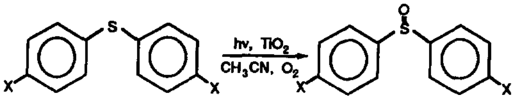
Tetrahedron Lett. **1990**, *31*, 4533

Selectivity in the TiO_2- Mediated Photocatalytic Oxidation of Thioethers

Marye Anne Fox* and A.A. Abdel-Wahab
Department of Chemistry
University of Texas at Austin
Austin, TX 78712 USA

The TiO_2-photocatalyzed oxidations of diaryl sulfides and dibenzyl sulfides proceed, via cation radical intermediates, to oxygenation and oxidative cleavage products, respectively.



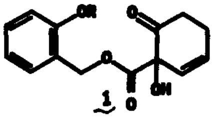
3: X = OCH_3, CH_3, H, Cl, Br

4: 73 - 95%

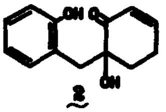
Tetrahedron Lett. **1990**, *31*, 4537

AGLYCONE FRAGMENTATION ACCOMPANIES β-GLUCOSIDASE CATALYZED HYDROLYSIS OF SALICORTIN, A NATURALLY-OCCURRING PHENOL GLYCOSIDE

Thomas P. Clausen, John W. Keller and Paul B. Reichardt*.
Dept. of Chemistry, University of Alaska Fairbanks, Fairbanks, AK 99775-0520.



1



2

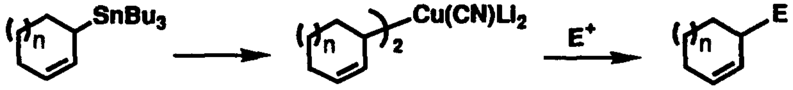
The aglycone of salicortin (1) undergoes an unusual fragmentation/recombination reaction to produce 2 via a proposed ortho-quinone methide pathway.

Tetrahedron Lett. **1990**, *31*, 4539

PREPARATION AND REACTIONS OF CYCLIC ALLYLIC HIGHER ORDER CYANOCUPRATES

Bruce H. Lipshutz,* C. Ung, T.R. Elworthy, and D.C. Reuter
Department of Chemistry, University of California, Santa Barbara, CA 93106

New cyclic allylic cuprates can be easily formed and utilized as a means of introducing a cycloalkenyl moiety into various organic substrates.

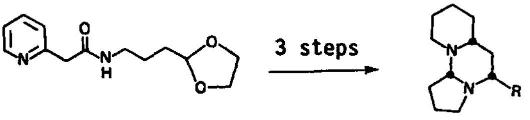


Tetrahedron Lett. **1990**, *31*, 4543

A STEREOSELECTIVE SYNTHESIS OF THE (9Z,11Z) TETRAPONERINES T4 AND T8

Tappey H. Jones
Laboratory of Biophysical Chemistry
National, Heart, Lung, and Blood Institute
Bethesda, MD 20892

An efficient, stereoselective synthesis of the tetraponerines T4 and T8 (R= n-propyl and n-pentyl) is described.

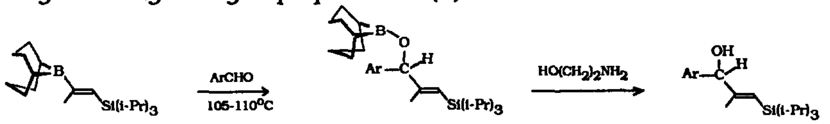


Tetrahedron Lett. **1990,** *31,* 4545

E-3-SILYL ALLYL ALCOHOLS *VIA* ORGANOBORANES

John A. Soderquist* and Jaime Vaquer
Department of Chemistry, University of Puerto Rico, Rio Piedras, PR 00931

The Brown vinylation of aromatic aldehydes was developed to provide a simple, efficient route to pure E-1-aryl-2-methyl-3-silyl-2-propen-1-ols **(3)**.



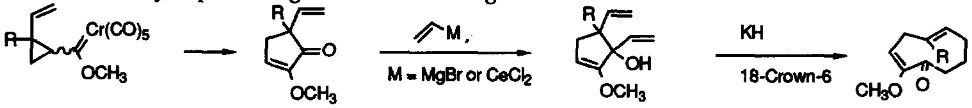
3

Tetrahedron Lett. **1990,** *31,* 4547

Sequential Vinylcyclopropylcarbene and Anionic Oxy-Cope Rearrangements: An Expedient Synthesis of Nine-Membered Rings.

James W. Herndon*, Leonard A. McMullen, and Charles E. Daitch, Department of Chemistry and Biochemistry, University of Maryland, College Park, Maryland 20742, USA

A variety of nine-membered ring-derivatives can easily be prepared by the following sequence of reactions: 1) thermolysis of 2-vinylcyclopropylcarbene-chromium complexes; 2) vinyl anion addition to the resulting 5-alkenyl-2-cyclopentenone; and 3) anionic oxy-Cope rearrangement of the resulting trienols.

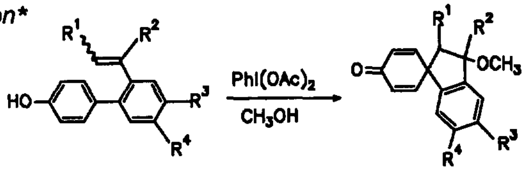


Tetrahedron Lett. **1990,** *31,* 4551

SPIRO-ANNULATED 2,5-CYCLOHEXADIENONES VIA OXIDATION OF 2'-ALKENYL-*p*-PHENYL PHENOLS WITH IODOBENZENE DIACETATE

*A. Callinan, Y. Chen, G. W. Morrow, and J. S. Swenton**
Department of Chemistry, The Ohio State University,
Columbus, Ohio 43210

The oxidation of 2'-alkenyl-substituted p-phenyl phenols via iodobenzene diacetate gives spiro-annulated-2,5-cyclohexadienones.

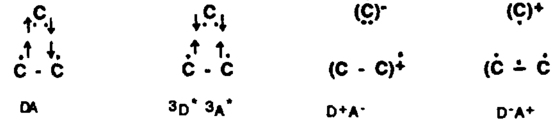


Tetrahedron Lett. **1990,** *31,* 4553

A CURVE CROSSING APPROACH TO CARBENIC REACTIVITY

Addy Pross and Robert A. Moss, *Wright and Rieman Laboratories,*
Department of Chemistry, Rutgers, The State University, New Brunswick, New Jersey 08903

The barrier to singlet carbene addition is generated from the configuration mixing of DA , $^3D^*{}^3A^*$, D^+A^-, and D^-A^+configurations.

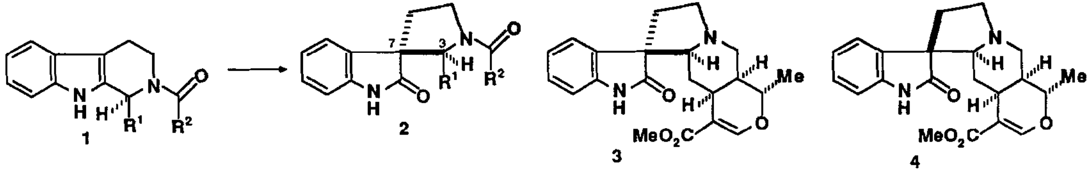


Tetrahedron Lett. **1990**, *31*, 4557

NEW METHODS FOR THE SYNTHESIS OF OXINDOLE ALKALOIDS. TOTAL SYNTHESES OF ISOPTEROPODINE AND PTEROPODINE.

Stephen F. Martin* and Michael Mortimore
Department of Chemistry, The University of Texas, Austin, TX 78712

A new protocol to effect oxidation/rearrangement 1 → 2 was applied to the total syntheses of isopteropodine (3) and pteropodine (4).



Tetrahedron Lett. **1990**, *31*, 4561

IMPROVED COUPLING OF PROTECTED PEPTIDES ON THE KAISER OXIME RESIN USING BOP ACTIVATION

Joseph T. Jarrett and Peter T. Lansbury, Jr.*
Department of Chemistry, Massachusetts Institute of Technology, Cambridge, Massachusetts 02139

Protected peptides and amino acids can be coupled to resin-bound amine in high yield with low levels of racemization using BOP activation. The synthesis of the 16 amino acid protected peptide VI derived from the ice nucleation protein is described and experimental procedures for these couplings are provided.

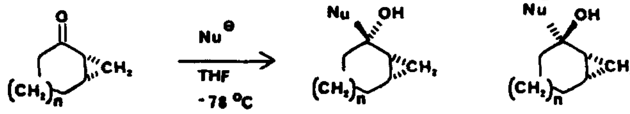
Boc-AGY'GS'T'QT'AGS'D'S'S'LT'-CO$_2$H

VI

Tetrahedron Lett. **1990**, *31*, 4565

DIASTEREOSELECTIVE MANIPULATIONS OF CONFORMATIONALLY RESTRICTED ENANTIOMERICALLY PURE BICYCLO[m.1.0]ALKANES. 1. NUCLEOPHILIC ADDITIONS TO THE CARBONYL CARBONS OF BICYCLO[m.1.0]ALKAN-2-ONES

Eugene A. Mash*, Michelle A. Kaczynski, and Daniel P. Dolata
Department of Chemistry, The University of Arizona, Tucson, Arizona 85721



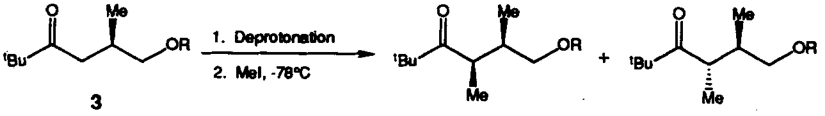
Diastereoselectivity > 20:1 for n ≥ 3.

Tetrahedron Lett. **1990**, *31*, 4569

THE DIASTEREOSELECTIVE INFLUENCES OF REMOTE SUBSTITUENTS ON ENOLATE ALKYLATIONS

Glenn J. McGarvey* and Marc W. Andersen
University of Virginia, Department of Chemistry, Charlottesville, Virginia 22901

The stereodirecting influences of a variety of R groups upon the methylation of the enolate derived from ketone **3** have been examined.

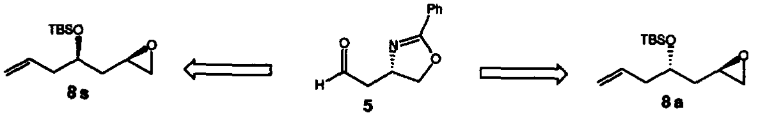


Tetrahedron Lett. **1990**, *31*, 4573

STUDIES TOWARD THE APPLICATION OF OXAZOLINE-EPOXIDE EQUIVALENCY IN 1,3-ASYMMETRIC INDUCTION

Kenneth R. Overly, J. Michael Williams, and Glenn J. McGarvey*
University of Virginia, Department of Chemistry, Charlottesville, Virginia, 22901

Synthetically versatile epoxy alcohols **8a** and **8s** have been prepared from a common intermediate, chiral aldehyde **5**, through a sequence involving diastereoselective allylation followed by stereospecific transformation of the oxazoline to an epoxide.

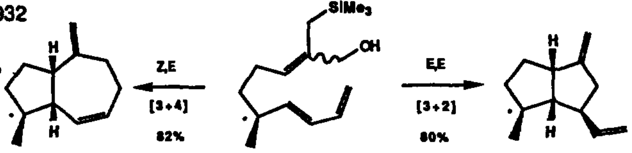


Tetrahedron Lett. **1990**, *31*, 4577

DIASTEREOSELECTIVITY AND REGIOCONTROL IN INTRAMOLECULAR ALLYL CATION CYCLOADDITIONS: SELECTIVE FORMATION OF [3 + 2] *OR* [3 + 4] CYCLOADDUCTS

Raymond J. Giguere,* Susan M. Tassely, Michael I. Rose, Department of Chemistry, Skidmore College, Saratoga Springs, New York 12866-1632 and V.V. Krishnamurthy, Varian NMR Instument Division, Florham Park, New Jersey 07932

Intramolecular Hoffmann-Noyori reactions of chiral, diastereomeric trienols **1a** and **1b** demonstrate *site-selectivity control to form either* [3+4] *or* [3+2] cycloadducts **2a** and **2b**, respectively.

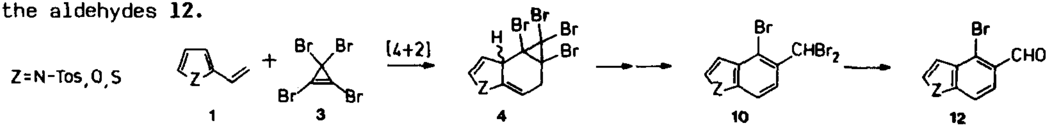


Tetrahedron Lett. **1990**, *31*, 4581

[4+2]-CYCLOADDITIONEN MIT TETRABROMCYCLOPROPEN: EIN NEUER SYNTHESEWEG ZU POLYFUNKTIONALISIERTEN INDOLEN, BENZOFURANEN UND BENZOTHIOPHENEN.

J.-M.Keil, T.Kämpchen und G.Seitz*, Pharmazeutisch-Chemisches der Philipps-Universität, Marbacher Weg 6, D-3550 Marburg/Lahn 1 (FRG)

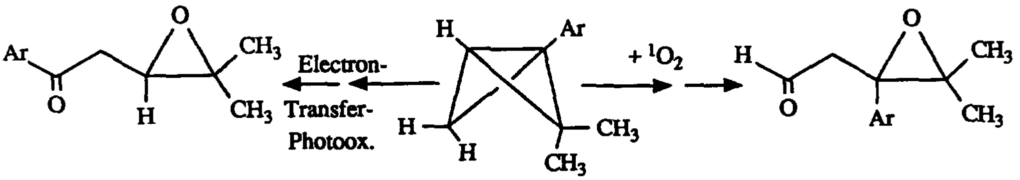
[4+2]-Cycloaddition of **1** with **3** leads via **4** to the 10 -hetarenes **10**, which can be converted to the aldehydes **12**.



Tetrahedron Lett. **1990**, *31*, 4585

PHOTOOXYGENIERUNG VON 1- ARYL-2,2-DIMETHYLBICYCLO[1.1.0]BUTANEN

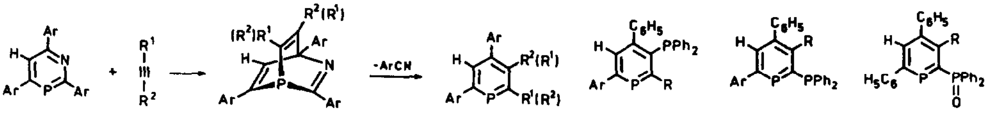
Klaus Gollnick und Maria Weber, Institut für Organische Chemie der Universität München, D-8000 München 2, Bundesrepublik Deutschland



Tetrahedron Lett. **1990**, *31*, 4589

(4+2)-CYCLOADDITIONEN VON 1,3λ^3-AZAPHOSPHININEN MIT ALKINYLPHOSPHANEN BEI HOHEN DRUCKEN.

G. Märkl,* Ch. Dörges, Th. Riedl, Institut für Organische Chemie der Universität, Universitätsstr. 31, D-8400 Regensburg;
F.-G. Klärner, C. Ludwig, Fakultät für Chemie der Ruhr-Universität, Universitätsstr. 150, D-4630 Bochum.

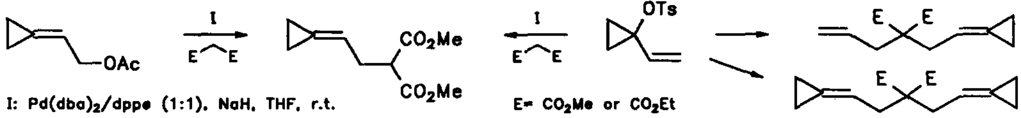


Tetrahedron Lett. **1990**,*31*, 4593

PALLADIUM(0) CATALYZED SUBSTITUTION REACTIONS OF CYCLOPROPYL GROUP CONTAINING ALLYLIC ESTERS

Andreas Stolle,[a,b] Jacques Salaün*[b] and Armin de Meijere*[a]
Institut für Organische Chemie der Universität[a] D-2000 Hamburg 13, FR Germany
Laboratoire des Carbocycles Associé au CNRS,[b] Université de Paris-Sud, F-91405 Orsay, France

Complete regioselectivity is observed in palladium(0) catalyzed allylic substitution reactions of 1-vinylcyclopropyl and cyclopropylideneethyl esters with a series of soft carbon nucleophiles.



I: Pd(dba)$_2$/dppe (1:1), NaH, THF, r.t.

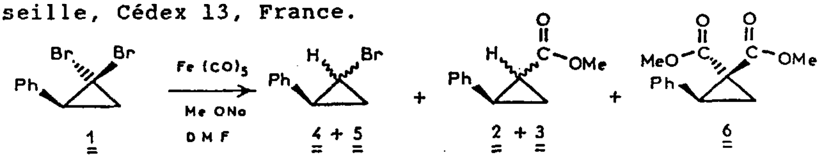
E= CO_2Me or CO_2Et

Tetrahedron Lett. **1990**, *31*, 4597

Reduction and carbonylation of gem dihalogeno cyclopropanes with iron pentacarbonyl

by F.Reyne, P.Brun et B.Waegell

Laboratoire de Stéréochimie, associé au CNRS, LASCO, Université l'Aix-Marseille, Faculté des Sciences, Avenue Escadrille Normandie-Niemen, case 532, 13397 Marseille, Cédex 13, France.

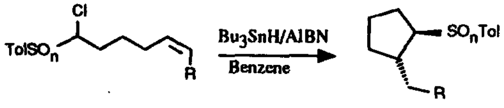


Tetrahedron Lett. **1990**, *31*, 4601

ADDITION OF SULFINYLATED AND SULFONYLATED CARBON CENTERED RADICALS TO ALKENES AND ENOLETHERS

Philippe Renaud, Université de Lausanne, Institut de Chimie Organique,
Rue de la Barre 2, CH-1005 Lausanne (Switzerland)

Inter- and intramolecular addition reactions to electron rich alkenes are descibed. Cyclizations have been shown to proceed with high diastereoselectivity.

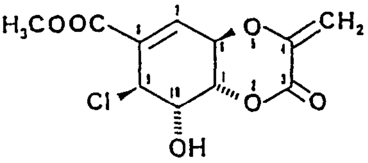


R = H, OCH_3, n = 1, 2

Tetrahedron Lett. **1990**, *31*, 4605

(1R,6R,9S,10S)-9-CHLORO-10-HYDROXY-8-METHOXYCARBONYL-4-METHYLENE-2,5-DIOXA-BICYCLO[4.4.0]DEC-3-ONE-7-ENE , A FIRST CHLORINE-CONTAINING SHIKIMATE-RELATED METABOLITE FROM FUNGI

Eiji Kitamura, Akira Hirota, Masahira Nakagawa, Mitsuru Nakayama*
Department of Agricultural Chemistry, University of Osaka Prefecture, Osaka 591, Japan
Hiroshi Nozaki
Department of Biological Chemistry, Okayama University of Science, Okayama 700, Japan
Toshiji Tada
Analytical Research Laboratories, Fujisawa Pharmaceutical Co.,Ltd., Osaka 532, Japan
Manabu Nukina*
Department of Agricultural Chemistry, Yamagata University, Tsuruoka 997, Japan
Hiroshi Hirota
Department of Chemistry, The University of Tokyo, Tokyo 113, Japan

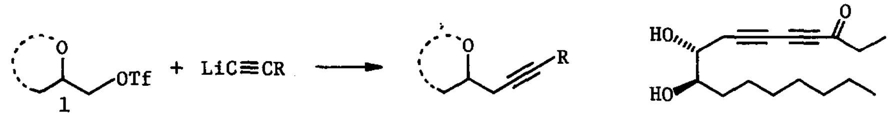


Tetrahedron Lett. **1990**, *31*, 4609

AN EFFICIENT METHOD FOR THE ALKYLATION OF CHIRAL TRIFLATES WITH ALKYNYLLITHIUM REAGENTS. A HIGHLY CONCISE TOTAL SYNTHESIS OF (+)-PANAXACOL

Hiyoshizo Kotsuki,* Isao Kadota, Masamitsu Ochi
Department of Chemistry, Faculty of Science, Kochi University, Akebono-cho, Kochi 780, Japan

Usefulness of the chiral triflate 1 was demonstrated in the total synthesis of panaxacol.

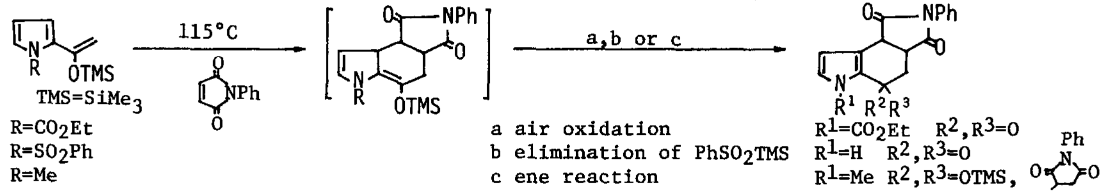


Panaxacol

Tetrahedron Lett. **1990**, *31*, 4613

DIVERSE PROCESS IN [4+2]CYCLOADDITION REACTION OF SILYL ENOL ETHERS OF *N*-SUBSTITUTED 2-ACETYLPYRROLES TO A INDOLE SKELETON

*M. Ohno, S. Shimizu, and S. Eguchi**
(Institute of Applied Organic Chemistry, Faculty of Engineering, Nagoya University, Chikusa, Nagoya 464, Japan)



TMS=$SiMe_3$
R=CO_2Et
R=SO_2Ph
R=Me

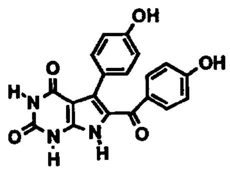
a air oxidation
b elimination of $PhSO_2TMS$
c ene reaction

R^1=CO_2Et R^2,R^3=O
R^1=H R^2,R^3=O
R^1=Me R^2,R^3=OTMS,

Tetrahedron Lett. **1990**, *31*, 4617

RIGIDIN, A NOVEL ALKALOID WITH CALMODULIN ANTAGONISTIC ACTIVITY FROM THE OKINAWAN MARINE TUNICATE *EUDISTOMA* CF. *RIGIDA*

Jun'ichi Kobayashi,* Jie-fei Cheng,[a] Yumiko Kikuchi, Masami Ishibashi, Shosuke Yamamura,[a] Yasushi Ohizumi,[b] Tomihisa Ohta,[c] and Shigeo Nozoe[c]
Faculty of Pharmaceutical Sciences, Hokkaido University, Sapporo 060, Japan,
[a]Faculty of Science and Technology, Keio University, Yokohama 223, Japan,
[b]Mitsubishi Kasei Institute of Life Sciences, Machida, Tokyo 194, Japan, and
[c]Pharmaceutical Institute,Tohoku University, Sendai 980, Japan

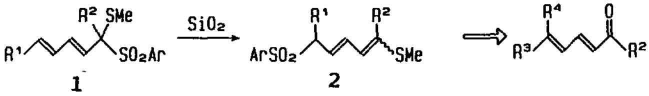


Tetrahedron Lett. **1990**, *31*, 4621

A Novel 1,5-Rearrangement of a Sulfonyl Group in a 1-Sulfenylated 2,4-Alkadiene

Katsuyuki Ogura, Nobuhiro Yahata, Taketoshi Fujimori, and Makoto Fujita
Department of Synthetic Chemistry, Faculty of Engineering and Graduate School of Science and Technology, Chiba University, 1-33 Yayoicho, Chiba 260, Japan

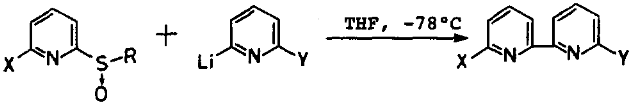
A smooth 1,5-rearrangement of a sulfonyl group occurred on SiO_2 treatment of 1 to give 2, which was also shown to be an important precursor for a variety of conjugated dienones.



Tetrahedron Lett. **1990**, *31*, 4625

Ipso Substitution of 2-Alkylsulfinylpyridine by 2-Pyridyllithium; A New Preparation of Oligopyridine and Their Bromomethyl Derivatives

Junichi Uenishi, Takakazu Tanaka, Shoji Wakabayashi and Shigeru Oae, Department of Chemistry, Okayama University of Science, Okayama, 700 Japan
Hiroshi Tsukube, Department of Chemistry and Liberal Arts & Science, Okayama University, Okayama, 700 Japan



X: H_3C, EtS, $TBSOCH_2$, Cl

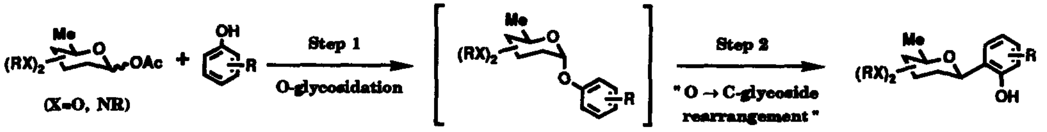
Y: H, Br, $TBSOCH_2$

R: H_3C, Et

Tetrahedron Lett. **1990**, *31*, 4629

Improvement in O→ C-Glycoside Rearrangement Approach to C-Aryl Glycosides: Use of 1-O-Acetyl Sugar as Stable but Efficient Glycosyl Donor

Takashi Matsumoto, Takamitsu Hosoya, and Keisuke Suzuki*
Department of Chemistry, Keio University, Hiyoshi, Yokohama 223, Japan

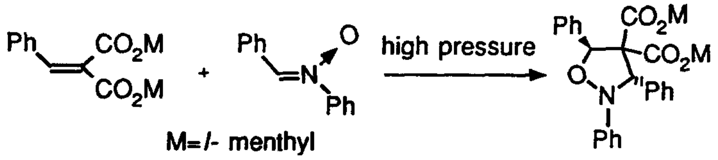


Application to a few 2-deoxy sugars, including an amino sugar, was investigated.

Tetrahedron Lett. **1990**, *31*, 4633

1,3-DIPOLAR CYCLOADDITION OF DI-l-MENTHYL BENZYLIDENEMALONATE TO (Z)-N,α-DIPHENYLNITRONE: EXPLANATION FOR DIASTEREOSELECTIVITY:

Nobuya Katagiri,[a,*] Nobuhisa Watanabe,[a] Jun-ichi Sakaki,[a] Takatoshi Kawai,[b] and Chikara Kaneko,[a,*] [a] Pharmaceutical Institute, Tohoku Univ., Sendai 980, Japan and [b] Tsukuba Research Lab., Eisai Co., Ltd., Tsukuba, Ibaraki 300-26, Japan



Asymmetric induction is caused by pyramidarization.

Tetrahedron Lett. **1990**, *31*, 4637

PROTEIN ENGINEERING OF HIV PROTEINS BY TOTAL CHEMICAL SYNTHESIS: THE C-TERMINAL 104 RESIDUE FROM GAG p24

Paolo Mascagni*(1), Dwo Y. Sia (2), Anthony RM Coates (2) and William A Gibbons (1)

1) The School of Pharmacy, University of London, UK
2) The London Hospital, London, UK

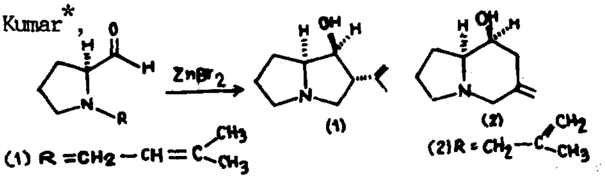
The chemical synthesis of the 104 residue peptide from HIV-1 gag p24 protein has been performed using BOC-amino acid chemistry. 15-20% (w/w) of homogeneous peptide was purified from about 2q of crude material. Rigorous quality control was used to assess the chemical integrity of the peptide. This was found to be immunogenic in its free form.

Tetrahedron Lett. **1990**, *31*, 4641

DIASTEREOSELECTIVE SYNTHESIS OF OPTICALLY ACTIVE PYRROLIZIDINE AND INDOLIZIDINE RING SYSTEMS THROUGH INTRAMOLECULAR ENE REACTION.

Suneel Y. Dike*, Murli Mahalingam and Ashok Kumar*,
Alchemie Research Centre, P.O.Box 155,
Thane-Belapur Road, THANE 400601, INDIA.

Optically active hydroxy pyrrolizidine and indolizidine are prepared by $ZnBr_2$ induced intramolecular ene reaction.

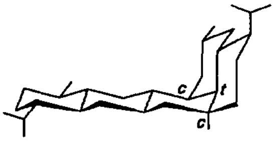


Tetrahedron Lett. **1990**, *31*, 4645

CIS-CIS-TRANS-BICADINANE, A NOVEL MEMBER OF AN UNCOMMON TRITERPANE FAMILY ISOLATED FROM CRUDE OILS

B.G.K. van Aarssen[a*], C. Kruk[b], J.K.C. Hessels[a], and J.W. de Leeuw[a]
[a]Delft University of Technology, Faculty of Chemical Technology and Materials' Science, Organic Geochemistry Unit, De Vries van Heystplantsoen 2, 2628 RZ Delft, The Netherlands.[b]University of Amsterdam, Faculty of Chemistry, Organic Chemistry Unit, Nieuwe Achtergracht 129, 1018 WS, Amsterdam, The Netherlands

Cis-cis-trans-bicadinane, an uncommon triterpane present in South East Asian crude oils has been isolated and its structure has been revealed by NMR-spectroscopic methods.



Tetrahedron Lett. **1990**, *31*, 4649

UVARIAMICIN-I, II AND III: THREE NOVEL ACETOGENINS FROM *UVARIA NARUM*

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[1]Department of Pharmaceutical Sciences, University of Antwerp (UIA), B-2610 Antwerp, Belgium

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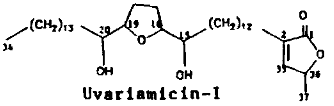
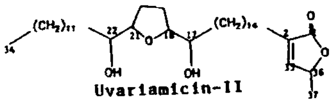
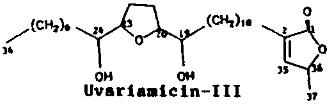


Uvariamicin-I



Uvariamicin-II



Uvariamicin-III

Tetrahedron Lett. **1990**, *31*, 4653

A NOVEL SYNTHESIS OF p-PHENYLCALIX[4]ARENES VIA TETRAIODO DERIVATIVES

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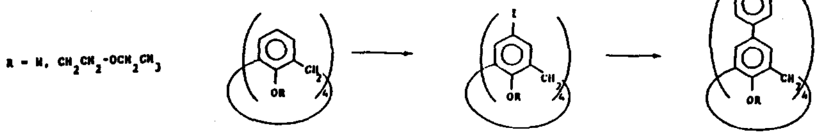
The synthesis of p-phenylcalix[4]arenes, macrocycles with extended hydrophobic cavities, via iodo derivative is described.



Tetrahedron Lett. **1990**, *31*, 4657

7-METHYL-TRICYCLO$[5.3.0.0.^{1,6}]$DECA-2,4-DIEN-8-ONES: THE FIRST EXAMPLES OF TRICYCLONORCARADIENONES IN TAUTOMERIC EQUILIBRIUM WITH THE 7-METHYL-BICYCLO[5.3.0]1,3,5-DECATRIEN-8-ONES.

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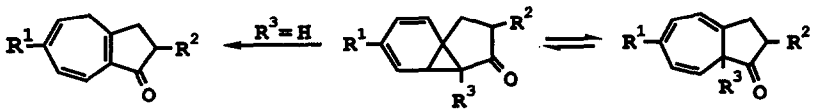

Tetrahedron Lett. **1990**, *31*, 4661

METAL SALTS AS NEW CATALYSTS FOR MILD AND EFFICIENT AMINOLYSIS OF OXIRANES

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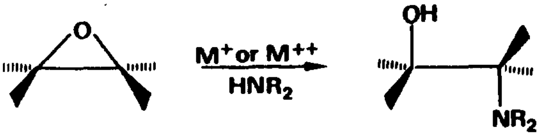

A new simple, efficient, inexpensive, anti stereoselective, highly regioselective method for aminolysis of 1,2-epoxides, by means of metal salts, is described.