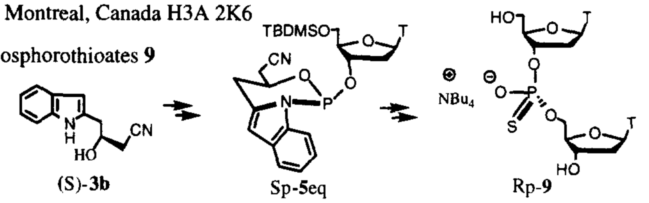
GRAPHICAL ABSTRACTS

Tetrahedron Letters, **1997**, *38*, 3797

A Stereoselective Synthesis of Dinucleotide Phosphorothioates, Using Chiral Indol-oxazaphosphorine Intermediates

Jian-Chao Wang and George Just*
Department of Chemistry, McGill University, Montreal, Canada H3A 2K6

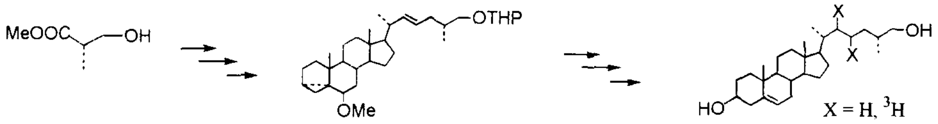
A stereoselective synthesis of dinucleotide phosphorothioates **9** with a de of > 98%, using (S) and (R)-**3b** as chiral auxiliaries, is reported. The procedure may be adaptable to solid phase synthesis.



Tetrahedron Letters, **1997**, *38*, 3801

Synthesis of (25R)-Cholest-5-ene-3β, 26-diol and its Radiolabeled Analog.

Thomas E. D'Ambra'[a] Norman B. Javitt,[b] Koji Nakanishi,[c] Tadeusz Warchol[c,]*
[a] Albany Molecular Research, Inc., 21 Corporate Circle, Albany, N. Y. 12203. [b]New York University, Medical Center, 550 First Avenue, N. Y. 10016. [c]Columbia University in the City of New York, Department of Chemistry, N.Y. 10027.

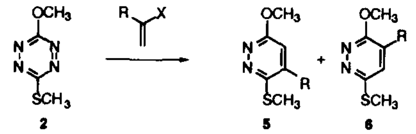


Tetrahedron Letters, **1997**, *38*, 3805

Preparation and Inverse Electron Demand Diels-Alder Reactions of 3-Methoxy-6-methylthio-1,2,4,5-tetrazine.

Subas M. Sakya*, Kelley K. Groskopf[‡], Chemical Sciences, Infectious Disease Subdivision, Wyeth-Ayerst Research, Pearl River, New York 10965; Dale L. Boger, Department of Chemistry, The Scripps Research Institute, 10550 North Torrey Pines Road, La Jolla, California 92037.

Synthesis and preliminary investigation into the participation of **2** in [4+2] cycloaddition reactions with electron rich and neutral dienophiles along with the resulting regioselective formation of the products (**5**) are discussed.



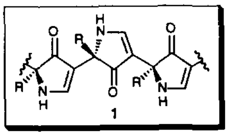
Tetrahedron Letters, **1997**, *38*, 3809

A SECOND-GENERATION SYNTHESIS OF SCALEMIC 3,5,5-TRISUBSTITUTED PYRROLIN-4-ONES: INCORPORATION OF FUNCTIONALIZED AMINO ACID SIDE-CHAINS

Amos B. Smith, III,* Andrew B. Benowitz, David A. Favor, Paul A. Sprengeler, and Ralph Hirschmann*

Department of Chemistry, Monell Chemical Senses Center and Laboratory for Research on the Structure of Matter, University of Pennsylvania, Philadelphia, Pennsylvania 19104, U.S.A.

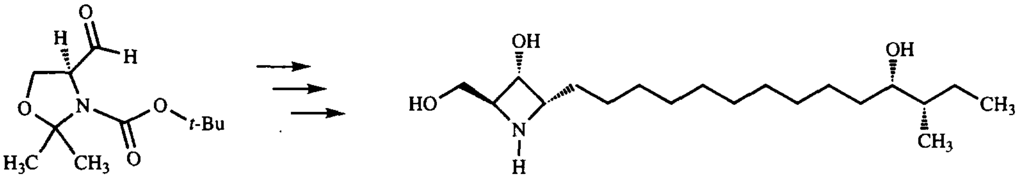
Abstract: To access mimics of peptidal β-strands (**1**), scalemic 3,5,5-trisubstituted pyrrolin-4-ones bearing the tyrosine, serine, and lysine side-chains have been generated via cyclization of metalated imino esters and deprotection. The functionalized imino esters were prepared by asymmetric alkylation of a common oxazolidinone precursor (**2**) derived from L-prenylglycine.



Tetrahedron Letters, **1997**, *38*, 3813

STEREOSELECTIVE SYNTHESIS OF PENARESIDIN A AND RELATED AZETIDINE ALKALOIDS.

Spencer Knapp* and Yaohua Dong, Department of Chemistry, Rutgers
The State University of New Jersey, New Brunswick, New Jersey 08903 USA

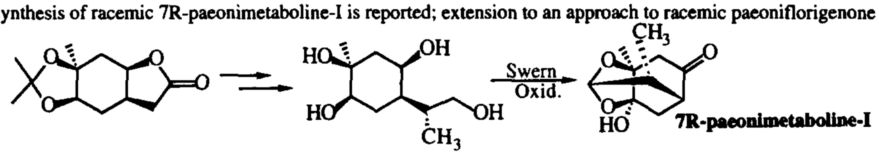


Tetrahedron Letters, **1997**, *38*, 3817

STEREOSELECTIVE SYNTHESIS OF 7R-PAEONIMETABOLINE-I; STEREOSELECTIVE ROUTE TOWARDS PAEONIFLORIGENONE

David P. Richardson,* Priscilla W. Carr, Jared N. Cumming, Warren G. Harbison, Nina D. Raoof, Michelle S. Sanders, Eliza Shin, Thomas E. Smith, and Thomas H. Wintner, Department of Chemistry, Williams College Williamstown, MA 01267 USA

A synthesis of racemic 7R-paeonimetaboline-I is reported; extension to an approach to racemic paeoniflorigenone is also summarized.

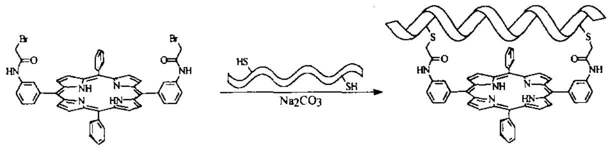


Tetrahedron Letters, **1997**, *38*, 3821

THE DESIGN, SYNTHESIS, AND CHARACTERIZATION OF A PORPHYRIN-PEPTIDE CONJUGATE.

G. Richard Geier III and Tomikazu Sasaki,* Department of Chemistry, University of Washington, Seattle, WA 98195 USA

The design and synthesis of a novel peptide strapped porphyrin assembly is described. CD spectroscopy and ^{1}H NMR are supportive of the designed structure.

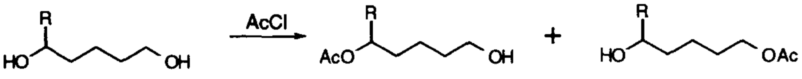


Tetrahedron Letters, **1997**, *38*, 3825

ACETYLATION OF UNSYMMETRICAL DIOLS IN THE PRESENCE OF Al_2O_3.

Gary W. Breton*, Melissa J. Kurtz, Sharyn L. Kurtz
Berry College, Department of Chemistry, Mount Berry, GA 30149-5016 USA

Acetylation of unsymmetrical diols in the presence of Al_2O_3 affords sterically congested monoacetates.

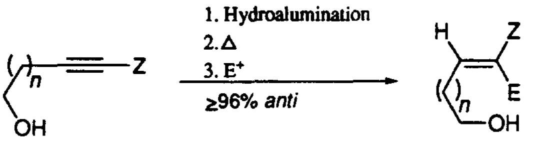


for R = *sec*-butyl	no adsorbent	13	:	87
	with Al_2O_3	65	:	35

Tetrahedron Letters, **1997**, *38*, 3829

Anti-Hydroalumination of Homo- and Bishomopropargyl Alcohols

Shengming Ma, Fang Liu, and Ei-ichi Negishi
Department of Chemistry, Purdue University, W. Lafayette, IN 47907, USA



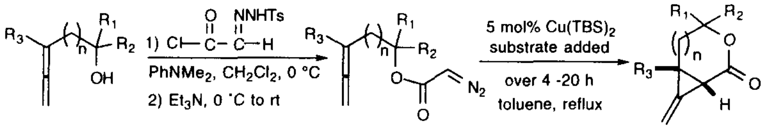
Z = Alkyl, phenyl, $SiMe_3$ or $GeMe_3$.
E = H or I.
n = 1 or 2.

Tetrahedron Letters, **1997**, *38*, 3833

SYNTHESIS AND REACTIONS OF 1,2-DISUBSTITUTED METHYLENECYCLOPROPANES PREPARED VIA INTRAMOLECULAR CYCLOPROPANATION OF ALLENIC DIAZOACETATES.

Mark Lautens,* Christophe Meyer, and Arjan van Oeveren Department of Chemistry, University of Toronto, Toronto, Ontario, Canada M5S 3H6

1,2-Disubstituted methylenecyclopropanes were prepared via a copper catalyzed diazo decomposition reaction.

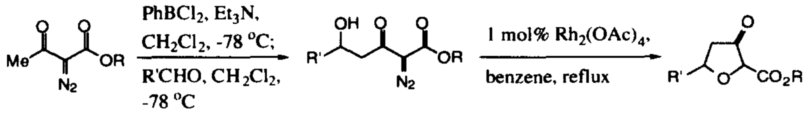


Tetrahedron Letters, **1997**, *38*, 3837

ALDOL-CYCLIZATION REACTION SEQUENCE FOR THE SYNTHESIS OF TETRAHYDROFURANS.

Michael A. Calter*, Priyantha M. Sugathapala and Cheng Zhu, Department of Chemistry, Virginia Tech, Blacksburg, VA 24061-0212

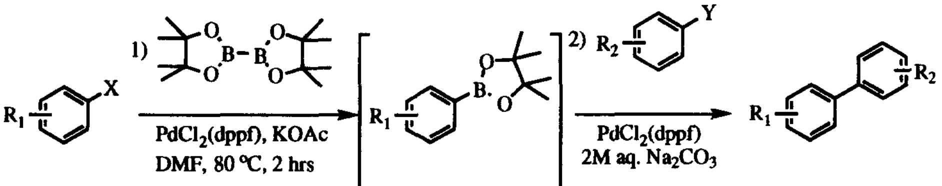
The combination of an aldol and an insertion reaction affords a novel synthesis of tetrahydrofurans.



Tetrahedron Letters, **1997**, *38*, 3841

ONE POT BIARYL SYNTHESIS *VIA IN SITU* BORONATE FORMATION

André Giroux*, Yongxin Han and Petpiboon Prasit
Department of Medicinal Chemistry, Merck-Frosst Centre for Therapeutic Research P.O. Box 1005, Pointe-Claire-Dorval, Québec, Canada H9R 4P8



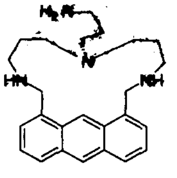
X,Y = Br, I, OTf

Tetrahedron Letters, **1997**, *38*, 3845

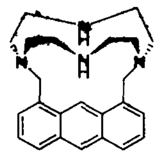
A [illegible] Chemosensor Signalling Only Hg(II) and [illegible]

[illegible] Yoon, Norman E. Ohler, David H. Vance, [illegible] Czarnik*, Department of Chemistry, Ohio State University, Columbus, OH 43210

[illegible] 5 and 7 are described. Chemosensor 5 senses [illegible] (Hg, 5.6 µM) in 100% aqueous solution. On the other hand, [illegible]-bridged cyclen derivative (7) showed no effect on fluorescence by any metal ion examined. A novel approach to the attainment of binding discrimination in chemosensors, based upon the rigid immobilization of polyamine ligands onto a fluorophore framework, is discussed.



5



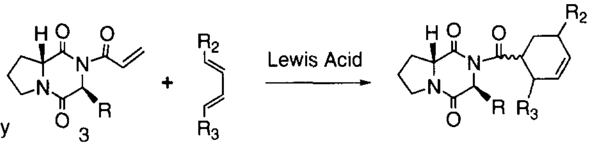
7

Tetrahedron Letters, **1997**, *38*, 3849

(2,5-diketopiperazines)New Chiral Auxiliaries for Asymmetric Diels Alder Reactions

Thuy X. H. Le, Jacqueline C. Bussolari and William V. Murray*
The R.W. Johnson Pharmaceutical Research Institute
1000 Route 202, Raritan NJ 08869

Cyclo-S-phenylalanine -R-proline has been shown to be an excellent chiral auxiliary for Diels-Alder reactions. Reactions of dienes with 3 proceed in high chemical yield, high endo selectivity and excellent diastereoselectivity.

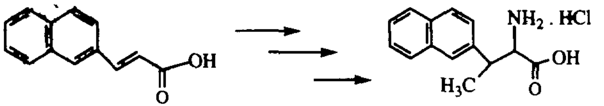


Tetrahedron Letters, **1997**, *38*, 3853

Asymmetric Synthesis of Unusual Amino Acid: Synthesis of Four Isomers of β-Methyl-3-(2'-Naphthyl)alanine

Wei-[illegible] and Victor J. Hruby *
Department of Chemistry, The University of Arizona, Tucson, Arizona 85721

The asymmetric synthesis of all four individual isomer of 3-methyl-3-(2'-naphthyl)alanine guided by an Evans-type chiral auxiliary is reported.

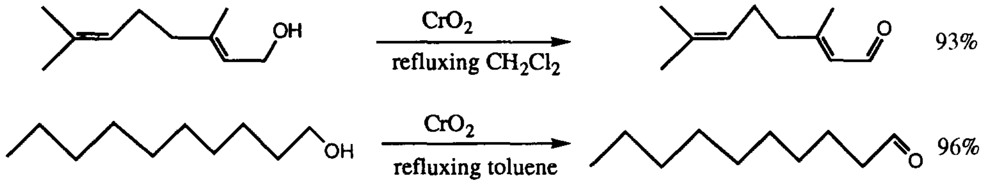


All four individual isomers

Tetrahedron Letters, **1997**, *38*, 3857

MAGTRIEVE™: AN EFFICIENT, MAGNETICALLY RETRIEVABLE AND RECYCLABLE OXIDANT.

Ross Lee*[a] and Dennis Donald*[b],
Dupont Films[a] and DuPont Central Science and Engineering Laboratory[b], Wilmington , Delaware

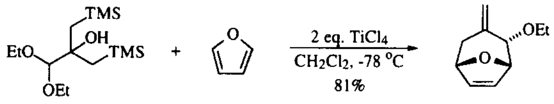


Tetrahedron Letters, **1997**, *38*, 3861

HETEROATOM-STABILIZED ALLYLIC CATIONS IN 4+3 CYCLOADDITIONS. A TANDEM PETERSON OLEFINATION/4+3 CYCLOADDITION REACTION

Michael Harmata* and Darin E. Jones
Department of Chemistry, University of Missouri-Columbia, Columbia, Missouri 65211

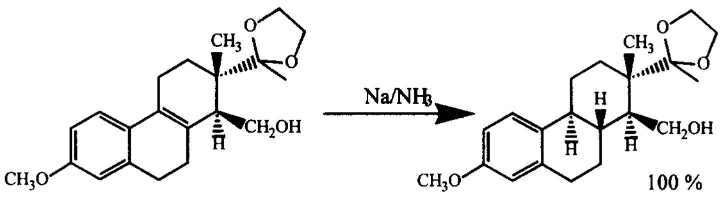
A tandem Peterson olefination/4+3 cycloaddition reaction has been established.



Tetrahedron Letters, **1997**, *38*, 3863

Neighbouring Group Directed Protonation in the Birch Reduction of Styrene Double Bonds

Zhen Lin,[§] Jinhua Chen,[§*] and Zdenek Valenta[*] Department of Chemistry, University of New Brunswick, Bag Service 45222, Fredericton, New Brunswick, Canada, E3B 6E2

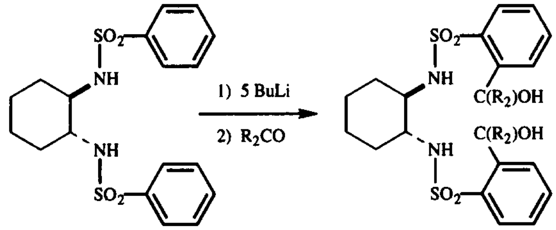


Tetrahedron Letters, **1997**, *38*, 3867

Synthesis of New Chiral Tetradentate Sulfonamide Based Ligands.

David E. Ho, Juan M. Betancort, David H. Woodmansee, Martin L. Larter and Patrick J. Walsh*
Department of Chemistry, San Diego State University, San Diego, Ca 92182-1030, U.S.A.

The key step in the synthesis of novel tetradentate bissulfonamide based ligands is a directed metallation followed by quenching with either ketones or carbon dioxide.

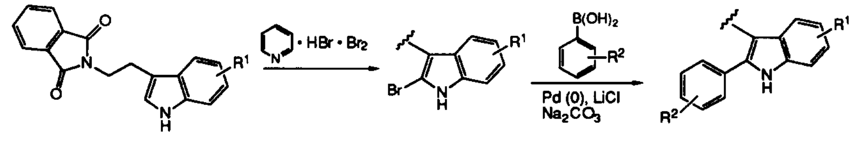


Tetrahedron Letters, **1997**, *38*, 3871

Synthesis of 2-Aryltryptamines with Palladium Catalyzed Cross-Coupling of 2-Bromotryptamines and Arylboronic Acids

Lin Chu*, Michael H. Fisher, Mark T. Goulet, and Matthew J. Wyvratt, Department of Medicinal Chemistry, Merck Research Laboratories. P.O. Box 2000, Rahway, New Jersey 07065 USA

A high-yielding synthesis of 2-aryltryptamines employing palladium(0) catalyzed cross-coupling of 2-bromotryptamines and arylboronic acids is reported.

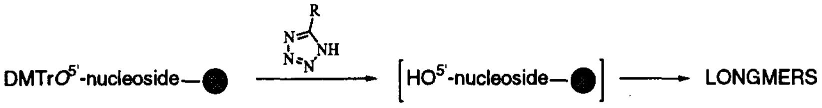


Tetrahedron Letters, **1997**, *38*, 3875

ON THE FORMATION OF LONGMERS IN PHOSPHOROTHIOATE OLIGODEOXYRIBONUCLEOTIDE SYNTHESIS

Achim H. Krotz*, Patrick G. Klopchin, Kathleen L. Walker, G. Susan Srivatsa, Douglas L. Cole and Vasulinga T. Ravikumar,
Isis Pharmaceuticals, Inc., 2292 Faraday Avenue, Carlsbad, CA 92008, USA

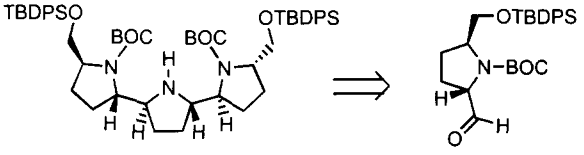
The formation of longmers [(n+1)-, (n+2)-mers, etc.] in phosphorothioate oligodeoxyribonucleotide synthesis through phosphoramidite coupling chemistry occurs in a base-, activator- and contact time-dependent manner.



Tetrahedron Letters, **1997**, *38*, 3879

Stereoselective Synthesis of a Terpyrrolidine Unit, a Potential Building Block for Anion Recognition.

Hans-Dieter Arndt, Kurt Polborn and Ulrich Koert*, Institut für Organische Chemie der LMU, Karlstraße 23, D-80333 München.

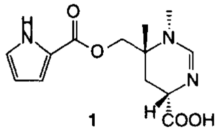


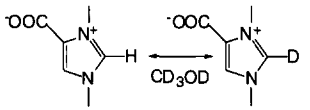
Bidirectional acetylide coupling of two *trans*-pyrrolidine aldehydes derived from S-pyroglutamic acid delivers enantiomerically pure terpyrrolidine via a 1,4-cyclic sulfate - ring closure sequence.

Tetrahedron Letters, **1997**, *38*, 3883

MANZACIDIN D: AN UNPRECEDENTED SECONDARY METABOLITE FROM THE "LIVING FOSSIL" SPONGE *ASTROSCLERA WILLEYANA*

Thorsten Jahn, Gabriele M. König*, Anthony D. Wright, Institute for Pharmaceutical Biology, Technical University of Braunschweig, Mendelssohnstraße 1, 38106 Braunschweig, Germany, Gert Wörheide and Joachim Reitner, Institute and Museum for Geology and Palaeontology, University of Göttingen, Goldschmidt Straße 3, 37077 Göttingen, Germany


1



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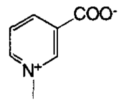


3

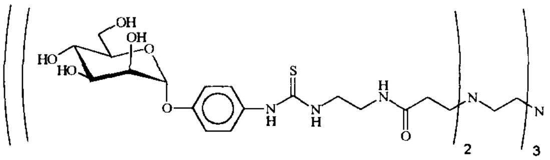
The methanol extract of *Astrosclera willeyana* was found to contain the unprecedented natural product manzacidin D (**1**), norzooanemonin (**2**), and trigonelline (**3**).

Tetrahedron Letters, **1997**, *38*, 3885

GLYCODENDRIMER SYNTHESIS WITHOUT USING PROTECTING GROUPS.

Christoffer Kieburg and Thisbe K. Lindhorst*,
University of Hamburg, Department of Organic Chemistry, Martin-Luther-King-Platz 6, D-20146 Hamburg, Germany.

Thiourea-bridged glycodendrimers were obtained by the reaction of unprotected NCS-functionalized carbohydrate derivatives and branched oligoamines in aqueous solution.

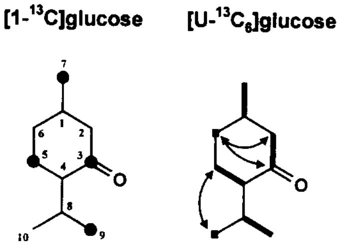


Tetrahedron Letters, **1997**, *38*, 3889

Monoterpenoid Essential Oils are Not of Mevalonoid Origin

Wolfgang Eisenreich§, Silvia Sagner+, Meinhart H. Zenk+ and Adelbert Bacher§*
§Institut für Organische Chemie und Biochemie, Technische Universität München, Lichtenbergstraße 4, D-85747 Garching, Germany and +Lehrstuhl für Pharmazeutische Biologie, Universität München, Karlstraße 29, D-80333 München, Germany

Incorporation of [1-^{13}C] and [U-^{13}C$_6$]glucose shows that monoterpenoid essential oils (geraniol, menthone, pulegone, thymol) are biosynthesised in plants by a pathway which is different from the established mevalonic acid route.

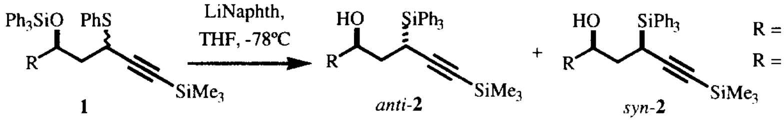


Tetrahedron Letters, **1997**, *38*, 3893

1,3-ASYMMETRIC INDUCTION IN RETRO-[1,4]-BROOK REARRANGEMENTS OF PROPARGYLLITHIUM COMPOUNDS TO PROPARGYLSILANES

Frank Sammtleben§), Mathias Noltemeyer#), and Reinhard Brückner§) §) Institut für Organische Chemie der Georg-August-Universität, Tammannstr. 2, D-37077 Göttingen, Germany #) Institut für Anrganische Chemie der Georg-August-Universität, Tammannstr. 4, D-37077 Göttingen, Germany*

γ-Siloxylated propargyl phenyl sulfides **1** were lithiated reductively to provide propargyllithium intermediates which rearranged to propargylsilanes **2**. Whether the γ-C–O bond and the newly formed C–Si bond are preferentially *anti*- or *syn*-oriented depends on the size of the substituent R.



R = Me: *anti*-**2**:*syn*-2 = 81:19

R = tBu: *anti*-**2**:*syn*-**2** = 13:87

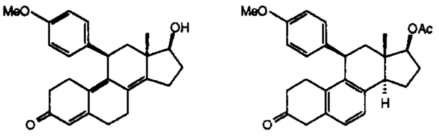
Tetrahedron Letters, **1997**, *38*, 3897

SYNTHESIS AND SPECTROSCOPIC PECULIARITIES OF 11β-ARYL-ESTRA-4,8(14),9-TRIENES AND 11β-ARYL-ESTRA-5(10),6,8-TRIENES

Günter Neef,* Arwed Cleve, Gisbert Depke, and Emil Eckle

Research Laboratories of Schering AG, D-13342 Berlin, Germany

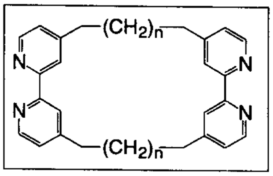
Two new types of 11β-aryl-substituted steroids are synthesized. The 11β-phenyl ring shows signs of restricted rotation at ambient temperature.



Tetrahedron Letters, **1997**, *38*, 3901

BIPYRIDINE BASED EXODITOPIC LIGANDS : SYNTHESIS AND STRUCTURAL ANALYSIS OF HOMOBINUCLEAR RUTHENIUM COMPLEXES

Christian Kaes, Mir Wais Hosseini* , André De Cian, Jean Fischer
Institut de Chimie, Université Louis Pasteur, 4, rue Blaise Pascal, F-67000 Strasbourg, France



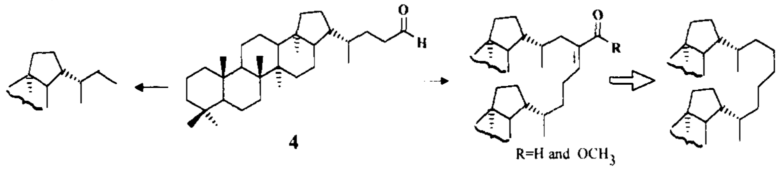
The synthesis of new macrocyclic ligands based on 2,2'-bipyridine unites interconnected at the 4 and 4' positions by alkyl chains was achieved. Homobinuclear Ru^{II} complexes were formed and the solid state structure of one of the diastereoisomers was investigated by X-ray analysis.

Tetrahedron Letters, **1997**, *38*, 3905

GEOMIMETIC AUTOXIDATION OF BIOHOPANOIDS : A ROUTE TO *BIS*-HOPANOIDS, POTENTIAL NEW SEDIMENTARY MOLECULAR FOSSILS.

Philippe Bisseret,* Anne Baron, Claude Rodier, Serge Neunlist, Ecole Nationale Supérieure de Chimie de Mulhouse, 3 rue A. Werner, 68093 Mulhouse, France; Michel Rohmer, Institut Le Bel, Université Louis Pasteur, 4 rue Blaise Pascal, 67070 Strasbourg, France.

Representative biohopanoid derivative **4** was submitted to geomimetic autoxidations in the presence of molecular sieves in benzene, giving access to *bis*-hopanoids, precursors to potential new molecular fossils, as well as under heating without solvent to give the saturated *nor*-hydrocarbon.



R=H and OCH_3

Tetrahedron Letters, **1997**, *38*, 3909

THE *BIS*-LINKING OF TETRATHIAFULVALENE (TTF) TO C_{60} : TOWARDS THE CONTROL OF ELECTRON TRANSFER BETWEEN π-DONORS AND C_{60}

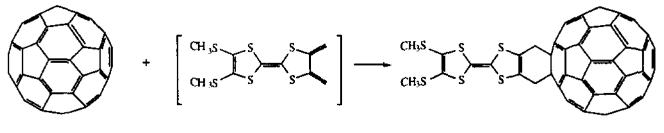
C. Boulle,[ab] J.M. Rabreau,[a] P. Hudhomme,[a*] M. Cariou,[b] M. Jubault,[b] A. Gorgues,[b*] J. Orduna,[c] and J. Garín[c]

[a] *Laboratoire de Synthèse Organique, associé au CNRS, Université de Nantes, 2 rue de la Houssinière, F-44322 Nantes*

[b] *Ingénierie Moléculaire et Matériaux Organiques, associé au CNRS, Université d'Angers, 2 Boulevard Lavoisier, F-49045 Angers*

[c] *Departamento de Química Orgánica, Universidad de Zaragoza-CSIC, E-50009 Zaragoza*

The *bis*-linking of a tetrathiafulvalene (TTF) to C_{60} is carried out using the [4+2] cycloaddition between a 2,3-dimethylene-TTF and C_{60}.

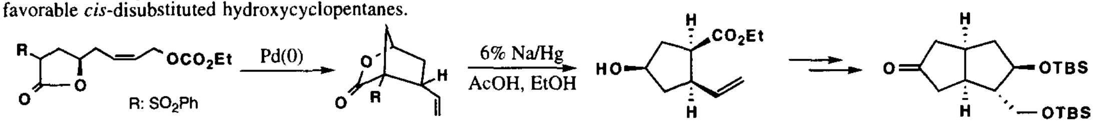


Tetrahedron Letters, **1997**, *38*, 3911

THE HIGHLY DIASTEREOSELECTIVE PALLADIUM-CATALYZED CYCLIZATIONS. STEREOSELECTIVE SYNTHESES OF *cis* AND *trans*-DISUBSTITUTED HYDROXYCYCLOPENTANES.

Young-Ger Suh*, Jae-Kyung Jung, Soon-Ai Kim Dong-Yun Shin and Kyung-Hoon Min. College of Pharmacy, Seoul National University, Seoul, 151-742, Korea.

A new variant of the palladium-catalyzed cyclization provides high 1,2-diastereocontrol of two new stereogenic centers as well as 1,3-asymmetric induction. Desulfonylation of the cyclized product also affords the thermodynamically less favorable *cis*-disubstituted hydroxycyclopentanes.

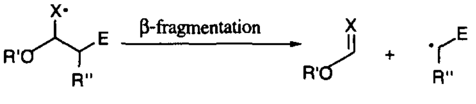


Tetrahedron Letters, **1997**, *38*, 3915

THE EFFECT OF α-ALKOXY GROUP IN RADICAL-MEDIATED β-FRAGMENTATION REACTIONS

Sunggak Kim,* Kwan Hee Kim, and Jin Rai Cho, Department of Chemistry, Korea Advanced Institute of Science and Technology, Taejon 305-701, Korea

β-Fragmentation reactions of alkyl and aminyl radicals were greatly facilitated by the presence of α-alkoxy groups.

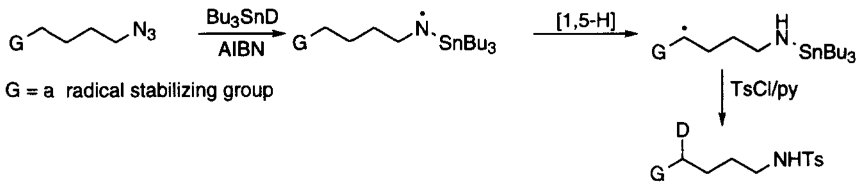


X = CR_2, NR
E = a radical stabilizing group

Tetrahedron Letters, **1997**, *38*, 3919

1,5-HYDROGEN TRANSFERS FROM CARBON TO *N*-TRIBUTYLTIN SUBSTITUTED NITROGEN

Sunggak Kim,* Kyu Man Yeon, and Kwang Sub Yoon, Department of Chemistry, Korea Advanced Institute of Science and Technology, Taejon 305-701, Korea

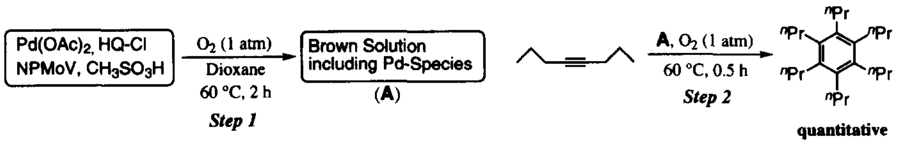


Tetrahedron Letters, **1997**, *38*, 3923

Cyclotrimerization of Alkynes Using a Multicatalytic System, Pd(II) / Chlorohydroquinone / NPMoV, Under Dioxygen.

Takahiro Yokota, Yasunori Sakurai, Satoshi Sakaguchi, Yasutaka Ishii*, Department of Applied Chemistry, Faculty of Engineering & High Technology Research Center, Kansai University, Suita Osaka 564, Japan

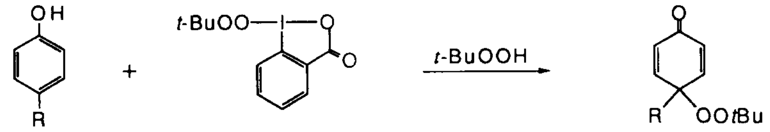
Cyclotrimerization of alkynes was performed using a new triple catalytic system, Pd(II) / chlorohydroquinone / NPMoV, under atmospheric oxygen.



Tetrahedron Letters, **1997**, *38*, 3927

FREE-RADICAL OXIDATION OF PARA-SUBSTITUTED PHENOLS BY HYPERVALENT TERT-BUTYLPEROXYIODANE AND TERT-BUTYL HYDROPEROXIDE: SYNTHESIS OF 4-(TERT-BUTYLPEROXY)-2,5-CYCLOHEXADIEN-1-ONES

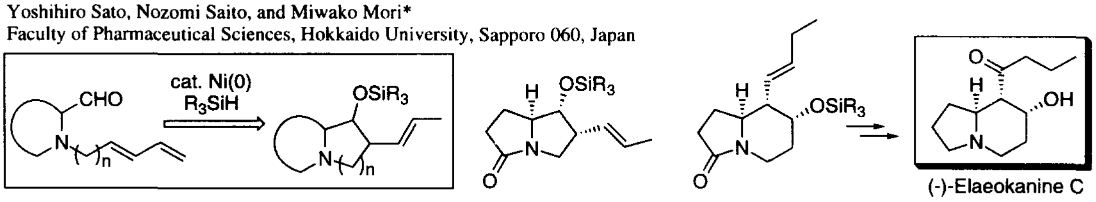
Masahito Ochiai,* Akinobu Nakanishi, and Akiko Yamada
Faculty of Pharmaceutical Sciences, University of Tokushima, 1-78 Shomachi, Tokushima 770, Japan



Tetrahedron Letters, **1997**, *38*, 3931

EFFICIENT SYNTHESIS OF PYRROLIZIDINE AND INDOLIZIDINE DERIVATIVES USING NICKEL-CATALYZED CYCLIZATION OF 1,3-DIENE AND ALDEHYDE: FORMAL TOTAL SYNTHESIS OF (-)-ELAEOKANINE C

Yoshihiro Sato, Nozomi Saito, and Miwako Mori*
Faculty of Pharmaceutical Sciences, Hokkaido University, Sapporo 060, Japan



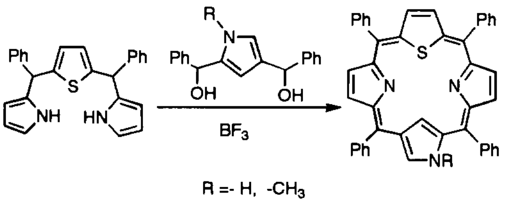
(-)-Elaeokanine C

Tetrahedron Letters, **1997**, *38*, 3935

Synthesis of meso-Tetraphenylthiaporphyrins Bearing One Inverted Pyrrole

Han-Je Kim and Chang-Hee Lee*
Department of Chemistry, Kangwon National University,
Chun-Cheon 200-701, Korea

2-Aza-21-thia-23-carba-5,10,15,20-tetraphenylporphyrin and its N-methylated analogue were synthesized and characterized. The synthesis utilizes [3+1] condensation of thiatripyrrin with 2,4-bis(α-hydroxy-α-phenylmethyl)pyrrole or 2,4-bis(α-hydroxy-α-phenylmethyl)-N-methylpyrrole in the presence of acid catalyst. This convenient process gives predominantly the titled porphyrin. Reinversion of the pyrrole unit is observed by prolonging the reaction time.

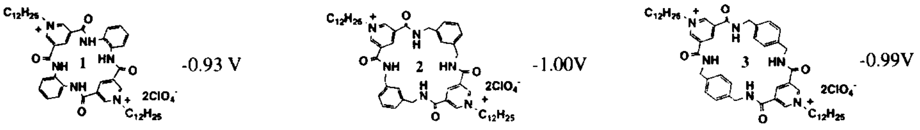


Tetrahedron Letters, **1997**, *38*, 3939

SYNTHESES AND REDOX BEHAVIOR OF NOVEL CYCLIC HOSTS HAVING MULTIPLE REDOX CENTERS OF NAD$^+$ ANALOGUE

Yasuhisa Kuroda ,*† Hidenori Seshimo, Toshio Kondo, Masana Shiba and Hisanobu Ogoshi
†Department of Polymer Science, Kyoto Institute of Technology, Sakyo-ku, Matsugasaki, Kyoto 606, Japan
Department of Synthetic Chemistry and Biological Chemistry, Kyoto University, Sakyo-ku, Kyoto 606-01 , Japan

A new series of cyclophanes having 3,5-dicarbamoylpyridinium moieties, **1**, **2** and **3**, were synthesized and their one-electron reduction potentials are determined by the cyclic voltammetric method.

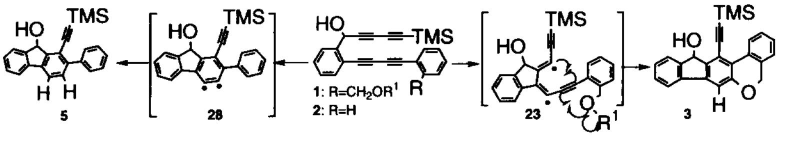


Tetrahedron Letters, **1997**, *38*, 3943

Cycloaromatization of a Non-Conjugated Polyenyne System: Synthesis of 5*H*-Benzo[*d*]fluoreno[3,2-*b*]pyrans via Diradicals Generated from 1-[2-{4-(2-Alkoxymethylphenyl)butan-1,3-diynyl}]phenylpentan-2,4-diyn-1-ols and Trapping Evidence for the 1,2-Didehydrobenzene Diradical

Kazuhiro Miyawaki, Riho Suzuki, Tomikazu Kawano, and Ikuo Ueda*, The Institute of Scientific and Industrial Research, Osaka University, Mihogaoka, Ibaraki, Osaka 567, Japan

Tetraynes **1** and **2** undergo thermal intramolecular cyclization at 25 °C to provide new polycyclic aromatic compounds **3** and **5**.

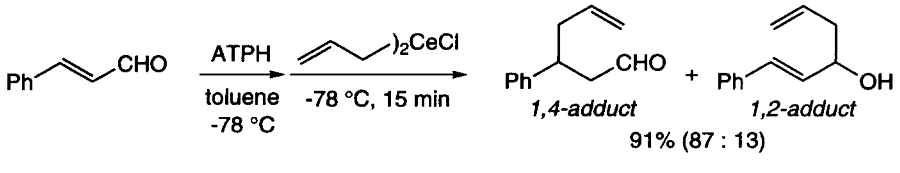


Tetrahedron Letters, **1997**, *38*, 3947

CONJUGATE ALLYLATION TO α,β-UNSATURATED ALDEHYDES WITH AMPHIPHILIC ALKYLATION SYSTEM, ATPH/ALLYLCERIUM REAGENTS

Takashi Ooi, Tomoya Miura, Yuichiro Kondo, and Keiji Maruoka*
Department of Chemistry, Graduate School of Science, Hokkaido University, Sapporo 060, Japan

Conjugate allylation to α,β-unsaturated aldehydes has been successfully accomplished with a new amphiphilic alkylation system, aluminum tris(2,6-diphenylphenoxide) (ATPH)/allylcerium reagents.

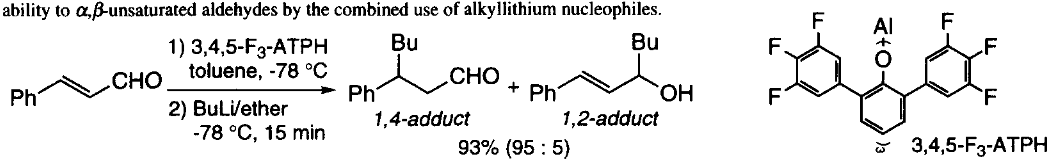


Tetrahedron Letters, **1997**, *38*, 3951

EVALUATION OF SEVERAL FLUORINATED ATPH DERIVATIVES AS FUNCTIONALLIZED LEWIS ACID RECEPTOR FOR CONJUGATE ALKYLATION TO α,β-UNSATURATED ALDEHYDES WITH ALKYLLITHIUM NUCLEOPHILES

Takashi Ooi, Yuichiro Kondo, Tomoya Miura, and Keiji Maruoka*
Department of Chemistry, Graduate School of Science, Hokkaido University, Sapporo 060, Japan

Several fluorinated aluminum tris(2,6-diphenylphenoxide) (ATPH) derivatives have been synthesized to evaluate the conjugate alkylation ability to α,β-unsaturated aldehydes by the combined use of alkyllithium nucleophiles.

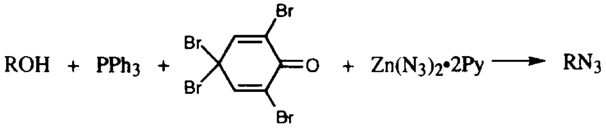


Tetrahedron Letters, **1997**, *38*, 3955

AN EFFICIENT METHOD FOR CONVERTING ALCOHOLS TO AZIDES WITH 2,4,4,6-TETRABROMO-2,5-CYCLOHEXADIENONE/PPh$_3$/Zn(N$_3$)$_2$•2Py

Akiko Saito, Kazumi Saito, Akira Tanaka,* and †Takayuki Oritani
Division of Environmental Bioremediation, Graduate School of Agriculture, and †Department of Applied Biological Chemistry, Faculty of Agriculture, Tohoku University, 1-1 Tsutsumidori-amamiyamachi, Aoba-ku, Sendai 981, Japan

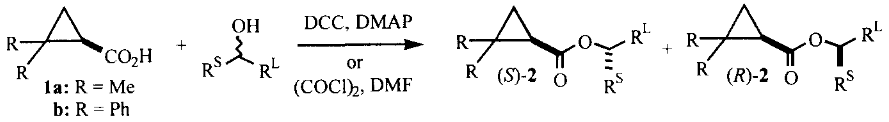
A combination of 2,4,4,6-tetrabromo-2,5-cyclohexadienone, PPh_3 and $Zn(N_3)_2$•2Py converted alcohols to azides in excellent yields.



Tetrahedron Letters, **1997**, *38*, 3959

CHIRAL 2,2-DISUBSTITUTED CYCLOPROPANECARBOXYLIC ACIDS: EFFECTIVE DERIVATIZING AGENTS FOR ANALYSIS OF ENANTIOMERIC PURITY OF ALCOHOLS AND FOR RESOLUTION OF 1,1'-BI-2-NAPHTHOL.

Hyun Chang Kim, Soojin Choi, Hongdoo Kim, Kwang-Hyun Ahn,* Department of Chemisty, Kyunghee University, Yongin 449-701, Republic of Korea; Jeong Hwan Koh, and Jaiwook Park* Department of Chemisty, Center for Biofunctional Molecules, POSTECH, Pohang 790-784, Republic of Korea

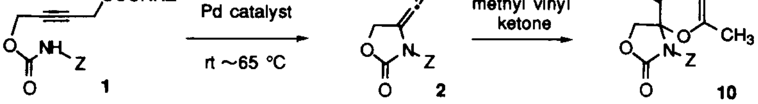


Tetrahedron Letters, **1997**, *38*, 3963

EFFICIENT SYNTHESIS OF 4-ETHENYLIDENE-2-OXAZOLIDINONES VIA PALLADIUM-CATALYZED AMINOCYCLIZATION OF 2-BUTYN-1,4-DIOL BISCARBAMATES

Masanari Kimura, Yoshinori Wakamiya, Yoshikazu Horino, and Yoshinao Tamaru*
Department of Applied Chemistry, Faculty of Engineering, Nagasaki University, 1-14 Bunnkyo, Nagasaki 852, Japan

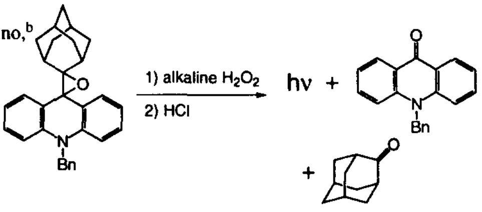
The enamine moiety of **2**, prepared from **1** by Pd-catalyzed cyclization, is reactive toward unsaturated carbonyls and provides, e.g., **10**.



Tetrahedron Letters, **1997**, *38*, 3967

9-ADAMANTYLIDENE-10-ALKYL-9,10-DIHYDROACRIDINE OXIDE AS A NOVEL AND POTENTIAL CHEMILUMINESCENT PRECURSOR: PROXIMITY EFFECT OF THE NITROGEN ATOM

Takeshi Imanishi,*[a] Yohko Ueda,[a] Masatoshi Minagawa,[a] Nobuhiro Hoshino,[b] and Kazuyuki Miyashita[a]
[a] Faculty of Pharmaceutical Sciences, Osaka University, 1-6 Yamadaoka, Suita, Osaka 565, Japan
[b] Iatron Laboratories, Inc., 1460-6 Mitodai,Takocho, Katori-gun, Chiba 289-22, Japan

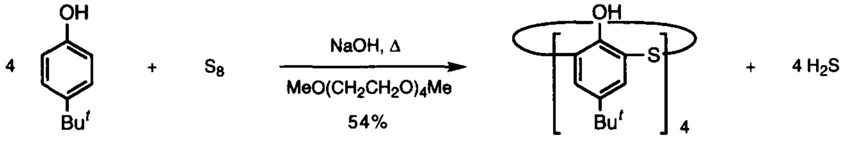


The oxirane was found to show chemiluminescence by treatment with alkaline H_2O_2 and subsequent with HCl.

Tetrahedron Letters, **1997**, *38*, 3971

FACILE SYNTHESIS OF P-TERT-BUTYLTHIACALIX[4]ARENE BY THE REACTION OF P-TERT-BUTYLPHENOL WITH ELEMENTAL SULFUR IN THE PRESENCE OF A BASE.

Hitoshi Kumagai,*[a] Mitsuharu Hasegawa,[a] Setsuko Miyanari,[a] Yoshihiro Sugawa,[a] Yoko Sato,[a] Takashi Hori,[a] Sanae Ueda,[a] Hiroki Kamiyama,[a] and Sotaro Miyano,*[b] [a]Chemical Technology Laboratory, Cosmo Research Institute, Satte, Saitama, 340-01, Japan, [b]Department of Biochemistry and Engineering, Faculty of Engineering, Tohoku University, Aramaki-Aoba, Sendai 980-77, Japan

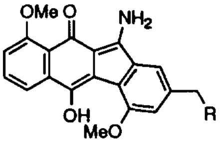


Tetrahedron Letters, **1997**, *38*, 3973

TOTAL SYNTHESES OF $O^{4,9}$-DIMETHYL STEALTHINS A AND C

Hiroya Koyama and Tadao Kamikawa*, Faculty of Science and Technology, Department of Chemistry, Kinki University, Kowakae, Higashi-osaka, Osaka 577, Japan

O^{12}-Acetyl-$O^{4,9}$-dimethylstealthin A and $O^{4,9}$-dimethylstealthin C were synthesized using the Suzuki coupling reaction as a key step.



$O^{4,9}$-dimethylstealthin C R = H

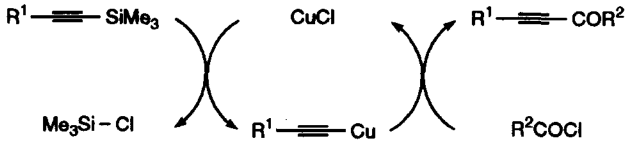
O^{12}-acetyl-$O^{4,9}$-dimethylstealthin A R = OAc

Tetrahedron Letters, **1997**, *38*, 3977

DIRECT ALKYNYL GROUP TRANSFER FROM SILICON TO COPPER: NEW PREPARATION METHOD OF ALKYNYLCOPPER (I) REAGENTS

Hajime Ito, Kikuo Arimoto, Hiro-omi Sensui, and Akira Hosomi*
Department of Chemistry, University of Tsukuba, Tsukuba, Ibaraki 305, Japan

A first observation of the direct alkynyl group transfer from silicon to copper is reported. The silicon group of alkynylsilanes was smoothly replaced by copper (I) chloride in DMI to give the corresponding copper (I) acetylides. This transformation was applied to the synthesis of alkynyl ketones catalyzed by CuCl.

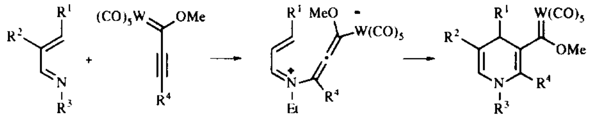


Tetrahedron Letters, **1997**, *38*, 3981

FIRST [4+2] CYCLOADDITION OF ALKYNYL FISCHER CARBENE COMPLEXES WITH HETERODIENES. FACILE SYNTHESIS OF 1,4-DIHYDROPYRIDINES FROM 1-AZADIENES.

José Barluenga,* Miguel Tomás, José A. López-Pelegrín and Eduardo Rubio. Instituto Universitario de Química Organometálica "Enrique Moles", Universidad de Oviedo, Julián Clavería 8, 33071- Oviedo

Neutral 1-azadienes react in a [4 + 2] fashion with alkynyl Fischer carbene complexes to afford regioselectively substituted 1,4-dihydropyridines.

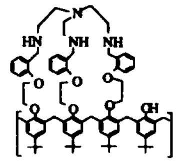


Tetrahedron Letters, **1997**, *38*, 3985

Synthesis of the Tripodal-Amine Capped Benzo Crown *p-tert*-Butylcalix[4]arene and Its Host-Guest Chemistry

Thawatchai Tuntulani*, Vithaya Ruangpornvisuti, Nonglak Tantikunwatthana, Onanong Ngampaiboonsombut and Ratana Seangprasertkij-Magee, Department of Chemistry, Chulalongkorn University, Bangkok 10330, Thailand

Zouhair Asfari and Jacques Vicens, E.C.P.M., 1 rue Blaise Pascal, Strasbourg, France

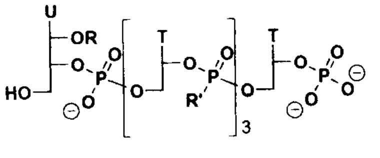


The tripodal-amine capped benzo crown *p-tert*-butylcalix[4]arene has been synthesised, and complexation studies of the compound with Zn(II) salts are also reported.

Tetrahedron Letters, **1997**, *38*, 3989

A NOVEL SOLID SUPPORT FOR SYNTHESIS OF 3'-PHOSPHORYLATED CHIMERIC OLIGONUCLEOTIDES CONTAINING INTERNUCLEOSIDIC METHYL PHOSPHOTRIESTER AND METHYLPHOSPHONATE LINKAGES.

Andrei Guzaev and Harri Lönnberg, Department of Chemistry, University of Turku, FIN-20014 Turku, Finland



R = H, Fpmp
R'= Me, OMe