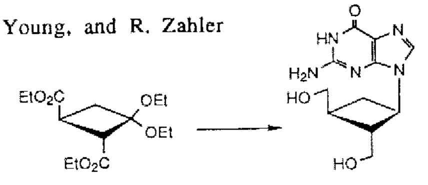
GRAPHICAL ABSTRACTS

Tetrahedron Lett. 30,6453(1989)

SYNTHESIS OF SQ-33,054, A NOVEL CYCLOBUTANE NUCLEOSIDE WITH POTENT ANTIVIRAL ACTIVITY

W. A. Slusarchyk*, G. S. Bisacchi, D. R. Hockstein, M. G. Young, and R. Zahler
The Squibb Institute for Medical Research,
P. O. Box 4000, Princeton, N. J. 08540

Summary. The racemic, guanine-containing cyclobutane nucleoside SQ-33,054 (3) was synthesized in 8 steps from the cyclobutane diester 4.

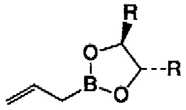


4 SQ-33,054 (3)

Tetrahedron Lett. 30,6457(1989)

THE ASYMMETRIC ALLYLBORATION REACTION: DEPENDENCE OF RATE AND ENANTIOSELECTIVITY ON THE CHIRAL AUXILIARY

William R. Roush,* Luca Banfi, Jae Chan Park and Lee K. Hoong
Departments of Chemistry, Indiana University, Bloomington, IN 47405



The rate as well as enantioselectivity of the asymmetric allylboration reaction depends on the diol auxiliary.

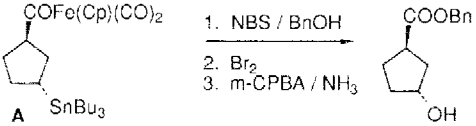
Rate: -CO_2iPr >> *p*-NO_2-Ph > Ph > -$CONR_2$ >> alkyl
Enantioselectivity: -CO_2iPr >> all others

Tetrahedron Lett. 30,6461(1989)

Stereoselective Conversion Of Tetraalkyltin Compounds to Alcohols

James W. Herndon and Chao Wu; Department of Chemistry and Biochemistry; University of Maryland; College Park, Maryland, USA, 20742

Complete conversion of a tributyltin group at a secondary carbon to the corresponding alcohol can be achieved by reaction with bromine, followed by reaction with peroxyacid anions. The stereochemistry in compounds such as A, derived from the reaction of allylstannanes with enoyl-iron complexes,can now be accurately assigned.



A

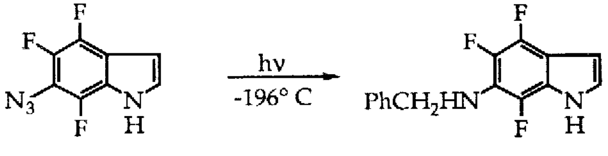
Tetrahedron Lett. 30,6465(1989)

THE PREPARATION AND PHOTOCHEMISTRY OF 6-AZIDO-4,5,7-TRIFLUOROINDOLE IN TOLUENE.

M. W. Shaffer and M. S. Platz
Department of Chemistry, The Ohio State University, Columbus, Ohio 43210

Photolysis of 1 in toluene at -196° produces CH insertion adduct in 70-80% yield.

1



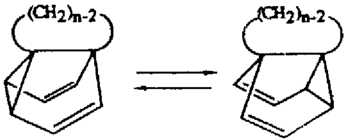
2

Tetrahedron Lett. 30, 6469 (1989)

DYNAMICS OF SEVEN- AND EIGHT-MEMBERED 1,5-CYCLOALKANE-FUSED SEMIBULLVALENE DERIVATIVES

Frank A. L. Anet*, Ragini Anet, Michael P. Trova, and Leo A. Paquette*, *Departments of Chemistry and Biochemistry, University of California at Los Angeles, Los Angeles, CA 90024 and the Department of Chemistry, Ohio State University, Columbus, Ohio 43210.*

The conformations and conformational dynamics of the two title hydrocarbons have been determined by ^1H 500 MHz NMR and molecular mechanics calculations; barriers for the Cope rearrangement are also reported.



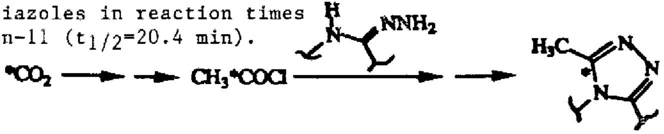
n = 7, 8, 12

Tetrahedron Lett. 30, 6473 (1989)

DEVELOPMENT OF METHODOLOGY FOR THE RAPID INCORPORATION OF CARBON-13 INTO 1,2,4-TRIAZOLO SYSTEMS FROM CARBON DIOXIDE

William R. Banks and George A. Digenis*
College of Pharmacy, University of Kentucky, Lexington, KY 40536-0082

An in-situ production of acetylchloride and subsequent reaction with amidrazones allows the production of 1,2,4-triazoles in reaction times suitable for labelling with carbon-11 ($t_{1/2}$=20.4 min).

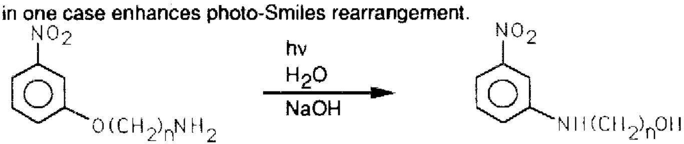


Tetrahedron Lett. 30, 6477 (1989)

α–CYCLODEXTRIN COMPLEXATION AS A PROBE OF HETEROLYTIC GENERAL BASE-CATALYZED PHOTO-SMILES REARRANGEMENTS

Gene G. Wubbels* and W. Donald Cotter
Department of Chemistry, Grinnell College, Grinnell, IA 50112 USA

α-Cyclodextrin inhibits or in one case enhances photo-Smiles rearrangement.



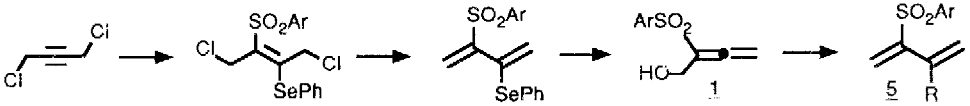
n = 2 and 3

Tetrahedron Lett. 30, 6481 (1989)

A NEW PREPARATION OF 3-SUBSTITUTED 2-(p-TOLUENESULFONYL)-1,3-DIENES

Thomas G. Back*, Enoch K.Y. Lai and K.Raman Muralidharan
Department of Chemistry, University of Calgary, Calgary, Alberta, Canada, T2N1N4

The title compounds 5 were prepared by addition-elimination reactions of 2-(p-toluenesulfonyl)-2,3-butadien-1-ol (1), in turn easily obtained from 1,4-dichloro-2-butyne.

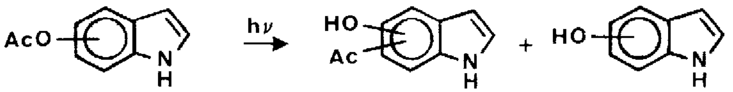


Tetrahedron Lett. 30,6483(1989)

REGIOSELECTIVITY OF THE PHOTO-FRIES REARRANGEMENT IN ACETOXYINDOLES

Alexander C. Chan* and Peter R. Hilliard, Jr., Clairol Research Laboratories, 2 Blachley Road, Stamford, CT 06922

5- and 6-acetoxyindoles have been found to undergo regio-selective photo-Fries rearrangement in aqueous solution.

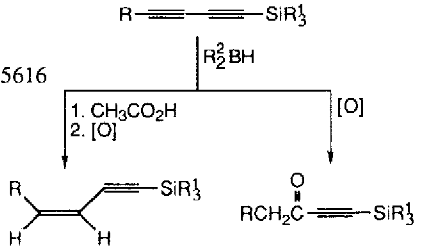


Tetrahedron Lett. 30,6487(1989)

DIRECTIVE EFFECTS IN HYDROBORATIONS OF 1-(TRIALKYLSILYL)-1,3-DIYNES. SYNTHESES OF *(Z)*-ENYNES AND α-KETOACETYLENES

E. C. Stracker, W. Leong, J. A. Miller,T. M. Shoup, and G. Zweifel*
Department of Chemistry, University of California, Davis, California 95616

Chemo-and regioselective hydroborations of 1-(dimethylthexyl silyl)-1,3-diynes with dicyclohexylborane or with [bis(1,2-dimethylpropyl)borane] furnishes organoboranes which afford on protonation *(Z)*-enynes and on oxidation alkynyl ketones.

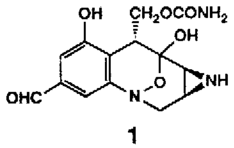


Tetrahedron Lett. 30,6491(1989)

SYNTHETIC APPROACHES TOWARD FR-900482. I. STEREOSELECTIVE SYNTHESIS OF A PENTACYCLIC MODEL COMPOUND.

Tohru Fukuyama* and Shunsuke Goto
Department of Chemistry, Rice University, Houston, Texas 77251

An efficient synthesis of a pentacyclic compound **18** possessing all the necessary handles to construct the unique skeleton of antitumor antibiotic FR-900482 **1** is described.



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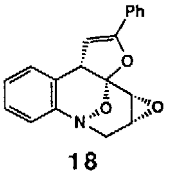


18

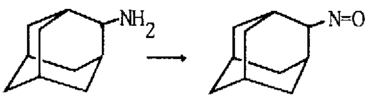
Tetrahedron Lett. 30,6495(1989)

OXIDATION OF PRIMARY ALIPHATIC AMINES WITH SODIUM PERBORATE

Walter W. Zajac, Jr.*, Michael G. Darcy, Amador P. Subong and John H. Buzby
Department of Chemistry, Villanova University, Villanova, PA 19085 USA

$RNH_2 \xrightarrow[\text{EtOAc/H}_2\text{O; R.T. 2.5hr.}]{\text{NaBO}_3\text{/NaHCO}_3\text{/TAED}}$ RN=O (isolated as dimer or oxime) in yields of 30-100%

(TAED = N,N,N',N'-tetraacetylethylenediamine) e.g.



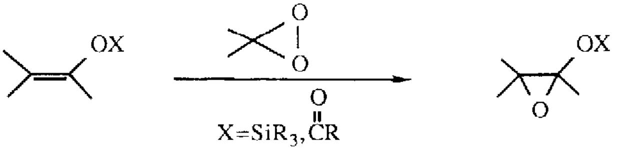
80%

Tetrahedron Lett. 30,6497(1989)

EPOXIDATION OF SILYL ENOL ETHERS, PHTHALIDES, AND ENOL ESTERS BY DIMETHYLDIOXIRANE

Waldemar Adam, Lazaros Hadjiarapoglou, Xiaoheng Wang*
Institute of Organic Chemistry, University of Würzburg, Am Hubland, D-8700 Würzburg
Federal Republic of Germany.

The corresponding pure epoxides were isolated in excellent yields, prepared via epoxidation by dimethyldioxirane.



Tetrahedron Lett. 30,6501(1989)

RUTHENIUM CATALYZED DECARBONYLATION OF ALKYL FORMATES

G. Jenner(x), M. Nahmed and H. Leismann
EHICS, Université Louis Pasteur, 67008 Strasbourg, France

Triruthenium dodecacarbonyl + tributylphosphine is an efficient catalytic system for the decarbonylation of formates to alcohols at 180°C

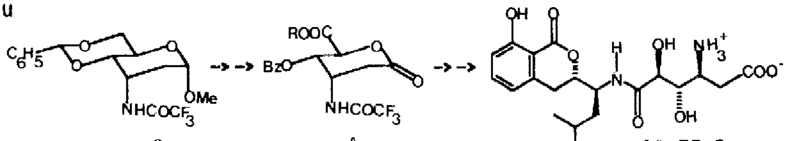
$$HCOOR \longrightarrow CO + ROH$$

Tetrahedron Lett. 30,6503(1989)

CHIRAL SYNTHESIS OF THE HYDROXY AMINO ACID MOIETY OF AI-77-B.

J.P. Gesson*, J.C. Jacquesy and M. Mondon.
Laboratoire de Chimie XII - Unité associée au CNRS.
40, Avenue du Recteur Pineau
86022 POITIERS (FRANCE).

Synthons A (R=H, Me, tBu) have been prepared from the known amide 3.

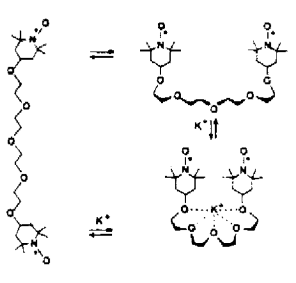


3 A AI-77-B

Tetrahedron Lett. 30,6507(1989)

REGULATION BY POTASSIUM IONS OF SPIN EXCHANGE AND DIPOLAR SPLITTING IN A BIRADICAL. A SIMPLE ALLOSTERIC SYSTEM

Geneviève Gagnaire, André Jeunet, Jean-Louis Pierre.
Laboratoire d'Etudes Dynamiques et Structurales de la Sélectivité, CNRS, URA D 0332.
Université Joseph Fourier - BP 53X - 38041 Grenoble Cedex France.



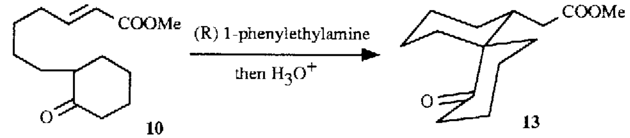
In frozen solution, the dipolar interaction is only detected in the presence of K+

At room temperature, the spin-spin interaction is amplified in the presence of K+.

Tetrahedron Lett. 30,6511(1989)

AN EFFICIENT ASYMMETRIC SPIROANNULATION PROCESS

Jean d'Angelo, Clotilde Ferroud, Claude Riche and Angèle Chiaroni
Unité de Chimie Organique, ESPCI, 10 rue Vauquelin 75231 Paris Cedex 05, France.

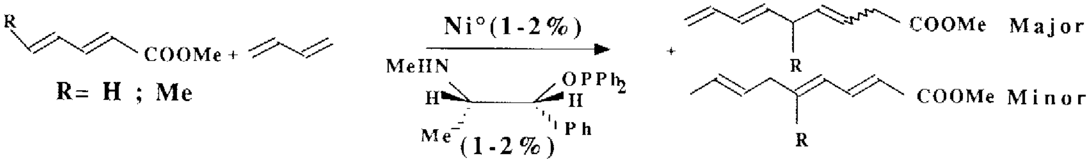


Spiro adduct 13 exhibits a high degree of control of the two newly created asymmetric centers.

Tetrahedron Lett. 30,6515(1989)

FIRST SELECTIVE LINEAR BUTADIENE-FUNCTIONALIZED DIENES CODIMERIZATION CATALYZED BY NICKEL COMPLEXES

Mohamed Amin EL AMRANI, André MORTREUX and Francis PETIT
Laboratoire de Chimie Organique Appliquée associé au CNRS
E.N.S.C. Lille; U.S.T. Lille Flandres Artois, BP 108, 59652 -Villeneuve d'Ascq- France

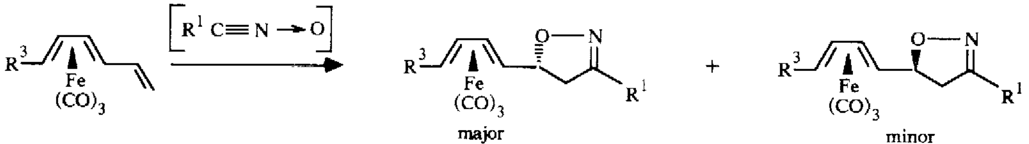


Tetrahedron Lett. 30,6517(1989)

Face Selectivity during the Cycloaddition Reaction of Nitrile Oxides with Iron Complexed Trienes.

T. Le Gall *, J.P. Lellouche *, L. Toupet ** and J.P. Beaucourt *.

* Service des Molécules Marquées, Bt 547, CEN Saclay, 91191 Gif-sur-Yvette Cédex, France.
** Département de Physique Cristalline, Université de Rennes I, 35042 Rennes Cédex, France.

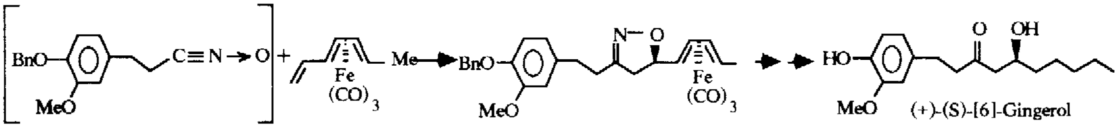


Tetrahedron Lett. 30,6521(1989)

An Organo-Iron Mediated Chiral Synthesis of (+)-(S)-[6]-Gingerol

T. Le Gall, J.P. Lellouche and J.P. Beaucourt

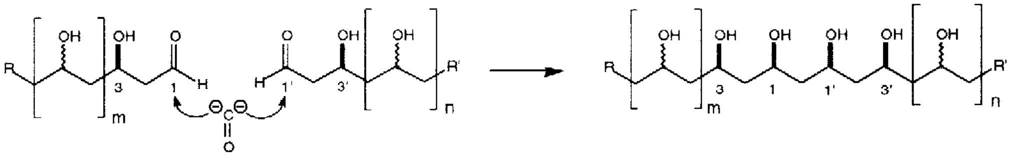
Service des Molécules Marquées, Bt 547, CEN Saclay, 91191 Gif-sur-Yvette Cédex, France.



Tetrahedron Lett. 30, 6525 (1989)

STEREOCONTROLLED CONVERGENT SYNTHESIS OF 1,3-POLYOL

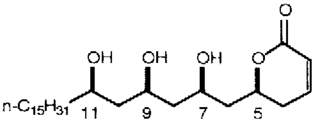
Tadashi Nakata,* Toshiro Suenaga, and Takeshi Oishi*
RIKEN (The Institute of Physical and Chemical Research), Wako-shi, Saitama 351-01, Japan

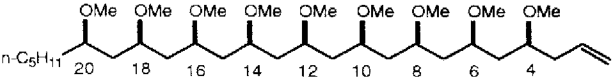


Tetrahedron Lett. 30, 6529 (1989)

TOTAL SYNTHESIS OF NATURAL PRODUCTS HAVING 1,3-SYN-POLYOL, δ-LACTONE OF (2Z,5S,7S,9R,11R)-TETRAHYDROXY-HEXACOS-2-ENOIC ACID AND 4,6,8,10,12,14,16,18,20-ALL-SYN-NONAMETHOXY-1-PENTACOSENE

Tadashi Nakata,* Toshiro Suenaga, Koichi Nakashima, and Takeshi Oishi*
RIKEN (The Institute of Physical and Chemical Research), Wako-shi, Saitama 351-01, Japan

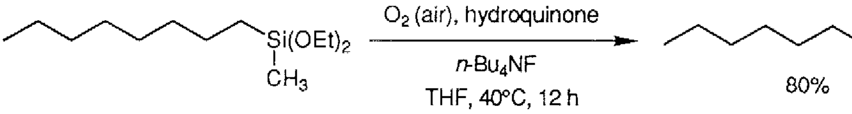




Tetrahedron Lett. 30, 6533 (1989)

AN EFFICIENT OXIDATIVE CLEAVAGE OF CARBON-SILICON BONDS BY A DIOXYGEN/ HYDROQUINONE SYSTEM

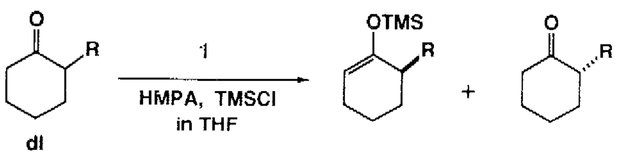
Kohei Tamao,* Takashi Hayashi, and Yoshihiko Ito*
Department of Synthetic Chemistry, Faculty of Engineering, Kyoto University, Kyoto 606, Japan

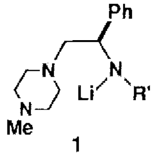


Tetrahedron Lett. 30, 6537 (1989)

Kinetic Resolution of Racemic 2-Substituted Cyclohexanones by Enantioselective Deprotonation

Hee-doo Kim, Hisashi Kawasaki, Makoto Nakajima, and Kenji Koga*
Faculty of Pharmaceutical Sciences, University of Tokyo, Hongo, Bunkyo-ku, Tokyo 113, Japan





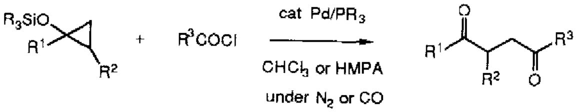
1

Tetrahedron Lett. 30, 6541 (1989)

Palladium- and Platinum-Catalyzed Reaction of Siloxycyclopropanes with Acid Chlorides. A Homoenolate Route to 1,4-Dicarbonyl Compounds

Satoshi Aoki, Tsutomu Fujimura, Eiichi Nakamura,* and Isao Kuwajima*
Department of Chemistry, Tokyo Institute of Technology, Meguro, Tokyo 152, Japan

1,4-Dicarbonyl synthesis via direct coupling of siloxycyclopropanes with acid chlorides.

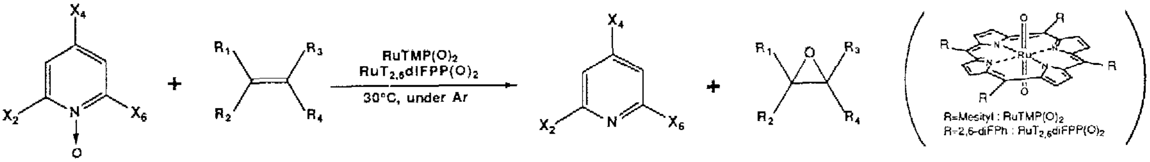


R^1 = alkoxy, alkyl, aryl

Tetrahedron Lett. 30, 6545 (1989)

HIGHLY EFFICIENT EPOXIDATION OF OLEFINS WITH PYRIDINE N-OXIDES CATALYZED BY RUTHENIUM PORPHYRINS

Tsunehiko Higuchi, Hiro Ohtake, Masaaki Hirobe*
Faculty of Pharmaceutical Sciences, University of Tokyo, Hongo, Bunkyo-ku, Tokyo 113, Japan

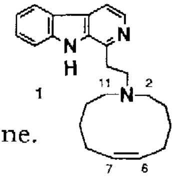


Tetrahedron Lett. 30, 6549 (1989)

A TOTAL SYNTHESIS OF MANZAMINE C

Yasuhiro Torisawa, Akihiro Hashimoto, Masako Nakagawa*, and Tohru Hino*
Faculty of Pharmaceutical Sciences, Chiba University,
Yayoi-Cho, Chiba-shi, 260 Japan

Manzamine C (**1**) has been synthesized from 1-hydroxyethyl- or 1-ethoxycarbonylmethyl-β-carboline and 6-(z)-azacycloundecene.

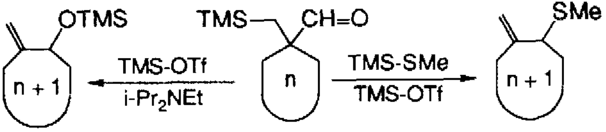


1

Tetrahedron Lett. 30, 6551 (1989)

SILICON-BASED NUCLEOPHILES MEDIATED ONE-CARBON RING EXPANSION REACTION OF 1-(TRIMETHYLSILYLMETHYL) CYCLOALKANECARBALDEHYDES

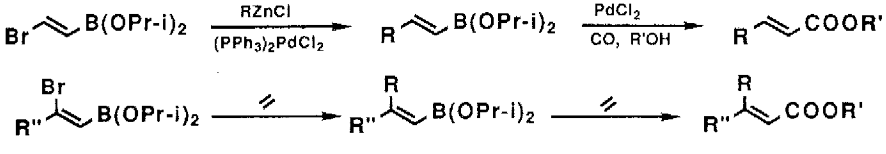
Keiji Tanino, Kazushige Sato, and Isao Kuwajima*
Department of Chemistry, Tokyo Institute of Technology,
Meguro, Tokyo 152, Japan



Tetrahedron Lett. 30,6555(1989)

ORGANIC SYNTHESIS USING HALOBORATION REACTION XVIII. A STEREOSELECTIVE SYNTHESIS OF β-MONO- AND β,β-DISUBSTITUTED α,β-UNSATURATED ESTERS

Naoko Yamashina, Satoshi Hyuga, Shoji Hara, and Akira Suzuki*
Department of Applied Chemistry, Faculty of Engineering, Hokkaido University, Sapporo 060, Japan



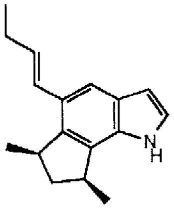
Tetrahedron Lett. 30,6559(1989)

The Total Synthesis of (±)-cis-Trikentrin B via Allene Intramolecular Cycloaddition

Takanori Yasukouchi and Ken Kanematsu*

Faculty of Pharmaceutical Sciences,
Kyushu University, Fukuoka 812, Japan

The first total synthesis of (±)-cis-trikentrin B via the intramolecular Diels-Alder reaction strategy is described.



(±)-*cis*-trikentrin B

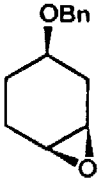
Tetrahedron Lett. 30,6563(1989)

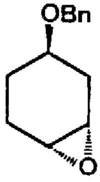
ALTERNATING HIGH REGIOSELECTION IN METHYL GROUP TRANSFER TO ALICYCLIC OXIRANES. SIGNIFICANCE OF THE PRESENCE OF A REMOTE POLAR GROUP

M.Chini,[a] P.Crotti,[a]*L.A.Flippin,[b]*F.Macchia[a]
[a]Istituto di Chimica Organica,Facoltà di Farmacia, 56100 Pisa,Italy and [b]Department of Chemistry and Biochemistry,San Francisco State University, San Francisco, California 94132, USA.

An alternating high regiocontrol of the methylating ring opening of oxiranes 1 and 2 by means of metal-assisted chelating or non-chelating processes is reported.

1





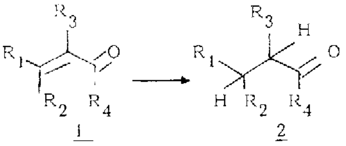
2

Tetrahedron Lett. 30,6567(1989)

A SIMPLE PROCEDURE FOR SELECTIVE REDUCTION OF α , β-UNSATURATED CARBONYL COMPOUNDS USING Al-NiCl$_2$ SYSTEM

Manoj J. Hazarika and Nabin C. Barua*
Division of Natural Products Chemistry, Regional Research Laboratory (CSIR), Jorhat 785 006, Assam, India.

The Al-NiCl$_2$.6H$_2$O-THF system selectively reduces the double bond of the α-enone system 1 to the corresponding saturated analogue 2 without effecting isolated double bonds and carbonyls present in the molecule. Aliphatic aldehydes & ketones are not effected by this system but aromatic aldehydes and ketones are reduced to the corresponding hydroxy compounds in good yields.

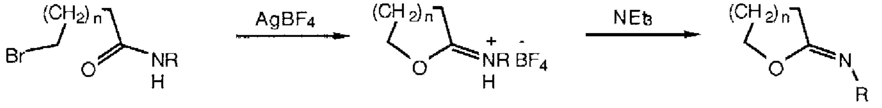


Tetrahedron Lett. 30,6571(1989)

FACILE PREPARATION OF 2-IMINO TETRAHYDROFURANS, PYRANS AND OXEPANS

Alex I. D. Alanine, Colin W.G. Fishwick, and Csaba Szantay Jr.*
School of Chemistry, The University of Leeds, Leeds LS2 9JT.

A simple and convenient route to 2-imino tetrahydrofurans, pyrans and oxepans which utilizes a silver-assisted intramolecular O-alkylation has been developed and produces these novel imidates in good yields and with high stereoselectivity.

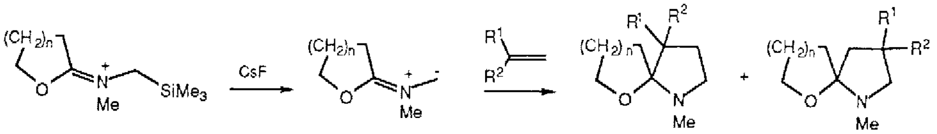


Tetrahedron Lett. 30,6573(1989)

GENERATION AND CYCLOADDITIONS OF TETRAHYDROFURYL, PYRANYL, AND OXEPANYL-2-IMMINIUM METHYLIDES

Alex I. D. Alanine, Colin W.G. Fishwick, and Csaba Szantay Jr.*
School of Chemistry, The University of Leeds, Leeds LS2 9JT.

Tetrahydrofuryl, pyranyl, and oxepanyl-2-imminium methylides, generated via fluoride anion-induced desilylation of the corresponding N-(trimethylsilyl)methyl imminium cations undergo facile 1,3-dipolar cycloaddition to a range of electron deficient olefins to yield novel spirocyclic systems, which exist in dynamic epimeric equilibrium.

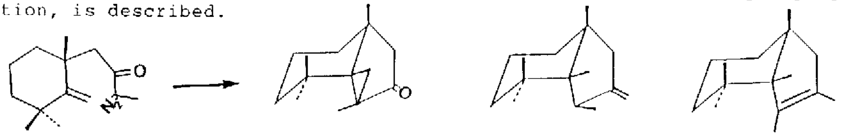


Tetrahedron Lett. 30,6577(1989)

STEREOSPECIFIC SYNTHESIS OF THAPS-7(15)-ENE AND THAPS-6-ENE, PROBABLE BIOGENETIC PRECURSORS OF THAPSANES

A. Srikrishna and K. Krishnan
Department of Organic Chemistry, Indian Institute of Science
Bangalore - 560 012, INDIA

Synthesis of title compounds based on intramolecular diazoketone cyclopropanation reaction, is described.



Tetrahedron Lett. 30,6581(1989)

RHIZOCHALIN, A NOVEL SECONDARY METABOLITE OF MIXED BIOSYNTHESIS FROM THE SPONGE <u>RHIZOCHALINA INCRUSTATA</u>.

T.N.Makarieva*,V.A.Denisenko,V.A.Stonik
Pacific Institute of Bioorganic Chemistry,Vladivostok-22,USSR
Yu.M.Milgrom,Ya.V.Rashkes
Institute of Plant Natural Products,Tashkent-170,USSR

The structure of rhizochalin (1),a novel sponge metabolite, is elucidated.