GRAPHICAL ABSTRACTS

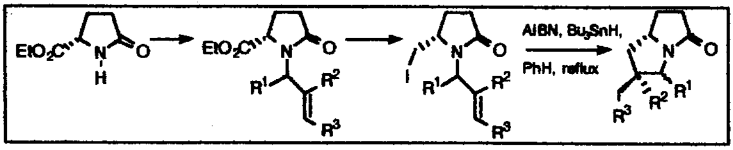
Tetrahedron, **1992**, *48*, 2977

Asymmetric Radical Cyclizations: The Synthesis of 6-Alkyl Pyrrolizidin-2-ones

Paul F. Keusenkothen and Michael B. Smith*

Department of Chemistry, University of Connecticut Storrs, Connecticut, U.S.A. 06269-3060

This work describes the use of S-ethyl 5-carboethoxy-2-pyrrolidinone (ethyl pyroglutamate) as a chiral starting material for use in radical cyclization reactions. Pyroglutamate is converted to a 5-iodomethyl-N-allylic-2-pyrrolidinone that undergoes radical cyclization under mild conditions. The products are 6-substituted pyrrolizidinone derivatives, produced with high asymmetric induction and with high diastereoselectivity. The NMR methods used to identify the products are also discussed.

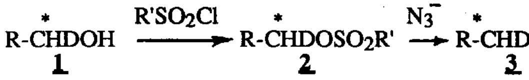


Tetrahedron, **1992**, *48*, 2993

CHIRAL 1-DEUTERIO AZIDES

Carolyn Fisher, Eric Morse, Blair Romer, Tian-Pa You, Carol W. Mosher and Harry S. Mosher*,
Department of Chemistry, Stanford University, Stanford, CA 94305, USA.

Chiral 1-deuterio azides have been prepared and their circular dichroic spectra determined. (*R*)-1-Deuterio azide **3a** had a (-) CD (288 nm, [θ] = - 12.6), while **3b, c, & d** had (+) CDs (288 nm, [θ] = + 6, +30, +47)



$$\underset{\mathbf{1}}{\overset{*}{\text{R-CHDOH}}} \xrightarrow{\text{R'SO}_2\text{Cl}} \underset{\mathbf{2}}{\overset{*}{\text{R-CHDOSO}_2\text{R'}}} \xrightarrow{\text{N}_3^-} \underset{\mathbf{3}}{\overset{*}{\text{R-CHDN}_3}}$$

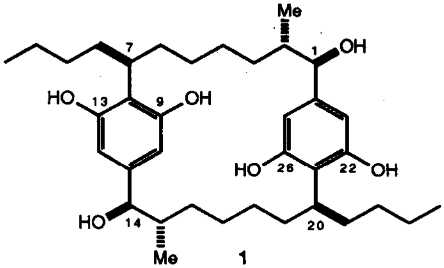
; R = **a**, Me; **b**, n-Pr; **c**, t-Bu; **d**, 1-adamantyl; **e**, Ph.

Tetrahedron, **1992**, *48*, 3001

STRUCTURES OF CYLINDROCYCLOPHANES A-F

Bradley S. Moore, Jian-Lu Chen, Gregory M. L. Patterson, and Richard E. Moore,* Department of Chemistry, University of Hawaii at Manoa, Honolulu, Hawaii 96822

Cylindrocyclophanes A-F are moderate cytotoxins associated with strains of the terrestrial blue-green alga *Cylindrospermum licheniforme*. The absolute stereochemistry of cylindrocyclophane A (1) has been determined by Mosher's method.



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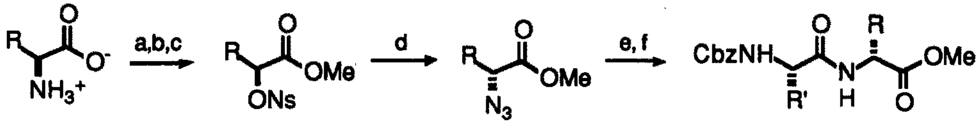
Tetrahedron, **1992**, *48*, 3007

Preparation of (R)-2-Azidoesters from 2-((p-Nitrobenzene)sulfonyl)oxy Esters and Their Use as Protected Amino Acid Equivalents for the Synthesis of Di- and Tripeptides Containing D-Amino Acid Constituents

Robert V. Hoffman* and Hwa-Ok Kim

Department of Chemistry, New Mexico State University, Las Cruces, NM 88003-0001



L-D dipeptide ester

a. $NaNO_2$, 1N H_2SO_4, 85-95%. b. K_2CO_3, CH_3I, acetone, 69-96%, c. NsCl, TEA, DMAP, CH_2Cl_2, 80-100%, d. NaN_3, DMF, 80-95%, ee=100%. e. PPh_3, H_2O, f. DCC, CBZ-amino acid

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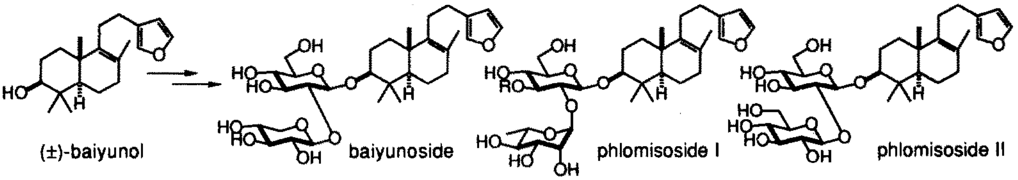
Tetrahedron, **1992**, *48*, 3021

SYNTHESES OF SWEET TASTING DITERPENE GLYCOSIDES, BAIYUNOSIDE AND ANALOGS

Hidetoshi Yamada and Mugio Nishizawa*

Faculty of pharmaceutical Sciences, Tokushima Bunri University, Yamashirocho, Tokushima 770, Japan

Total syntheses of sweet tasting diterpene glycosides, baiyunoside, phlomisosides I, II, and 21 kinds of analogs have accomplished using 2'-discriminated glycosylation followed by Noyori's glycosylation.



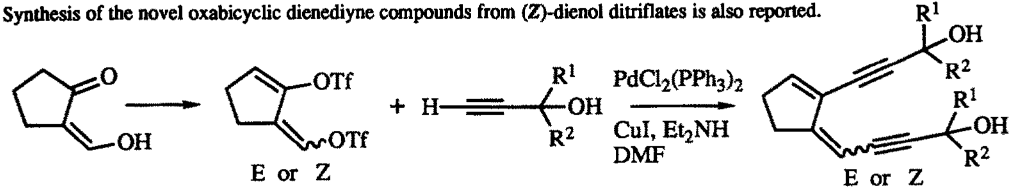
Tetrahedron, **1992**, *48*, 3045

SYNTHETIC STUDIES ON THE COMPOUNDS RELATED TO NEOCARZINOSTATIN CHROMOPHORE. 2. SYNTHESIS OF THE OPEN-CHAIN (*E*)- AND (Z)-DIENEDIYNE SYSTEMS AND ITS APPLICATION TO THE SYNTHESIS OF A STRAIN-RELEASED CYCLIC ANALOGUE.

Kazuhiko Nakatani, Katsuko Arai, Kaoru Yamada, and Shiro Terashima*

Sagami Chemical Research Center, Nishi-Ohnuma, Sagamihara, Kanagawa 229, Japan

The stereo-defined (*E*)- and (Z)-dienediyne diols could be prepared in one operation from (*E*)- and (Z)-dienol ditriflates. Synthesis of the novel oxabicyclic dienediyne compounds from (Z)-dienol ditriflates is also reported.



Tetrahedron, **1992**, *48*, 3061

AMPHIPHILIC AND MESOGENIC CARBOHYDRATES
SYNTHESIS AND CHARACTERISATION OF MONO-O-(n-ALKYL)-D-GLUCOSE DERIVATIVES

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Dep. of Organic Chemistry, Univ. of Rostock
Buchbinderstr. 9, D-2500 Rostock, Germany

Liptak, A.
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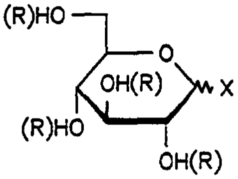
H-4010 Debrecen, Hungary



The synthesis and thermal behaviour of the homologeous series of 2-O-, 3-O-, 4-O- and 6-O-(n-alkyl)-D-glucopyranose derivatives are described.

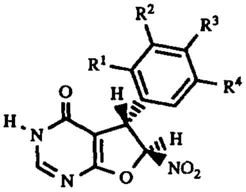
X= OH or OCH_3
R= C_nH_{2n+1} (n= 8, 10, 12, 14, 16)

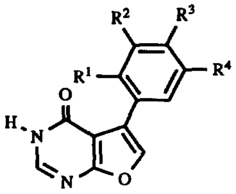
Tetrahedron, **1992**, *48*, 3069

A CONVENIENT PROCEDURE FOR THE PREPARATION OF 5,6-DIHYDRO-6-NITRO-5-PHENYLFURO[2,3-d]PYRIMIDIN-4(3*H*)-ONES AND 5-PHENYLFURO[2,3-d]PYRIMIDIN-4(3*H*)-ONES

Daniel DAUZONNE* and Anne ADAM-LAUNAY
Service de Chimie de l'Institut Curie, Section de Biologie, URA 1387P du CNRS, 26 rue d'Ulm, F-75231 Paris Cedex 05, France

A facile synthesis of the hitherto unknown title compounds starting from 4,6-dihydroxypyrimidine and Z-(2-chloro-2nitroethenyl)benzenes is described.

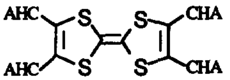




Tetrahedron, **1992**, *48*, 3081

TETRAFORMYLTETRATHIAFULVALENE (TFTTF) AND ACETALS, PRECURSORS OF POLYFUNCTIONALIZED TTFs

M. Sallé,[a] A. Gorgues,[a*] M. Jubault,[a] K. Boubekeur [b] and P. Batail [b]
a- Laboratoire de Synthèse Organique et d'Electrochimie, Université d'Angers, 2, bd Lavoisier, 49045 Angers, France.
b- Laboratoire de Physique des Solides, LA 2 CNRS, Bâtiment 510, 91405 Orsay, France.



A : O, HOH, CR^1R^2
A-A : N-N

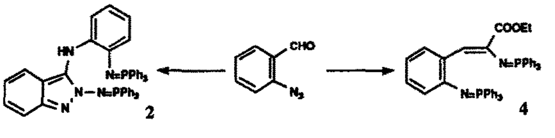
The synthesis of some aldehydic intermediates in the tetrathiafulvalene series is described. The powerful synthetic ability of tetraformyltetrathiafulvalene (TFTTF) is demonstrated by its straightforward four-fold functionalization using various nucleophilic agents. The new TTF derivatives thus obtained exhibit good π-donor properties as shown by cyclic voltammetry.

Tetrahedron, **1992**, *48*, 3091

Preparation, Reactivity and Synthetic Applications of Bis(iminophosphoranes): New Entries to Fused 1,3,5-Benzotriazepines, 1,3-Benzodiazepines and Indole Derivatives[1]

P. Molina, A. Arques, A. Alías, M.V. Vinader, M.C. Foces-Foces, F. Hernández-Cano
Departamento de Química Orgánica, Facultad de Química, Universidad de Murcia, Campus de Espinardo,
30071, Murcia, Spain.

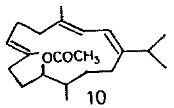
Aza Wittig-type reactions of bis(iminophosphoranes) **2** and **4** with iso(thio)cyanates and acyl chlorides have been studied.



Tetrahedron, **1992**, *48*, 3111

NEW DITERPENES FROM A NEW SPECIES OF LOBOPHYTUM SOFT CORAL OF THE SOUTH ANDAMAN COAST

Chitti Subrahmanyam*, Chirravuri Venkateswara Rao, V. Anjaneyulu
P. Satyanarayana and P.V. Subba Rao
Department of Organic Chemistry, Foods, Drugs and Water, Andhra University
Visakhapatnam - 530 003, India
Robert S. Ward and Andrew Pelter
Department of Chemistry, University College of Swansea, Swansea SA2,8PP, United Kingdom



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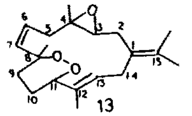

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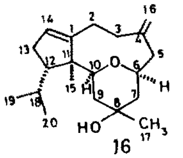

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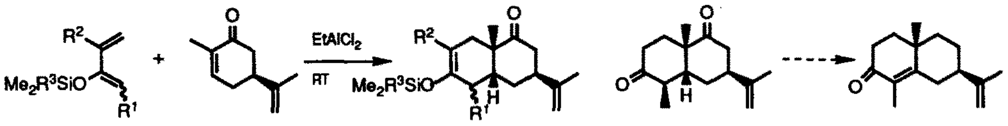
Tetrahedron, **1992**, *48*, 3121

LEWIS ACID CATALYZED DIELS-ALDER REACTIONS OF S-(+)-CARVONE WITH SILYLOXY DIENES. TOTAL SYNTHESIS OF (+)-α-CYPERONE.

Anja A. Haaksma, Ben J.M. Jansen and Aede de Groot*
Laboratory of Organic Chemisty, Agricultural University, Dreijenplein 8, 6703 HB Wageningen, The Netherlands

The Lewis acid catalyzed reactions of S-(+)-carvone (1) with the methyl substituted silyloxy dienes (2) gave predominantly anti-addition products. One of the hydrolyzed adducts was converted into (+)-α-cyperone (3).

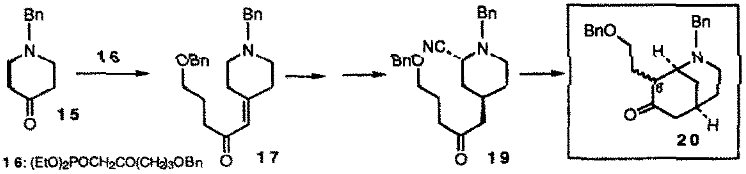


2a, 2b, 2c **1** **3**

Tetrahedron, **1992**, *48*, 3131

STUDIES ON THE SYNTHESIS OF 8-ALKYL-8-ARYL-2-AZABICYCLO[3.3.1]NONAN-7-ONES. A SHORT SYNTHETIC ROUTE TO FUNCTIONALIZED 8-ALKYL DERIVATIVES

Josep Bonjoch*, Núria Casamitjana, Josefina Quirante, Carme Garriga, and Joan Bosch
Laboratory of Organic Chemistry, Faculty of Pharmacy, University of Barcelona, 08028-Barcelona, Spain



16: $(EtO)_2POCH_2CO(CH_2)_3OBn$

Both attempted arylation at C-8 of **20** and direct cyclization of an α-arylated ketone failed

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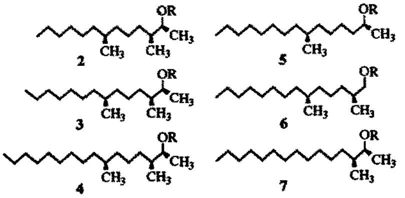
Tetrahedron, **1992**, *48*, 3139

Sex Pheromone of Pine Sawflies. Chiral Syntheses of some Active Minor Components Isolated from *Neodiprion sertifer* and of some Chiral Analogues of Diprionyl Acetate.

Erik Hedenström*[a], Hans-Erik Högberg[a], Ann-Britt Wassgren[b], Gunnar Bergström[b]
Jan Löfqvist[c], Bill Hansson[c] and Olle Anderbrant[c]
[a]University College of Sundsvall/Härnösand, Box 860, S-851 24 Sundsvall, Sweden.
[b]Department of Chemical Ecology, University of Göteborg, S-413 20 Göteborg, Sweden.
[c]Department of Ecology, Animal Ecology, University of Lund, S-223 62 Lund, Sweden.

The chiral syntheses of some analogues, **2** - **7**, of 3,7-dimethyl-2-pentadecanol **1** (diprionol), and of the corresponding acetates are described. The acetate of **1** is the main attractant in the sex pheromone of the *Neodiprion* genus (Diprionidae). Compounds **2** - **4** were identified as active minor components isolated from females of *Neodiprion sertifer*. Synthetic intermediates were prepared either from chiral starting materials, by asymmetric syntheses, or by baker's yeast reduction.

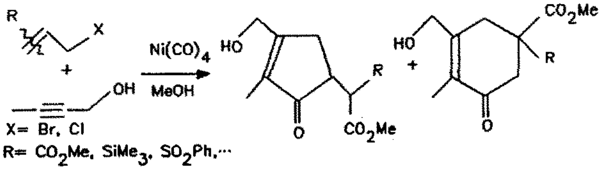


Tetrahedron, **1992**, *48*, 3147

Influence of Functional Substitution of Allyl Halides on their $Ni(CO)_4$ Promoted Carbonylative Cycloaddition with Acetylenes.

Francisco Camps, Josep M. Moretó* and Lluís Pagès.
Departament de Química Orgànica Biològica, C.I.D.(C.S.I.C.), J. Girona Salgado 18-26.
08034 Barcelona, Spain.

The effect of functional substitution of allyl halides in the $Ni(CO)_4$ promoted carbonylative cycloaddition of allyl halides and acetylenes has been studied.

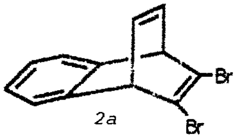


Tetrahedron, **1992**, *48*, 3163

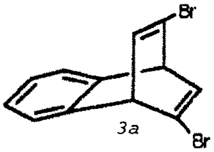
SYNTHESIS OF 2,3-, 2,5-, AND 2,6-DISUBSTITUTED BENZOBARRELENES: HIGH TEMPERATURE BROMINATION II

M. Balcı[a,*], O. Çakmak[a], T. Hökelek[b] ; [a]Department of Chemistry, Atatürk University, Erzurum (Turkey), [b]Department of Physics, Hacettepe University, Ankara (Turkey)

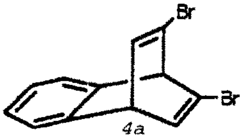
Bromination of 2-bromo-1,4-dihydro-1,4-ethenonaphthalene has been studied at 0 °C and 78 °C. It has been noticed that the higher temperatures prevent rearrangement. From the isolated compounds we have synthesized three isomeric benzobarrelene derivatives 2a, 3a, and 4a, respectively.



2a



3a

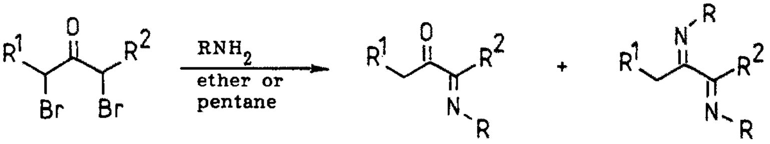


4a

Tetrahedron, **1992**, *48*, 3183

FORMATION OF α-IMINOKETONES AND α-DIIMINES VERSUS FAVORSKII REARRANGEMENT PRODUCTS FROM THE REACTION OF α,α'-DIBROMOKETONES AND PRIMARY AMINES

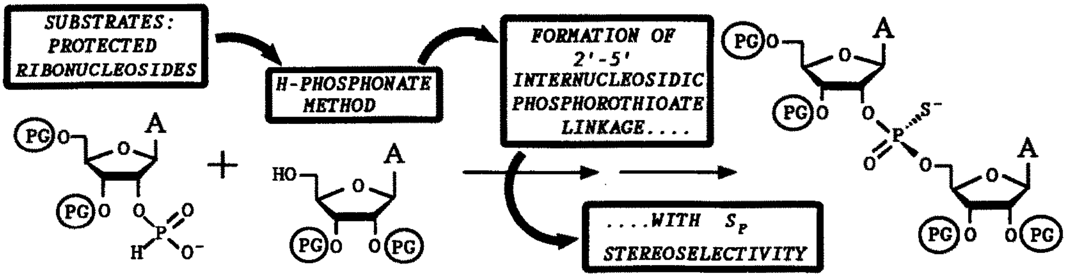
N. DE KIMPE, L. D'HONDT and L. MOENS
FAC. AGRIC. SCIENCES, UNIV. OF GENT, B-9000 GENT, BELGIUM



Tetrahedron, **1992**, *48*, 3209

AN EFFICIENT AND STEREOSELECTIVE SYNTHESIS OF 2',5'-OLIGO-(S_P)-THIOADENYLATES

Carlo Battistini, Maria Gabriella Brasca, Silvia Fustinoni and Ettore Lazzari*
FARMITALIA CARLO ERBA (ERBAMONT Group)-R&D. Milano - Italy.

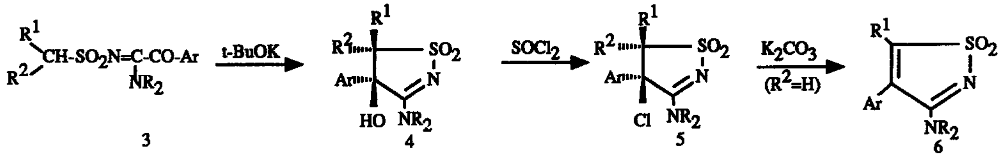


Tetrahedron, **1992**, *48*, 3227

N-Sulfonylamidines. Part IV . Intramolecular Cyclization of N-Sulfonylamidines of 2-Oxoacids: a new Synthesis of 3-Aminoisothiazole S,S-dioxides.

Francesca Clerici*[a], Giuseppe Marazzi[b] and Marcello Taglietti[c].
a)G.E.T.Lab., Ricerca e Sviluppo, V. D.Alighieri 73, Sanremo, Italy. b)Prassis, Istituto di Ricerche Sigma Tau, V. Forlanini 1/3, Settimo M. Italy. c)Istituto di Chimica Organica, Fac. di Farmacia, Università di Milano, V. Venezian 21, Milano, Italy.

The new class of N-Sulfonylamidines 3 undergo easily an intramolecular ring-closure reaction yielding 4 which are transformed into the 4-chloroderivatives 5 and the 3-Aminoisothiazoles S,S-dioxides 6.

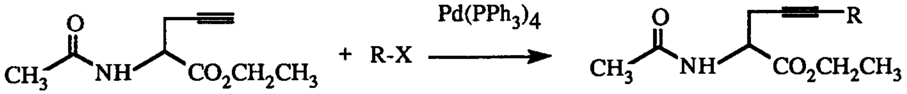


Tetrahedron, **1992**, *48*, 3239

PALLADIUM-CATALYZED COUPLING OF A PROPARGYLGLYCINE DERIVATIVE.

Geoffrey T. Crisp* and Thomas A. Robertson
Department of Organic Chemistry, University of Adelaide, P.O. Box 498, Adelaide, South Australia, Australia.

Coupling of aryl or vinyl halides and triflates with a propargylglycine derivative gave good yields of modified α-amino acids.



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