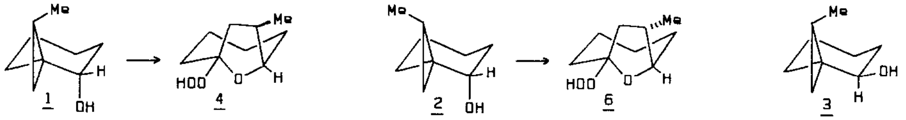
GRAPHICAL ABSTRACTS

Tetrahedron Lett. 27, 5787 (1986)

SOLVOLYTIC HYDROPEROXIDE REARRANGEMENTS III.
Stereoselective Rearrangements of Methylated Cyclopropyl Carbinols.

Robert C. Ronald* and Thomas S. Lillie
Department of Chemistry, Washington State University, Pullman, WA 99164 USA

The solvolysis of 1-3 in acidified THF-90% H_2O_2 through a combination of cyclopropylcarbinyl and Criegee rearrangements constitutes a novel stereoselective synthesis of 3-alkyl-4-hydroxy-cyclooctanone derivatives.

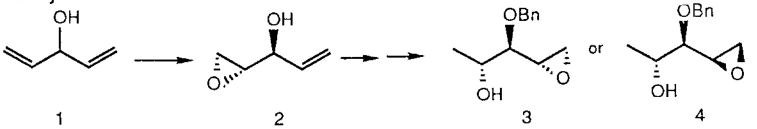


Tetrahedron Lett. 27, 5791 (1986)

ASYMMETRIC EPOXIDATION OF DIVINYL CARBINOL: A NEW APPROACH TO THE SYNTHESIS OF 2,6-DIDEOXYHEXOSE

Robert E. Babine
Infectious and Neoplastic Disease Research Section American Cyanamid Company Medical Reasearch Division Lederle Laboratories Pearl River, New York 10965

Sharpless epoxidation of divinyl carbinol (**1**) gives **2** as the major product. Of special note is the ability to transform **2** selectively into either **3** or **4**. The use of these reactions in the synthesis of homochiral 2,6-dideoxyhexoses is described.

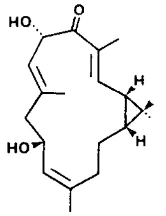


Tetrahedron Lett. 27, 5795 (1986)

AGROSTISTACHIN, A NOVEL MACROCYCLIC DITERPENE FROM AGROSTISTACHYS HOOKERI

Y.-H. Choi, J. Kim, J.M. Pezzuto, A.D. Kinghorn*, and N.R. Farnsworth, Program for Collaborative Research in the Pharmaceutical Sciences, College of Pharmacy, Chicago, IL 60612
and H. Lotter* and H. Wagner, Institut für Pharmazeutische Biologie der Universität München, D-8000 München, W. Germany

The structure of agrostistachin, a novel cytotoxic agent from Agrostistachys hookeri, was determined as I.



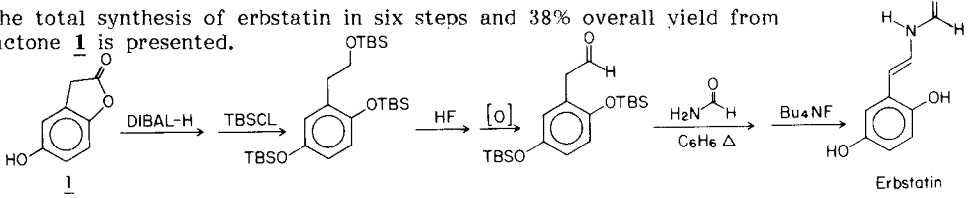
I

Tetrahedron Lett. 27, 5799 (1986)

TOTAL SYNTHESIS OF ERBSTATIN

David G. Hangauer
Merck Sharp & Dohme Research Laboratories, P.O. Box 2000, Rahway, NJ 07065

The total synthesis of erbstatin in six steps and 38% overall yield from lactone 1 is presented.

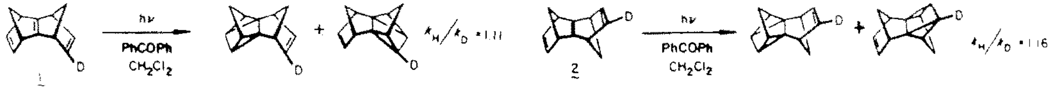


Tetrahedron Lett. 27, 5803 (1986)

KINETIC DEUTERIUM ISOTOPE EFFECTS OPERATIVE DURING TRIPLET-SENSITIZED [2+2] PHOTOCYCLIZATION OF syn- AND anti-SESQUINORBORNATRIENES

Leo A. Paquette,* Hermann Künzer, and Liladhar Waykole
Department of Chemistry, The Ohio State University, Columbus, Ohio 43210 USA

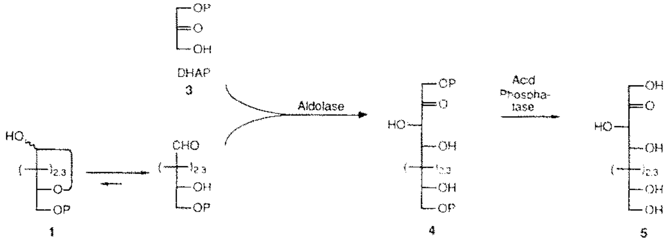
Product distributions in the triplet-sensitized photorearrangements of 1 and 2 are shown to be contrary to ground state expectations.



Tetrahedron Lett. 27, 5807 (1986)

ADLOLASE-CATALYZED SYNTHESIS OF COMPLEX C_8 AND C_9 MONOSACCHARIDES

Mark D. Bednarski, Herbert J. Waldmann,
and George M. Whitesides*
Department of Chemistry
Harvard University
Cambridge, MA, 02138



Tetrahedron Lett. 27, 5811 (1986)

REGIOSPECIFIC SYNTHESIS OF α-ARYLSULFONOXY KETONES FROM KETONE DERIVATIVES

Robert V, Hoffman* and C. Sean Carr
Department of Chemistry, New Mexico State University, Las Cruces, NM 88003

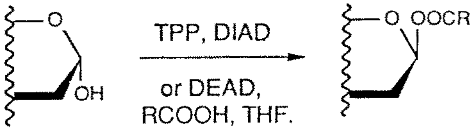
Isomeric enol ester, enamine, and silyl enol ether derivatives of ketones are converted regiospecifically to α-arylsulfonoxy ketones.

Tetrahedron Lett. 27, 5813 (1986)

AN EFFICIENT SYNTHESIS OF GLYCOSYL ESTERS EXPLOITING THE MITSUNOBU REACTION.

Amos B. Smith III*, Karl J. Hale and Ralph A. Rivero.
Department of Chemistry, The Laboratory for Research on the Structure of Matter and The Monell Chemical Senses Center, University of Pennsylvania, Philadelphia, Pennsylvania 19104.

The anomeric hydroxyl group of pyranose hemiacetals can be esterified with inversion of configuration using the Mitsunobu protocol.

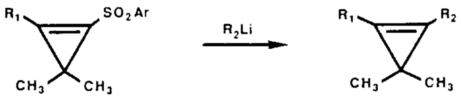


Tetrahedron Lett. 27, 5817 (1986)

NUCLEOPHILIC SUBSTITUTION REACTIONS OF 1-SULFONYL SUBSTITUTED CYCLOPROPENES WITH ALKYL LITHIUM REAGENTS

Albert Padwa* and M. Woods Wannamaker
Department of Chemistry, Emory University, Atlanta, GA 30322 USA

Sulfonyl substituted cyclopropenes react with a variety of alkyl lithium reagents to give disubstituted cyclopropenes in good yield.

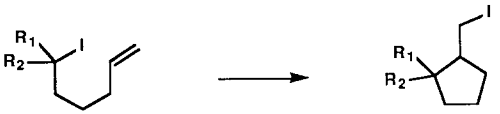


Tetrahedron Lett. 27, 5821 (1986)

ATOM TRANSFER CYCLIZATION OF SIMPLE HEXENYL IODIDES. A CAUTION ON THE USE OF ALKENYL IODIDES AS PROBES FOR THE DETECTION OF SINGLE ELECTRON TRANSFER PROCESSES

Dennis P. Curran*[1] and Dooseop Kim, Department of Chemistry, University of Pittsburgh, Pittsburgh, PA 15260

The trialkyltin initiated isomerization of 1-iodo-5-hexene to (iodomethyl)cyclopentane is reported. Rapid and reversible iodine atom transfer between alkyl radicals is the key chain transfer step. The results suggest an important caveat in the use of hexenyl iodides as free radical probes: a good mechanism exists whereby the yield of rearranged products may be much greater than the amount of radicals produced by the reaction under study!

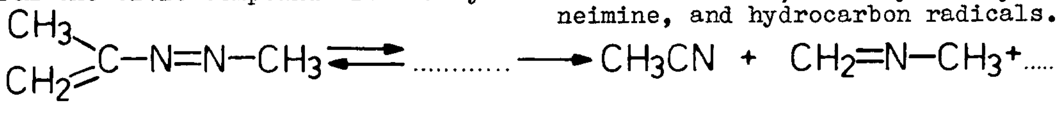


Tetrahedron Lett. 27, 5825 (1986)

MATRIX ISOLATION AND IR SPECTROSCOPIC STUDY OF PYROLYSIS PRODUCTS OF 2-METHYL-3,4-DIAZAPENTA-1,3-DIENE. CLEAVAGE OF N=N-BOND IN UNSATURATED AZO COMPOUNDS.

U. Ziegler, G. Zimmermann, B. Ondruschka, V.V. Volkova, L.E. Gusel'nikov, V.I. Smirnov, N.S. Nametkin

From the title compound are mainly formed acetonitrile, N-methyl methyleneimine, and hydrocarbon radicals.

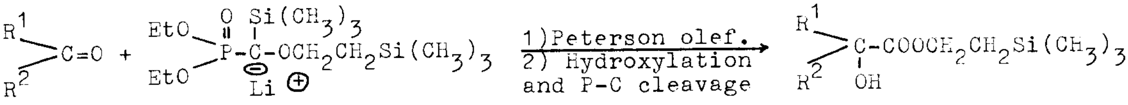


$$\begin{matrix}\mathrm{CH_3}\\ \mathrm{CH_2}{=}\end{matrix}\!>\!\mathrm{C{-}N{=}N{-}CH_3} \rightleftharpoons \cdots\cdots \longrightarrow \mathrm{CH_3CN} + \mathrm{CH_2{=}N{-}CH_3} + \cdots$$

Tetrahedron Lett. 27, 5829 (1986)

A NEW PROCEDURE FOR HOMOLOGATION OF CARBONYL COMPOUNDS TO α-HYDROXY-CARBOXYLIC ESTERS BY MEANS OF DIETHYL-[TRIMETHYLSILYLETHOXYMETHYL]PHOSPHONATE

Josef Binder and Erich Zbiral*
Institut für Organ.Chemie d.Univ.Wien, A-1090 Wien, Währinger Straße 38, Austria



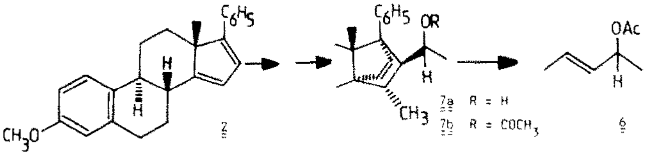
$$\begin{matrix}R^1\\ R^2\end{matrix}\!>\!C{=}O + \begin{matrix}EtO\\ EtO\end{matrix}\!>\!\overset{O}{\overset{\|}{P}}{-}\underset{\ominus\ \mathrm{Li}^{\oplus}}{\overset{Si(CH_3)_3}{C}}{-}OCH_2CH_2Si(CH_3)_3 \xrightarrow[\text{2) Hydroxylation and P-C cleavage}]{\text{1) Peterson olef.}} \begin{matrix}R^1\\ R^2\end{matrix}\!>\!\underset{OH}{C}{-}COOCH_2CH_2Si(CH_3)_3$$

Tetrahedron Lett. 27, 5833 (1986)

DIENES AS CHIRAL TEMPLATES

Dietmar Schomburg[+], Marion Thielmann[++], and
Ekkehard Winterfeldt[++*]; + GBF Gesellschaft für Biotechnologische Forschung mbH, Mascheroder Weg 1, D-3300 Braunschweig-Stöckheim. ++ Institut für Organische Chemie der Universität Hannover, Schneiderberg 1 B, D-3000 Hannover 1

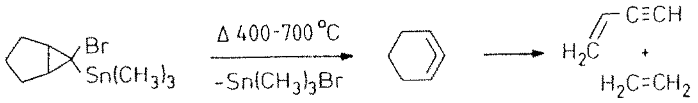
Stereoselective and regioselective cycloadditions to the chiral cyclopentadiene 2 are reported. Diastereoselective transformations of the adducts followed by a thermal retro reaction yields pure enantiomers.



Tetrahedron Lett. 27, 5835 (1986)

6-Bromo-6-(trimethylstannyl)bicyclo[3.1.0]hexane as a Thermal Precursor of 1,2,-Cyclohexadiene

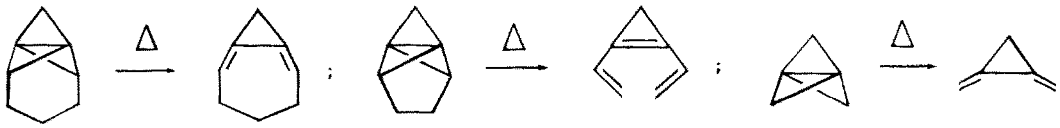
Andreas Runge und Wolfram Sander*
Organisch-Chemisches Institut der Universität, D-6900 Heidelberg



Tetrahedron Lett. 27, 5839 (1986)

THERMAL REARRANGEMENT OF SOME [1.1.1]PROPELLANES

Johannes Belzner and Günter Szeimies
Institut für Organische Chemie der Universität München, Karlstr. 23, D-8000 München 2



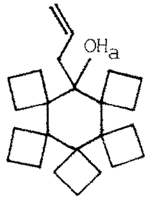
Tetrahedron Lett. 27, 5843 (1986)

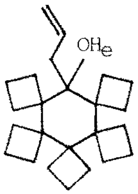
CONFORMATIONAL ISOMERISM IN A FULLY SUBSTITUTED CYCLOHEXANE

Detlef Wehle and Lutz Fitjer*
Institut für Organische Chemie der Universität Göttingen, Tammannstr. 2, D-3400 Göttingen, Germany

Conformational isomerism has been observed with 2a and 2b. Due to the highest barriers of inversion known so far [$\Delta G^{\ddagger}_{413}$ = 134.9 kJ/mol (2a) and 136.9 kJ/mol (2b)] both conformers are indefinitely stable at room temperature in solution.

2a





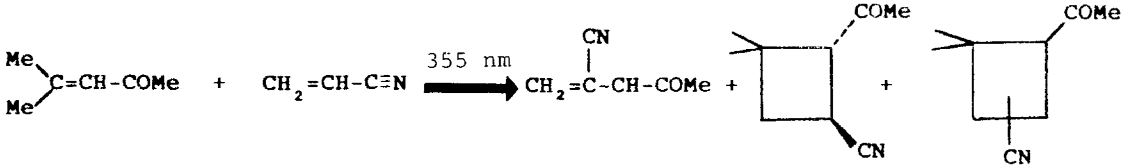
2b

Tetrahedron Lett. 27,5847(1986)

LASER INDUCED SYNTHESIS:
CONDENSATION OF ACRYLONITRILE ON MESITYL OXIDE

F.Lemaire, R.Stringat, R.Fellous & C.Bertaïna
Laboratoire d'Optique Atomique et Moléculaire
Université de Nice, Parc Valrose 06034 NICE Cedex France

This photoaddition is realized with high quantum yield (15%) using the second harmonic of a pulsed Nd-YAG laser (intensity= 9 MW/cm²)

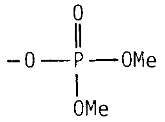


Tetrahedron Lett. 27,5851(1986)

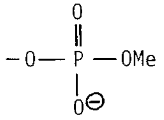
THE TAFT σ_I CONSTANTS OF SOME PHOSPHORYLOXY SUBSTITUENTS.

Marc Julia and Jean-Maurice Mallet
Laboratoire de Chimie, Ecole Normale Supérieure, 24, rue Lhomond, 75231 PARIS CEDEX 05 - FRANCE

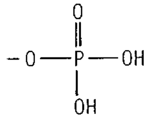
The Taft constants of the following groups were determined by ^{19}F NMR spectroscopy.



$-O-P(=O)(OMe)-OMe$



$-O-P(=O)(O^{\ominus})-OMe$



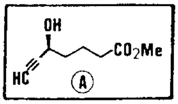
$-O-P(=O)(OH)-OH$

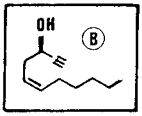
Tetrahedron Lett. 27,5853(1986)

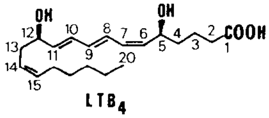
Optically Active Propargylic Alcohols from D-Xylose. Useful Precursors for LTB_4 Synthesis

P. Pianetti, P. Rollin and J.R. Pougny*
Laboratoire de Biochimie Structurale, UA 499, UFR de Sciences, 45067 Orléans Cédex 2, France

*An efficient synthesis of the optically active propargylic alcohols **A** and **B**, chiral precursors for the LTB_4 synthesis, has been achieved. The main transformation uses the homologation of the α-acyloxy aldehyde to the corresponding α-acyloxy alcyne.*







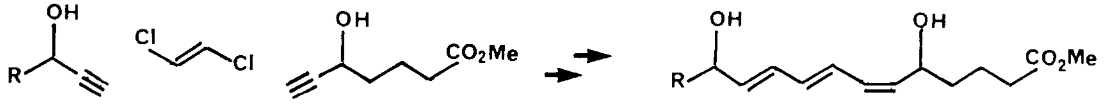
LTB_4

Tetrahedron Lett. 27,5857(1986)

STEREOSELECTIVE SYNTHESIS OF POLYENIC ALCOHOLS.
A NEW ROUTE TO THE LEUKOTRIENES B.

D. Guillerm and G. Linstrumelle
Laboratoire de Chimie, Ecole Normale Supérieure, 24 Rue Lhomond, 75231 Paris Cedex 05,France

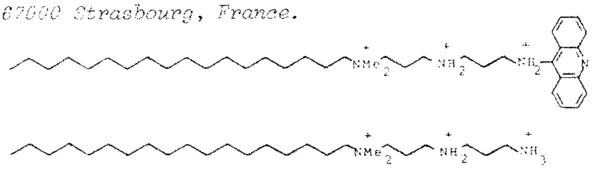
A stereoselective synthesis of 14,15 dihydro LTB_4 and analogues is described.

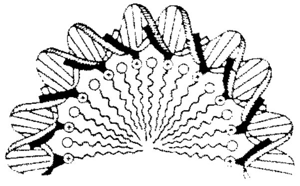


Tetrahedron Lett. 27,5861(1986)

DNA STRONGLY BINDS TO MICELLES AND VESICLES CONTAINING LIPOLYAMINES OR LIPOINTERCALANTS.

Jean-Paul Behr
Institut Le Bel, UA 422 CNRS, Université Louis Pasteur, 4, rue Blaise Pascal,
67000 Strasbourg, France.

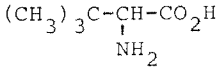




Tetrahedron Lett. 27,5865(1986)

SIMPLE OPTICAL RESOLUTION OF TERLEUCINE

Joëlle Viret, Heiko Patzelt and André Collet
Chimie des Interactions Moléculaires,
Collège de France, 75005 Paris, France



$$(CH_3)_3C\text{-}\underset{NH_2}{\underset{|}{CH}}\text{-}CO_2H$$

Terleucine

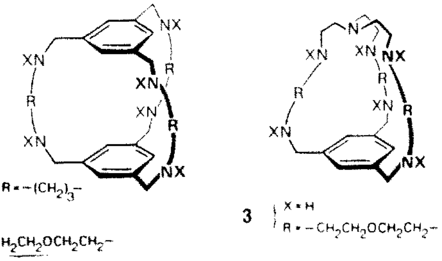
Terleucine can be easily resolved into L- and D-enantiomers by crystallization of its diastereoisomeric 10-camphorsulfonate salts.

Tetrahedron Lett. 27,5869(1986)

ANION COORDINATION CHEMISTRY - SYNTHESIS AND ANION BINDING FEATURES OF CYCLOPHANE TYPE MACROBICYCLIC ANION RECEPTOR MOLECULES.

*Dennis Heyer and Jean-Marie Lehn**
Institut Le Bel, UA 422 CNRS,
4 rue Blaise Pascal,
67000 Strasbourg, France.

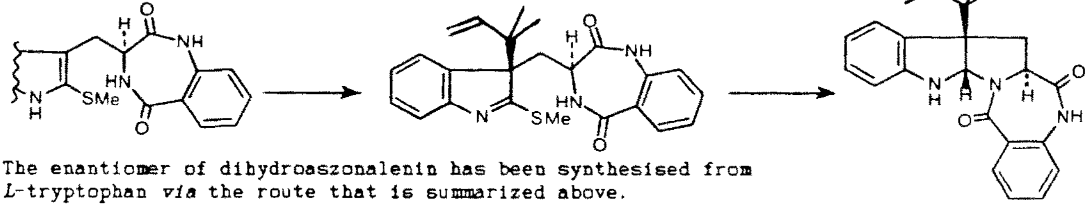
The three newly synthesized macrocyclic polyamines 1-3 strongly bind a variety of anions when protonated.



Tetrahedron Lett. 27,5873(1986)

THE TOTAL SYNTHESIS OF (-)-DIHYDROASZONALENIN AND THE STEREOCHEMISTRY OF ASZONALENIN

B. Bhat and D. M. Harrison, Dept. of Chemistry, University of Ulster.



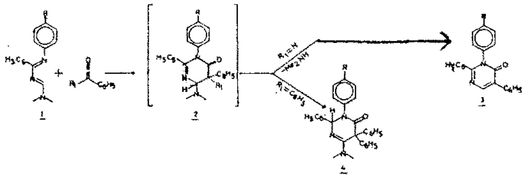
The enantiomer of dihydroaszonalenin has been synthesised from *L*-tryptophan *via* the route that is summarized above.

Tetrahedron Lett. 27, 5875 (1986)

DIELS-ALDER CYCLOADDITION REACTION OF 1,3-DIAZABUTADIENES WITH KETENES

Sujit Nandy Mazumdar, Ibrahim Ibnusaud and Mohinder Pal Mahajan*
Department of Chemistry, North-Eastern Hill University, Shillong 793 003
Meghalaya, INDIA.

First report of (4+2) cycloaddition of acyclic 1,3-diazabutadienes with Ketenes.

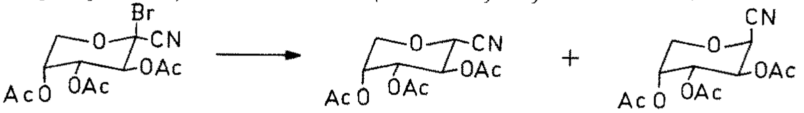


Tetrahedron Lett. 27, 5877 (1986)

PREPARATION OF 1,2-CIS-GLYCOSYL CYANIDES BY THE STEREOSELECTIVE REDUCTION OF ACETYLATED 1-BROMO-D-GLYCOSYL CYANIDES

L. Somsák, Gy. Batta, and I. Farkas
Inst. Org. Chem., L. Kossuth Univ., Debrecen, P.O.B. 20. H-4010, Hungary

Stereoselective reduction of the title compounds gives epimeric mixtures of glycosyl cyanides, which can be separated by crystallisation.

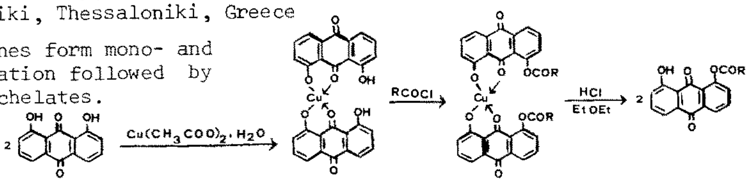


Tetrahedron Lett. 27, 5881 (1986)

NOVEL METHOD FOR SELECTIVE ESTERIFICATION OF POLYHYDROXY-ANTHRAQUINONES

Antonios S. Mellidis and Vassilios P. Papageorgiou*
Laboratory of Organic Chemistry, Department of Chemical Engineering,
University of Thessaloniki, Thessaloniki, Greece

Polyhydroxy-anthraquinones form mono- and diesters via metal chelation followed by acid hydrolysis of the chelates.

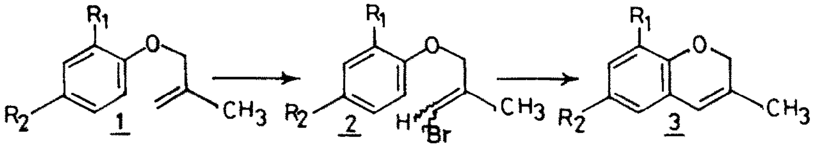


Tetrahedron Lett. 27, 5883 (1986)

A FACILE SYNTHESIS OF 3-METHYL-2H-1-BENZOPYRANS VIA CLAISEN REARRANGEMENT

D.Gopal and K.Rajagopalan*, Department of Organic Chemistry, University of Madras, Guindy Campus, Madras 600025, INDIA.

Several 3-methyl-2H-1-benzopyrans were prepared via Claisen rearrangement using PEG-400 as a solvent in the presence of N,N-diethylaniline.

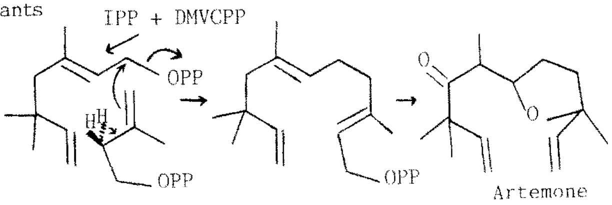


Tetrahedron Lett. 27,5885(1986)

A NOVEL BIOSYNTHESIS OF IRREGULAR SESQUITERPENE ARTEMONE IN *ARTEMISIA PALLENS*

A.AKHILA, P.K.SHARMA and R.S.THAKUR
Central Institute of Medicinal and Aromatic Plants
Lucknow, India 226 016

A novel condensation between IPP and DMVCPP has been reported for the first time within the plant system to biosynthesise artemone, a sesquiterpene.



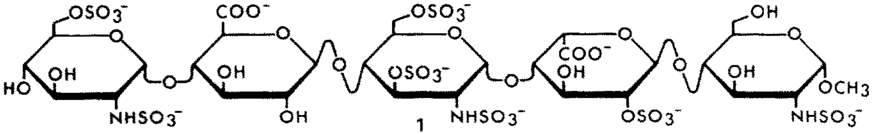
Tetrahedron Lett. 27,5889(1986)

SYNTHESIS OF AN ANTITHROMBIN BINDING HEPARIN-LIKE PENTASACCHARIDE LACKING 6-O SULPHATE AT ITS REDUCING END.

T. Beetz and C.A.A. van Boeckel

Organon Scientific Development Group, P.O. Box 20, 5340 BH Oss, The Netherlands

Synthesis of pentasaccharide 1 of the structure of the antithrombin (AT-III) binding sequence, but lacking the 6-O sulphate group at the reducing end is described.



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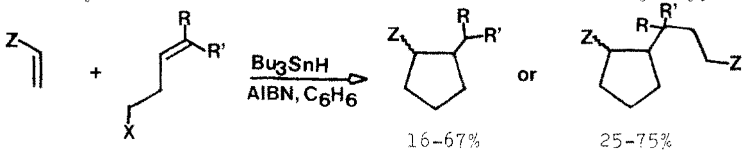
Tetrahedron Lett. 27,5893(1986)

FREE RADICAL ANNULATION OF CYCLOPENTANE RING

Živorad Čeković* and Radomir Saicic
Department of Chemistry, University of Belgrade, P.O. Box 550, 11001 Belgrade, Yugoslavia

Annulation of cyclopentane ring was achieved by combination of intermolecular conjugated homoallyl radical addition and intramolecular 5-hexenyl type radical cyclization



Z = CN, COOEt, COMe, CHO
R and R` = Me, Ph, H
X = Br, I