GRAPHICAL ABSTRACTS

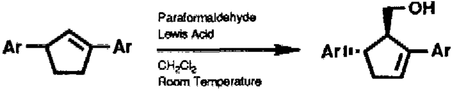
Tetrahedron Lett. 30, 4757 (1989)

LEWIS ACID CATALYZED STEREOSELECTIVE ENE ADDITION OF FORMALDEHYDE TO 1,3-DIARYLCYCLOPENTENES - SYNTHESIS OF TRANS-2,5-DIARYL-2-CYCLOPENTENE-1-METHANOLS

Mahavir Prashad,* John C. Tomesch and Michael J. Shapiro

Sandoz Research Institute, 59 Route 10, P.O. Box 11, East Hanover, NJ 07936, U.S.A.

A stereoselective synthesis of trans-2,5-diaryl-2-cyclopentene-1-methanols via a diethylaluminum chloride (Et_2AlCl) catalyzed ene reaction of formaldehyde with 1,3-diarylcyclopentenes is described.

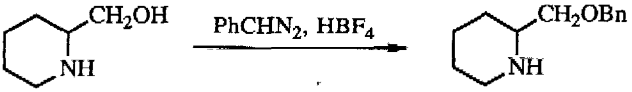


Tetrahedron Lett. 30, 4759 (1989)

SELECTIVE BENZYLATION OF ALCOHOLS AND AMINES UNDER MILD CONDITIONS

Louis J. Liotta and Bruce Ganem*
Department of Chemistry, Baker Laboratory, Cornell University, Ithaca, New York 14853 USA

A new synthesis of benzyl ethers and N-benzylamines is described under nonbasic conditions.

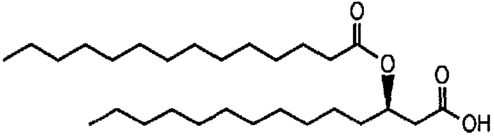


Tetrahedron Lett. 30, 4763 (1989)

ASYMMETRIC SYNTHESIS OF (3R)-ALKANOYLOXYTETRADECANOIC ACIDS-COMPONENTS OF BACTERIAL LIPOPOLYSACCHARIDES

Prabhakar K. Jadhav, E. I. du Pont de Nemours & Company, Inc.
Central Research & Development Department, Wilmington, DE 19880-0328

An efficient general synthesis of (3R)-alkanoyloxytetradecanoic acids has been developed by asymmetric allylboration, acylation followed by oxidation of the homoallylic esters



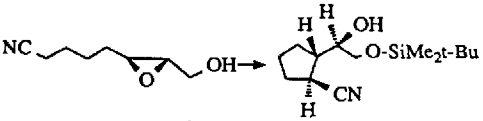
>95% ee

Tetrahedron Lett. 30, 4767 (1989)

A NEW ROUTE TO HOMOCHIRAL TRANS-DISUBSTITUTED CYCLOPENTANES

Samuel G. Levine* and Mary Pat Bonner
Department of Chemistry, North Carolina State University, Raleigh, North Carolina 27695-8204

Asymmetric epoxidation of cyano-substituted allylic alcohols gave epoxides of high optical purity. Subsequent base promoted cyclization (e.g., 9 → 10) produced diastereomerically pure cyclopentane derivatives in moderate yield.



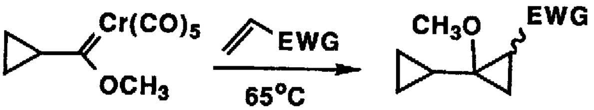
9 10

Tetrahedron Lett. 30, 4771 (1989)

Reaction of Cyclopropylcarbene-Chromium Complexes with Alkenes; Synthesis of Cyclopropylcyclopropanes

James W. Herndon* and Seniz U. Tumer; Department of Chemistry and Biochemistry; University of Maryland;
College Park, Maryland 20742, USA

Reaction of cyclopropylcarbene-chromium complexes with electron-deficient alkenes leads to cyclopropyl-cyclopropane derivatives. Unlike the corresponding reaction involving alkynes, the cyclopropane ring remains intact during the transformation.

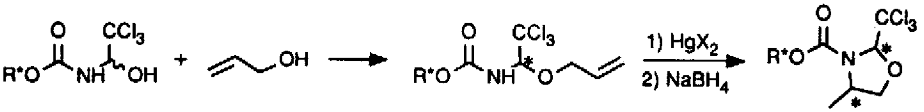


Tetrahedron Lett. 30, 4775 (1989)

SEQUENTIAL CHIRALITY TRANSFER IN INTRAMOLECULAR AMIDOMERCURATION REACTIONS

Kenn E. Harding,* Donald R. Hollingsworth, and Joseph Reibenspies
Department of Chemistry, Texas A&M University, College Station, TX 77843

A new technique is demonstrated for control of absolute stereochemistry in the amination of achiral allylic alcohols involving sequential chirality transfer from a chiral auxiliary to an amidal center then to the site of the new C-N bond.



Tetrahedron Lett. 30, 4779 (1989)

A RE-EXAMINATION OF THE PALLADIUM-CATALYZED CROSS COUPLING OF ALKYL IODIDES WITH ALKYL GRIGNARD REAGENTS

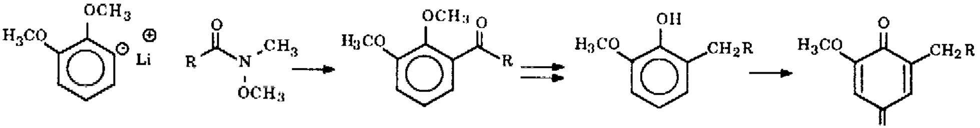
Kaixu Yuan and William J. Scott*
Department of Chemistry, The University of Iowa, Iowa City, IA 52242

Reaction of primary alkyl halides with Grignard reagents in the presence of (dppf)Pd(0) or (dppf)$PdCl_2$ leads to the reduction of the halide.

Tetrahedron Lett. 30, 4783 (1989)

THE SYNTHESIS OF IRISQUINONE

Ronald S. Michalak, David R. Myers, Jack L. Parsons*, Prabhakar A. Risbood
Starks Associates, Inc., 1280 Niagara Street, Buffalo, New York 14213
Rudiger D. Haugwitz, V. L. Narayanan
Division of Cancer Treatment, National Cancer Institute, Bethesda, MD 20892



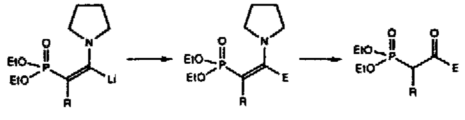
R = cis-$(CH_2)_9CH{=}CH(CH_2)_5CH_3$

Tetrahedron Lett. 30, 4787 (1989)

REGIOCONTROLLED METALATION OF DIETHYL β-DIALKYLAMINOVINYLPHOSPHONATES: A NEW SYNTHESIS OF SUBSTITUTED β-KETOPHOSPHONATES

Robert K. Boeckman, Jr., Michael A. Walters, and Hiroshi Koyano
Department of Chemistry, University of Rochester, Rochester, New York 14627

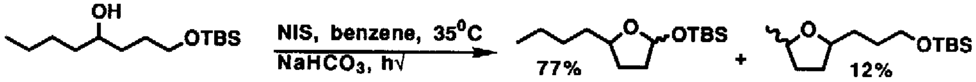
The metalation of diethyl β-dialkylaminovinylphosphonates (vinylogous phosphoramides (VPA)) and their reaction with electrophiles is described. Upon mild hydrolysis these derivatives provide good yields of β-ketophosphonates.



Tetrahedron Lett. 30, 4791 (1989)

N-IODOSUCCINIMIDE MEDIATED OXIDATIVE CYCLIZATION OF MONO t-BUTYLDIMETHYLSILYLATED DIOLS

Chriss E. McDonald*, Department of Chemistry, Williamsport, PA 17701 and
Thomas R. Beebe*, Mark Beard, Doug McMillen, and Daniel Selski, Department of Chemistry, Berea College, Berea, KY 40404

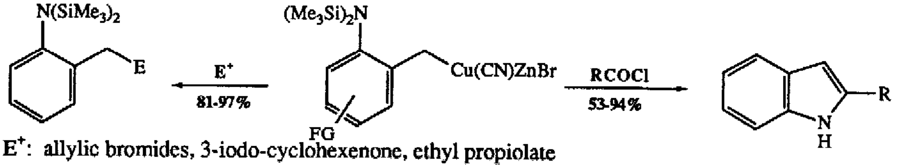


The t-butyldimethylsiloxy moiety can be used to direct oxidatiive cyclizations.

Tetrahedron Lett. 30, 4795 (1989)

MIXED COPPER, ZINC 2-AMINO BENZYLIC ORGANOMETALLICS AS EFFICIENT REAGENTS FOR THE SYNTHESIS OF HETEROCYCLES

Huai Gu Chen, Craig Hoechstetter and Paul Knochel*, Department of Chemistry, The University of Michigan, Ann Arbor, MI 48109



E^+: allylic bromides, 3-iodo-cyclohexenone, ethyl propiolate

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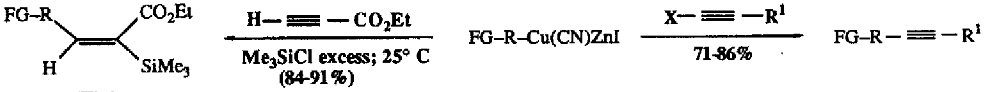
Tetrahedron Lett. 30, 4799 (1989)

THE REACTIVITY OF THE HIGHLY FUNCTIONALIZED COPPER, ZINC REAGENTS RCu(CN)ZnI TOWARD 1-HALOALKYNES AND ACETYLENIC ESTERS

Ming Chang P. Yeh and Paul Knochel*
Department of Chemistry, The University of Michigan, Ann Arbor, Michigan 48109



> 97% (E) isomer

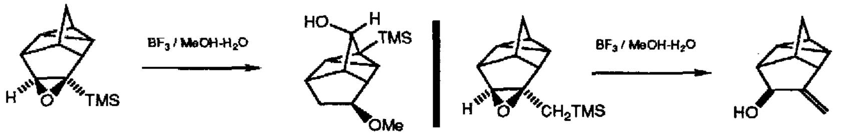
FG: nitrile, ester, halides; X = Br, I.

Tetrahedron Lett. 30,4803(1989)

RING OPENING REACTIONS OF DELTACYCLENE EPOXIDES

Mark Lautens*, Catherine M. Crudden
Department of Chemistry, University of Toronto, Toronto, Ontario Canada M5S 1A1

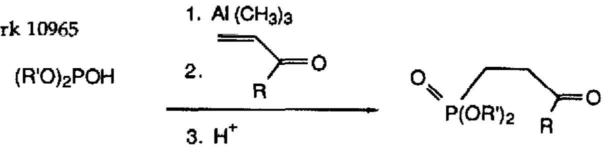
A series of deltacyclene epoxides were prepared and treated with $BF_3 \cdot Et_2O$. Ring opened products were observed. Rearrangements were noted in several cases depending on the nature of the substituent.



Tetrahedron Lett. 30,4807(1989)

TRIMETHYLALUMINUM PROMOTED CONJUGATE ADDITIONS OF DIMETHYLPHOSPHITE TO α,β–UNSATURATED ESTERS AND KETONES

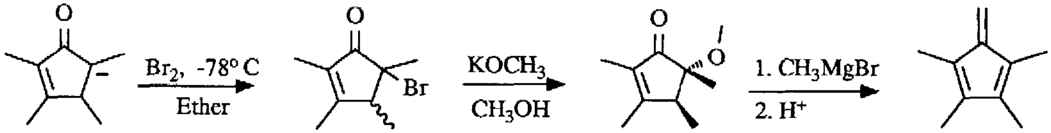
Kenneth Green, Metabolic Disease Research Section
American Cyanamid Co.
Lederle Laboratories, Pearl River, New York 10965



Tetrahedron Lett. 30,4811(1989)

5-METHOXY-2,3,4,5-TETRAMETHYLCYCLOPENT-2-ENONE, A SYNTHETIC EQUIVALENT FOR 2,3,4,5-TETRAMETHYCYCLOPENTADIENONE: APPLICATION TO THE SYNTHESIS OF 1,2,3,4-TETRAMETHYLFULVENE

Jerome C. Pando and Eric A. Mintz
Department of Chemistry, Clark Atlanta Univeristy, Atlanta, Georgia 30314-4381

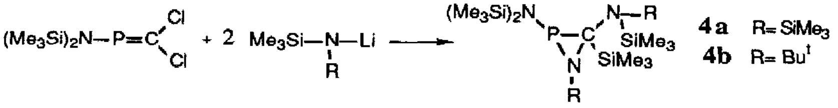


Tetrahedron Lett. 30,4813(1989)

UNEXPECTED SYNTHESIS OF A 1,2 λ^3AZAPHOSPHIRIDINE

Nathalie Dufour, Anne-Marie Caminade and Jean-Pierre Majoral*
Laboratoire de Chimie de Coordination du CNRS, 205,Route de Narbonne,31077 Toulouse ,France

Addition of two equivalents of lithium silylated amides to the dihalogenated phosphaalkene $(Me_3Si)_2N\text{-}P{=}CCl_2$ leads to the formation of three membered rings, the 1,2 λ^3 azaphosphiridines **4a,b**.

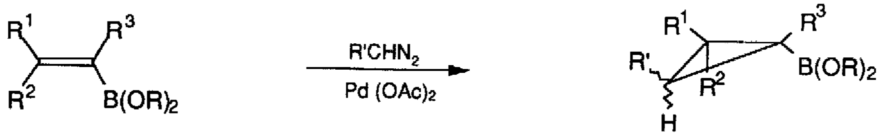


Tetrahedron Lett. 30, 4815 (1989)

A CONVENIENT HIGHLY STEREOSELECTIVE SYNTHESIS OF CYCLOPROPYLBORONATES

Pierre Fontani, Bertrand Carboni, Michel Vaultier and Robert Carrié.

Groupe de Recherche de Physicochimie Structurale, U.R.A. C.N.R.S. 704, Université de Rennes I, Campus de Beaulieu, 35042 Rennes Cédex, France.

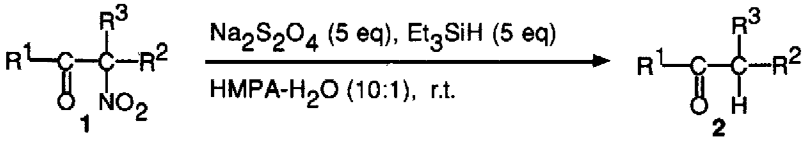


Tetrahedron Lett. 30, 4819 (1989)

A NOVEL DENITROHYDROGENATION METHOD BY $Na_2S_2O_4$-Et_3SiH

Akio Kamimura,* Kiyoko Kurata, and Noboru Ono†

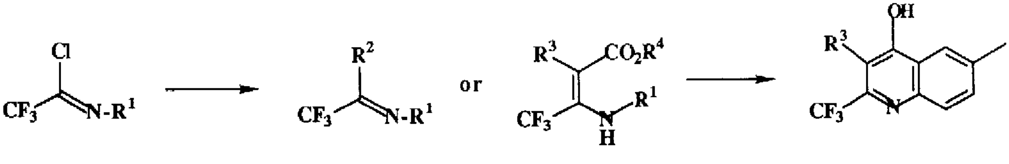
Department of Chemistry, Faculty of Liberal Arts, Yamaguchi University, Yamaguchi 753, Japan and †Department of Chemistry, Faculty of Science, Kyoto University, Kyoto 606, Japan



Tetrahedron Lett. 30, 4821 (1989)

TRIFLUOROACETIMIDOYL CHLORIDE AS A NEW TRIFLUOROMETHYL BUILDING BLOCK FOR FLUORINATED NITROGEN HETEROCYCLES

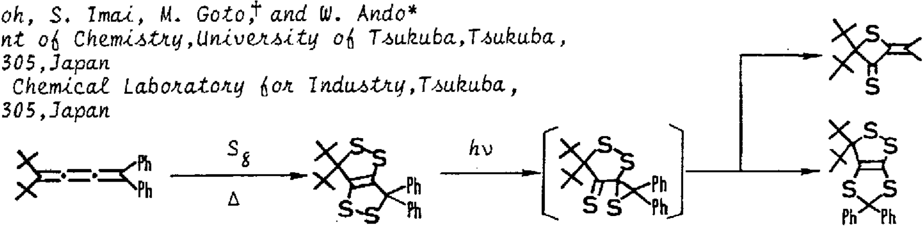
Kenji Uneyama, Osamu Morimoto, and Fumio Yamashita
Department of Applied Chemistry, Faculty of Engineering,
Okayama University, Okayama 700, JAPAN



Tetrahedron Lett. 30, 4825 (1989)

A Novel Formation And Photochemical Reaction Of 3,3-Di-t-butyl-3',3'-diphenyl[1,2]dithiolo[5,4-d][1,2]dithiole

*N. Tokitoh, S. Imai, M. Goto,† and W. Ando**
Department of Chemistry, University of Tsukuba, Tsukuba, Ibaraki 305, Japan
†National Chemical Laboratory for Industry, Tsukuba, Ibaraki 305, Japan

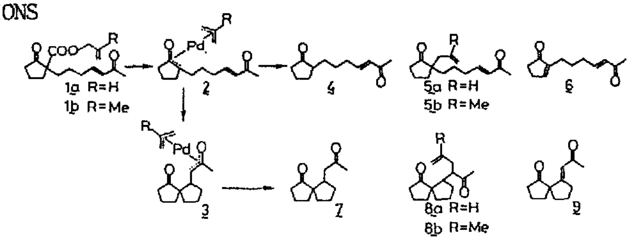


Tetrahedron Lett. 30, 4829 (1989)

THE PALLADIUM-CATALYZED MICHAEL ADDITION REACTION OF THE KETONE ENOLATES GENERATED BY THE DECARBOXYLATION OF ALLYL β-KETO CARBOXYLATES UNDER NEUTRAL CONDITIONS

J. Nokami,* H. Watanabe, T. Mandai,
M. Kawada, and J. Tsuji*
Okayama University of Science,
Ridai, Okayama, 700 Japan

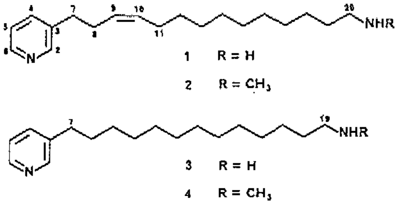
Palladium(0)-catalyzed reaction of 1 gave the Michael adducts 7, 8, and 9 selectively via 2 and 3.



Tetrahedron Lett. 30, 4833 (1989)

THEONELLADINS A ~ D, NOVEL ANTINEOPLASTIC PYRIDINE ALKALOIDS FROM THE OKINAWAN MARINE SPONGE THEONELLA SWINHOEI

Jun'ichi Kobayashi*, Tetsuya Murayama, Yasushi Ohizumi, Takuma Sasaki, Tomihisa Ohta and Shigeo Nozoe
Mitsubishi Kasei Institute of Life Sciences, Minamiooya, Machida, Tokyo 194, Japan, Cancer Research Institute, Kanazawa University, Kanazawa 920, Japan, and Pharmaceutical Institute, Tohoku University, Sendai 980, Japan

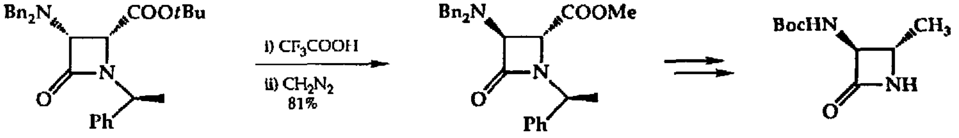


Tetrahedron Lett. 30, 4837 (1989)

REGIO- AND CHEMOSELECTIVE EPIMERIZATION OF *cis*-3-AMINO-β-LACTAMS TO THE *trans*-ISOMERS: A NEW SYNTHESIS OF AZTREONAM

Takeo Kawabata, Kazuhiro Itoh, and Tamejiro Hiyama*
Sagami Chemical Research Center, 4-4-1 Nishiohnuma, Sagamihara, Kanagawa 229, Japan

A regiospecific epimerization at C3 was observed.

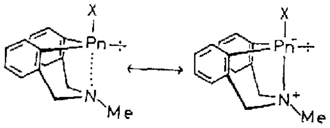


Tetrahedron Lett. 30, 4841 (1989)

SYNTHESIS AND CHEMICAL BEHAVIORS OF 12-SUBSTITUTED DIBENZ[c,f][1,5]AZASTIBOCINE AND DIBENZ[c,f][1,5]-AZABISMOCINE DERIVATIVES: EVIDENCES OF 10-Pn-4 TYPE HYPERVALENT INTERACTION

Katsuo Ohkata, Shin Takemoto, Masako Ohnishi, and Kin-ya Akiba*
Department of Chemistry, Faculty of Science, Hiroshima University
Higashisenda-machi, Nakaku, Hiroshima 730, Japan

Both chemical and spectroscopic experiments indicate transannular interaction between the pnictogen atom and the amino group in the title compounds.



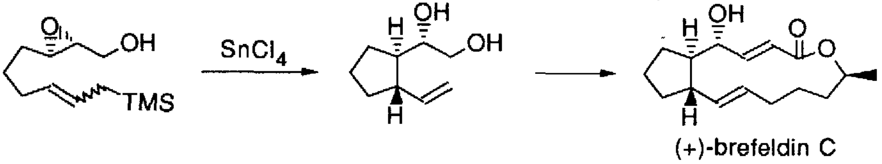
Pn=Sb,Bi 1a-g and 2a-e 10-Pn-4

X= F, Cl, I, Me, C_6H_5, $C_6H_5C{\equiv}C$, CN

Tetrahedron Lett. 30, 4845 (1989)

TOTAL SYNTHESIS OF (+)-BREFELDIN C *VIA* LEWIS ACID MEDIATED CYCLIZATION OF AN EPOXY-ALLYLSILANE

Susumi Hatakeyama, Ken Osanai, Hirotoshi Numata, and Seiichi Takano*
Pharmaceutical Institute Tohoku University, Aobayama, Sendai 980, Japan

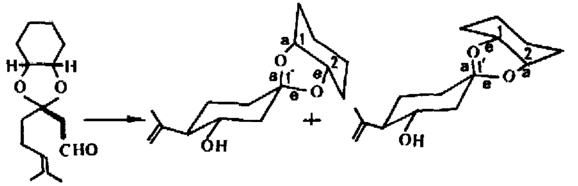


(+)-brefeldin C

Tetrahedron Lett. 30, 4849 (1989)

Rh(I)-CATALYZED FORMATION OF TWO CONFORMERS DUE TO CIS-1,2-CYCLOHEXANEDIOL

K.Funakoshi, K.Sakai/Kyushu Univ., Pharm. Sciences/Fukuoka 812; T.Hata, C.Tamura/ Sankyo Co.,/Hiromachi 1-2-58, Shinagawa, Tokyo, JAPAN

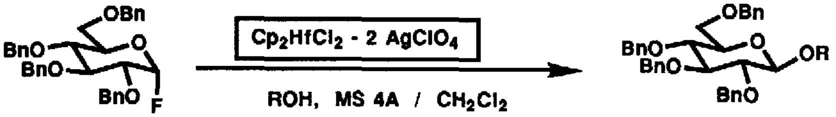


6-Octen-1-als with cis-1,2-cyclohexanedioxy function at C_3 were cyclized by Rh(I) to afford two conformers.

Tetrahedron Lett. 30, 4853 (1989)

An Improved Procedure for Metallocene-Promoted Glycosidation. Enhanced Rectivity by Employing 1:2-Ratio of Cp_2HfCl_2-$AgClO_4$

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

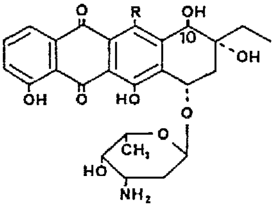


New molar ratio, Cp_2HfCl_2-$AgClO_4$ = 1 : 2, provides much higher rectivity than the original 1:1-ratio.

Tetrahedron Lett. 30, 4857 (1989)

A NOVEL METHOD FOR REGIO- AND STEREOSELECTIVE HYDROXYLATION OF ANTHRACYCLINE GLYCOSIDES

Shohachi Nakajima, Hiroyuki Kawai, Masayuki Sakakibara*, Kuniaki Tatsuta[+], Noboru Ōtake[++].
Pharmaceutical Laboratory, Kirin Brewery Co., Ltd.
1-2-2, Soujamachi, Maebashi, Gunma, 371, Japan.
+ Department of Applied Chemistry, Keio University,
Hiyoshi, Yokohama, Kanagawa, 223, Japan.
++ Department of Biosciences, Teikyo University,
1189, Nishikitayama, Nagaoka-cho, Utsunomiya, Tochigi, 320, Japan.

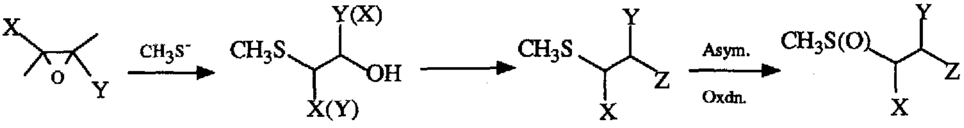


Hydroxylation at C-10 position of anthracycline glycoside proceeds stereoselectively with trimethylamine-N-oxide in DMF

Tetrahedron Lett. 30, 4859 (1989)

ASYMMETRIC OXIDATION OF THIOETHERS[1]. ENANTIOSELECTIVE SYNTHESIS OF β-HYDROXYSULFOXIDES BY DIRECT OXIDATION.

Valeria Conte, Fulvio Di Furia, Giulia Licini and Giorgio Modena.
Centro Studio Meccanismi Reazioni Organiche del CNR, Dipartimento di Chimica Organica dell'Universita', Via Marzolo 1, I-35131, Padova Italy

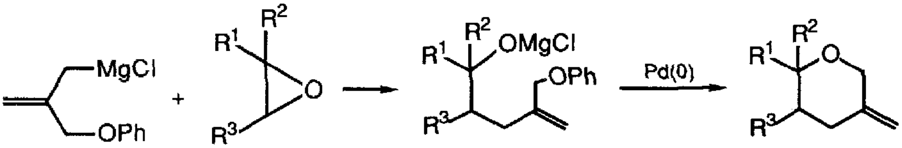


X = H, Ph; Y = H, Ph, CH_3; Z = $OSiPh_3$, $OSitBuPh_2$, $OSi(CH_3)_2tBu$, $OCOCH_3$
e.e. range from 18 to 80%; for X = Ph, Y = CH_3, Z = $OSiPh_3$, e.e. (after cryst.) >98%

Tetrahedron Lett. 30, 4863 (1989)

ADDITION OF 2-(PHENOXYMETHYL)-2-PROPENYL-MAGNESIUM CHLORIDE TO EPOXIDES FOLLOWED BY Pd(0)-CATALYZED CYCLIZATION: A ONE-POT SYNTHESIS OF 3-METHYLENETETRAHYDROPYRANS

J. van der Louw, G.J.J. Out, J.L. van der Baan, F.J.J. de Kanter, F. Bickelhaupt and G.W. Klumpp,*
Scheikundig Laboratorium, Vrije Universiteit, De Boelelaan 1083, 1081 HV Amsterdam, The Netherlands.

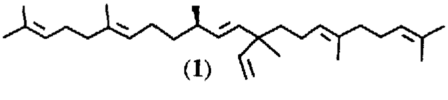


Tetrahedron Lett. 30, 4867 (1989)

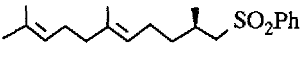
TOTAL SYNTHESIS OF 10-(R,S)-C_{30} BOTRYOCOCCENE AND BOTRYOCOCCANE AND A NEW SYNTHESIS OF A GENERAL INTERMEDIATE TO THE BOTRYOCOCCENE FAMILY.

N.W.Hird, T.V.Lee*, A.J.Leigh, J.R.Maxwell and T.M.Peakman (The University, Bristol).

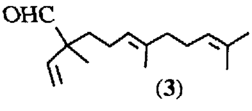
The first synthesis of a C-30 botryococcene (1) has been achieved by using a modified Julia reaction for the key coupling of fragments (2) and (3).



(1)



(2)



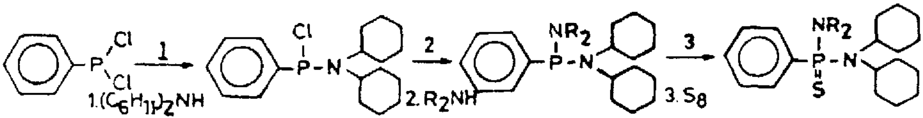
(3)

Tetrahedron Lett. 30, 4871 (1989)

STABLE CHIRAL BUT RACEMIC PHOSPHINES (R)(R')(R")P CONTAINING TWO DIFFERENT (AMINO) SUBSTITUENTS : HIGH YIELD SYNTHESIS AND CONVERSION TO THE RESPECTIVE PHOSPHINE SULPHIDES

T. Mohan, M.N. Sudheendra Rao* and G. Aravamudan
Department of Chemistry, Indian Institute of Technology, MADRAS, INDIA.

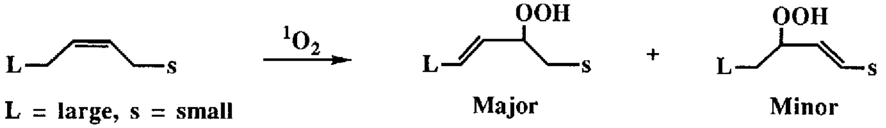
Reports the preparation of five different tertiary phosphines of the type mentioned above and their conversion to the corresponding phosphine sulphides, (Ph)(DCA)(NR_2)P(S).



Tetrahedron Lett. 30, 4875 (1989)

REGIOSELECTIVE REACTION OF SINGLET OXYGEN WITH *CIS*-ALKENES

Michael Orfanopoulos*, Manolis Stratakis and Yiannis Elemes
Department of Chemistry, University of Crete, 71110 Iraklion, Crete, Greece

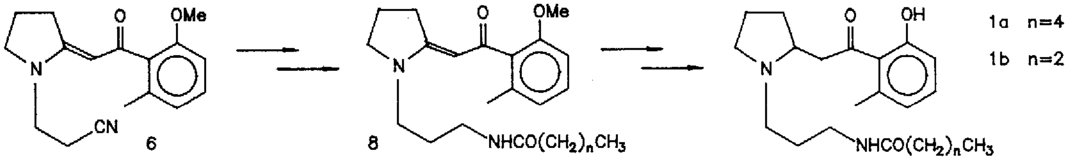


Tetrahedron Lett. 30, 4879 (1989)

SYNTHESIS OF TWO PYRROLIDINE ALKALOIDS, PERIPENTADENINE AND DINORPERIPENTADENINE

J P Michael, A S Parsons and R Hunter
Department of Chemistry, University of the Witwatersrand, Wits 2050, South Africa

Vinylogous amides 6 and 8 are key intermediates in syntheses of title alkaloids 1a and 1b.

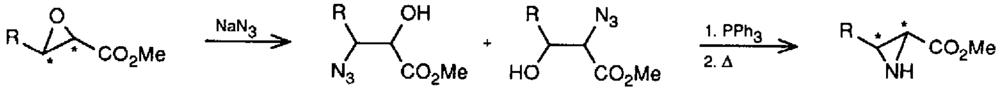


Tetrahedron Lett. 30, 4881 (1989)

A CONVENIENT SYNTHESIS OF OPTICALLY ACTIVE 1H-AZIRIDINE-2-CARBOXYLIC ACIDS (ESTERS).

J. Legters, L. Thijs, B. Zwanenburg*
Department of Organic Chemistry, University of Nijmegen,
Toernooiveld, 6525 ED NIJMEGEN, The Netherlands.

Aziridine-2-carboxylic esters of high optical purity were prepared from the corresponding glycidic esters.



Tetrahedron Lett. 30, 4885 (1989)

TAUTOMERISM OF 2-(2,4-DINITROBENZYL)PYRIDINE

Rory A. More O'Ferrall* and Anne P. Quirke
Department of Chemistry, University College, Belfield, Dublin 4, Ireland

Equlibrium constants for imine-enamine and *aci* -nitro tautomerism for the photochromic 2-(2,4-dinitrobenzyl)pyridine have been determined as 7.5×10^{-9} and $\sim 3 \times 10^{-14}$ respectively.