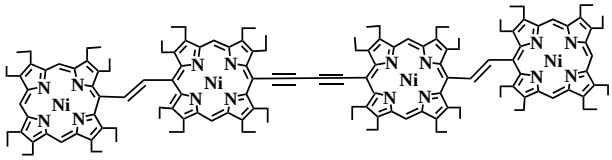
Synthesis and electronic properties of diacetylene- and vinylene-groups connected octaethylporphyrin tetramer

Tetrahedron Letters 43 (2002) 3097

Hiroyuki Higuchi,[a,*] Takao Maeda,[a] Keiko Miyabayashi,[b] Mikio Miyake[b] and Koji Yamamoto[a]

[a]*Department of Chemistry, Faculty of Science, Toyama University, 3190 Gofuku, Toyama 930-8555, Japan*
[b]*School of Materials Science, JAIST (Hokuriku), 1-1 Asahi-dai, Tatsunokuchi, Noumi, Ishikawa 923-1292, Japan*

The diacetylene- and vinylene-groups connected OEP tetramer was synthesized. Its electronic properties are described, as compared with those of diacetylene-group and vinylene-group connected OEP dimers.



diacetylene- and vinylene-groups connected OEP tetramer

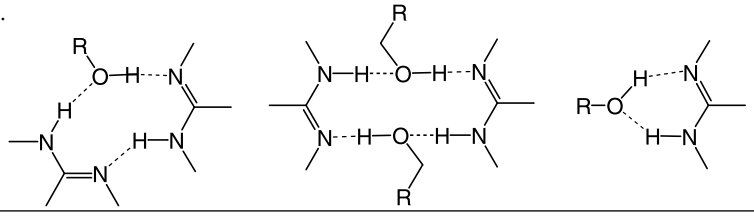
Supramolecular synthons in the co-crystal structures of 2-aminopyrimidine with diols and carboxylic acids

Tetrahedron Letters 43 (2002) 3101

Ning Shan, Andrew D. Bond and William Jones*

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

Supramolecular synthons have been discussed and rationalised in the co-crystal structures of 2-aminopyrimidine with diols and carboxylic acids.

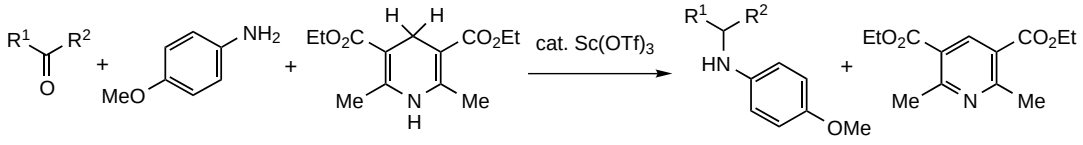


Reductive amination of aldehydes and ketones by a Hantzsch dihydropyridine using scandium triflate as a catalyst

Tetrahedron Letters 43 (2002) 3105

Takashi Itoh, Kazuhiro Nagata, Ayako Kurihara, Michiko Miyazaki and Akio Ohsawa*

School of Pharmaceutical Sciences, Showa University, 1-5-8 Hatanodai, Shinagawa-ku, Tokyo 142-8555, Japan



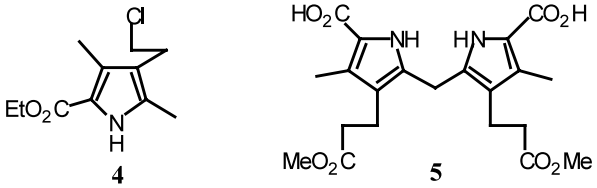
New route to protoporphyrins III and XIII from common starting pyrroles

Tetrahedron Letters 43 (2002) 3109

Georges P.-J. Hareau,[a,*] Saburo Neya,[b] Noriaki Funasaki[b] and Isao Taniguchi[a]

[a]*Department of Applied Chemistry & Biochemistry, Kumamoto University, 2-39-1, Kurokami, Kumamoto 860-8555, Japan*
[b]*Department of Physical Chemistry, Kyoto Pharmaceutical University, Yamashina, Kyoto 607-8414, Japan*

Compounds **4** and **5** have proved to be the only starting materials required in a remarkably simple new synthesis of protoporphyrins III and XIII.



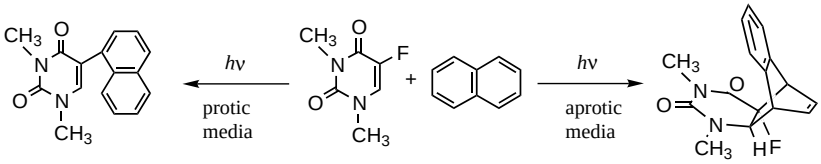
4 **5**

Tetrahedron Letters 43 (2002) 3113

Stereoselective synthesis of 4a-fluoro-5,10-ethenobenzo[*f*]-quinazolines via photo-Diels–Alder reaction of 5-fluoro-1,3-dimethyluracil with naphthalenes

Kazue Ohkura,[a] Tatsuyuki Sugaoi,[a] Ken-ichi Nishijima,[a,b] Yuji Kuge[b] and Koh-ichi Seki[a,*]

[a]*Faculty of Pharmaceutical Sciences, Health Sciences University of Hokkaido, Ishikari-Tobetsu, Hokkaido 061-0293, Japan*
[b]*Graduate School of Medicine, Hokkaido University, Kita-15, Nishi-7, Kita-ku, Sapporo 060-8638, Japan*

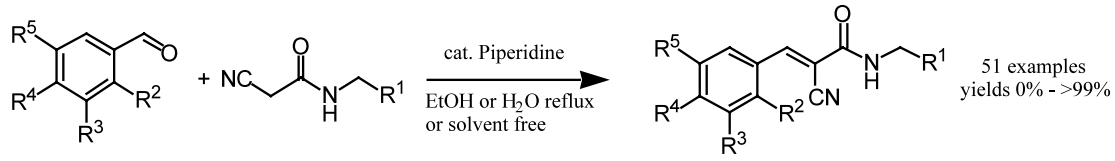


Tetrahedron Letters 43 (2002) 3117

Green chemistry approaches to the Knoevenagel condensation: comparison of ethanol, water and solvent free (dry grind) approaches

Adam McCluskey,[a,*] Philip J. Robinson,[b] Tim Hill,[a] Janet L. Scott[c] and J. Kate Edwards[a]

[a]*Chemistry, School of Environmental and Life Sciences, The University of Newcastle, Callaghan NSW 2308, Australia*
[b]*Children's Medical Research Institute, Westmead Hospital, Wentworthville, Sydney, Australia*
[c]*Centre for Green Chemistry, PO Box 2, Monash University, Victoria 3800, Australia*

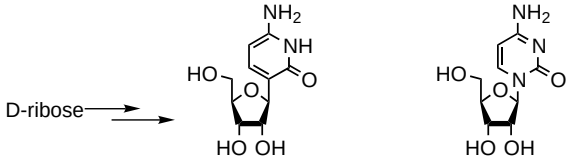


Tetrahedron Letters 43 (2002) 3121

First synthesis of 1-deazacytidine, the *C*-nucleoside analogue of cytidine

Matthieu Sollogoub,[a] Keith R. Fox,[b] Vicki E. C. Powers[a] and Tom Brown[a,*]

[a]*Department of Chemistry, University of Southampton, Highfield, Southampton SO17 1BJ, UK*
[b]*Division of Biochemistry and Molecular Biology, School of Biological Sciences, University of Southampton, Bassett Crescent East, Southampton SO16 7PX, UK*



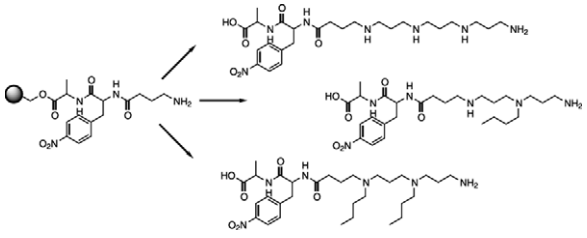
Tetrahedron Letters 43 (2002) 3125

Repetitive solid-phase synthesis of polyamines

Daniel Jönsson* and Anders Undén

Department of Neurochemistry & Neurotoxicology, Stockholm University, S-10691 Stockholm, Sweden

Primary amino groups are monoalkylated with acid labile benzhydryl-based protective groups and reductively alkylated with Fmoc-amino aldehydes. Treatment with dilute TFA cleaves the protective groups preferentially allowing selective branching of the polyamine backbone.



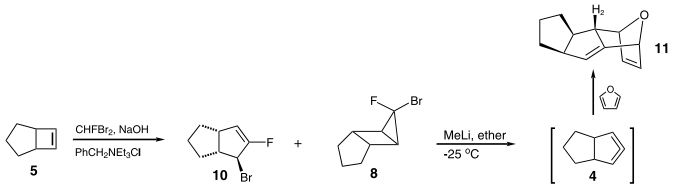
The first generation and trapping of a five-membered ring allene: 2-dehydro-3a,4,5,6,6a-pentahydropentalene

Tetrahedron Letters 43 (2002) 3129

Fatih Algi, Recep Özen and Metin Balci*

Department of Chemistry, Middle East Technical University, 06531 Ankara, Turkey

3-Bromo-3-fluorotricyclo[3.3.0.0^{2,4}]octane (**8**) was prepared by addition of bromofluorocarbene to bicyclo[3.2.0]hept-6-ene (**5**). Treatment of a solution of **8** in ether with MeLi in the presence of furan afforded the trapping product **11**.



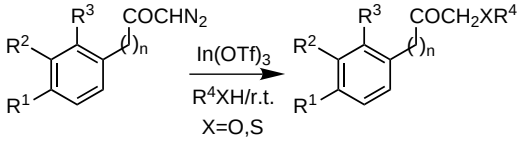
Indium triflate: a mild and efficient Lewis acid catalyst for O–H insertion reactions of α-diazo ketones

Tetrahedron Letters 43 (2002) 3133

Sengodagounder Muthusamy,* Srinivasarao Arulananda Babu and Chidambaram Gunanathan

Silicates and Catalysis Discipline, Central Salt and Marine Chemicals Research Institute, Bhavnagar 364 002, India

Insertion reactions of α-diazo ketones with aliphatic/aromatic alcohols or benzenethiol have been developed in the presence of indium triflate as a catalyst.

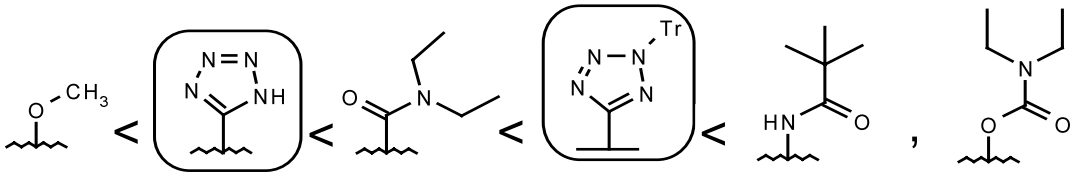


On the relative strength of the 1*H*-tetrazol-5-yl- and the 2-(triphenylmethyl)-2*H*-tetrazol-5-yl-group in directed *ortho*-lithiation

Tetrahedron Letters 43 (2002) 3137

Patrik Rhonnstad and David Wensbo*

Discovery Chemistry, AstraZeneca R&D Södertälje, S-151 85 Södertälje, Sweden



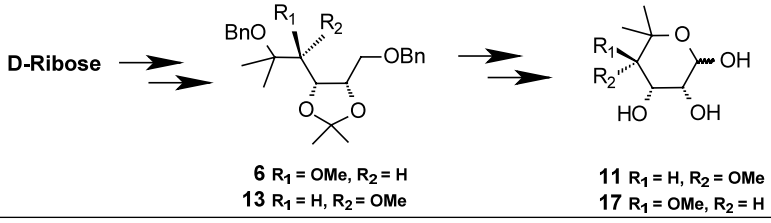
A novel synthesis of noviose and its C-(4) epimer

Tetrahedron Letters 43 (2002) 3141

David W. Gammon,* Roger Hunter* and Seanette Wilson

Department of Chemistry, University of Cape Town, Rondebosch 7701, South Africa

An efficient and stereoselective synthetic route has been developed to both noviose, **17** and its C-(4) epimer, **11**, thus providing a platform for the investigation of the structure–activity relationships (SAR) involving the methoxy group of noviose in the coumarin antibiotic Novobiocin.



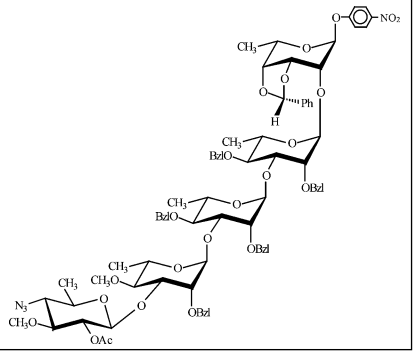
Synthesis of the pentasaccharide hapten from the glycopeptidolipid antigen of *Mycobacterium avium* serovar 12

Tetrahedron Letters 43 (2002) 3145

Zsolt Varga,[a] István Bajza,[b] Gyula Batta[c] and András Lipták[a,b,*]

[a]*Department of Biochemistry, University of Debrecen, PO Box 55, Debrecen H-4010, Hungary*
[b]*Research Group for Carbohydrates of the Hungarian Academy of Sciences, PO Box 55, Debrecen H-4010, Hungary*
[c]*Research Group for Antibiotics of the Hungarian Academy of Sciences, PO Box 70, Debrecen H-4010, Hungary*

The title pentasaccharide was synthesized as a protected *p*-nitrophenyl glycoside using a 3+2 block synthesis.



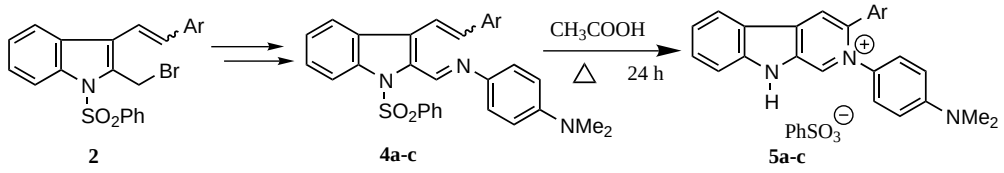
A facile synthesis of 2-[4′-dimethylaminophenyl]-3-aryl-β-carbolinium phenylsulfonates

Tetrahedron Letters 43 (2002) 3149

Sathananthan Kannadasan and Panayencheri C. Srinivasan*

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

A convenient method for the synthesis of 2-[4′-dimethylaminophenyl]-3-aryl-β-carbolinium phenylsulfonates from the corresponding 2-*N*′-aryliminomethylene-3-β-arylvinylindoles by thermal oxidative cyclization is reported.

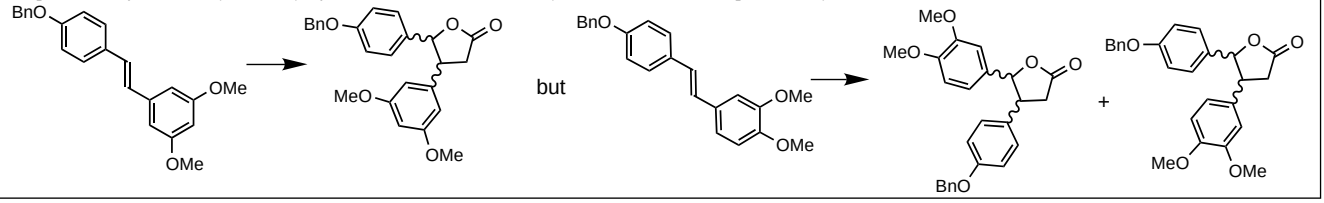


Manganese triacetate oxidative lactonisation of electron-rich stilbenes possessing catechol and resorcinol substitution (resveratrol analogues)

Tetrahedron Letters 43 (2002) 3151

N. F. Thomas,[a,*] K. C. Lee,[b] Thomas Paraidathathu,[b] J. F. F. Weber[b] and K. Awang[c]

[a]*Department of Pharmacy, Faculty of Health, Science and Applied Science, Sedaya College, Taman Segar, Cheras, 56100 Kuala Lumpur, Malaysia*
[b]*Department of Pharmacy, Faculty of Allied Health Science, Universiti Kebangsaan Malaysia, Jalan Raja Muda Abdul Aziz, 50300 Kuala Lumpur, Malaysia*
[c]*Department of Chemistry, Faculty of Sciences, Universiti Malaya, 59100 Kuala Lumpur, Malaysia*



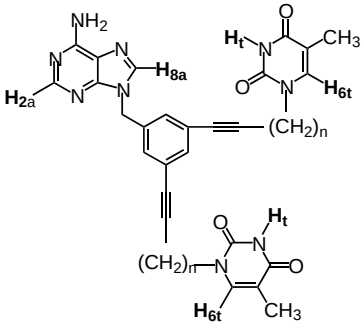
Intramolecular hydrogen bonding of nucleobases

Tetrahedron Letters 43 (2002) 3157

Geoffrey T. Crisp* and Yu-Lin Jiang

Department of Chemistry, Adelaide University, Adelaide 5005, South Australia, Australia

The intramolecular hydrogen bonding of a series of linked uracil, thymine and adenine derivatives is described.

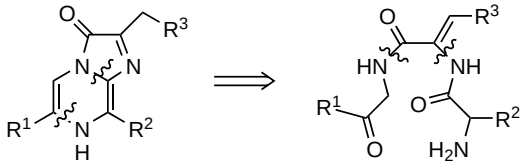


A biomimetic synthesis of coelenterazine analogs

Tetrahedron Letters 43 (2002) 3161

Ingrid Devillers, Axelle Arrault, Gilles Olive and Jacqueline Marchand-Brynaert*

Unité de Chimie Organique et Médicinale, Université catholique de Louvain, Place Louis Pasteur, 1, Bâtiment Lavoisier, B-1348 Louvain-la-Neuve, Belgium

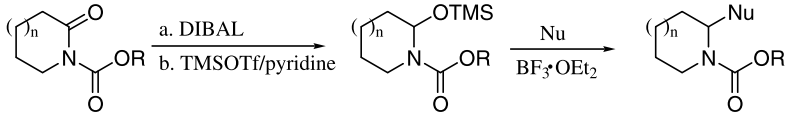


The versatile conversion of lactams to the α-alkylated azacycles via cyclic *N,O*-acetal TMS ether

Tetrahedron Letters 43 (2002) 3165

Young-Ger Suh,* Seok-Ho Kim, Jae-Kyung Jung and Dong-Yun Shin

College of Pharmacy, Seoul National University, San 56-1, Shinlim-Dong, Kwanak-Gu, Seoul 151-742, South Korea



Toward a total synthesis of brassinosteroids; structure assessment of the Ireland–Claisen products of geranyl and neryl esters

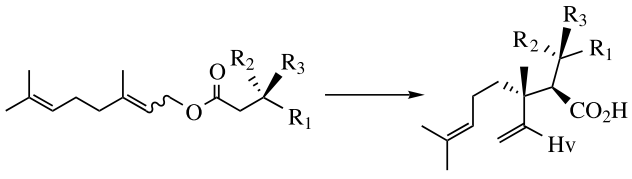
Tetrahedron Letters 43 (2002) 3169

O. Temmem,[a] D. Uguen,[a,*] A. De Cian[b] and N. Gruber[b]

[a]*Laboratoire de Synthèse Organique, associé au CNRS, Ecole Européenne de Chimie, Polymères et Matériaux, Université Louis Pasteur, 25, rue Becquerel, 67087 Strasbourg, France*

[b]*Laboratoire de Cristallochimie et Chimie Structurale, associé au CNRS, Université Louis Pasteur, 67070 Strasbourg, France*

Chemical shift of Hv in ^{1}H NMR is diagnostic of the relative configuration at the newly-formed stereogenic centres for the three cases studied.



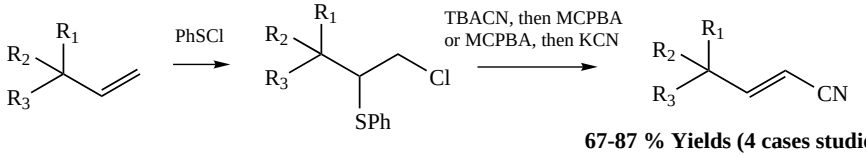
Efficient dehydrocyanation of hindered 1-substituted olefins

Tetrahedron Letters 43 (2002) 3175

O. Temmem,[a] D. Uguen,[a,*] A. De Cian[b] and N. Gruber[b]

[a]*Laboratoire de Synthèse Organique, associé au CNRS, Ecole Européenne de Chimie, Polymères et Matériaux, Université Louis Pasteur, 25, rue Becquerel, 67087 Strasbourg, France*

[b]*Laboratoire de Cristallochimie et Chimie Structurale, associé au CNRS, Université Louis Pasteur, 67070 Strasbourg, France*



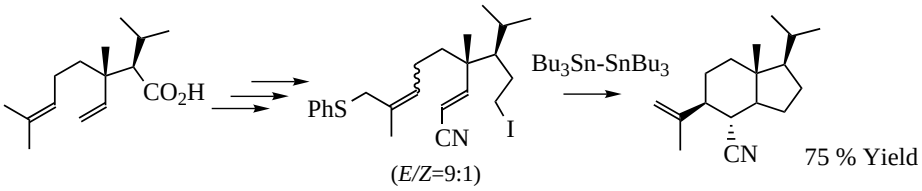
67-87 % Yields (4 cases studied)

Tetrahedron Letters 43 (2002) 3181

Toward a total synthesis of brassinosteroids; stereoselective generation of the hydrindane ring system

O. Temmem, T. Zoller and D. Uguen*

Laboratoire de Synthèse Organique, associé au CNRS Ecole Européenne de Chimie, Polymères et Matériaux, Université Louis Pasteur, 25, rue Becquerel, 67087 Strasbourg, France

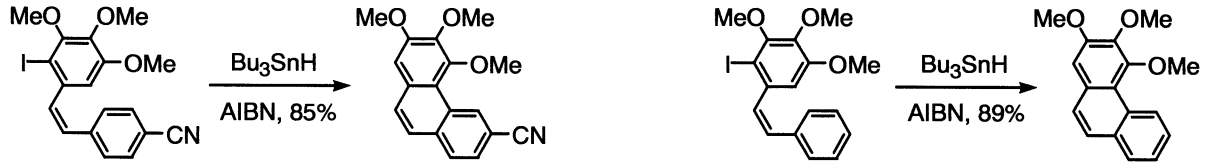


Tetrahedron Letters 43 (2002) 3185

Radical cyclisations to arenes for the synthesis of phenanthrenes

David C. Harrowven,[a,*] Michael I. T. Nunn[a] and David R. Fenwick[b]

[a]*Department of Chemistry, The University, Southampton SO17 1BJ, UK*
[b]*Discovery Chemistry, Pfizer Global Research and Development, Sandwich, Kent CT13 9NJ, UK*

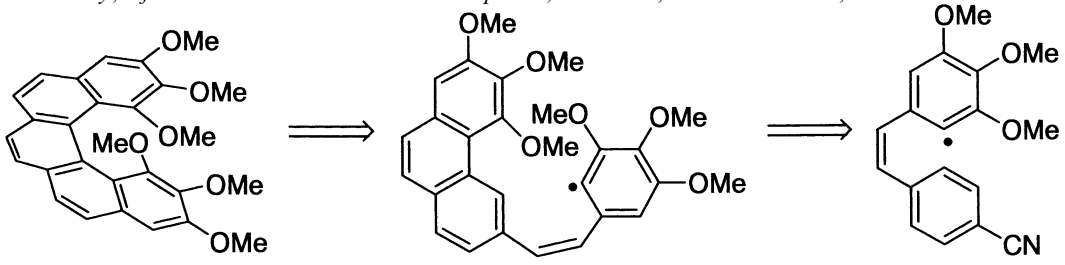


Tetrahedron Letters 43 (2002) 3189

[5]Helicenes by iterative radical cyclisations to arenes

David C. Harrowven,[a,*] Michael I. T. Nunn[a] and David R. Fenwick[b]

[a]*Department of Chemistry, The University of Southampton, Southampton SO17 1BJ, UK*
[b]*Discovery Chemistry, Pfizer Global Research and Development, Sandwich, Kent CT13 9NJ, UK*

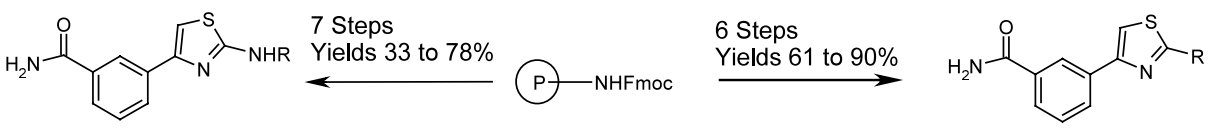


Tetrahedron Letters 43 (2002) 3193

Solid support synthesis of 2,4-disubstituted thiazoles and aminothiazoles

Saïd El Kazzouli,[a,b] Sabine Berteina-Raboin,[a,*] Abderrahim Mouaddib[b] and Gérald Guillaumet[a]

[a]*Institut de Chimie Organique et Analytique, UMR-CNRS 6005, Université d'Orléans, rue de Chartres, BP 6759, 45067 Orléans Cedex 2, France*
[b]*Faculté des Sciences et Techniques de Beni-Mellal, Université Caddi-Ayyad, BP 523, 23000 Beni-Mellal, Morocco*



Tetrahedron Letters 43 (2002) 3197

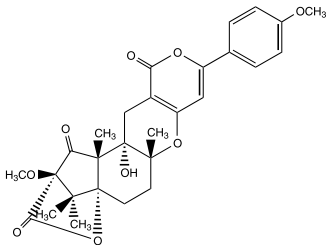
Terreulactone A, a novel meroterpenoid with anti-acetylcholinesterase activity from *Aspergillus terreus*

Won-Gon Kim,[a] Kyung-Mi Cho,[a,b] Chong-Kil Lee[b] and Ick-Dong Yoo[a,*]

[a]*Korea Research Institute of Bioscience and Biotechnology, PO Box 115, Yusong, Taejon 305-600, South Korea*

[b]*Department of Pharmacy, Chung-Buk National University, Cheong-Ju 361-763, South Korea*

A novel sesquiterpene lactone type meroterpenoid, terreulactone A, was isolated from the solid-state fermentation of *Aspergillus terreus* and its structure was established by various spectral analysis.

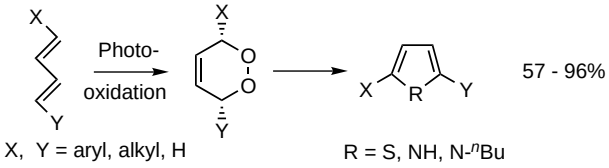


Tetrahedron Letters 43 (2002) 3199

A one-pot synthesis of thiophene and pyrrole derivatives from readily accessible 3,5-dihydro-1,2-dioxines

Cassie E. Hewton, Marc C. Kimber and Dennis K. Taylor*

Department of Chemistry, Adelaide University, South Australia 5005, Australia



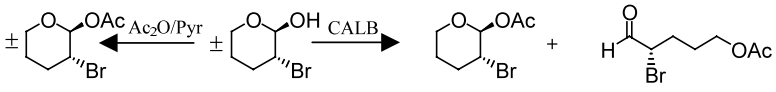
Tetrahedron Letters 43 (2002) 3203

Chemical versus enzymatic acetylation of α-bromo-ω-hydroxyaldehydes: decyclization of hemiacetals by lipase

Ly Villo,[a] Andrus Metsala,[a] Omar Parve[a,*] and Tõnis Pehk[b]

[a]*Department of Bioorganic Chemistry, Institute of Chemistry at Tallinn Technical University, Akadeemia tee 15, 12 618 Tallinn, Estonia*

[b]*Department of Chemical Physics, National Institute of Chemical Physics and Biophysics, Akadeemia tee 23, 12 618 Tallinn, Estonia*



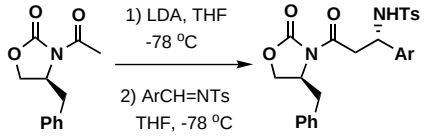
Tetrahedron Letters 43 (2002) 3209

Stereoselective nucleophilic addition of chiral lithium enolates to (*N*-tosyl)imines: enantioselective synthesis of β-aryl-β-amino acid derivatives

Zhihua Ma, Yonghua Zhao, Nan Jiang, Xianglin Jin and Jianbo Wang*

Key Laboratory of Bioorganic Chemistry and Molecular Engineering of Ministry of Education, Department of Chemical Biology, College of Chemistry, Peking University, Beijing 100871, China

The reaction of the chiral lithium enolates derived from (*S*)-(−)-4-benzyl-2-oxazolidinone acetamide with *N*-tosyl arylaldehyde imines gives β-aryl-β-amino acid derivatives in excellent diastereoselectivity.

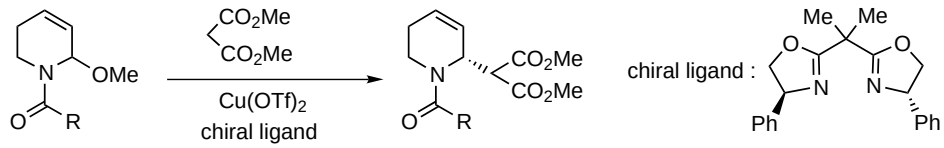


Tetrahedron Letters 43 (2002) 3229

Copper ion-catalyzed asymmetric carbon–carbon bond-forming reaction at the 2-position of a piperidine skeleton

Osamu Onomura, Yasuhisa Kanda, Yasuharu Nakamura, Toshihide Maki and Yoshihiro Matsumura*

Faculty of Pharmaceutical Sciences, Nagasaki University, 1-14 Bunkyo-machi, Nagasaki 852-8521, Japan



Tetrahedron Letters 43 (2002) 3233

Regioselective reduction of *N*-alkyl-3-sulfonyl glutarimides. Synthesis of 3,4-dihydro-3-tosylpyridin-2-ones

Bo-Rui Chang, Chung-Yi Chen and Nein-Chen Chang*

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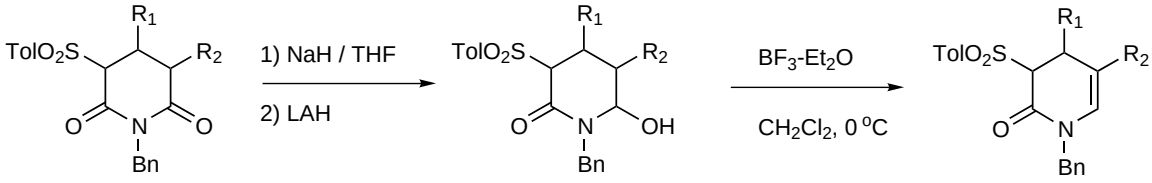

Tetrahedron Letters 43 (2002) 3237

A mild and efficient biomimetic synthesis of α-hydroxymethyl-arylketones from oxiranes in the presence of β-cyclodextrin and NBS in water

M. Arjun Reddy, N. Bhanumathi and K. Rama Rao*

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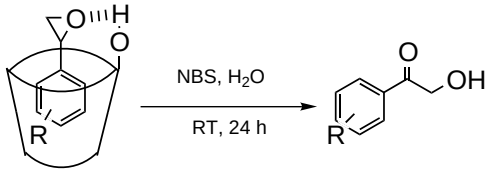

Tetrahedron Letters 43 (2002) 3239

Intramolecular photocycloaddition of olefin-tethered benzo[*a*]spiro-[2,5]octa-1,4-dien-3-one derivatives

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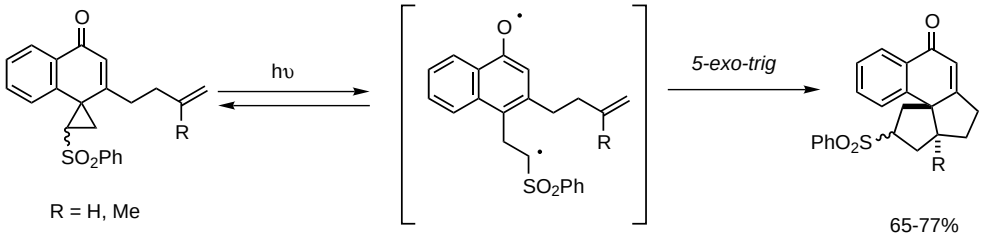

Tetrahedron Letters 43 (2002) 3243

New strategies towards proline derivatives as conformationally constrained arginine analogues

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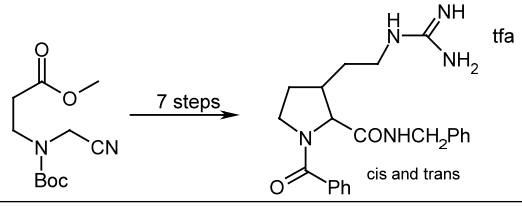
Preparation of *cis* and *trans* 3-substituted prolines as conformationally constrained arginine analogues



Tetrahedron Letters 43 (2002) 3247

Candida rugosa lipase catalyzed enantioselective hydrolysis in organic solvents. Convenient preparation of optically pure 2-hydroxy-2-arylethanephosphonates

Yonghui Zhang, Zuyi Li and Chengye Yuan*

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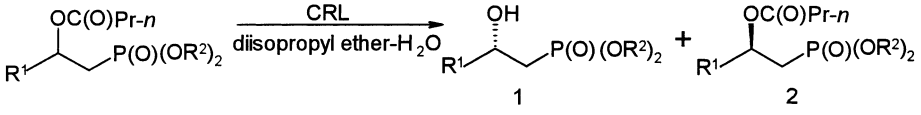

R^1= x-C_6H_4, 2-naphthyl, 2-furyl; R^2= Me, Et, *n*-Pr, *i*-Pr

E up to >100

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A convenient method for the conversion of β-thymidine to α-thymidine based on TMSOTf-mediated C1′-epimerization

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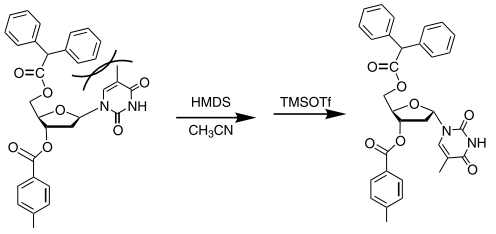

Tetrahedron Letters 43 (2002) 3255

A facile synthesis of 2,4-diaza-1-borines from anilines

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Conversion of an aniline and a nitrile to a 2,4-diaza-1-borine was achieved by successive treatment with $AlCl_3$ and BCl_3. The product was isolated as a hydrated HCl salt, and the structure was confirmed by X-ray analysis.