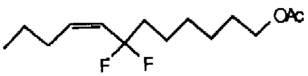
GRAPHICAL ABSTRACTS

Tetrahedron Lett. 30, 3243 (1989)

SYNTHESIS AND PHEROMONAL PROPERTIES OF (Z)-7,7-DIFLUORO-8-DODECENYL ACETATE, A DIFLUORO DERIVATIVE OF THE SEX PHEROMONE OF THE ORIENTAL FRUIT MOTH

Marek Masnyk and Josef Fried*
Department of Chemistry, University of Chicago, Chicago, IL 60637
Wendell Roelofs
NY State Experimental Station, Geneva, NY 14456



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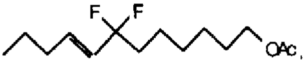


2

A synthesis of the difluoro analog 1 of the pheromone of the oriental fruit moth and its trans-isomer 2 is presented. The cis-isomer 1 possesses activity identical to that of the natural pheromone.

Tetrahedron Lett. 30, 3247 (1989)

CIS-TRANS ISOMERIZATION OF AN α,α-DIFLUOROOLEFIN CATALYZED BY BROMINE

Marek Masnyk and Josef Fried*
Department of Chemistry, The University of Chicago
Chicago, IL 60637

1

2

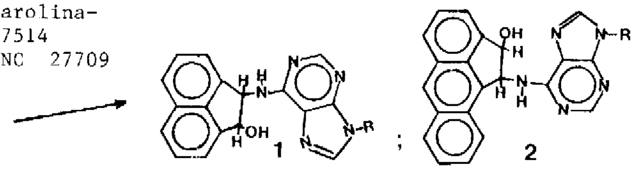
Bromination of 1 with 1M Br_2 in CCl_4 yields threo and erythro dibromides in a 19:1 ratio. 2 gives only the erythro isomer. At 0.04-0.11 M Br_2 1 is isomerized to 2 in high yield. A free bromocarbocation β to the CF_2 group is invoked to explain these results.

Tetrahedron Lett. 30, 3251 (1989)

SYNTHESIS OF N^6-ADENOSINE ADDUCTS EXPECTED FROM CYCLOPENTA-RING ACTIVATION OF ACENAPHTHYLENE AND ACEANTHRYLENE

A.W. Bartczak,[a] R. Sangaiah,[a] D.J. Kelman,[a] G.E. Toney,[b] L.J. Deterding,[b] J. Charles,[a] D. Marbury,[a] and A. Gold[a*]
[a]Department of Environmental Sciences and Engineering, University of N. Carolina-Chapel Hill, Chapel Hill, NC 27514
[b]NIEHS, Research Triangle Park, NC 27709

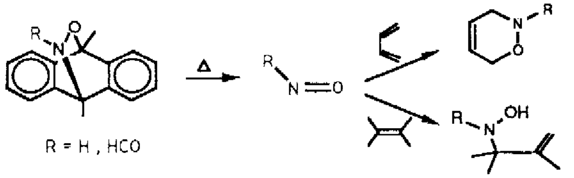
trans cyclopenta amine alcohol +
6-chloropurine riboside



Tetrahedron Lett. 30, 3255 (1989)

DIELS-ALDER AND ENE REACTIONS OF NITROSYL HYDRIDE AND NITROSOFORMALDEHYDE

Harry E. Ensley*and Shivkumar Mahadevan
Department of Chemistry, Tulane University, New Orleans, LA 70118

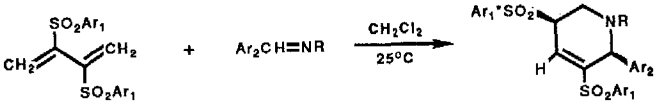


Tetrahedron Lett. 30, 3259 (1989)

THE UNCATALYZED DIELS-ALDER REACTION OF IMINES WITH BIS(PHENYLSULFONYL) SUBSTITUTED DIENES.

Albert Padwa, Brian Harrison and Bryan H. Norman*
Department of Chemistry, Emory University, Atlanta, GA 30322 USA

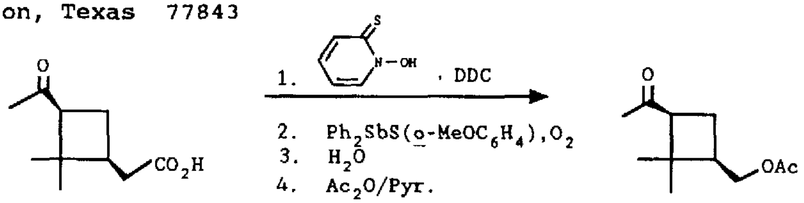
The reaction of 2,3-bis(phenylsulfonyl)-1,3-butadiene with arylimines affords N-alkyl-3,5-diphenylsulfonyl-1,2,5,6-tetrahydropyridines in high yield.



Tetrahedron Lett. 30, 3263 (1989)

RADICAL CHEMISTRY BASED ON (+)-CIS-PINONIC ACID

D.H.R. Barton, Nubar Ozbalik and Martine Schmitt
Texas A&M University, Dept. of Chemistry, College Station, Texas 77843



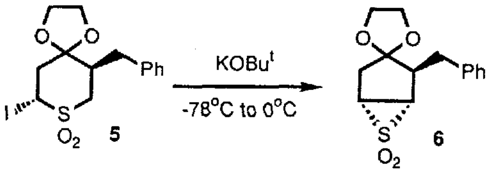
Step 1 72%
Steps 2-4 75%

Tetrahedron Lett. 30, 3267 (1989)

THE FIRST ISOLATION OF AN EPISULPHONE INTERMEDIATE FROM A RAMBERG-BÄCKLUND REACTION

Alan G. Sutherland and Richard J.K. Taylor
School of Chemical Sciences, University of East Anglia, Norwich, NR4 7TJ.

Episulphone 6 was isolated as a crystalline solid in 69% yield from the low temperature Ramberg-Bäcklund reaction of iodo-sulphone 5.

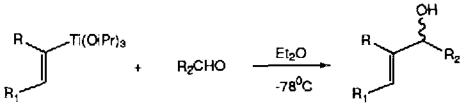


Tetrahedron Lett. 30, 3271 (1989)

STUDIES OF THE STABILITY AND REACTIVITY OF SUBSTITUTED VINYL TITANIUM TRIISOPROPOXIDES

Robert K. Boeckman Jr.,* and Kenneth J. O'Connor
Department of Chemistry, University of Rochester, Rochester, New York 14627

Substituted vinyl titanium triisopropoxides are stable when prepared in Et_2O below ~-60°C and exhibit excellent chemoselectivity, moderate reactivity, and modest diastereoselectivity.

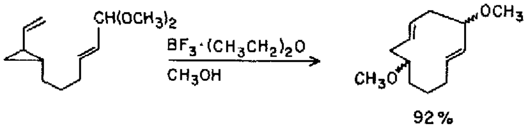


Tetrahedron Lett. 30, 3275 (1989)

THE VINYLCYCLOPROPANE MOIETY AS AN EFFICIENT INTRAMOLECULAR TRAP FOR CARBOCATIONS. A HIGH YIELD PROCESS FOR THE FORMATION OF ELEVEN-MEMBERED CARBOCYCLIC STRUCTURES.

Paul G. Gassman and Richard J. Riehle, Department of Chemistry, University of Minnesota, Minneapolis, Minnesota 55455 USA.

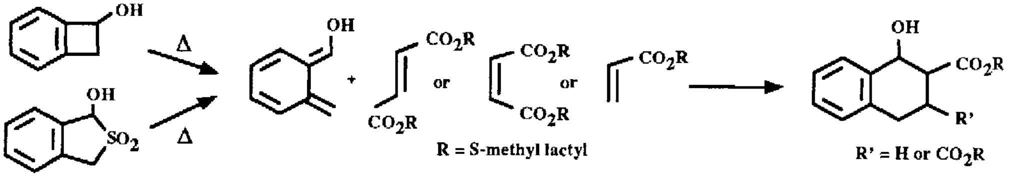
A vinylcyclopropane carbocation trap and a relatively long-lived alkoxyl-substituted allyl cation make an excellent reactive pair for the formation of 11-membered carbocyclic rings in high yield.



Tetrahedron Lett. 30, 3279 (1989)

THERMAL GENERATION OF ALPHA-HYDROXY-ORTHOQUINODIMETHANE AND REACTION WITH THE FUMARATE, MALEATE AND ACRYLATE OF S-METHYL LACTATE

J. L. Charlton, Kevin Koh and Guy L. Plourde. Department of Chemistry, University of Manitoba, Winnipeg, CANADA R3T 2N2

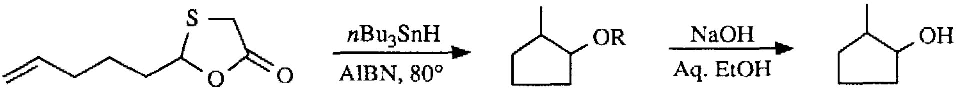


Tetrahedron Lett. 30, 3283 (1989)

CYCLOPENTANE SYNTHESIS AND ANNULATION II: RADICAL CYCLIZATIONS OF OXATHIOLANONES

Veejendra K. Yadav and Alex G. Fallis*
The Ottawa-Carleton Chemistry Institute, Department of Chemistry, University of Ottawa, Ottawa, Ont., Canada K1N 6N5

Radical cyclization of unsaturated 1,3-oxathiolan-5-ones affords cyclopentanols.

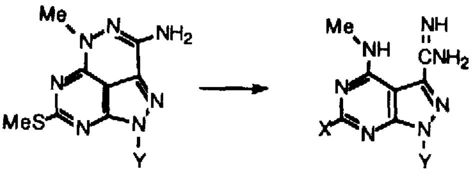


Tetrahedron Lett. 30, 3287 (1989)

AN UNUSUAL REDUCTIVE RING-OPENING OF THE 1,2,3,5,6,7-HEXAAZAACENAPHTHYLENE RING SYSTEM

Andrew M. Kawasaki and Leroy B. Townsend*
Department of Medicinal Chemistry, College of Pharmacy,
Department of Chemistry, College of Literature, Sciences and Arts,
The University of Michigan, Ann Arbor, MI 48109-1065

Studies on an unexpected reaction involving a reductive cleavage of the pyridazine moiety of a tricyclic heterocycle are described. Structure assignments for the products obtained from the reductive clevage were made using physicochemical methods.

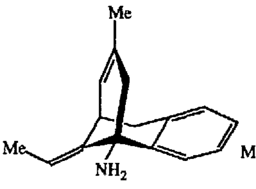


Tetrahedron Lett. 30, 3291 (1989)

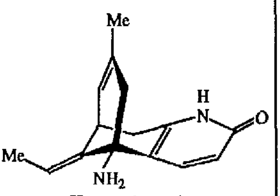
SYNTHESIS OF THE BENZENOID ANALOGUE OF THE CHINESE NOOTROPIC AGENT HUPERZINE A

Yan Xia, E. Rajarathnam Reddy, and Alan P. Kozikowski*
Departments of Chemistry and Behavioral
Neuroscience, University of Pittsburgh,
Chevron Science Center, Pittsburgh, PA 15260

A short synthesis of the benzene isostere of huperzine A, an anticholinesterase of potential use in the treatment of Alzheimer's disease, is described starting from β-tetralone.



Huperzine Analogue



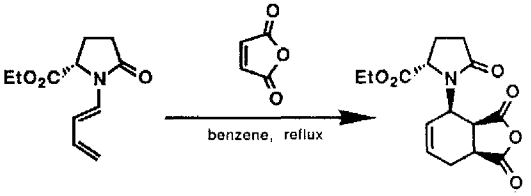
Huperzine A

Tetrahedron Lett. 30, 3295 (1989)

ETHYL N-DIENYL PYROGLUTAMATES: NOVEL ASYMMETRIC DIENES

Royce M. Menezes, Charles A. Zezza, Jennline Sheu and Michael B. Smith*
Department of Chemistry, University of Connecticut, Storrs, CT. 06269

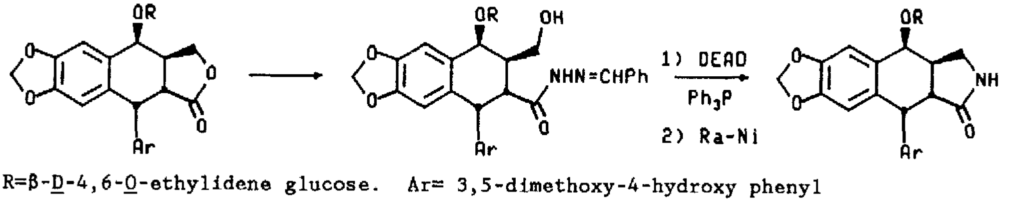
S-Ethyl pyroglutamate is converted to the *N*-dienyl lactam by reaction with α, β-unsaturated aldehydes. Reaction of this new chiral diene with dienophiles gave cycloadducts with excellent diastereoface selection.



Tetrahedron Lett. 30, 3299 (1989)

SYNTHESIS OF ETOPOSIDE LACTAM VIA A MITSUNOBU REACTION SEQUENCE

J.F.Kadow*, D.M.Vyas, and T.W.Doyle, Bristol-Myers Co., Wallingford, CT. 06492-7660



R=β-D-4,6-O-ethylidene glucose. Ar= 3,5-dimethoxy-4-hydroxy phenyl

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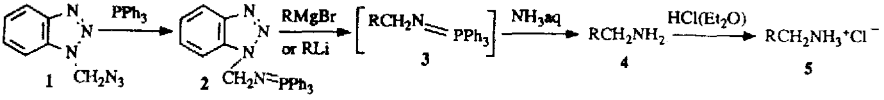
Tetrahedron Lett. 30, 3303 (1989)

N-Triphenylphosphorylidene-1-(benzotriazol-1-y) methylamine, a Novel Synthon Equivalent to $^+CH_2NH_2$: The Preparation of Primary Amines.

Alan R. Katritzky, Jinlong Jiang and Laszlo Urogdi
Department of Chemistry, University of Florida, Gainesville, FL 32601. USA

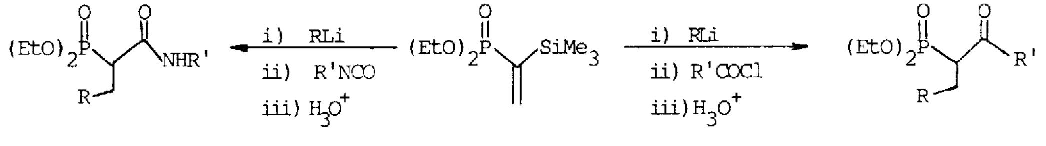
Primary amines are readily prepared by reaction of the title compound with organolithiums or Grignard reagents.



Tetrahedron Lett. 30,3307(1989)

NEW SYNTHESIS OF β-KETO PHOSPHONATES

Seongkuk Hong, Kyeongho Chang, Bonchul Ku, Dong Young Oh*
Department of Chemistry, Korea Advanced Institute of Science & Technology Seoul 130-650, Korea



7a-d (70-85%)

1

5a-e (73-80%)

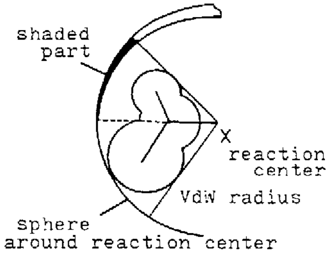
Tetrahedron Lett. 30,3309(1989)

A NEW METHOD FOR EVALUATING OF THE STERIC HINDRANCE BY SUBSTITUENT

Tamiki KOMATSUZAKI, Kazuhisa SAKAKIBARA and Minoru HIROTA
Department of Synthetic Chemistry, Division of Materials Science and Chemical Engineering , Faculty of Engineering, Yokohama National University, Hodogaya-ku, Yokohama 240

New steric substituent parameter, Ω_s, evaluating the steric hindrance around the reaction center was defined on the basis of molecular mechanics.

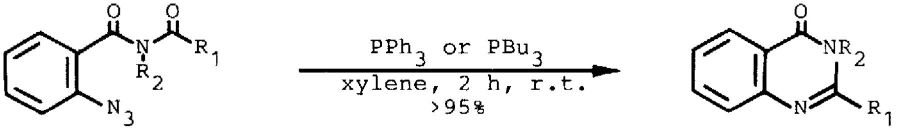
$$\Omega_s \equiv \frac{\text{area of shaded part}}{\text{total surface area of the sphere}}$$



Tetrahedron Lett. 30,3313(1989)

A NEW ROUTE TO QUINAZOLINONES VIA INTRAMOLECULAR AZA-WITTIG REACTION

Hisato Takeuchi and Shoji Eguchi
Institute of Applied Organic Chemistry, Faculty of Engineering, Nagoya University, Furo-cho, Chikusa-ku, Nagoya 464-01, Japan

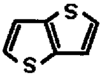


Tetrahedron Lett. 30,3315(1989)

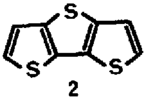
SYNTHESIS OF TETRATHIENO-ACENE AND PENTA-THIENO-ACENE: UV-SPECTRAL TREND IN A HOMOLOGOUS SERIES OF THIENO-ACENES

Yasuhiro Mazaki and Keiji Kobayashi*
Department of Chemistry, College of Arts and Sciences,
The University of Tokyo, Komaba, Meguro-ku, Tokyo 153 Japan

The title compounds **3** and **4** were synthesized.



1



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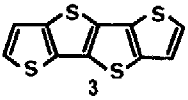
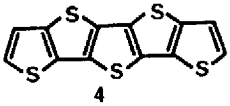


3

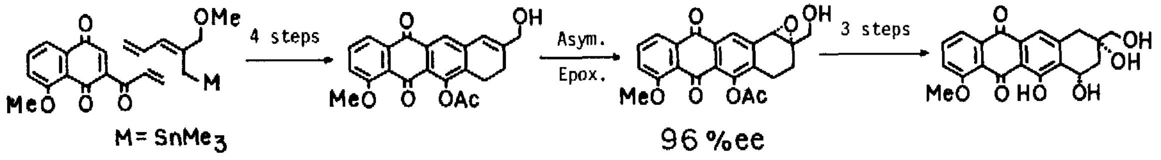


4

Tetrahedron Lett. 30, 3319 (1989)

AN EFFICIENT ASYMMETRIC SYNTHESIS OF 11-DEOXYANTHRACYCLINONE

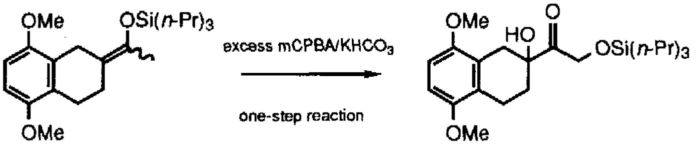
Yoshinori Naruta*, Yutaka Nishigaichi, and Kazuhiro Maruyama*
Department of Chemistry, Faculty of Science, Kyoto University, Kyoto 606, Japan



Tetrahedron Lett. 30, 3323 (1989)

DOUBLE HYDROXYLATION OF ENOL SILYL ETHERS. A SINGLE-STEP SYNTHESIS OF α,α'-DIHYDROXY KETONES

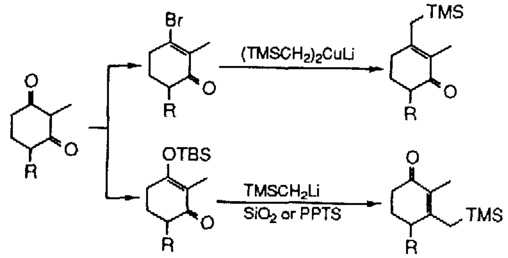
Yoshiaki Horiguchi, Eiichi Nakamura,* and Isao Kuwajima *
Department of chemistry
Tokyo Institute of Technology
Meguro, Tokyo, Japan



Tetrahedron Lett. 30, 3327 (1989)

REGIOSELECTIVE SYNTHESIS OF TWO TYPES OF CYCLIC 3-(TRIMETHYLSILYLMETHYL)ENONES

Yoshiaki Horiguchi, Yasuhiro Kataoka, and Isao Kuwajima*
Department of Chemistry, Tokyo Institute of Technology,
Meguro, Tokyo 152, Japan

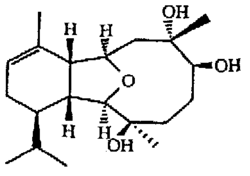


Tetrahedron Lett. 30, 3331 (1989)

A NEW EUNICELLIN-BASED DITERPENE FROM AN OKINAWAN SOFT CORAL, *CLADIELLA* SP.

Y. Uchio,*[a] M. Nakatani,[b] T. Hase,[b] M. Kodama,[c] S. Usui,[d] and Y. Fukazawa*[d]
a - School of Allied Medical Sciences, Kagoshima University, Usuki-cho, Kagoshima 890, Japan
b - Department of Chemistry, Kagoshima University, Kagoshima 890, Japan
c - Faculty of Pharmaceutical Sciences, Tokushima-bunri University, Tokushima 770, Japan
d - Department of Chemistry, Hiroshima University, Hiroshima 730, Japan

The structure of a metabolite (1) from a *Cladiella* sp. was determined by spectroscopic and chemical evidence, and confirmed by X-ray crystallography.

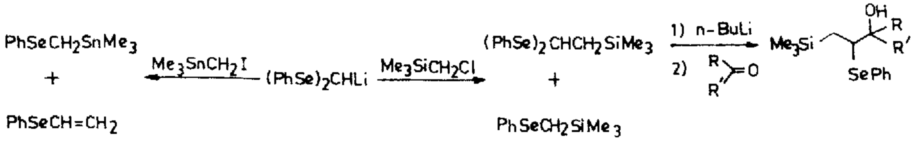


1

Tetrahedron Lett. 30, 3333 (1989)

THE REACTIONS OF LITHIOBISPHENYLSELENOMETHANE WITH CHLOROMETHYLTRIMETHYLSILANE AND IODOMETHYLTRIMETHYLSTANNANE : NOVEL 1,1 - AND 1,2- ELIMINATION REACTIONS IN ORGANOSELENIUM/ ORGANOTIN CHEMISTRY

Tarun K. Sarkar * and Tushar K. Satapathi, Department of Chemistry , Indian Institute of Technology, Kharagpur 721302, India.

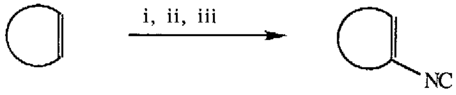


Tetrahedron Lett. 30, 3335 (1989)

A FACILE ROUTE TO VINYL ISONITRILES

Jack E. Baldwin* and Yasuchika Yamaguchi
The Dyson Perrins Laboratory, University of Oxford, South Parks Road, Oxford, OX1 3QY, U.K.

A new method for the synthesis of vinyl isonitriles from olefins is described, which is based on the iodo isocyanation reaction of olefins followed by the conversion to β-iodo isocyanides and subsequent β-elimination reaction.



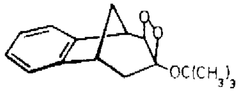
i) AgOCN, I_2 ii), Cl_3SiH, diisopropylethylamine iii) t-BuOK, THF.

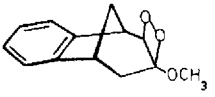
Tetrahedron Lett. 30, 3339 (1989)

A NOVEL DIOXETANE-HYDROPEROXIDE REARRANGEMENT: PHOTO-OXYGENATION OF 3-TERT-BUTOXY (AND METHOXY)-6,7-BENZOBICYCLO [3.2.1] OCTA-2,6-DIENES

Metin Balcı, Yavuz Taşkesenligil and Mansur Harmandar
Atatürk University, Department of Chemistry, Faculty of Sciences, Erzurum/Turkey

The dioxetanes 1 and 2 have been synthesized by photo-oxygenation of the corresponding enol ethers. Upon heating 1 rearranged to the unexpected hydroperoxide where 2 decomposed to the expected aldehyde-ester. The striking behaviour of these dioxetanes have been discussed in terms of steric factors.





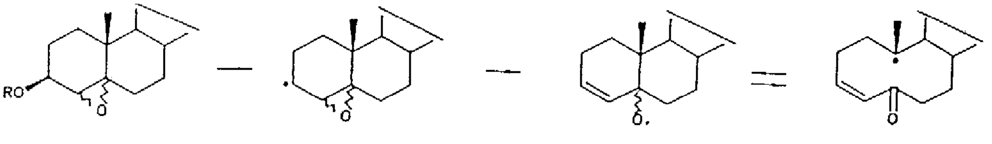
2

Tetrahedron Lett. 30, 3343 (1989)

REVERSIBLE CLEAVAGE OF 5-CHOLEST-3-ENOXYL RADICALS: ADDITION OF ALKYL RADICALS TO KETONES

W. Russell Bowman*, Brian A. Marples*, and Naveed A. Zaidi
Department of Chemistry, University of Technology, Loughborough, Leics.

5-Cholest-3-enoxyl radicals underwent reversible cleavage of the C5-C10 bond.

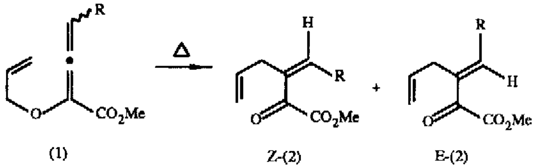


Tetrahedron Lett. 30, 3345 (1989)

SYNTHESIS AND CLAISEN REARRANGEMENT OF 1-ALLYLOXY-1-CARBOMETHOXY ALLENES.

M. J. Sleeman and G. V. Meehan., Department of Chemistry and Biochemistry, James Cook University of North Queensland, Townsville, 4814. Australia.

A number of allyl allenyl ethers (1) have been synthesised and shown to undergo the Claisen rearrangement. The kinetics of rearrangement of (1b) together with stereochemical data obtained, is consistent with a concerted mechanism for these rearrangements.



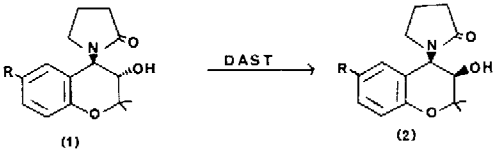
(a) R=Ph, (b) R=^{t}Bu, (c) R=Me, (e) R=H.

Tetrahedron Lett. 30, 3349 (1989)

AN UNUSUAL HYDROXYL INVERSION MEDIATED BY DAST

Catherine S V Houge-Frydrych and Ivan L Pinto*
Beecham Pharmaceuticals Biosciences Research Centre, Great Burgh,
Epsom, Surrey, KT18 5XQ

Trans - 4 - amido - 3 - hydroxy - benzopyrans (1) were shown to undergo epimerisation to the cis isomer (2) on treatment with DAST.



R=CN, CHO

Tetrahedron Lett. 30, 3351 (1989)

ACHILLEOL A: A NEW MONOCYCLIC TRITERPENE FROM *ACHILLEA ODORATA L.*

A. F. Barrero, E. J. Alvarez-Manzaneda R. and R. Alvarez-Manzaneda R.
Depertament of Organic Chemistry. Faculty of Sciences.
University of Granada, Granada, Spain.

A new triterpene **1a** from *Achillea odorata L.* has been isolated and its structure established. This compound shows the first example of monocyclic triterpene skeleton.

1a R= H
1b R= Ac