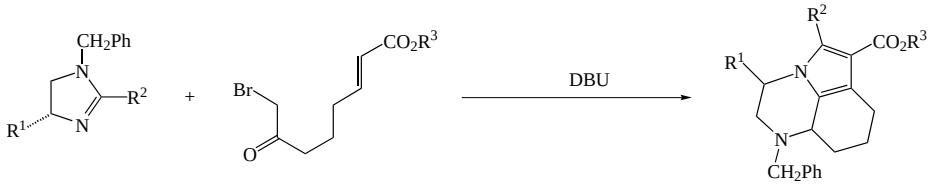


Pyrrolo[1,2,3-*de*]quinoxalines: unexpected products from 1,3-dipolar cycloaddition of dihydroimidazolium ylides

Tetrahedron Letters 42 (2001) 3951

Raymond C. F. Jones,[a,*] James N. Iley,[a,*] Pedro M. J. Lory,[a] Simon C. Coles,[b] Mark E. Light[b] and Michael B. Hursthouse[b]

[a]*Chemistry Department, The Open University, Walton Hall, Milton Keynes MK7 6AA, UK*
[b]*EPSRC National Crystallography Service, Department of Chemistry, University of Southampton, Highfield, Southampton SO17 1BJ, UK*



Highly regioselective ring opening of epoxides and aziridines using cerium(III) chloride

Tetrahedron Letters 42 (2001) 3955

Gowravaram Sabitha,* R. Satheesh Babu, M. Rajkumar, Ch. Srinivas Reddy and J. S. Yadav

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

A wide variety of epoxides and aziridines were converted to the corresponding β-halohydrins and β-haloamines using cerium(III) chloride and the cerium(III) chloride/NaI system in acetonitrile.