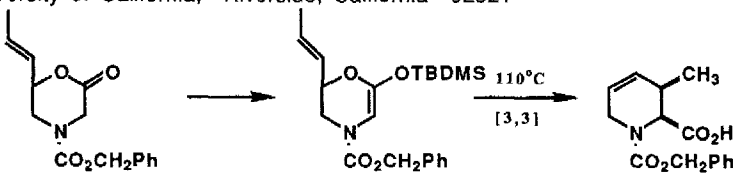
GRAPHICAL ABSTRACTS

Tetrahedron Lett.30,515(1989)

STEREOSELECTIVE SYNTHESIS OF SUBSTITUTED PIPECOLIC ACIDS

Steven R. Angle* and Damian O. Arnaiz
Department of Chemistry, University of California, Riverside, California 92521

A stereoselective synthesis of $\Delta^{4,5}$-pipecolic acid derivatives has been developed.

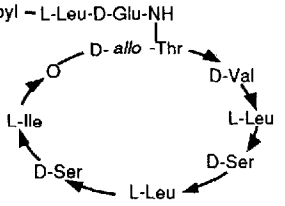


Tetrahedron Lett.30,519(1989)

SOLID-PHASE SYNTHESIS OF VISCOSIN, A CYCLIC DEPSIPEPTIDE WITH ANTIBACTERIAL AND ANTIVIRAL PROPERTIES

Terrence R. Burke, Jr., Martha Knight, and B. Chandrasekhar*
Peptide Technologies Corporation,
125 Michigan Ave. N.E., Washington, D.C., 20017, USA
James A. Ferretti, NHLBI, National Institutes of Health, Bethesda, MD 20892, USA

The use of solid-phase chemistry in the synthesis of the cyclic depsipeptide viscosin is reported. Synthesis of the proposed structure of viscosin was accomplished by solid-phase techniques using Fmoc chemistry and acid-sensitive alkoxybenzyl alcohol resin. Cyclizaton of the linear peptide was achieved using the activating agent BOP-Cl. The resulting peptide was indistinguishable from natural material, thereby supporting the proposed structure of viscosin.

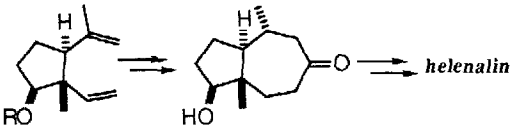


Tetrahedron Lett.30,523(1989)

BORON ANNULATION IN ORGANIC SYNTHESIS. 3. STEREOSELECTIVITY AND THE FORMAL SYNTHESIS OF (±)-HELENALIN

Michael C. WELCH and Thomas A. BRYSON
Department of Chemistry
University of South Carolina, Columbia, SC 29208

Stereochemical aspects of boron cycloheptanone annulation and a synthesis of (±)-helenalin are described.

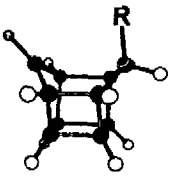


Tetrahedron Lett.30,527(1989)

ANALYSIS OF NORRISH TYPE II REACTIONS BY MOLECULAR MECHANICS METHODOLOGY

Ronald R. Sauers* and Karsten Krogh-Jespersen
Department of Chemistry
Rutgers University
New Brunswick, NJ 08903

Force field parameters have been developed that reproduce the structures of the triplet states of **1** and **2** calculated by *ab initio* techniques. Transition state strain energies for intramolecular hydrogen abstractions have been estimated. A correlation has been found between the overall increase in strain energies and Type II reactivity.



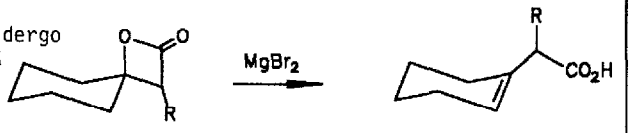
1 R = H
2 R = CH_3

Tetrahedron Lett.30,531(1989)

AN EFFICIENT, HIGHLY REGIOSELECTIVE SYNTHESIS OF SUBSTITUTED (1-CYCLOHEXENYL) ACETIC ACID DERIVATIVES VIA IONIZATION/ELIMINATION OF β-LACTONES

T. Howard Black * and Stephen L. Maluleka
Department of Chemistry, Eastern Illinois University
Charleston, Illinois, USA 61920

When treated with $MgBr_2$, spiro β-lactones undergo an ionization/elimination reaction to afford cyclohexenyl acetic acids in high yield and isomeric purity.

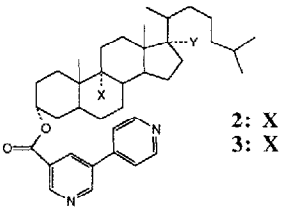


Tetrahedron Lett.30,535(1989)

DOUBLE FUNCTIONALIZATION OF CHOLESTANOL DIRECTED BY SELECTIVE BIFUNCTIONAL TEMPLATES

Radhika Batra and Ronald Breslow
Department of Chemistry, Columbia University
New York NY 10027

The free radical chlorination of **2** affords **3** in a high yield selective reaction.



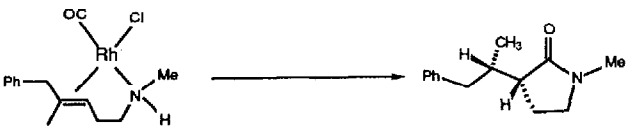
2: X = Y = H
3: X = Y = Cl

Tetrahedron Lett.30,539(1989)

RHODIUM COMPLEXES OF TRISUBSTITUTED OLEFINS: *SYN* SELECTIVE DIRECTED HYDROCARBOXYLATION

Marie E. Krafft Department of Chemistry, Florida State University, Tallahassee, FL 32306-3006

Bidentate complexes of trisubstituted olefins have been prepared and shown to undergo a directed hydrocarboxylation reaction. The stereoselectivity of the process has been shown to result from an overall *syn* addition across the olefin (i.e. **9** --**10**).



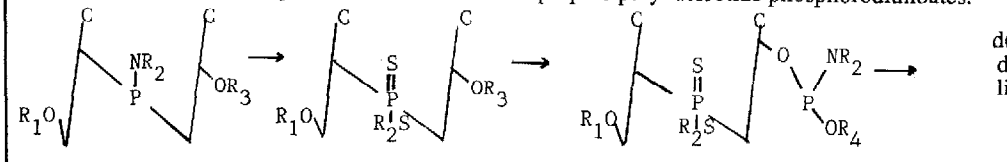
9 **10**

Tetrahedron Lett.30,543(1989)

SYNTHESIS OF DEOXYCYTIDINE OLIGOMERS CONTAINING PHOSPHORODITHIOATE LINKAGES

Ana Grandas, William S. Marshall, John Nielsen and Marvin H. Caruthers, Department of Chemistry & Biochemistry, University of Colorado, Boulder, CO 80309, USA

Dinucleoside phosphoroamidites are used to prepare polynucleotide phosphorodithioates.

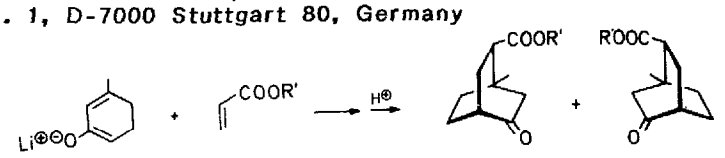


d(C)15 with dithioate linkages

Tetrahedron Lett.30,547(1989)

DIASTEREOSELECTIVE SYNTHESIS OF BICYCLO[2.2.2]-OCTANES BY DOUBLE MICHAEL ADDITION

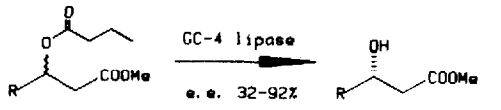
Dietrich Spitzner* and Peter Wagner, Institut für Chemie, Universität Hohenheim, Garbenstr. 30,D-7000 Stuttgart 70, Germany
Arndt Simon* and Karl Peters, Max-Planck-Institut für Festkörperforschung Heisenbergstr. 1, D-7000 Stuttgart 80, Germany



Tetrahedron Lett.30,551(1989)

BIOCATALYTIC RESOLUTION OF LONG-CHAIN 3-HYDROXYALKANOIC ESTERS

C.Feichter, K.Faber* and H.Griengl
Institute of Organic Chemistry, Graz University of Technology, Stremayrgasse 16, A-8010 Graz, Austria



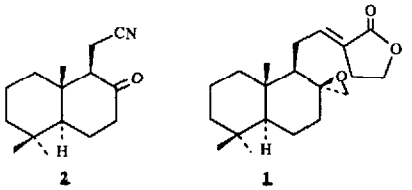
R = n-C_7H_{15}, n-$C_{11}H_{23}$, n-$C_{15}H_{31}$, $(CH_2)_4CH(n\text{-}C_4H_9)_2$

Tetrahedron Lett.30,553(1989)

TOTAL SYNTHESIS OF (±)-GALANOLACTONE

D. Herlem, J. Kervagoret and F. Khuong-Huu*
Institut de Chimie des Substances Naturelles
C.N.R.S., 91198 Gif-sur-Yvette FRANCE

Starting from the cyanoketone **2**, *which was prepared* from geraniol, has been effected the synthesis of (±)-galanolactone **1**.



2 **1**

Tetrahedron Lett.30,557(1989)

DIRECT CONVERSION OF TETRAHYDROPYRANYLATED ALCOHOLS TO THE CORRESPONDING BROMIDES

A. WAGNER, M.-P.HEITZ, C. MIOSKOWSKI*
Laboratoire de Chimie Bio-Organique, associé au CNRS, Université Louis Pasteur
Faculté de Pharmacie, 74 route du Rhin F- 67401 STRASBOURG Cédex France.

Direct conversion of various THP protected alcohols into the corresponding bromides using PPh_3/CBr_4 is described. The reaction proceeds with inversion of configuration.

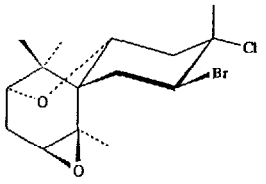
$$\text{R-OTHP} \xrightarrow[CH_2Cl_2]{2\ PPh_3\ /\ CBr_4} \text{R-Br}$$

Tetrahedron Lett.30,559(1989)

ISOLATION, STRUCTURAL DETERMINATION AND ABSOLUTE CONFIGURATION OF ALMADIOXIDE

Maurice Aknin[a], Alain Ahond[b], Angèle Chiaroni[b], Christiane Poupat[b], Claude Riche[b] and Jean-Michel Kornprobst[a]

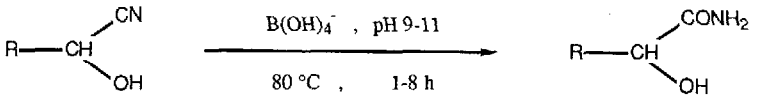
[a]Département de Chimie, Faculté des Sciences, Université Cheikh Anta Diop de Dakar, Dakar, SÉNÉGAL
[b]Institut de Chimie des Substances Naturelles du CNRS, 91198 Gif-sur-Yvette Cedex, FRANCE



Tetrahedron Lett.30,563(1989)

HYDRATION OF CYANOHYDRINS IN WEAKLY ALKALINE SOLUTIONS OF BORIC ACID SALTS

Jacqueline Jammot, Robert Pascal*, and Auguste Commeyras
U.A. C.N.R.S. n°1097 "Hétérochimies et aminoacides", Université des Sciences et Techniques du Languedoc, Place E. Bataillon, 34060 Montpellier Cedex, France.

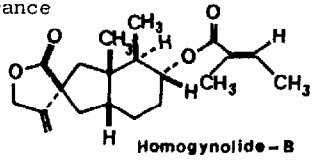


Tetrahedron Lett.30,565(1989)

DIRECT APPROACH TO THE BAKKANES: A SYNTHESIS OF (±)-HOMOGYNOLIDE-B

Fernando Coelho,[a] Jean-Pierre Deprés,[a] Timothy J. Brocksom,[b] and Andrew E. Greene*,[a]
[a]Université J. Fourier de Grenoble (LEDSS), 38041 Grenoble Cedex, France
[b]Universidade Federal de São Carlos, 13.560 São Carlos, S.P., Brazil

A short synthesis of racemic homogynolide-B is described.

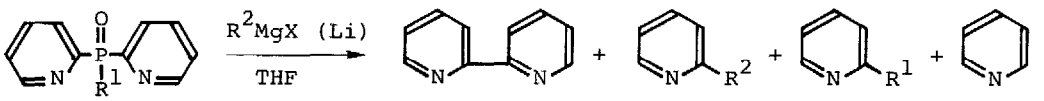


Homogynolide-B

Tetrahedron Lett.30,567(1989)

LIGAND COUPLING REACTION ON THE PHOSPHORUS ATOM

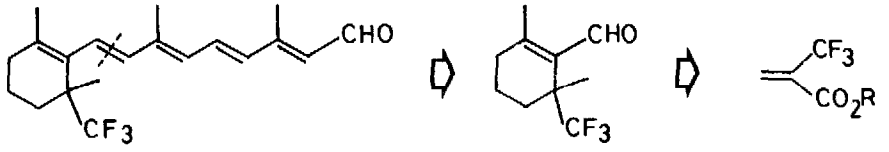
Yuzuru Uchida*, Katsumi Onoue, Nobuaki Tada, and Fumio Nagao
Department of Applied Chemistry, Osaka Institute of Technology
Asahi-ku Osaka 535, Japan
Shigeru Oae*
Okayama University of Science, 1-1 Ridai-cho, Okayama 700, Japan



Tetrahedron Lett.30,571(1989)

TRIFLUOROMETHYL GROUP ON QUARTERNARY CARBON; SYNTHESIS OF 16,16,16-TRIFLUORORETINAL.

Yuji Hanzawa, Makoto Suzuki and Yoshiro Kobayashi, Tokyo College of Pharmacy, 1432-1 Horinouchi, Hachioji, Tokyo 192-03 Japan

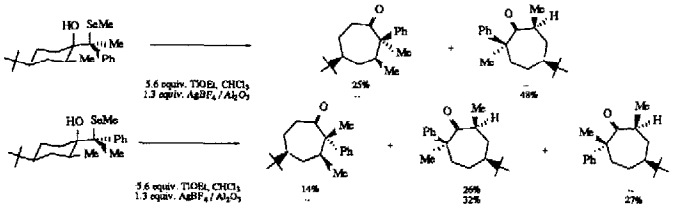


Tetrahedron Lett.30,575(1989)

About the Mechanism of the Rearrangement of β-Hydroxyalkylselenides to Ketones

A. Krief [a]*, J.L. Laboureur [a], G. Evrard[b], B. Norberg[b] and E. Guittet[c]

a) Laboratoire de Chimie Organique and b) Laboratoire de Chimie Moléculaire Structurale (Facultés Universitaire Notre-Dame de la Paix, 61 rue de Bruxelles, B-5000 Namur, Belgium). c) Laboratoire de RMN (Institut de Chimie des Substances Naturelles, F-91190 Gif-sur-Yvette, France



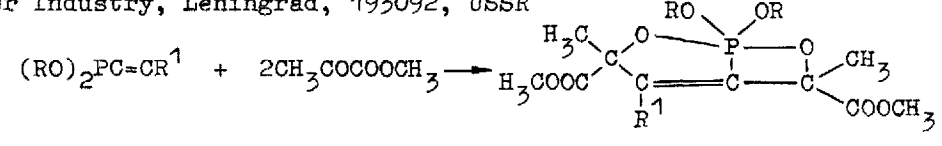
The regio and stereo chemistry of the ring enlargement of β-hydroxyalkyl methylselenides derived from cyclic ketones is disclosed and sheds some light on the intimate mechanism of the rearrangement.

Tetrahedron Lett.30,577(1989)

SUBSTITUTED 1-PHOSPHABICYCLO[3.2.0]HEPT-4-ENES

Ju.G.Trishin [b], I.V.Konovalova [a], R.N.Burangulova [b], L.A.Burnaeva [a], V.N.Chistokletov [b], A.N.Pudovik [a]

a)V.I.Ul'yanov-Lenin Kazan State University, Department of Chemistry, Kazan, 420008, USSR b)Leningrad Technology Institute for the Pulp and Paper Industry, Leningrad, 193092, USSR



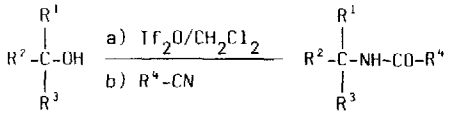
Tetrahedron Lett.30,581(1989)

AN IMPROVED MODIFICATION OF *RITTER REACTION*

A. García Martínez*, R. Martínez Alvarez, E. Teso Vilar, A. García Fraile, Dpto. Química Orgánica, Fac. Químicas, U.C.M., E-28040 Madrid, Spain.

M. Hanack, L.R. Subramanian, Institut für Organische Chemie der Universität, D-7400 Tübingen 1, Federal Republic Germany.

Amides can be obtained (50-98%) by reaction of alcohols with triflic anhydride in presence of an excess of nitrile



Tetrahedron Lett.30,583(1989)

ENZYMATIC COUPLING OF TWO D-AMINO ACID RESIDUES IN AQUEOUS MEDIA

Björn Ekberg, Christer Lindbladh, Maria Kempe and Klaus Mosbach*
Department of Pure and Applied Biochemistry, University of Lund, P.O. Box 124, 221 00 Lund, Sweden

The formation of a D-Ala-D-Ala containing peptide in aqueous solution catalysed by muramoylpentapeptide carboxypeptidase, is described

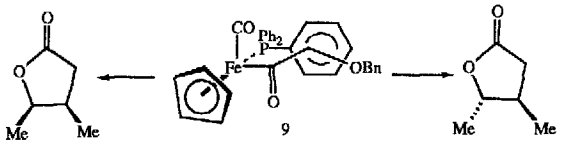
Ac-L-Lys(Ac)-D-Ala-D-Lac-OH + H-D-Ala-OMe ⟶ Ac-L-Lys(Ac)-D-Ala_2-OMe + H-D-Lac-OH

Tetrahedron Lett.30,587(1989)

Chiral recognition in the reaction of the enolate derived from $[(\eta^5C_5H_5)Fe(CO)(PPh_3)$-$COCH_2OCH_2Ph]$ with *trans* -and *cis*-2,3-epoxybutane: Application to the stereoselective synthesis of *cis*- and *trans*-βγ-disubstituted-γ-lactones.

Stephen G. Davies[a]*, David Middlemiss[b], Alan Naylor[b] and Martin Wills[a].
[a]Dyson Perrins Laboratory, South Parks Road, Oxford, U.K., OX1 3QY.
[b]Glaxo Group Research, Ware, Herts, SG12 0DJ, U.K.

The reaction between the enolate derived from 9 and *cis*- *and trans*-2,3-epoxybutane proceeds with a high degree of chiral recognition between the reagents (10:1) to give products which may be converted to β,γ-dimethyl -γ-lactones possessing *trans*- or *cis*- stereochemistry.

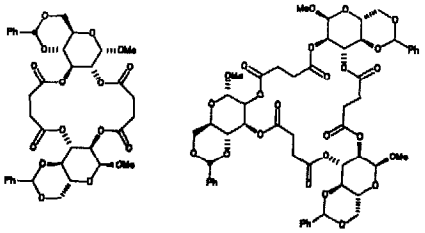


Tetrahedron Lett.30,591(1989)

MACROCYCLISATION: THE TIN DIRECTED REACTION OF A CARBOHYDRATE DERIVATIVE WITH SUCCINYL CHLORIDE

Mathys M. Basson, Martin W. Bredenkamp and Cedric W. Holzapfel*, Department of Chemistry, Rand Afrikaans University, P.O. Box 524, JOHANNESBURG, South Africa

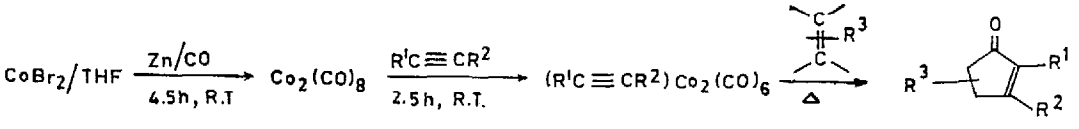
The preparation and characterisation of two tetra-, a hexa- and an octalactone is described. For example:



Tetrahedron Lett.30,595(1989)

A Simple Convenient Synthesis of Alkyne-$Co_2(CO)_6$ Complexes and their utilization in the Pauson-Khand Cyclopentenone Synthesis

A. Devasagayaraj and M. Periasamy*
School of Chemistry, University of Hyderabad, Central University P.O., Hyderabad 500 134, India.



Tetrahedron Lett.30,597(1989)

HIGH YIELD PREPARATION OF BORONIC ESTERS OF
1,2-DIOLS WITH LITHIUM TRIALKYLBOROHYDRIDES

Luigi Garlaschelli,Giorgio Mellerio[§] and Giovanni Vidari *
Dipartimento di Chimica Organica,Università di Pavia,V.le Taramelli 10,27100 PAVIA,Italia
[§]CGS Lab.Spettrometria di Massa,Università di Pavia,V.le Taramelli 10,27100 PAVIA,Italia

Cyclic boronic esters of 1,2- diols are easily prepared by the following new reaction of lithium trialkylborohydrides with 1,2-diols:

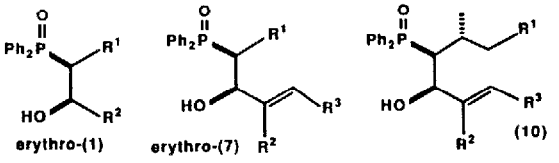
R = Et
$CH(CH_3)CH_2CH_3$
$CH(CH_3)CH(CH_3)_2$

Tetrahedron Lett.30,601(1989)

REVERSED STEREOCHEMICAL CONTROL IN THE REGIOSELECTIVE REDUCTION OF HINDERED DIPHENYLPHOSPHINOYL (Ph_2PO-) KETONES AND ENONES

Jason Elliott, David Hall, and Stuart Warren,
University Chemical Laboratory, Lensfield Road, Cambridge, England CB2 1EW.

Wittig-Horner intermediates (1), (7), and (10) leading to Z-alkenes are formed with high stereoselectivity by reduction of ketones or enones with $NaBH_4/CeCl_3$.

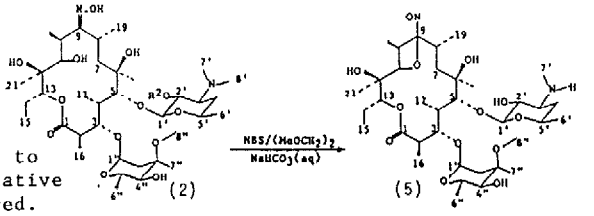


Tetrahedron Lett.30,605(1989)

THE REACTION OF (9-E)-9-DEOXO-9-HYDROXIMINOERYTHROMYCIN A WITH ALKALINE N-BROMOSUCCINIMIDE

Ian K. Hatton* and John W. Tyler
Beecham Pharmaceuticals Research Division,
Brockham Park, Betchworth, Surrey, RH3 7AJ,
England.

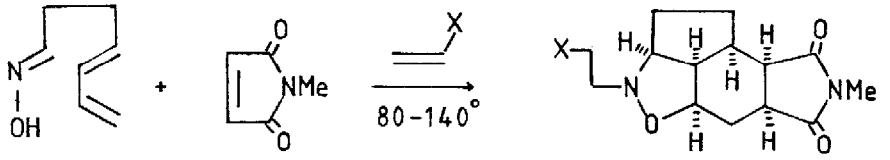
The title oxime (2) reacts with alkaline NBS to give the gem-nitrosooxetan (5) in which oxidative N-demethylation of the amino sugar has occured. Regeneration of the oxime from (5) was achieved with $^nBu_3SnH$.



Tetrahedron Lett.30,609(1989)

CONSECUTIVE DIELS-ALDER- MICHAEL ADDITION - 1,3-DIPOLAR CYCLOADDITION PROCESSES.

Gregory Donegan, Ronald Grigg*, Frances Heaney, Sivagnanasundram Surendrakumar and William J. Warnock
Chemistry Department, Queen's University, Belfast BT9 5AG, Northern Ireland.

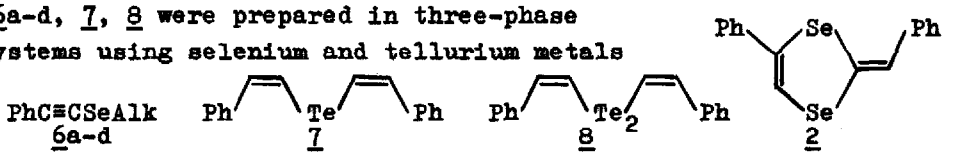


Tetrahedron Lett.30,613(1989)

REACTIONS OF SELENIUM AND TELLURIUM METALS WITH PHENYLACETYLENE IN THREE-PHASE CATALYTICAL SYSTEMS

V. A. Potapov, S. V. Amosova‡ A. S. Kashik, Institute of Organic Chemistry, Siberian Division of the USSR Academy of Sciences, 664033 Irkutsk, USSR

Compounds 2, 6a-d, 7, 8 were prepared in three-phase catalytical systems using selenium and tellurium metals as one phase.

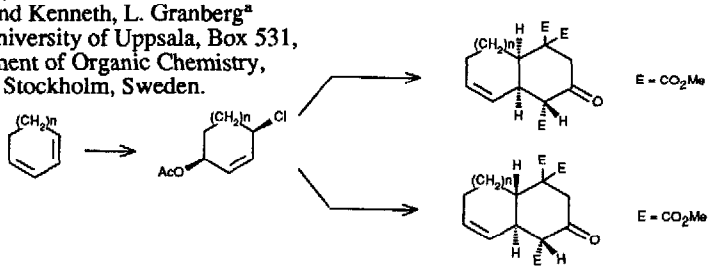


Tetrahedron Lett.30,617(1989)

PALLADIUM-CATALYZED *CIS*- AND *TRANS*-ANNULATIONS TO 1,3-CYCLOHEXADIENE AND 1,3-CYCLOHEPTADIENE.

Jan-E. Bäckvall,[a]* Jan-O. Vågberg,[b] and Kenneth, L. Granberg[a]
[a]Department of Organic Chemistry, University of Uppsala, Box 531, 751 21 Uppsala, Sweden and [b]Department of Organic Chemistry, Royal Institute of Technology, 100 44 Stockholm, Sweden.

Palladium-catalyzed *cis*- and *trans*-annulations to 1,3-cycloalkadienes were obtained via the chloroacetoxylation approach.



Tetrahedron Lett.30,621(1989)

RADICAL MACROCYCLISATIONS IN SYNTHESIS. A NEW APPROACH TO MUKULOL AND MARINE CEMBRANOLIDE LACTONES.

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A synthesis of cembranolides, based on 14-endo trigonal cyclisation, involving the allylic radical (7) is described.