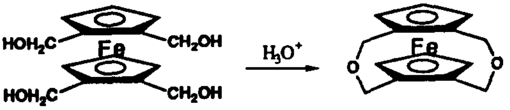
Tetrahedron Lett. **1990**, *31*, 6117

Cooperative Dehydration of 1,1',2,2'-Ferrocenetetramethanol

Russell C. Petter, Craig I. Milberg, and S. Jagadishwar Rao*
Department of Chemistry, University of Pittsburgh, Pittsburgh, PA 15260

Summary: 1,1',2,2'-ferrocenetetramethanol (1) undergoes a remarkable acid-catalyzed tandem dehydration in aqueous solvents to give 1,1':2,2'-bis(oxybismethylene)ferrocene (2).



Tetrahedron Lett. **1990**, *31*, 6121

SYNTHESIS OF TYROCIDINE A: USE OF OXIME RESIN FOR PEPTIDE CHAIN ASSEMBLY AND CYCLIZATION

George Ösapay, Adam Profit and John W. Taylor*; The Rockefeller University, Laboratory of Bioorganic Chemistry and Biochemistry, New York, N.Y. 10021.

Peptide chain assembly was followed by intrachain aminolysis of the peptidyl resin bond with concomitant cleavage from the solid support in 55% yield.

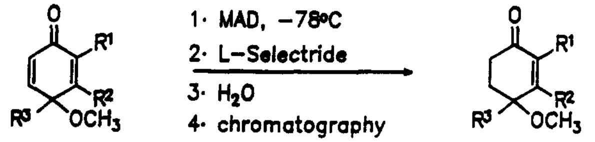
L-Tyr(Cl_2-Bzl) - L-Val - L-Orn(Z) - L-Leu-O-N=C(resin)
|
L-Gln
|
L-Asn - D-Phe - L-Phe - L-Pro - D-Phe-H

Tetrahedron Lett. **1990**, *31*, 6125

CONJUGATE REDUCTION OF QUINONE DERIVATIVES. A ROUTE TO PHENOL KETO-TAUTOMER EQUIVALENTS

Barbara J. Doty and Gary W. Morrow*
Department of Chemistry, The University of Dayton, Dayton, Ohio 45469

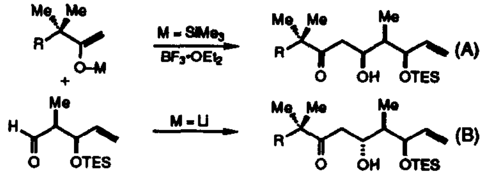
Lewis acid-mediated 1,4-addition of hydride to quinone monoketals and p-quinol ethers affords 4,4-substituted-2-cyclohexene-1-ones, which represent equivalents of the keto-tautomers of phenols.



Tetrahedron Lett. **1990**, *31*, 6129

Reversal of Aldehyde Diastereofacial Selectivity in a Methyl Ketone Aldol Reaction. Application to the Synthesis of the Calyculin Spiroketal.

David A. Evans* and James R. Gage
Department of Chemistry, Harvard University, Cambridge, Mass. 02138



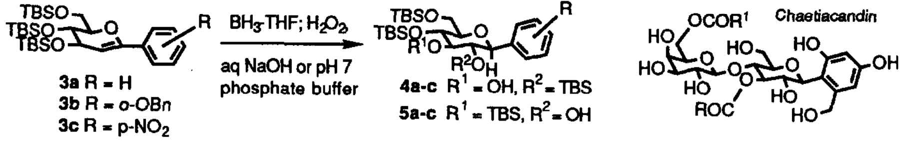
The illustrated methyl ketone-derived bond construction was investigated. The stereochemical course of the reaction depended strongly upon nucleophile structure. It was concluded that chelate organization is not a relevant stereochemical control element in the lithium enolate reactions (B). Bond construction (A) was employed in the synthesis of the calyculin spiroketal.

Tetrahedron Lett. **1990**, *31*, 6133

HYDROBORATION OF C-ARYLGLUCALS. SYNTHESIS OF THE β-C-ARYLGLUCOSIDE NUCLEUS OF CHAETIACANDIN

Richard W. Friesen* and Anand K. Daljeet
Department of Chemistry, Univeristy of Toronto, 80 St. George St., Toronto, Ontario, Canada M5S 1A1

Hydroboration of the C-arylglucal 3a-c provides the corresponding β-C-arylglucosides 4a-c or 5a-c.

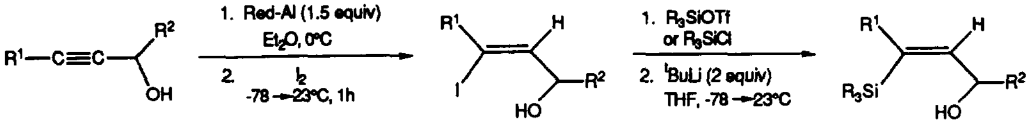


Tetrahedron Lett. **1990**, *31*, 6137

A NEW STEREOSELECTIVE SYNTHESIS OF (Z)-VINYLSILANE ALLYLIC ALCOHOLS

Kee D. Kim and Plato A. Magriotis*
Department of Chemistry, West Virginia University, Morgantown, WV 26506

A highly stereoselective synthesis of the title compounds (γ-silylated allylic alcohols, R^2=H) is described employing a novel 1,4-O→sp^2C silyl rearrangement.

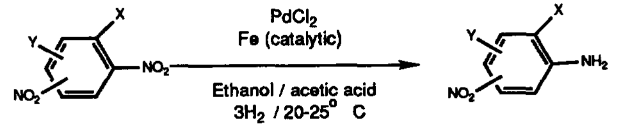


Tetrahedron Lett. **1990**, *31*, 6141

SELECTIVE HYDROGENATION OF POLYNITROAROMATIC DERIVATIVES WITH NOBLE METAL CATALYSTS IN THE PRESENCE OF CATALYTIC AMOUNTS OF IRON

George Theodoridis*, Mark C. Manfredi, and Jessica D. Krebs
Agricultural Chemical Group, FMC Corporation, P.O. Box 8
Princeton, New Jersey 08543

X = H, F, Cl, OH
Y = H, Cl

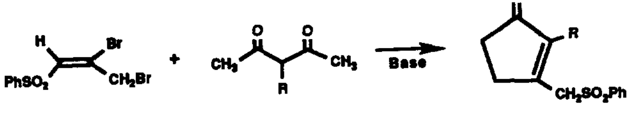


Tetrahedron Lett. **1990**, *31*, 6145

A NEW ROUTE TO DISUBSTITUTED CYCLOPENTENONES USING 2,3-DIBROMO-1-(PHENYLSULFONYL)-1-PROPENE AS A PIVOTAL REAGENT

*S. Shaun Murphree, Cheryl L. Muller and Albert Padwa**
Department of Chemistry, Emory University, Atlanta, GA 30322 USA

2,3-Dibromo-1-(phenylsulfonyl)-1-propene acts as a dielectrophile towards 1,3-dicarbonyls providing an entry into a variety of cyclopentenones.

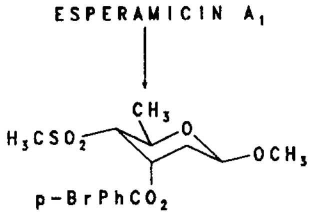


Tetrahedron Lett. **1990**, *31*, 6149

STEREOCHEMICAL STUDIES ON ESPERAMICIN A_1: A SINGLE CRYSTAL X-RAY STRUCTURE OF THIOSUGAR MOIETY

J. Golik and T. W. Doyle
Bristol-Myers Squibb Company, Pharmaceutical Research Institute,
5 Research Parkway, P.O. Box 5100, Wallingford, Connecticut 06492-7660
G. VanDuyne and J. Clardy
Cornell University, Department of Chemistry, Baker Laboratory,
Ithaca, New York 14853-1301

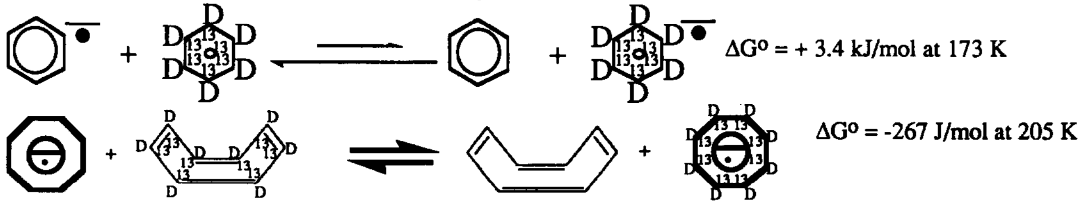
A single crystal x-ray study revealed β-D configuration for the 2,4,6-trideoxy-4-thiomethyl-ribo-hexopyranose fragment of esperamicin A_1.



Tetrahedron Lett. **1990**, *31*, 6151

CONTRASTING FREE ENERGIES OF ELECTRON TRANSFER FROM [6] AND [8]ANNULENES TO THEIR PERDEUTERIATED-PER-^{13}C ANALOGUES

Gerald R. Stevenson*, Steven J. Peters, and Kerry A. Reidy,
Department of Chemistry, Illinois State University, Normal, Ill 61761



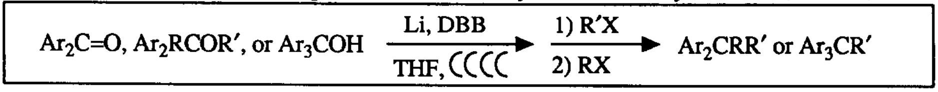
ΔG° = + 3.4 kJ/mol at 173 K

ΔG° = -267 J/mol at 205 K

Tetrahedron Lett. **1990**, *31*, 6155

CONVERSION OF AROMATIC KETONES, BENZYL ALCOHOLS, AND ALKYL ARYL ETHERS TO AROMATIC HYDROCARBONS WITH LITHIUM 4,4′-DI-*t*-BUTYLBIPHENYL RADICAL ANION

Rafik Karaman, Dan T. Kohlman, and James L. Fry*
Bowman-Oddy Laboratories, Department of Chemistry, The University of Toledo, Toledo, OH 43606-3390



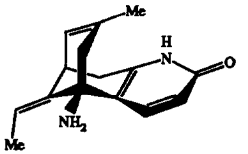
$$\mathrm{Ar_2C{=}O,\ Ar_2RCOR',\ or\ Ar_3COH}\ \xrightarrow[\text{THF, ((((}]{\text{Li, DBB}}\ \xrightarrow[\text{2) RX}]{\text{1) R'X}}\ \mathrm{Ar_2CRR'\ or\ Ar_3CR'}$$

Tetrahedron Lett. **1990**, *31*, 6159

Synthesis and Biological Evaluation of (±)-Z-Huperzine A

Alan P. Kozikowski*[a], Fumio Yamada[a], X.-C. Tang[b], and Israel Hanin[b]
[a]Departments of Chemistry and Behavioral Neuroscience, University of Pittsburgh, 1101 Chevron Science Center, Pittsburgh, PA 15260; [b]Department of Pharmacology and Experimental Therapeutics, Loyola University Chicago Stritch School of Medicine, 2160 South First Avenue, Maywood, IL 60153

The synthesis of (±)-Z-huperzine A has been accomplished and the ability of this agent to inhibit acetylcholinesterase has been measured. The compound has an IC_{50} of 6 x 10^{-6}M, which is comparable to that of huperzine B.

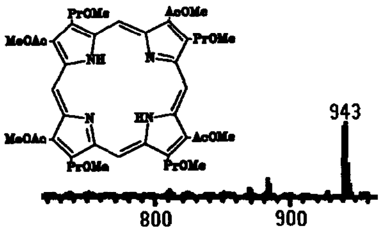


(±)-Z-huperzine A
mp 249-250 °C (dec.)

Tetrahedron Lett. **1990**, *31*, 6163

INTERMEDIATES IN THE VITAMIN B_{12} BIOSYNTHETIC PATHWAY OF *Propionibacterium shermanii* BY FAST ATOM BOMBARDMENT MASS SPECTROMETRY

Thomas R. Sharp[*†], **Patricio J. Santander**[‡], **and A. Ian Scott.**[‡]
† Center for Chemical Characterization and Analysis
‡ Center for Biological Nuclear Magnetic Resonance
Department of Chemistry, Texas A&M University
College Station, Texas 77843 U.S.A.

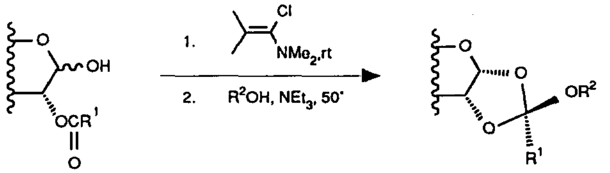


m-Nitrobenzyl alcohol matrix for positive ion FAB-MS of Vitamin B_{12} porphyrin biosynthetic intermediates.

Tetrahedron Lett. **1990**, *31*, 6167

HALOENAMINES -II. A RAPID AND EFFICIENT SYNTHESIS OF CARBOHYDRATE 1,2-ORTHOESTERS

Beat Ernst*, Alain De Mesmaeker, Beatrice Wagner, Tammo Winkler
Central Research Laboratories, CIBA-GEIGY Ltd., CH 4002 Basel, Switzerland

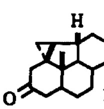


Carbohydrate exo 1,2-orthoesters are obtained in good to excellent yields by treating furanose and pyranose hemiacetals first with 1.1 eq. 1-chloro-2,N,N-trimethyl-propenylamine and then with the appropriate alcohols in the presence of NEt_3.

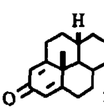
Tetrahedron Lett. **1990**, *31*, 6171

A Carbenoid Route To C(1)-C(11) Bridged Steroids

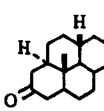
H. Künzer,* D. Bittler, D. Rosenberg, G. Sauer, and R. Wiechert
Research Laboratories, Schering AG Berlin,
Müllerstr. 170-178, D-1000 Berlin 65,
West Germany



1



2



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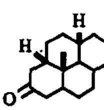


4

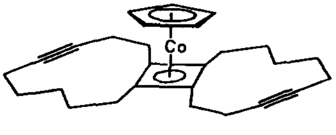
The synthesis of pentacyclic steroids, like 2-4, via 1 is described.

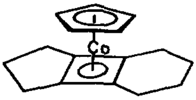
Tetrahedron Lett. **1990**, *31*, 6175

REACTION OF 1,5-CYCLOUNDECADIYNE AND 1,6-CYCLOUNDECADIYNE WITH $CpCo(CO)_2$

Rolf Gleiter[a], Detlef Kratz[a], Manfred L. Ziegler[b] and Bernhard Nuber[b]
Organisch-Chemisches[a] and Anorganisch-Chemisches[b] Institut der Universität Heidelberg,
Im Neuenheimer Feld 270,
D-6900 Heidelberg (W.-Germany)

Observation of inter- or intra- molecular compounds as main products, depending on the -$(CH_2)_n$- chain length.



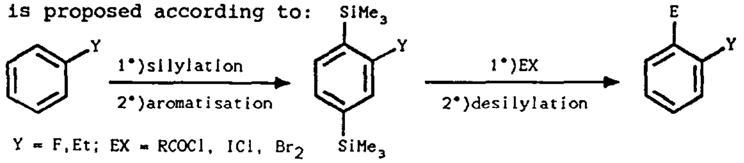


Tetrahedron Lett. **1990,** *31,* 6179

A REGIOSELECTIVE ORTHO FUNCTIONALISATION OF FLUORO OR ETHYLBENZENE

Bernard Bennetau[a], Michèle Krempp[a] Jacques Dunoguès[a] et Serge Ratton[b]
a) Laboratoire de Chimie organique et organométallique, Université de Bordeaux I, 33405 Talence, France
b) Rhône-Poulenc Recherches, B.P.62, 69192 Saint-Fons, France.

A regioselective method for ortho functionalisation of fluoro or ethylbenzene is proposed according to:

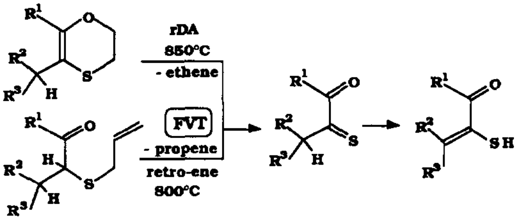


Tetrahedron Lett. **1990,** *31,* 6183

SYNTHESIS OF ENETHIOLISABLE α-OXOTHIONES BY FLASH VACUUM THERMOLYSIS

François Bourdon, Jean-Louis Ripoll* and Yannick Vallée
Laboratoire de Chimie des Composés Thioorganiques,
URA CNRS 480, ISMRa, Université, 14032 Caen, France.

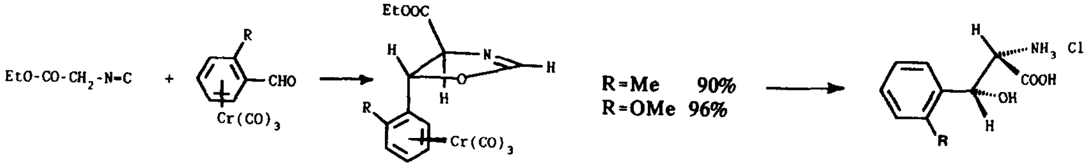
Simple enethiolisable α-oxothiones were obtained by retro Diels-Alder reaction of 2,3-dihydro-1,4-oxathiins, and by retro-ene reaction of α-allylthio-carbonyl compounds under FVT conditions.



Tetrahedron Lett. **1990,** *31,* 6185

STEREOSELECTIVE SYNTHESIS of β-HYDROXYAMINOACIDS by ALDOL REACTION of α-ISOCYANOCARBOXYLATE with ARENE-CHROMIUM-TRICARBONYL COMPLEXES.

S. COLONNA, A. MANFREDI; Centro CNR e Dipartimento di Chimica Organica dell'Universita Via Golgi, 19; 20133 Milano, Italy.
A. SOLLADIE-CAVALLO, S. QUAZZOTTI; Laboratoire de Stéréochimie Organometallique, EHICS 1 rue B. Pascal, 67008 Strasbourg, France.



Tetrahedron Lett. **1990,** *31,* 6189

Glycolamidic ester handle used with polystyrene. Application to the synthesis of TP5.

M.L. Ceccato, J. Chenu, J. Mery, M. Follet and B. Calas. CRBM, BP 5051, F-34033, Montpellier, France.

The glycolamidic ester handle linked to BHA resin can be easily cleaved by using smooth alcaline conditions.

BHA-NHCOCH$_2$-O-Tyr(2,6 DCB)-Val-Asp(Chx)-Lys(2ClZ)-Arg(Mts)Boc $\xrightarrow[\text{DMF, aqueous NaOH, 25°C, 2 h}]{}$

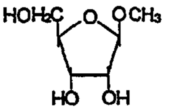
BHA-NHCOCH$_2$OH + BocArg(Mts)-Lys(2ClZ)-Asp(Chx)-Val-Tyr(2,6 DCB)

Tetrahedron Lett. **1990**, *31*, 6193

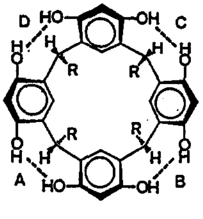
HIGHLY STEREOSELECTIVE GLYCOSIDATION OF RIBOSE SOLUBILIZED IN APOLAR ORGANIC MEDIA VIA HOST-GUEST COMPLEXATION

Yasutaka Tanaka, Chinmai Khare, Masaki Yonezawa, and Yasuhiro Aoyama*
Department of Chemistry, Nagaoka University of Technology, Kamitomioka, Nagaoka 940-21, Japan

Ribose complexed with 1 in CCl_4 undergoes highly stereoselective glycosidation with methanol to afford methyl β-ribofuranoside 3f-β.



3f-β

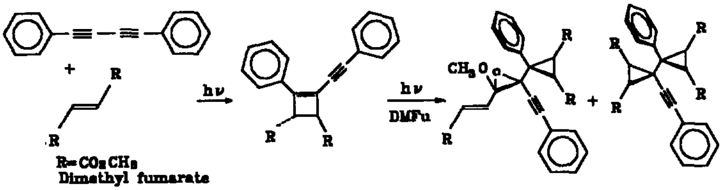


1 ; R = $(CH_2)_{10}CH_3$

Tetrahedron Lett. **1990**, *31*, 6197

PHOTOCHEMISTRY OF CONJUGATED POLYACETYLENE: PHOTOREACTION OF 1,4-DIPHENYL-1,3-BUTADIYNE WITH DIMETHYL FUMARATE.

Sang Jin Lee and Sang Chul Shim*
Department of Chemistry,
Korea Advanced Institute of Science and Technology, P.O. Box 150, Chongyangni, Seoul 130-650, Korea

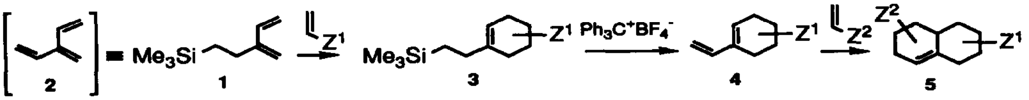


Tetrahedron Lett. **1990**, *31*, 6201

2-TRIMETHYLSILYLETHYL-1,3-BUTADIENE AS A SYNTHETIC EQUIVALENT OF PARENT CROSS-CONJUGATED HEXATRIENE, 3-METHYLENE-1,4-PENTADIENE

Akira Hosomi,* Toshiyuki Masunari,# Yoshinori Tominaga,# Toshiharu Yanagi, and Makoto Hojo
Department of Chemistry, University of Tsukuba, Tsukuba, Ibaraki 305, Japan and Faculty of Pharmaceutical Sciences, Nagasaki University, Nagasaki 852, Japan#

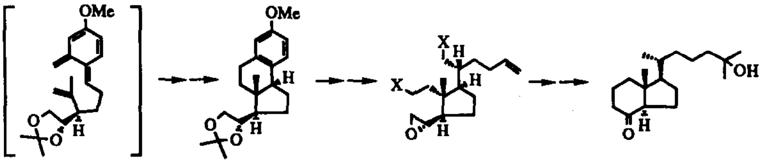
The title compound (1) is a synthetic equivalent of parent cross-conjugated hexatriene (2, [3]dendralene).



Tetrahedron Lett. **1990**, *31*, 6205

A NOVEL o-QUINODIMETHANE STRATEGY FOR AN ACTIVE METABOLITE OF VITAMIN D$_3$. A TOTAL SYNTHESIS OF 25-HYDROXY WINDAUS-GRUNDMANN KETONE

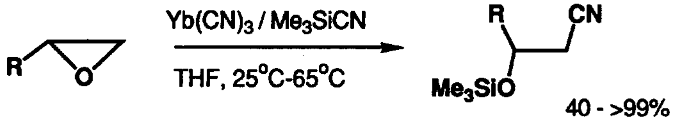
Hideo Nemoto, Masahiro Ando, and Keiichiro Fukumoto*
Phrmaceutical Institute, Tohoku University, Aobayama, Sendai 980
Japan



REACTION OF CYANOTRIMETHYLSILANE WITH OXIRANES UNDER Yb(CN)$_3$ CATALYSIS.

Tetrahedron Lett. **1990**, *31*, 6209

Seijiro Matsubara, Hitoshi Onishi, and Kiitiro Utimoto*
Department of Industrial Chemistry, Faculty of Engineering,
Kyoto University, Yoshida, Kyoto 606, Japan



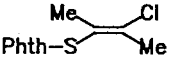
Ln(CN)$_3$ (Ln: Sc, Y, Ce, Eu) is also effective for the reaction.

Phthalimidosulphenyl Chloride: A Synthetic Equivalent of Inaccessible Sulphenyl Chlorides

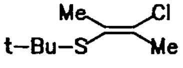
Tetrahedron Lett. **1990**, *31*, 6213

Giuseppe Capozzi*, Luciano Gori and Stefano Menichetti.
Centro C.N.R. "Chimica dei Composti Eterociclici", Dipartimento di Chimica Organica, Universita' di Firenze, Via G. Capponi 9, 50121 Firenze, Italy

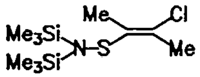
The reaction of phthalimidosulphenyl chloride with 2-butyne gives the adduct 1. It reacts with nucleophiles like *t*-BuLi, $(Me_3Si)_2NNa$, lithium alkynides or with *n*-Bu_3SnH (in the presence of AIBN) to give the vinylsulphides 2, 3, 4 and 5 respectively which can be considered as addition products of not easy accessible sulphenyl chlorides to 2-butyne.



1



2



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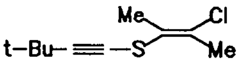
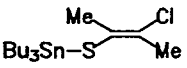


4



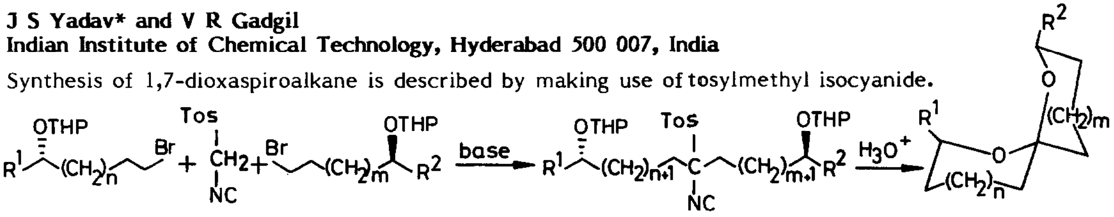
5

TosMIC IN THE PREPARATION OF SPIROACETALS : SYNTHESIS OF PHEROMONE COMPONENTS OF OLIVE FRUIT FLY

Tetrahedron Lett. **1990**, *31*, 6217

J S Yadav* and V R Gadgil
Indian Institute of Chemical Technology, Hyderabad 500 007, India

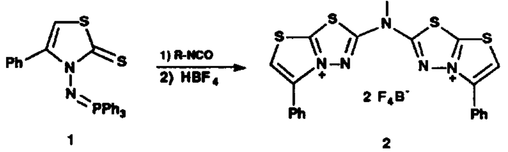
Synthesis of 1,7-dioxaspiroalkane is described by making use of tosylmethyl isocyanide.



SYNTHESIS AND ELECTROCHEMICAL PROPERTIES OF UNKNOWN N,N-BISHETEROARYL AMINES BEARING FUSED HETEROCYCLES AS N-SUBSTITUENTS

Tetrahedron Lett. **1990**, *31*, 6219

Pedro Molina*, Antonio Arques, Asunción Alías, María D. Velasco.
Departamento de Química Orgánica, Facultad de Ciencias, Universidad de Murcia,
Campus de Espinardo, E-30071, Murcia, Spain.



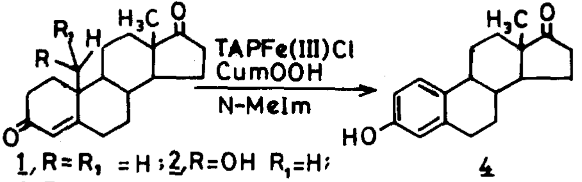
Iminophosphorane **1** by sequential treatment with alkyl isocyanates and HBF$_4$ leads to N,N-bisheteroarylamines **2**.

Tetrahedron Lett. **1990**, *31*, 6223

CHLOROIRON(III)-5,10,15,20-TETRAARYLPORPHINATE/ N-METHYLIMIDAZOLE CATALYZED OXIDATION OF ANDROST-4-EN-3,17-DIONE BY CUMENE HYDROPEROXIDE

B. Vijayarahavan and S.M.S. Chauhan*
Department of Chemistry, University of Delhi, Delhi-110 007, INDIA

The oxidation of 1, 2 and 3 with the chloroiron(III)-5,10,15,20-tetraaryl-porphinate/N-methylimidazole/CumOOH systems gave 4 in moderate yields.



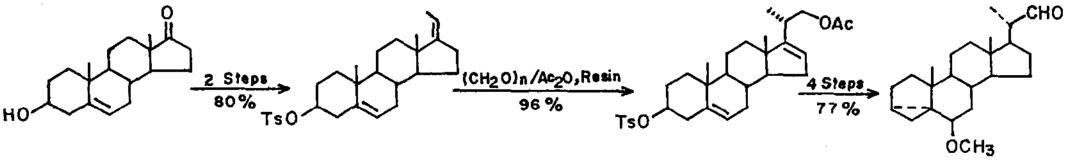
1, R = R$_1$ = H; 2, R = OH R$_1$ = H; 3 R-R$_1$=O

4

Tetrahedron Lett. **1990**, *31*, 6227

RESIN CATALYSED ENE REACTION ON 3 β-TOLUENE-p-SULFONOXY-(Z)-PREGNA-5,17(20)-DIENE : SYNTHESIS OF (20S) 6 β-METHOXY-3α,5-CYCLO-5α-PREGNANE-20-CARBOXYLDEHYDE

Braja G. Hazra*, P.L.Joshi and V.S.Pore
National Chemical Laboratory, Pune 411 008, India



Tetrahedron Lett. **1990**, *31*, 6231

POLYSTYRENE-SUPPORTED SYNTHESIS BY THE PHOSPHITE TRIESTER APPROACH : AN ALTERNATIVE FOR THE LARGE SCALE SYNTHESIS OF SMALL OLIGODEOXYRIBONUCLEOTIDES

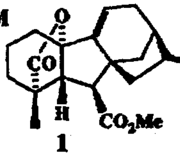
Francesc Bardella, Ernest Giralt and Enrique Pedroso*
Departament de Química Orgànica, Universitat de Barcelona
Martí i Franquès 1, 08028 Barcelona, Spain

The large scale synthesis of two octadeoxyribonucleotides has been successfully accomplished on polystyrene by the phosphite triester approach. Employing moderate excesses but high concentrations of phosphoramidites the coupling yields are similar to those obtained in standard small scale syntheses.

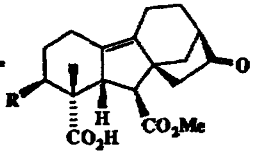
Tetrahedron Lett. **1990**, *31*, 6235

SYNTHESIS OF GA$_{73}$ METHYL ESTER, A POTENT GIBBERELLIN-DERIVED ANTHERIDIOGEN FROM GAMETOPHYTES OF THE FERN LYGODIUM JAPONICUM

Petra Kraft-Klaunzer, Mark Furber, Lewis N. Mander, Bruce Twitchin
Research School of Chemistry, Australian National University,
GPO Box 4, Canberra, A.C.T. 2601, Australia



1



(5, R = AcO; 17, R = H)

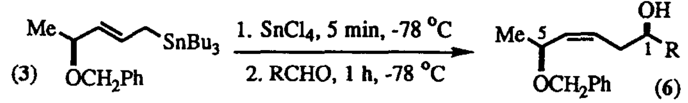
Summary: Iodolactonisation of gibberellin Δ^9-ene-19-oic acids 5 and 17 followed by dehydrohalogenation provides access to gibberellin $\Delta^{9(11)}$-enes, including the potent antheridiogen, $\Delta^{9(11)}$-didehydro-GA$_9$ methyl ester 1, isolated from the fern *Lygodium japonicum*.

Tetrahedron Lett. **1990**, *31*, 6239

1,5-Asymmetric Induction in Reactions between δ–Alkoxyallylstannanes and Aldehydes induced by Tin (IV) Chloride

Alan H. McNeill and Eric J. Thomas*
Department of Chemistry, University of Manchester, Manchester, M13 9PL, U.K.

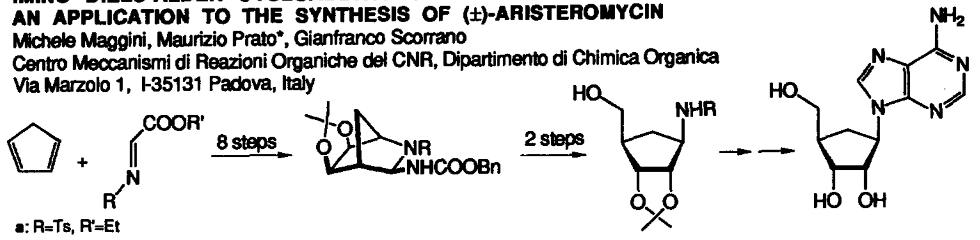
Treatment of (*S*)-4-benzyloxypent-(2*E*)-2-enyl(tributyl)stannane (3) with tin (IV) chloride at -78 °C, followed by the addition of an aldehyde, gives 1,5-diol derivatives (6) with excellent 1,5-diastereoselectivity.



Tetrahedron Lett. **1990**, *31*, 6243

IMINO DIELS-ALDER CYCLOADDITIONS: AN APPLICATION TO THE SYNTHESIS OF (±)-ARISTEROMYCIN

Michele Maggini, Maurizio Prato*, Gianfranco Scorrano
Centro Meccanismi di Reazioni Organiche del CNR, Dipartimento di Chimica Organica
Via Marzolo 1, I-35131 Padova, Italy

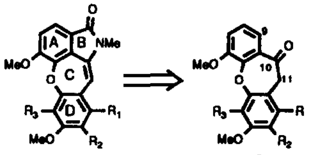


Tetrahedron Lett. **1990**, *31*, 6247

CONVERSION OF DIBENZOXEPINONES TO ARISTOCULARINE ALKALOIDS

Carlos Lamas, Luis Castedo* and Domingo Domínguez
Dpto. de Química Orgánica. Facultad de Química y Sección de Alcaloides del C.S.I.C. Santiago de Compostela. Spain

A new synthesis of aristocularines **5**, from the corresponding dibenzoxepinones **2**, is described:



5 **2**