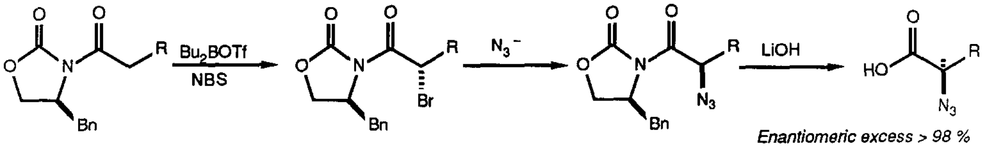
Tetrahedron Lett. 28,1123(1987)

ASYMMETRIC HALOGENATION OF CHIRAL IMIDE ENOLATES. A GENERAL APPROACH TO THE SYNTHESIS OF ENANTIOMERICALLY PURE α-AMINO ACIDS.

David A. Evans*, Jon A. Ellman, and Roberta L. Dorow
Department of Chemistry, Harvard University, Cambridge, Mass. 02138 USA

The asymmetric synthesis of α-azido carboxylic acids via the route illustrated below is reported.



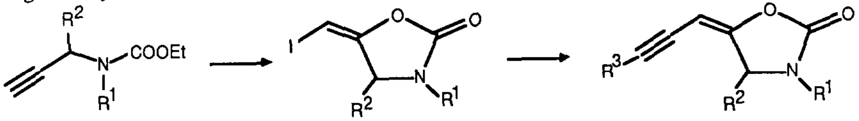
Enantiomeric excess > 98 %

Tetrahedron Lett. 28,1127(1987)

SYNTHESIS OF 5-ALKYNYLIDENE-OXAZOLIDIN-2-ONES

Tim F. Tam*, Everton Thomas, Allen Krantz
Syntex Research, 2100 Syntex Ct., Mississauga, Ont. L5N 3X4, Canada

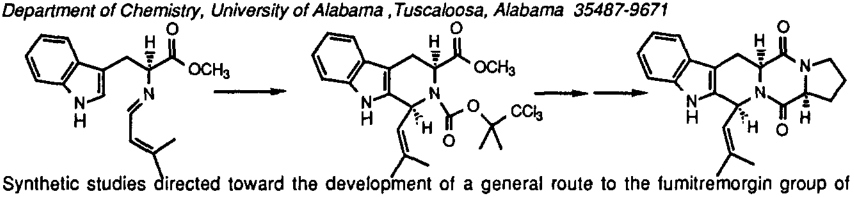
A general synthesis of the title compound is described.



Tetrahedron Lett. 28,1131(1987)

Tremorgenic Mycotoxins: Synthesis of 6-Demethoxyfumitremorgin C

Gerard J. O'Malley and Michael P. Cava*
Department of Chemistry, University of Alabama ,Tuscaloosa, Alabama 35487-9671



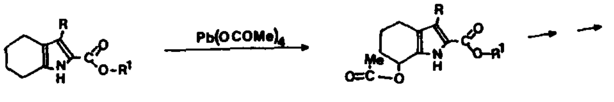
Synthetic studies directed toward the development of a general route to the fumitremorgin group of mycotoxins are disclosed. A chloroformate-induced cyclization of a L-tryptophan imine afforded a 1,2,3,4-tetrahydro-b-carboline which was elaborated to 6-demethoxyfumitremorgin C.

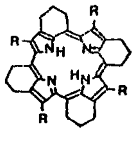
Tetrahedron Lett. 28,1135(1987)

SYNTHESIS OF PORPHYRINS WITH FOUR EXOCYCLIC RINGS FROM 4,5,6,7-TETRAHYDROINDOLES.

Timothy D. Lash*, Karla A. Bladel and Marty C. Johnson.
Department of Chemistry, Illinois State University, Normal IL 61761, USA.

Novel porphyrins with four exocyclic rings have been prepared from 7-acetoxy-4,5,6,7-tetrahydroindoles.



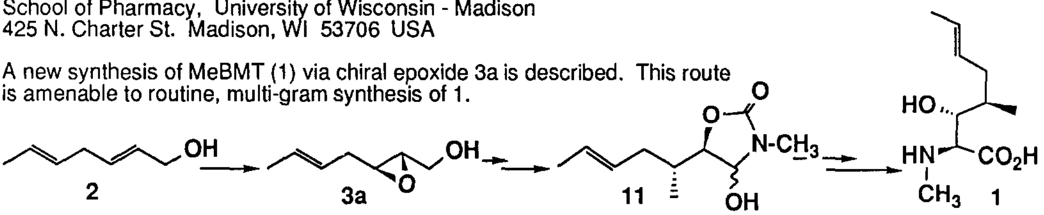


Tetrahedron Lett.28,1139(1987

TOTAL SYNTHESIS OF THE UNUSUAL CYCLOSPORINE AMINO ACID MeBMT

Roger D. Tung and Daniel H. Rich*
School of Pharmacy, University of Wisconsin - Madison
425 N. Charter St. Madison, WI 53706 USA

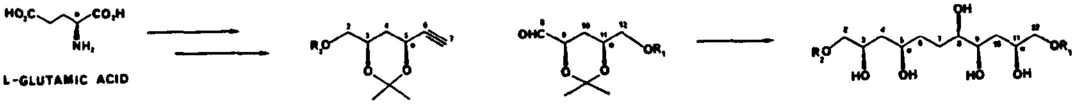
A new synthesis of MeBMT (1) via chiral epoxide 3a is described. This route is amenable to routine, multi-gram synthesis of 1.



Tetrahedron Lett.28,1143(1987

METHODOLOGY FOR THE POLYENE AND RELATED ANTIBIOTICS - ENANTIOSPECIFIC SYNTHESIS OF CHIRAL STRUCTURAL UNITS OF AMPHOTERICIN B FROM A COMMON PROGENITOR: THE C_1-C_{13} POLYOL SEGMENT

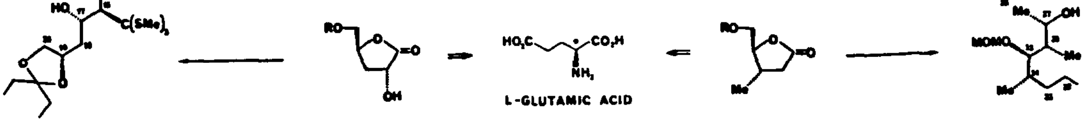
Stephen Hanessian*, Soumya P. Sahoo and Maurizio Botta
Department of Chemistry, Université de Montréal, Montréal, Québec, Canada H3C 3J7



Tetrahedron Lett.28,1147(1987

METHODOLOGY FOR THE POLYENE AND RELATED ANTIBIOTICS - ENANTIOSPECIFIC SYNTHESIS OF CHIRAL STRUCTURAL UNITS OF AMPHOTERICIN B FROM A A COMMON PROGENITOR: THE C_{14}-C_{20} AND C_{32}-C_{38} SEGMENTS

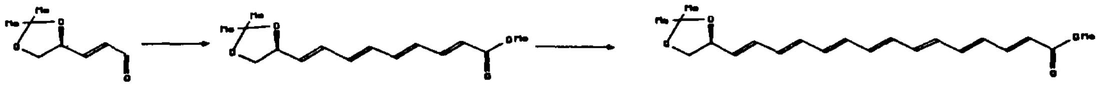
Stephen Hanessian*, Soumya P. Sahoo and Maurizio Botta
Department of Chemistry, Université de Montréal, Montréal, Québec, Canada
H3C 3J7



Tetrahedron Lett.28,1151(1987

METHODOLOGY FOR THE POLYENE AND RELATED ANTIBIOTICS - VERSATILE AND PRACTICAL ACCESS TO BIFUNCTIONAL ALL-TRANS POLYOLEFINIC SYSTEMS

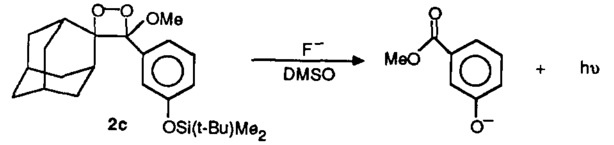
Stephen Hanessian* and Maurizio Botta
Department of Chemistry, Université de Montréal, Montréal, Québec, Canada H3C 3J7



Tetrahedron Lett. 28, 1155 (1987)

CHEMICAL AND ENZYMATIC TRIGGERING OF 1,2-DIOXETANES. 2:
FLUORIDE-INDUCED CHEMILUMINESCENCE FROM *TERT*-BUTYLDIMETHYLSILYLOXY-SUBSTITUTED DIOXETANES

A. P. Schaap, T. S. Chen, R. S. Handley, R. DeSilva and B. P. Giri*
Department of Chemistry, Wayne State University, Detroit, MI 48202



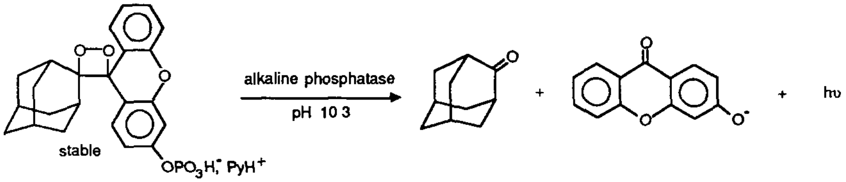
2c

Treatment of dioxetane 2c with fluoride in DMSO at ambient temperature generates chemiluminescence with 25% efficiency.

Tetrahedron Lett. 28, 1159 (1987)

CHEMICAL AND ENZYMATIC TRIGGERING OF 1,2-DIOXETANES. 3:
ALKALINE PHOSPHATASE-CATALYZED CHEMILUMINESCENCE FROM AN ARYL PHOSPHATE-SUBSTITUTED DIOXETANE

A. P.Schaap, M. D. Sandison and R. S. Handley,* Department of Chemistry, Wayne State University, Detroit, MI 48202

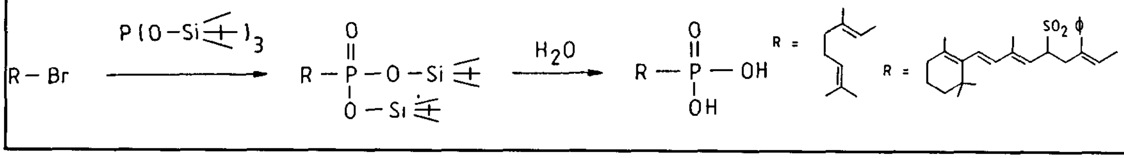


Tetrahedron Lett. 28, 1163 (1987)

SYNTHESIS OF ALLYLIC PHOSPHONATES OF BIOLOGICAL INTEREST

J.-L. Montero*, J.-L. Clavel and J.-L. Imbach
Laboratoire de Chimie Bio-Organique, U.S.T.L., Place Bataillon, 34060 Montpellier Cedex (France).

A novel route to the synthesis of allylic phosphonates of biological interest is described.



Tetrahedron Lett. 28, 1165 (1987)

STEREOSELECTIVITE DE LA REACTION DE WITTIG. UTILISATION D'UNE PHOSPHINE PORTANT UN GROUPEMENT NUCLEOPHILE

H. DANIEL et M. LE CORRE

Laboratoire de Synthèse Organique, Université de Rennes, 35042 RENNES CEDEX - FRANCE

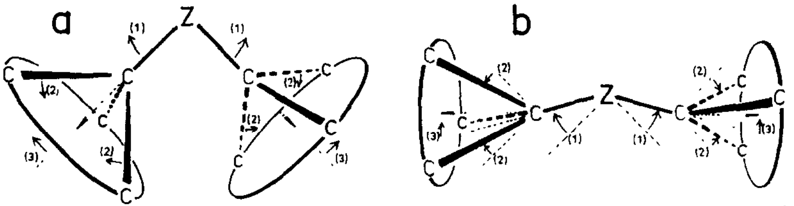
Replacement of triphenylphosphine by β-diphenylphosphinopropanoic acid in the Wittig reaction increases the E stereoselectivity and gives water soluble phosphine-oxyde.

$$RCH_2\overset{+}{P}Ph_2\text{-}CH_2CH_2CO_2H\ X^- \xrightarrow[\text{2) R'CHO}]{\text{1) base}} R\text{-}CH{=}CH\text{-}R' + Ph_2P(O)CH_2CH_2CO_2^-$$

Tetrahedron Lett. 28, 1169 (1987)

BOND ANGLE DISTORTION OF C_3CZCC_3 FRAGMENTS (Z = C,N,P,S,O,Si) BY CZC OPENING AND SYMMETRICAL C_3C DISTORTION.

A. Cossé-Barbi and J.E. Dubois
Institut de Topologie et de Dynamique des Systèmes de l'Université Paris VII,
1, rue Guy de la Brosse, 75005 Paris (France).



The framework distortion is large and includes (b compared to a) :
- the CZC angle opening (1),
- the symmētrical deformation (2) of tertiary groups.

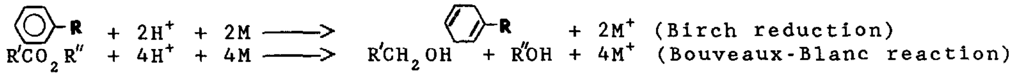
It is not limited to
- the C_3C- rocking (3).

Tetrahedron Lett. 28, 1173 (1987)

ELECTROCHEMICAL REDUCTIONS IN LIQUID AMMONIA: BIRCH REACTIONS AND REDUCTIVE FISSIONS.

J. Chaussard[1], C. Combellas[2], A. Thiebault[2]*.
[1] Centre de Recherches du Bouchet, 91 710 Vert le Petit.
[2] Laboratoire de Chimie et Electrochimie des Matériaux Moléculaires, ESPCI, 10, rue Vauquelin , 75 231 Paris cedex 05.

A procedure of electrochemical reduction in liquid ammonia using a single-compartment cell equiped with a soluble anode is described:

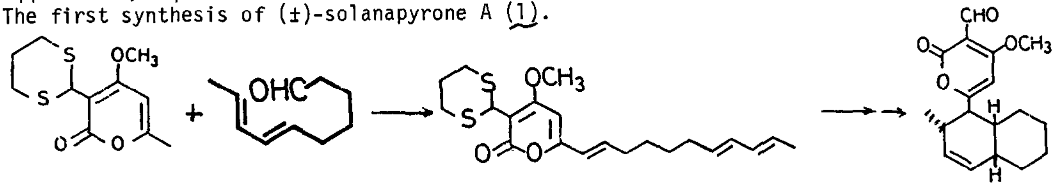


Tetrahedron Lett. 28, 1175 (1987)

SYNTHESIS OF (±)-SOLANAPYRONE A

Akitami Ichihara*, Masayoshi Miki, Hiroyuki Tazaki, and Sadao Sakamura*
Department of Agricultural Chemistry, Faculty of Agriculture, Hokkaido University,
Sapporo 060, Japan

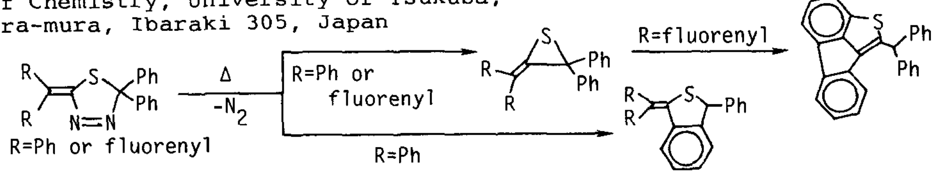
The first synthesis of (±)-solanapyrone A (1).



Tetrahedron Lett. 28, 1179 (1987)

NOVEL RING-CLOSING REACTIONS IN THERMOLYSES OF 2-METHYLENE-1,3,4-THIADIAZOLINE DERIVATIVES

Toshiya Furuhata and Wataru Ando*
Department of Chemistry, University of Tsukuba,
Sakura-mura, Ibaraki 305, Japan

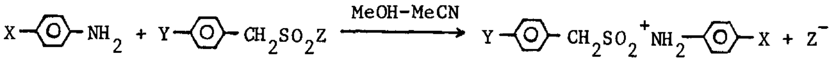


Tetrahedron Lett.28,1183(1987)

A MEASURE OF CHARGE TRANSFER (ρ) VERSUS A MEASURE OF BOND TIGHTNESS (ρ_{ij}) IN THE TRANSITION STATE.

Ikchoon Lee*, and Han Keun Kang, Department of Chemistry, Inha University, Inchon 160, Korea

An example has been presented in which ρ is only a measure of charge transfer whereas ρ_{ij} serves as a measure of bond tightness in the transition state.



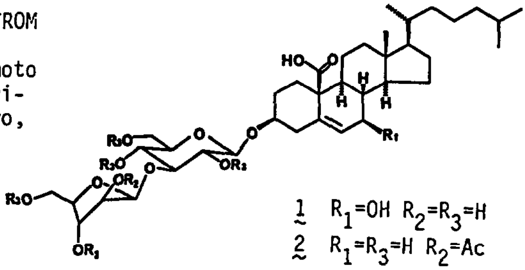
At 55.0° C in MeOH, ρ_{XY} = -0.50 and -1.02 for Z= Cl and F, respectively.

Tetrahedron Lett.28,1187(1987)

DIMORPHOSIDES A AND B, NOVEL STEROID GLYCOSIDES FROM THE GORGONIAN ANTHOPLEXAURA DIMORPHA.

N. Fusetani, K. Yasukawa, S. Matsunaga, K. Hashimoto
Laboratory of Marine Biochemistry, Faculty of Agriculture, The University of Tokyo, Bunkyo-ku, Tokyo, Japan

Dimorphosides A (1) and B (2), the cell-division inhibitors, have been isolated from the Western Paciffic gorgonian.



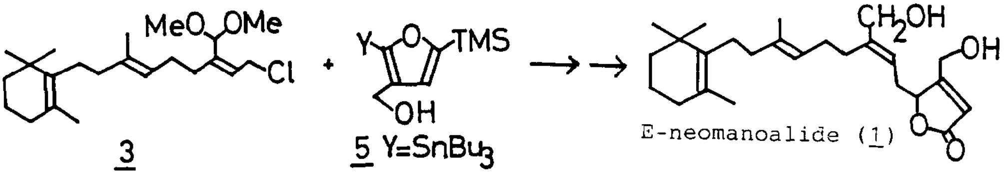
1 R_1=OH R_2=R_3=H

2 R_1=R_3=H R_2=Ac

Tetrahedron Lett.28,1191(1987)

TOTAL SYNTHESIS OF E-NEOMANOALIDE VIA Pd(0) CATALYZED COUPLING OF ALLYLHALIDE AND α-STANNYLFURAN FOLLOWED BY CHEMOSELECTIVE OXYGENATION OF α-SILYLFURAN†

Shigeo Katsumura*, Shinya Fujiwara, and Sachihiko Isoe*, Institute Of Organic Chemistry, Faculty Of Science, Osaka City University, Osaka 558, Japan



3

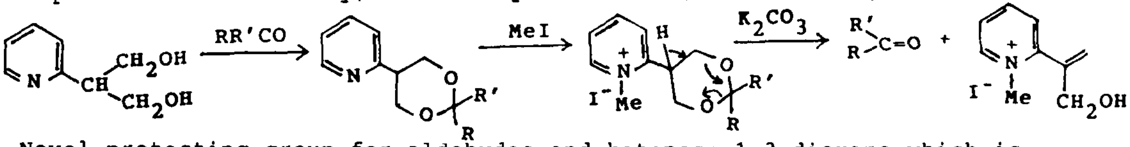
5 Y=SnBu$_3$

E-neomanoalide (1)

Tetrahedron Lett.28,1195(1987)

ACETALS AND KETALS OF 2-(2-PYRIDYL) PROPANE-1,3-DIOL. A NOVEL PROTECTION FOR CARBONYL GROUPS

Alan R. Katritzky; Wei-Qiang Fan and Qiao-Ling Li
Department of Chemistry, University of Florida, Gainesville, FL 32611 USA



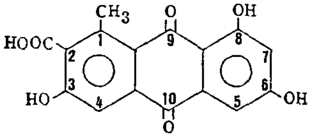
Novel protecting group for aldehydes and ketones: 1,3-dioxane which is removed by mild base after activation by methyl iodide quaternization

Tetrahedron Lett.28,1199(1987)

THE CHEMICAL NATURE OF FLAVOKERMESIC ACID

J. Wouters* and A. Verhecken, Koninklijk Instituut voor het Kunstpatrimonium,
Jubelpark 1, B- 1040 Brussel, Belgium

Flavokermesic acid is a minor dye constituent from *Kermes* insects. Its identity with laccaic acid D was proven by HPLC, Ultraviolet-, mass-, ^{1}H- nmr- and ^{13}C- ^{1}H two- dimensional long-range correlation nmr- spectrometry.

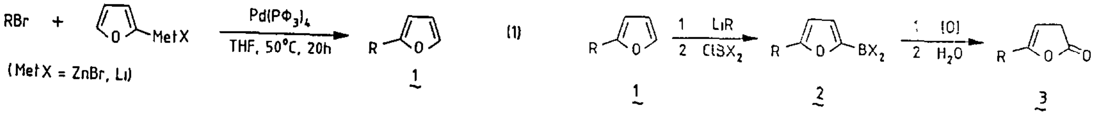


Tetrahedron Lett.28,1203(1987)

THE CONVERSION OF 2-ORGANYLFURANS TO 5-ORGANYL-2(3H)-BUTENOLIDES

Andrew Pelter* and Martin Rowlands
Department of Chemistry, University College of Swansea, Singleton Park, SWANSEA SA2 8PP, U.K.

2-Aryl- and 2-alkylfurans are converted into the corresponding 5-organyl-2(3H)-butenolides by the oxidation of boron derivatives with *m*-chloroperbenzoic acid.

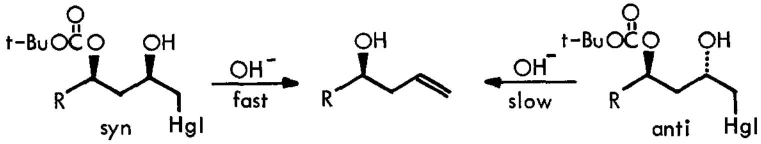


Tetrahedron Lett.28,1207(1987)

DIASTEREOSELECTIVE DEOXYMERCURATION IN ACYCLIC SYSTEM. A REMARKABLE ASSISTANCE BY THE NEIGHBORING CARBONATE GROUP

Suchart Lilitkarntakul, Masahiro Hirama* and Shô Itô
Department of Chemistry, Tohoku University, Sendai 980, Japan

Unprecedented syn-selective deoxymercuration catalyzed by alkali, possibly through a cyclic carbonate intermediate.

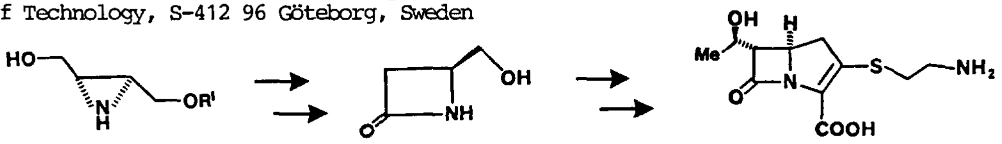


Tetrahedron Lett.28,1211(1987)

AN AZIRIDINE ROUTE TO CHIRAL β-LACTAMS

A NOVEL ENTRY TO (+)-THIENAMYCIN

David Tanner* and Peter Somfai, Dept. of Organic Chemistry, Chalmers University of Technology, S-412 96 Göteborg, Sweden

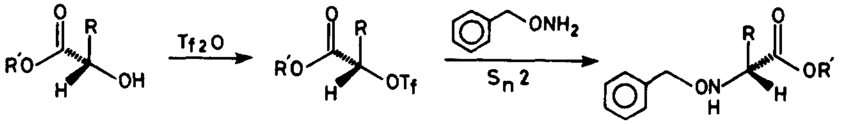


(+)-Thienamycin

Tetrahedron Lett. 28,1215(1987)

AN EFFICIENT SYNTHESIS OF N-HYDROXY-α-AMINO ACID DERIVATIVES OF HIGH OPTICAL PURITY

R.W. Feenstra, E.H.M. Stokkingreef, R.J.F. Nivard, H.C.J. Ottenheijm*
Department of Organic Chemistry, University of Nijmegen,
Toernooiveld, 6525 ED NIJMEGEN, the Netherlands



1 2 3

Tetrahedron Lett. 28,1219(1987)

SULPHUR DIOXIDE INSERTION INTO ORGANOCOBALOXIME: A TRUE INSERTION OR A CASE OF RADICAL CHAIN PROCESS!

B.D. Gupta, Sujit Roy and Maheswar Roy
Department of Chemistry, I.I.T., Kanpur 208 016, India

The insertion of sulphur dioxide into Co-C bond of organocobaloximes, $RCo(dmgH)_2Py$ (R = 2- and 3-thienyl methyl, furfuryl and 3-furyl) occurs readily under photochemical conditions by a radical chain process.

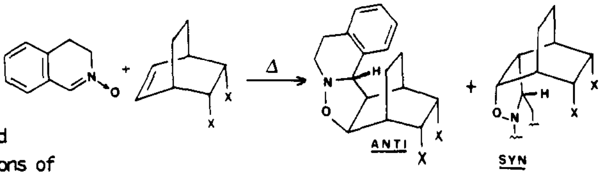
$$RCo^{III}(dmgH)_2Py + SO_2 \xrightarrow[h\nu]{0^{\circ}C} RSO_2Co^{III}(dmgH)_2Py$$

Tetrahedron Lett. 28,1225(1987)

ROLE OF STERIC, ELECTROSTATIC AND HYDROGEN BONDING EFFECTS AS FACE SELECTIVITY CONTROLLING FACTORS IN NITRONE CYCLOADDITIONS

Marina Burdisso, Remo Gandolfi*, Paolo Pevarello
Dip. di Chimica Organica, Università di Pavia, Italy
Augusto Rastelli*
Dip. di Chimica, Università di Modena, Italy

Hydrogen bonding promotes syn attack whereas steric and electrostatic factors favour anti attack in the reactions of nitrones with cis- endo-5,6-disubstituted bicyclo[2.2.2]oct-2-enes.

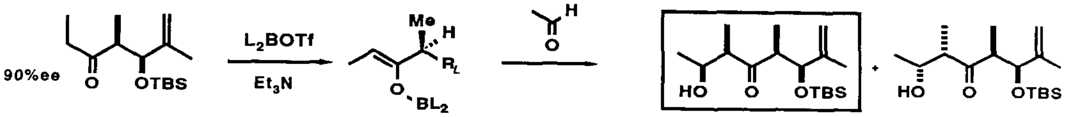


X = CO_2Me, CN, OMe, OAc, OH

Tetrahedron Lett. 28,1229(1987)

STUDIES IN MACROLIDE SYNTHESIS: ALDOL CONDENSATIONS OF CHIRAL ETHYLKETONES VIA BORON ENOLATES.

Ian Paterson* and Cynthia K. McClure, University Chemical Laboratory, Lensfield Road, Cambridge CB2 1EW, U.K.



The all-syn aldol isomer (in box) is formed selectively using the 9-BBN or ${}^{n}Bu_2B$ enolate. Chiral ligands on boron can be used to enhance or reduce the enolate face selectivity.

9-BBNOTf	12 : 1
(+)-$(Ipc)_2BOTf$	47 : 1
(-)-$(Ipc)_2BOTf$	3 : 1