Graphical abstracts

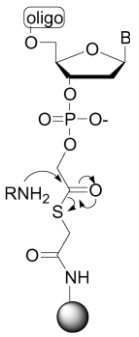
Solid-supported synthesis of oligomeric bioconjugates

Tetrahedron 59 (2003) 5137

Pasi Virta, Johanna Katajisto, Teija Niittymäki and Harri Lönnberg*

Department of Chemistry, University of Turku, FIN-20014 Turku, Finland

Preparation of organic conjugates of oligonucleotides and peptides, peptide conjugates of oligonucleotides, and glycoconjugates of peptides on a solid support has been reviewed.



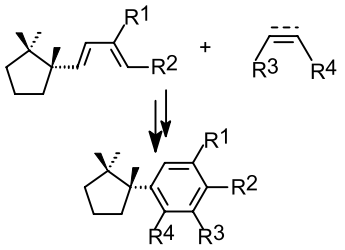
Convenient route to enantiopure aryl cyclopentanes via Diels–Alder reaction of asymmetric dienes. Total synthesis of (+)-herbertene and (+)-cuparene

Tetrahedron 59 (2003) 5175

Abhijit Nayek,[a] Michael G. B. Drew[b] and Subrata Ghosh[a,*]

[a]*Department of Organic Chemistry, Indian Association for the Cultivation of Science, 2A & 2B Raja S. C. Mallick Road, Jadavpur, Kolkata 700 032, India*

[b]*Department of Chemistry, The University, Whitenknights, Reading RG6 6AD, UK*

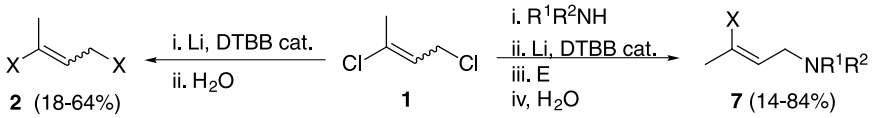


1,3-Dichloro-2-butene: a useful precursor for the 2-butene-1,3-dianion and its corresponding 1,3-dipolar synthon

Tetrahedron 59 (2003) 5183

Miguel Yus,* Beatriz Maciá and Cecilia Gómez

Departamento De Química Orgánica, Facultad De Ciencias, Universidad De Alicante, Apdo. 99, 03080 Alicante, Spain



2 (18-64%) **1** **7** (14-84%)

[E=EtCHO, Pr^{i}CHO, Bu^{t}CHO, *c*-C_6H_{11}CHO, Me_2CO, Et_2CO, $(CH_2)_4CO$, $(CH_2)_5CO$, (*c*-$C_3H_5)_2CO$, Me_3SiCl; R^1R^2NH=morpholine, $PhCH_2NHMe$].

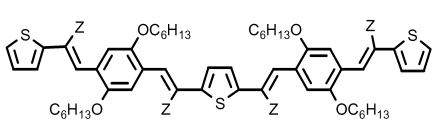
Synthesis of oligo(*p*-phenylene–vinylene–thienylene)s as potential red light-emitting materials

Tetrahedron 59 (2003) 5193

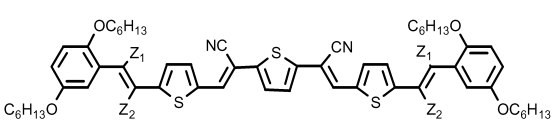
Cuihua Xue[a,b] and Fen-Tair Luo[a,*]

[a]*Institute of Chemistry, Academia Sinica, 128, Academia Road, Nankang, Taipei 11529, Taiwan*

[b]*The Faculty of Chemistry, Sichuan University, Chengdu 610064, China*



Z = H **1**
Z = CN **2**



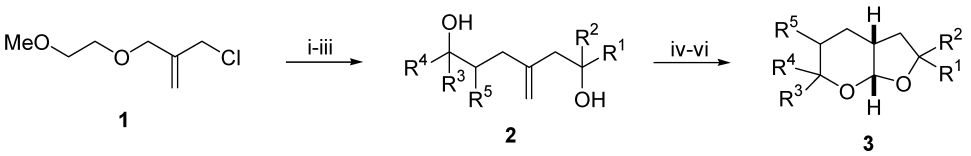
Z_1 = H, Z_2 = CN **3**
Z_1 = CN, Z_2 = H **4**

Straight and versatile synthesis of substituted perhydrofuro[2,3-*b*]pyrans from 2-chloromethyl-3-(2-methoxyethoxy)propene

Tetrahedron 59 (2003) 5199

Francisco Alonso, Emilio Lorenzo, Jaisiel Meléndez and Miguel Yus*

Departamento de Química Orgánica, Facultad de Ciencias, Universidad de Alicante, Apdo. 99, E-03080 Alicante, Spain



1 2 3

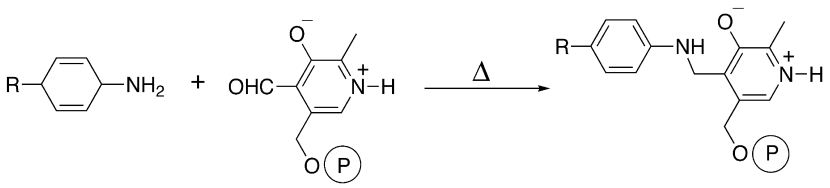
[*Reagents*: i, Li, $C_{10}H_8$ (2.5%), R^1R^2CO; ii, $R^3R^4C(O)CHR^5$; iii, H_2O; iv, BH_3·THF; v, H_2O_2; vi, PCC or $Ru(PPh_3)_3Cl_2$]

Identification of the products of reaction between pyridoxal phosphate and amiclenomycin and other related 1-amino-cyclohexa-2,5-dienes

Tetrahedron 59 (2003) 5209

Stéphane Mann,[a] Denis Lesage,[b] Jean-Claude Tabet[b] and Andrée Marquet[a,*]

[a]*Laboratoire de Chimie Organique Biologique, Université Paris VI, UMR CNRS 7613, 4, Place Jussieu, 75252 Paris cedex 05, France*
[b]*Laboratoire de Chimie Structurale Organique et Biologique, Université Paris VI, UMR CNRS 7613, 4, Place Jussieu, 75252 Paris cedex 05, France*



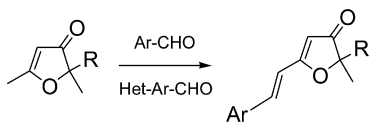
New 5-(2-ethenylsubstituted)-3(2*H*)-furanones with in vitro antiproliferative activity

Tetrahedron 59 (2003) 5215

Stefano Chimichi,[a,*] Marco Boccalini,[a] Barbara Cosimelli,[b] Francesco Dall'Acqua[c] and Giampietro Viola[c]

[a]*Dipartimento di Chimica Organica 'U. Schiff', via della Lastruccia 13, I-50019 Sesto F.no (Firenze), Italy*
[b]*Dipartimento di Chimica Farmaceutica e Tossicologica, Università Federico II, via Montesano 49, I-80131 Napoli, Italy*
[c]*Dipartimento di Scienze Farmaceutiche, via Marzolo 5, I-35131 Padova, Italy*

The synthesis and the in vitro antiproliferative activity of new 5-(2-ethenylsubstituted)-3(2*H*)-furanones is described.



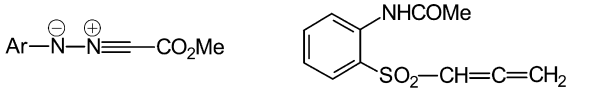
Assessment of mechanistic hypotheses of 1,3-dipolar cycloaddition of (arylsulfonyl)allene to nitrilimines by DFT reactivity indices

Tetrahedron 59 (2003) 5225

Giorgio Molteni[a] and Alessandro Ponti[b,*]

[a]*Dipartimento di Chimica Organica e Industriale, Università degli Studi di Milano, via Camillo Golgi 19, 20133 Milan, Italy*
[b]*Istituto di Scienze e Tecnologie Molecolari, Consiglio Nazionale delle Ricerche, via Camillo Golgi 19, 20133 Milan, Italy*

DFT calculations gave quantitative reactivity indices, which provided a basis to assess the mechanistic hypotheses.



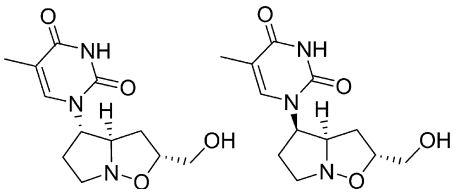
Ar = C_6H_5, 4-Me-C_6H_4, 4-MeO-C_6H_4, 4-Cl-C_6H_4, 4-NO_2-C_6H_4

Stereoselective synthesis of new bicyclic *N,O-iso*-homonucleoside analogues

Tetrahedron 59 (2003) 5231

Barbara Richichi,[a] Stefano Cicchi,[a] Ugo Chiacchio,[c] Giovanni Romeo[b,*] and Alberto Brandi[a,*]

[a]*Dipartimento di Chimica Organica 'Ugo Schiff', Universita' di Firenze, Polo Scientifico, Via della Lastruccia 13, I-50019 Sesto Fiorentino, Firenze, Italy*
[b]*Dipartimento Farmaco-Chimico, Universita' di Messina, Viale Annunziata, Messina I-98100, Italy*
[c]*Dipartimento di Scienze Chimiche, Universita' di Catania, Viale A. Doria 6, Catania I-95125, Italy*

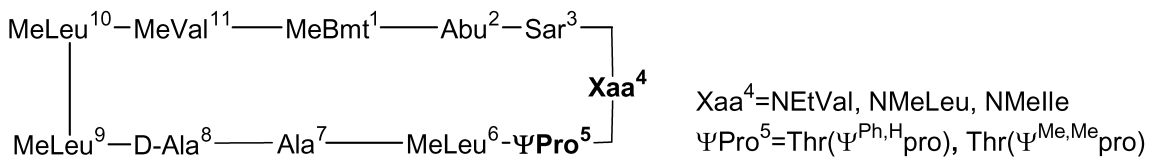


Synthesis and characterization of constrained cyclosporin A derivatives containing a pseudo-proline group

Tetrahedron 59 (2003) 5241

Luc Patiny,[a] Jean-François Guichou,[a] Michael Keller,[a] Olivier Turpin,[a] Thomas Rückle,[a] Philippe Lhote,[b] Timo M. Buetler,[b] Urs T. Ruegg,[b] Roland M. Wenger[a] and Manfred Mutter[a,*]

[a]*Institute of Molecular and Biological Chemistry (ICMB), EPFL-BCH, CH-1015 Lausanne, Switzerland*
[b]*Pharmacology Group, School of Pharmacy, University of Lausanne, CH-1015 Lausanne, Switzerland*

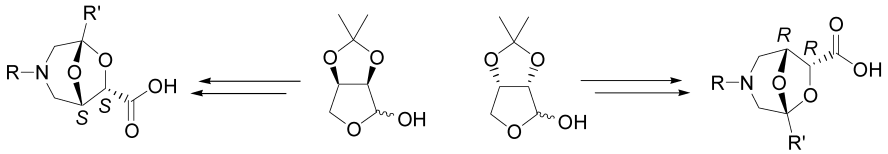


Enantiospecific synthesis of 3-aza-6,8-dioxa-bicyclo [3.2.1]octane carboxylic acids from erythrose

Tetrahedron 59 (2003) 5251

Andrea Trabocchi, Gloria Menchi, Massimo Rolla, Fabrizio Machetti, Ilaria Bucelli and Antonio Guarna*

Dipartimento di Chimica Organica 'Ugo Schiff', Università di Firenze, and Istituto di Chimica dei Composti Organometallici-C.N.R., Polo Scientifico di Sesto Fiorentino, Via della Lastruccia 13, I-50019 Sesto Fiorentino, Firenze, Italy

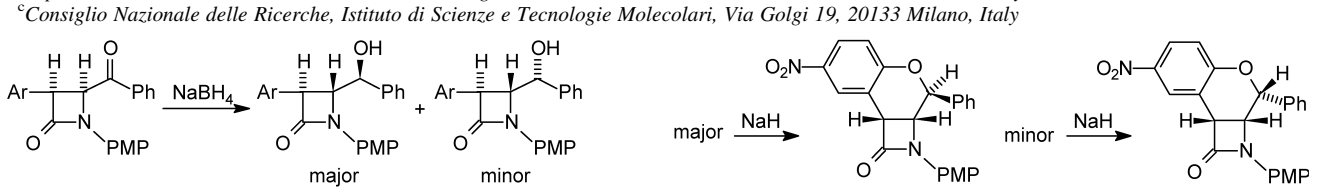


The intramolecular aromatic nucleophilic substitution as a route to tricyclic β-lactams. Synthesis of the novel 4-oxa-7-azabicyclo[4.2.0]octane skeleton

Tetrahedron 59 (2003) 5259

Paola Del Buttero,[a,*] Giorgio Molteni,[a] Antonio Papagni[b] and Tullio Pilati[c]

[a]*Dipartimento di Chimica Organica e Industriale, Università degli Studi di Milano, Via Golgi 19, 20133 Milano, Italy*
[b]*Dipartimento di Scienze dei Materiali, Università degli Studi di Milano-Bicocca, Via Cozzi 53, 20125 Milano, Italy*
[c]*Consiglio Nazionale delle Ricerche, Istituto di Scienze e Tecnologie Molecolari, Via Golgi 19, 20133 Milano, Italy*

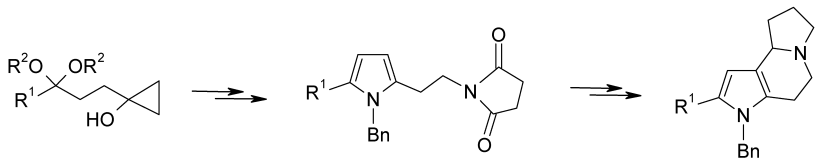


Tetrahedron 59 (2003) 5265

A convenient approach to the synthesis of 2-(2-aminoethyl)pyrroles and their heterocyclization into hydrogenated pyrrolopyridines and related pyrroloindolizines

Marina V. Raiman,[a] Aleksei V. Pukin,[a] Vladimir I. Tyvorskii,[a] Norbert De Kimpe[b] and Oleg G. Kulinkovich[a,*]

[a]*Department of Organic Chemistry, Belarusian State University, Fr. Scorina Avenue, 4, 220050 Minsk, Belarus*
[b]*Department of Organic Chemistry, Faculty of Agricultural and Applied Biological Sciences, Ghent University, Coupure Links 653, B-9000 Ghent, Belgium*

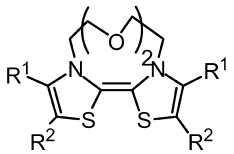


Tetrahedron 59 (2003) 5273

Crown-ether annelated dithiadiazafulvalenes

David Guérin, Roger Carlier, Michel Guerro and Dominique Lorcy*

Synthèse et électrosynthèse organiques, Institut de chimie de Rennes, UMR CNRS 6510-Université de Rennes 1, Campus de Beaulieu, 35042 Rennes, France

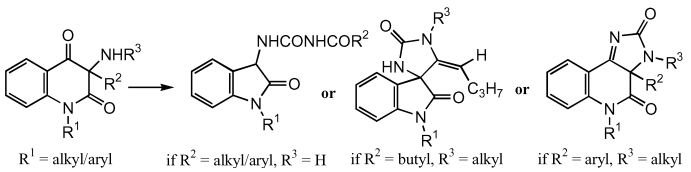


Tetrahedron 59 (2003) 5279

Reaction of 1-alkyl/aryl-3-amino-1*H*,3*H*-quinoline-2,4-diones with urea. Synthetic route to novel 3-(3-acylureido)-2,3-dihydro-1*H*-indol-2-ones, 4-alkylidene-1′*H*-spiro[imidazolidine-5,3′-indole]-2,2′-diones, and 3,3a-dihydro-5*H*-imidazo[4,5-*c*]quinoline-2,4-diones

Antonín Klásek,[a,*] Kamil Kořistek,[a] Antonín Lyčka[b] and Michal Holčapek[c]

[a]*Department of Chemistry and Environmental Technology, Faculty of Technology, Tomas Bata University, 762 72 Zlín, Czech Republic*
[b]*Research Institute for Organic Syntheses, 532 18 Pardubice-Rybitví, Czech Republic*
[c]*Department of Analytical Chemistry, Faculty of Chemical Technology, University of Pardubice, 53210 Pardubice, Czech Republic*



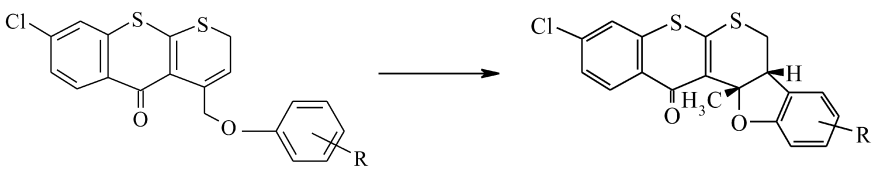
R^1 = alkyl/aryl | if R^2 = alkyl/aryl, R^3 = H | if R^2 = butyl, R^3 = alkyl | if R^2 = aryl, R^3 = alkyl

Tetrahedron 59 (2003) 5289

Regioselective synthesis of pentacyclic heterocycles by sequential [3,3] sigmatropic rearrangement of 2-(4′-aryloxybut-2′-ynyl-mercapto)thiochromen-4-ones

K. C. Majumdar,* A. Bandyopadhyay and A. Biswas

Department of Chemistry, University of Kalyani, Kalyani 741 235, W.B., India

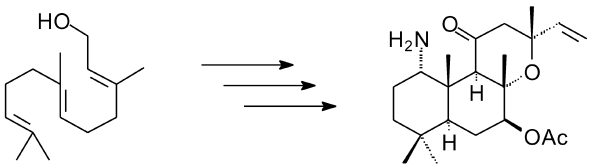


Synthesis of a 1α-amino-1-deoxy analogue of forskolin

Tetrahedron 59 (2003) 5295

Alexei Anikin, Michael Maslov, Joachim Sieler, Steffen Blaurock, Jens Baldamus, Lothar Hennig, Matthias Findeisen, Gerd Reinhardt, Ramona Oehme and Peter Welzel*

Fakultät für Chemie und Mineralogie, Institut fur Organische Chemie, Universität Leipzig, Johannisallee 29, D-04103 Leipzig, Germany



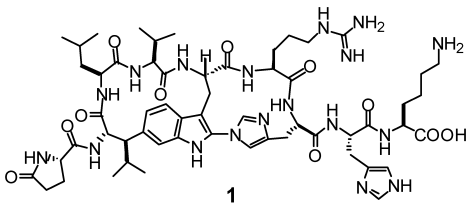
New antimitotic bicyclic peptides, celogentins D–H, and J, from the seeds of *Celosia argentea*

Tetrahedron 59 (2003) 5307

Hayato Suzuki,[a] Hiroshi Morita,[a] Shigeo Iwasaki[b] and Jun'ichi Kobayashi[a,*]

[a]*Graduate School of Pharmaceutical Sciences, Hokkaido University, Sapporo 060-0812, Japan*
[b]*Kitasato Institute for Life Science, Kitasato University, Tokyo 108-8642, Japan*

Six new bicyclic peptides, celogentins D–H (**1**–**5**) and J (**6**) have been isolated from the seeds of *Celosia argentea*, and the structures including its absolute stereochemistry were determined by using extensive NMR methods and chemical means.



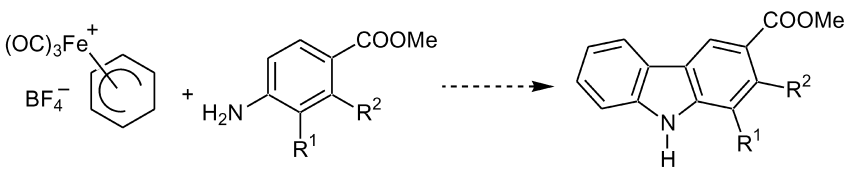
1

Transition metal complexes in organic synthesis. Part 68: Iron-mediated total synthesis of mukonine and mukonidine by oxidative cyclization with air as the oxidizing agent

Tetrahedron 59 (2003) 5317

Hans-Joachim Knölker*
and Marcus Wolpert

Institut für Organische Chemie, Technische Universität Dresden, Bergstrasse 66, 01069 Dresden, Germany



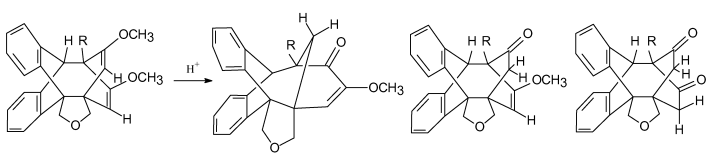
Mukonine (R^1 = OMe, R^2 = H)
Mukonidine (R^1 = H, R^2 = OH)

Rearrangement of the carbon skeleton in the intramolecular photoadduct of anthracene and benzene rings

Tetrahedron 59 (2003) 5323

Derong Cao,[a] Silvia Dobis,[b] Dieter Schollmeyer[b] and Herbert Meier[b,*]

[a]*LCLC, Guangzhou Institute of Chemistry, Chinese Academy of Sciences, 510650 Guangzhou, People's Republic of China*
[b]*Institute of Organic Chemistry, University of Mainz, Duesbergweg 10-14, D-55099 Mainz, Germany*



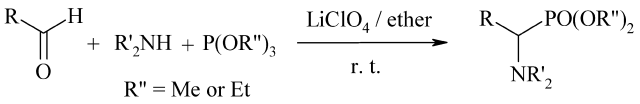
Synthesis of tertiary α-amino phosphonate by one-pot three-component coupling mediated by LPDE

Tetrahedron 59 (2003) 5329

Najmedin Azizi and Mohammad R. Saidi*

Department of Chemistry, Sharif University of Technology, P.O. Box 11365-9516 Tehran, Iran

A new method for the preparation of α-amino phosphonate is reported from the reaction of aldehyde, secondary amines and trialkylphosphite in ethereal solution of lithium perchlorate in high yields.

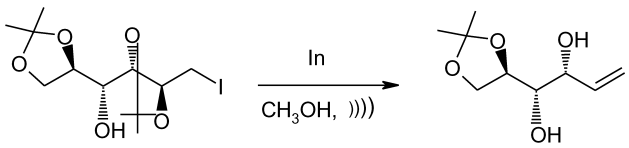


Ultrasound-accelerated synthesis of chiral allylic alcohols promoted by indium metal

Tetrahedron 59 (2003) 5333

J. S. Yadav,* B. V. S. Reddy and K. Srinivasa Reddy

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

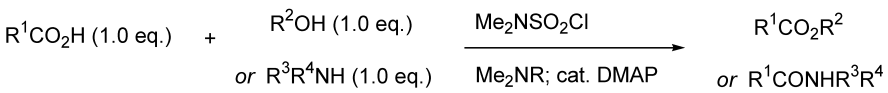


Novel and efficient method for esterification, amidation between carboxylic acids and equimolar amounts of alcohols, and amines utilizing Me_2NSO_2Cl and *N*,*N*-dimethylamines; its application to the synthesis of coumaperine, a natural chemopreventive dieneamide

Tetrahedron 59 (2003) 5337

Kazunori Wakasugi,[a] Atsushi Nakamura,[a] Akira Iida,[a] Yoshinori Nishii,[a] Nobuji Nakatani,[b] Shoji Fukushima[c] and Yoo Tanabe[a,*]

[a]*Department of Chemistry, School of Science and Technology, Kwansei Gakuin University, 2-1 Gakuen, Sanda, Hyogo 669-1337, Japan*
[b]*Laboratory of Chemistry, Osaka City University, 3-3-138 Sugimoto, Sumiyoshi-ku, Osaka 558-0022, Japan*
[c]*First Department of Pathology, Osaka City University, 3-3-138 Sugimoto, Sumiyoshi-ku, Osaka 558-0022, Japan*

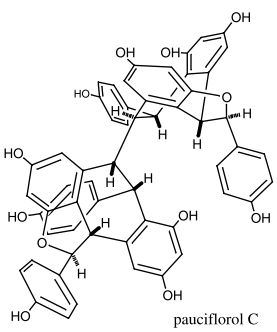


New resveratrol oligomers in the stem bark of *Vatica pauciflora*

Tetrahedron 59 (2003) 5347

Tetsuro Ito,[a,*] Toshiyuki Tanaka,[a] Munekazu Iinuma,[b] Ibrahim Iliya,[b] Ken-ichi Nakaya,[a] Zulfiqar Ali,[a] Yoshikazu Takahashi,[c] Ryuichi Sawa,[c] Yoshiaki Shirataki,[d] Jin Murata[e] and Dedy Darnaedi[f]

[a]*Gifu Prefectural Institute of Health and Environmental Sciences, Naka-fudogaoka, Kakamigahara, Gifu 504-0838, Japan*
[b]*Gifu Pharmaceutical University, 5-6-1 Mitahora-higashi, Gifu 502-8585, Japan*
[c]*Institute of Microbial Chemistry, 3-14-23 Kamiosaki, Shinagawa-ku, Tokyo 141-0021, Japan*
[d]*Faculty of Pharmaceutical Sciences, Josai University, 1-1 Keyakidai Sakado, Saitama 350-0295, Japan*
[e]*Botanical Gardens, Koishikawa, Graduate School of Science, University of Tokyo, 3-7-1, Hakusan, Bunkyo-Ku, Tokyo, 112-0001, Japan*
[f]*Indonesian Institute of Sciences, Jalan Ir. H. Juanda 13, Bogor 16122, Indonesia*

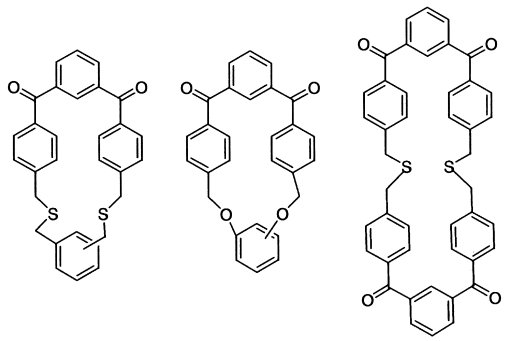


Synthesis of annularly functionalized cyclophanes

Tetrahedron 59 (2003) 5365

Perumal Rajakumar,* Muthialu Srisailas and Rajagopal Kanagalatha

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

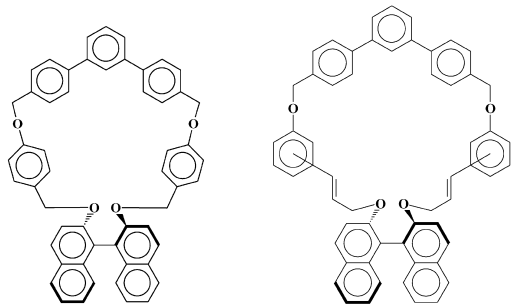


Synthesis of a new class of electron rich chiral cyclophanes with large cavities

Tetrahedron 59 (2003) 5373

Perumal Rajakumar* and Muthialu Srisailas

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



A short synthesis of (±)-tecomanine via a Pauson–Khand-based route

Tetrahedron 59 (2003) 5377

Denise A. Ockey, Mark A. Lewis and Neil E. Schore*

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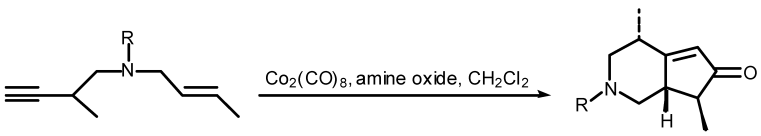
A synthesis of tecomanine via direct cyclization of a methylated 5-aza-6-nonen-1-yne is described.



Synthesis of quaternary allylammonium salts via ring opening of 1-benzyl-2-(bromomethyl)aziridines

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