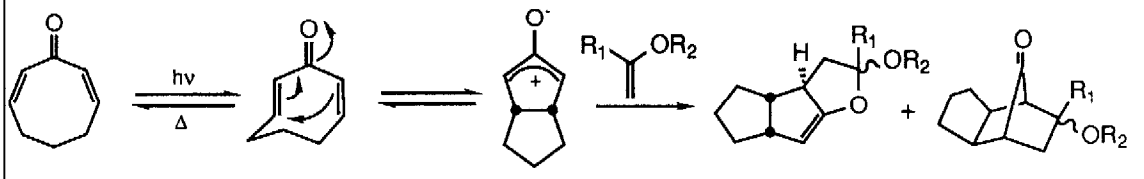
GRAPHICAL ABSTRACTS

Tetrahedron Lett. 30, 637 (1989)

Photochemically Induced Reactions of 2,7-Cyclooctadienone.

Albert R. Matlin*, Kyo Kim
Department of Chemistry, Oberlin College, Oberlin, OH 44074

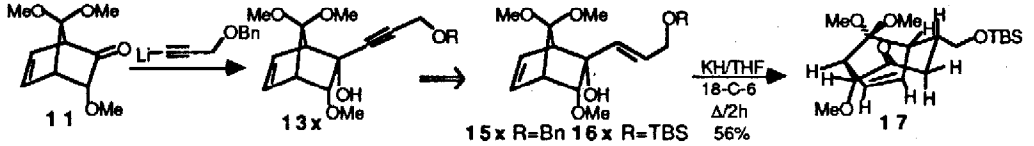


Tetrahedron Lett. 30, 641 (1989)

FACILE SYNTHESIS OF A SUBSTITUTED BICYCLO[4.2.1]NONANE VIA AN ANIONIC [1,3]-SIGMATROPIC SHIFT: USE OF LONG RANGE 2D HETCOR AND DIFFERENCE NOE IN STRUCTURE DETERMINATION

Michael E. Jung* and Susan M. Kaas, Department of Chemistry and Biochemistry, University of California, Los Angeles, CA 90024

The structure of the exo-alkenyl norbornenol **16x** (prepared in good yield from the ketone **11** via the alcohol **13x**) was proven by 2D HETCOR and difference NOE of **15x**; it rearranges readily to the substituted bicyclo[4.2.1]non-7-en-3-one **17**.



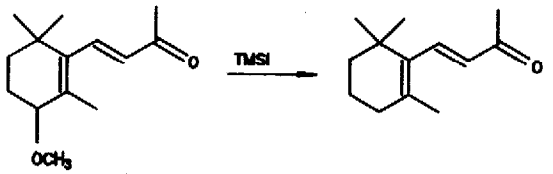
11 → 13x → 15x R=Bn, 16x R=TBS → 17

Tetrahedron Lett. 30, 645 (1989)

Iodotrimethylsilane Reduction of Carbonyl Conjugated Allylic Ethers

David A. Hartman and Robert W. Curley, Jr.
College of Pharmacy, The Ohio State University, Columbus, Ohio 43210

Iodotrimethylsilane may prove useful in cleavage of allylic carbonyl conjugated ethers, as illustrated by the conversion of **1** to **2**.

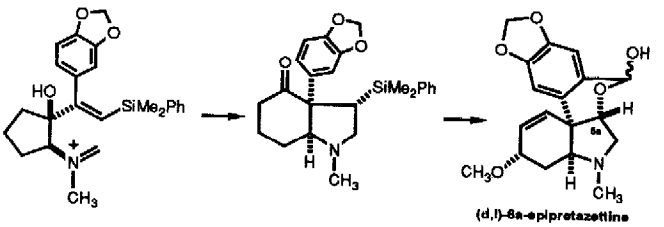


1 **2**

Tetrahedron Lett. 30, 647 (1989)

PREPARATION OF FUNCTIONALIZED HYDROINDOL-3-OLS VIA TANDEM AZA-COPE REARRANGEMENT-MANNICH CYCLIZATIONS. FORMAL TOTAL SYNTHESIS OF (±)-6a-EPIPRETAZETTINE AND RELATED ALKALOIDS

Larry E. Overman* and Hanno Wild
Department of Chemistry, University of California, Irvine, CA 92717

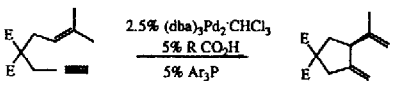


Tetrahedron Lett. 30,651(1989)

A NEW PALLADIUM CATALYST FOR INTRAMOLECULAR CARBAMETALATIONS OF ENYNES

Barry M. Trost*, Donna C. Lee, and Frode Rise
Departments of Chemistry, University of Wisconsin, Madison, WI 53706
and Stanford University, Stanford, CA 94305

A Pd(0) complex plus a carboxylic acid creates a catalyst for five membered ring construction including the prospect for easy catalytic asymmetric induction.

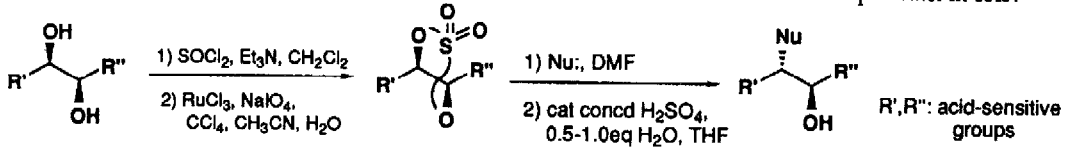


Tetrahedron Lett. 30,655(1989)

Cyclic Sulfates Containing Acid-Sensitive Groups and Chemoselective Hydrolysis of Sulfate Esters

B. Moon Kim and K. Barry Sharpless*
Department of Chemistry, Massachusetts Institute of Technology, Cambridge, MA 02139

Chemoselective hydrolysis of sulfate esters resulting from nucleophilic opening of cyclic sulfates containing acid-sensitive groups is smoothly effected by a catalytic amount of concd sulfuric acid and 0.5-1.0 eq of water in THF.

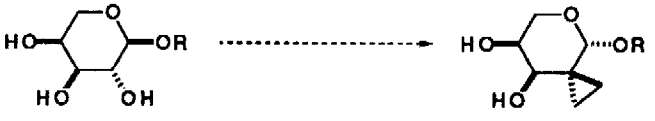


Tetrahedron Lett. 30,659(1989)

Synthesis of L-2-Spirocyclopropyl-2-deoxyarabinose

Russell C. Petter and David G. Powers*
Department of Chemistry, University of Pittsburgh, Pittsburgh, PA 15260

The synthesis of 2-spirocyclopropyl-2-deoxyarabinose from L-arabinose is described. Unusual reactions of a dichlorocyclopropane intermediate are observed. Glycosides of the target compound may serve as mechanism-based inactivators of β-galactosidase.

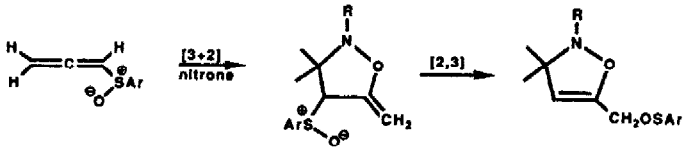


Tetrahedron Lett. 30,663(1989)

TANDEM [3+2]-CYCLOADDITION [2,3]-SIGMATROPIC REARRANGEMENT REACTION OF ALLENYL SULFOXIDES WITH NITRONES

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

The cycloaddition reaction of 2,4-dinitrophenylsulfinylpropadiene with several nitrones has been investigated. The initial 3+2-cycloadduct readily undergoes a subsequent 2,3-sigmatropic rearrangement.

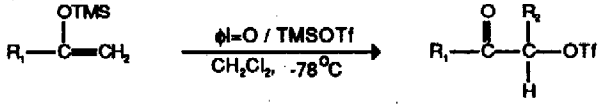


Tetrahedron Lett.30,667(1989)

HYPERVALENT IODINE OXIDATION OF TRIMETHYLSILYL ENOL ETHERS OF KETONES: A DIRECT SYNTHESIS OF α-KETO TRIFLATES

Robert M. Moriarty, W. Ruwan Epa, Raju Penmasta and Alok K. Awasthi
Department of Chemistry, University of Illinois at Chicago, Chicago, Illinois 60680

α-Keto triflates have been synthesized under very mild conditions by the reaction of silyl enol ethers of ketones and trimethylsilyl trifluormethanesulfonate/iodosobenzene in dichloromethane.

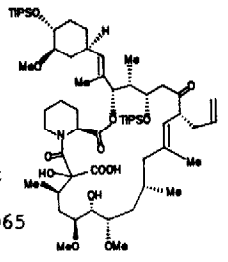


Tetrahedron Lett.30,671(1989)

CHEMISTRY OF FK-506: BENZILIC ACID REARRANGEMENT OF THE TRICARBONYL SYSTEM

D. Askin*, R.A. Reamer*, T.K. Jones, R.P. Volante and I. Shinkai

Department of Process Research, Merck Sharp & Dohme Research Laboratories P.O. Box 2000, Rahway, New Jersey 07065



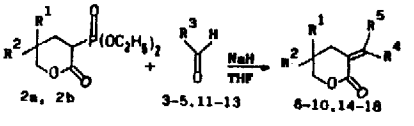
Treatment of bis-TIPS-FK-506 with aqueous LiOH results in a benzilic acid rearrangement of the C.8-C.10 tricarbonyl portion to afford the acid shown.

Tetrahedron Lett.30,675(1989)

SYNTHESIS OF α-METHYLENE MONOSUBSTITUTED δ-LACTONES FROM α-PHOSPHONOLACTONES NEW WITTIG-HORNER COMPOUNDS.

G.Falsone*, Ute Wingen and Detlef Wendisch (a)
Institut für Organische Chemie I der Universität, Universitätsstrasse 1,D-4000 Düsseldorf
(a) Zentralbereich Forschung und Entwicklung der Bayer AG,D-5090 Leverkusen Bayerwerk

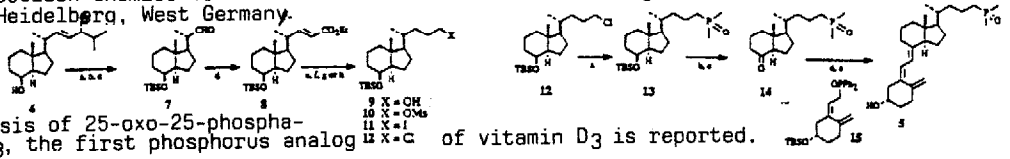
A synthesis of α-methylene monosubstituted δ-lactones 6-10, 14-18 from α-phosphonolactones 2a, 2b.



Tetrahedron Lett.30,677(1989)

THE SYNTHESIS OF 25-OXO-25-PHOSPHAVITAMIN D_3

William G. Dauben,[a*] Richard R. Ollmann, Jr.,
Angelika S. Funhoff,[b] and Richard Neidlein[b]
a: Department of Chemistry, University of California, Berkeley, Berkeley, California 94720.
b: Pharmazeutisch-Chemisches Institut der Universität Heidelberg, Im Neuenheimer Feld 364, D-6900 Heidelberg, West Germany.



The synthesis of 25-oxo-25-phospha-vitamin D_3, the first phosphorus analog of vitamin D_3 is reported.

Tetrahedron Lett. 30, 681 (1989)

TRIS(TRIMETHYLSILYL)SILANE AS MEDIATOR IN ORGANIC SYNTHESIS VIA RADICALS

B. Giese* and B. Kopping, Petersenstr. 22, Institut für Organische Chemie der THD - 6100 Darmstadt
C. Chatgilialoglu, Consiglio Nazionale delle Ricerche, I-40064 Ozzano Emilia (Bologna), Italy

In organic synthesis via radicals toxic stannanes can be replaced by tris(trimethylsilyl)silane

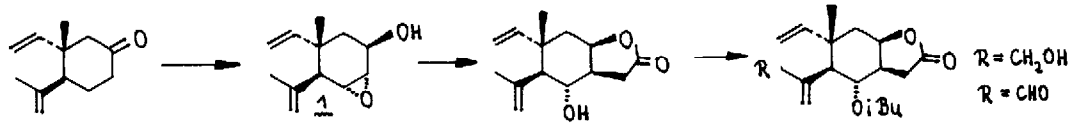
$$R^1\text{—}X \xrightarrow{(Me_3Si)_3Si\,\bullet} R^1\bullet \xrightarrow[\text{Rearrangement}]{\text{Addition Cyclization}} R^2\bullet \xrightarrow{(Me_3Si)_3SiH} R^2\text{—}X$$

Tetrahedron Lett. 30, 685 (1989)

TOTAL SYNTHESIS OF THE ELEMANOLIDES ZEMPOALIN A AND B

S. Bartel and F. Bohlmann
T.U. Berlin 12, IOC, W.-Germany

Synthesis of zempoalin A and B via epoxide 1



Tetrahedron Lett. 30, 689 (1989)

Reactions Of Organic Halides With Olefins Under Ni^0-Catalysis Formal Addition Of Hydrocarbons To CC-Double Bonds

Reiner Sustmann*, Peter Hopp and Peter Holl
Institut für Organische Chemie der Universität Essen, Postfach 103 764, D-43 Essen 1, W.Germany

$$R\text{-}X + H_2C{=}CHR' \xrightarrow[\text{THF, Zn, pyridine}]{NiCl_2 \times 6\,H_2O} RCH_2CH_2R'$$

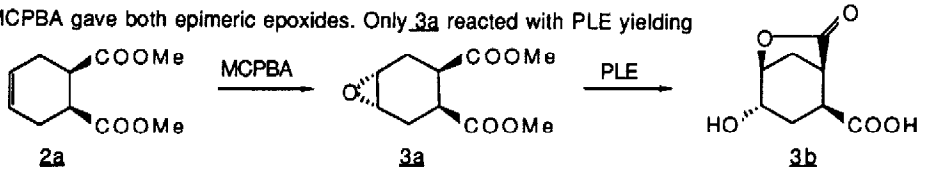
R=prim., sec., tert. alkyl, vinyl, phenyl yields= 60-80%
R'= $-CO_2Et$, $-COCH_3$, -CN

Tetrahedron Lett. 30, 693 (1989)

Selective Hydrolysis of the Dimethyl 4,5-Epoxy-1,2-cis-Cyclohexanedicarboxylates with Pig Liver Esterase (PLE).

Thomas Kuhn and Christoph Tamm*, Institut fuer Organische Chemie der Universitaet, St. Johanns-Ring 19, CH-4056 Basel
Andreas Riesen and Margaretha Zehnder, Institut fuer Anorganische Chemie der Universitaet, Spitalstrasse 51, CH-4056 Basel

Oxidation of 2a with MCPBA gave both epimeric epoxides. Only 3a reacted with PLE yielding the lactone 3b.



2a 3a 3b

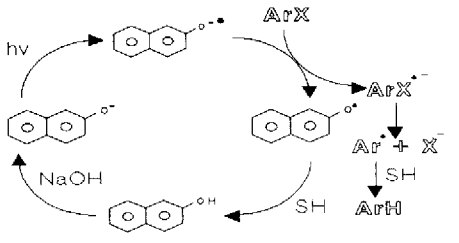
Tetrahedron Lett.30,697(1989)

PHOTODECHLORINATION OF CHLOROAROMATICS BY ELECTRON TRANSFER FROM AN ANIONIC SENSITIZER

J.Ph.SOUMILLION[1*], P.VANDEREECKEN[1], F.C.DE SCHRYVER[2].

1 Laboratory of Physical Organic Chemistry, Louvain-la-Neuve, Belgium.
2 Laboratory for Molecular Dynamics and spectroscopy, Heverlee, Belgium.

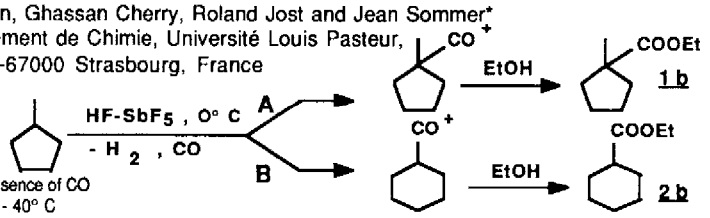
A novel photosensitized process for dechlorination of chloronaphthalene and chlorobiphenyl uses naphthoxide anion as excited donor. This process works via the radical anion of the chloroaromatic



Tetrahedron Lett.30,701(1989)

TEMPERATURE CONTROLLED SELECTIVITY IN METHYL-CYCLOPENTANE CARBONYLATION IN HF-SbF5

Jean-Christophe Culmann, Ghassan Cherry, Roland Jost and Jean Sommer*
UA CNRS 469, Département de Chimie, Université Louis Pasteur,
1, rue Blaise Pascal, F-67000 Strasbourg, France



A : 1) 6 hours at 0° C in the absence of CO
2) 1 hour carbonylation at - 40° C
B : 6 hours at 0° C in the presence of CO

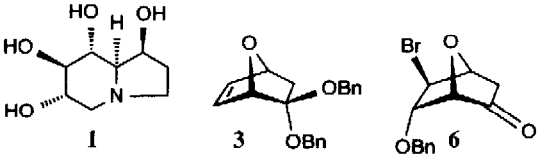
Yield based on SbF_5 : (A : 80% B : 60%)

Tetrahedron Lett.30,705(1989)

A HIGHLY STEREOSELECTIVE TOTAL SYNTHESIS OF (±)CASTANOSPERMINE.

Jean-Louis Reymond and Pierre Vogel* Institut de chimie organique de l'Université,
2, rue de la Barre, CH 1005 - Lausanne, Switzerland.

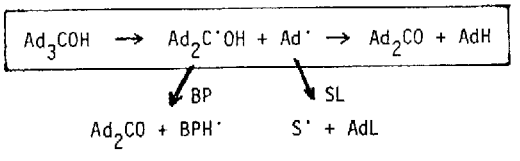
An efficient synthesis of castanospermine (1) based on the bromination/rearrangement reaction 3 → 6 is presented.



Tetrahedron Lett.30,707 (1989)

HYDROGEN ATOM TRANSFER IN THE REACTIONS OF THERMALLY-GENERATED DI-t-ALKYLKETYL AND 1-ADAMANTYL RADICALS

by John S. LOMAS and Sylvette BRIAND
Institut de Topologie et de Dynamique des Systèmes de l'Université Paris 7, associé au C.N.R.S.,
1, rue Guy de la Brosse, 75005 PARIS, France

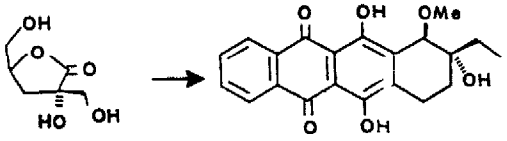


Radicals $Ad_2C^{\bullet}OH$ and Ad• escaping from the solvent cage react rapidly with benzophenone and toluene, respectively, giving mainly cross-product.

Tetrahedron Lett.30,711(1989)

ANTHRACYCLINONES IV. A SYNTHETIC APPROACH TOWARDS RHODOMYCINONES.

Agnès Génot, Jean-Claude Florent and Claude Monneret*
Département de Pharmacognosie associé au CNRS
Faculté des Sciences Pharmaceutiques et Biologiques
4 avenue de l'Observatoire, 75270
Paris Cédex 06, France.



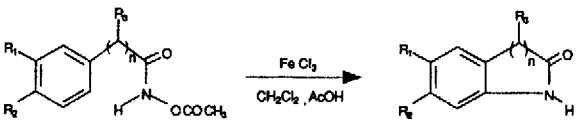
A precursor of β and γ-rhodomycinones is synthesized from α-D-isosaccharino-lactone.

Tetrahedron Lett.30,715(1989)

A novel electrophilic N-amidation via electron deficient complexes : action of ferric chloride on N-acetyloxyamides

M. Cherest* and X. Lusinchi
Institut de Chimie des Substances Naturelles, C.N.R.S., 91198 Gif-sur-Yvette, France

The action of $FeCl_3$ on N-acetyloxyamides leads to electron deficient species which can react intra or intermolecularly with an aromatic group to give oxindoles or analogues.

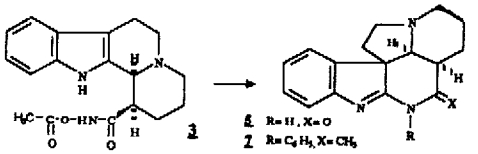


Tetrahedron Lett.30,719(1989)

Réarrangement d'indolo[2,3-a]quinolizidines en dérivés à squelette E-azaaspidospermane

L. Demuynck, M. Chérest, X. Lusinchi et C. Thal*
Institut de Chimie des Substances Naturelles, C.N.R.S., 91198 Gif-sur-Yvette, France

A rearrangement involving electron deficient nitrogen atoms gives original E-azaaspido-spermane derivatives from indolo[2,3-a]-quinolizidine aminocompounds.

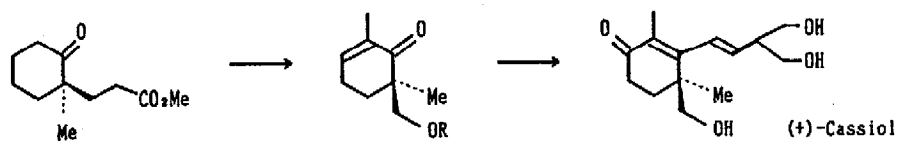


Tetrahedron Lett.30,723(1989)

TOTAL SYNTHESIS OF (+)-CASSIOL.

T. Takemoto, C. Fukaya* and K. Yokoyama
Central Research Laboratory, The Green Cross Corporation
2-1180-1, Shodai-Ohtani, Hirakata, Osaka 573, Japan.

The total synthesis of (+)-cassiol is described

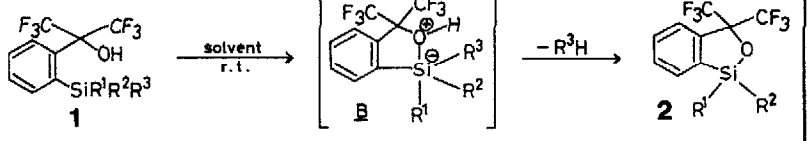


Tetrahedron Lett. 30, 725 (1989)

INTRAMOLECULAR CYCLIZATION OF o-SILYLBENZYL ALCOHOLS WITH ELIMINATION OF HYDROCARBON VIA HYPERVALENT SILICON INTERMEDIATES: EFFECT OF STRUCTURE ON THE SELECTIVITY FOR ELIMINATION.

Yohsuke Yamamoto, Yasuhiro Takeda, and Kin-ya Akiba*
Department of Chemistry, Faculty of Science, Hiroshima University, Hiroshima 730, JAPAN

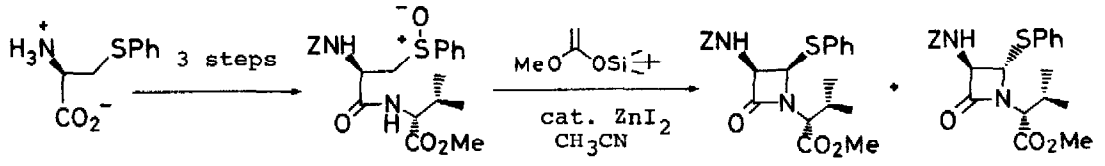
The selectivity for the elimination of substituents from 1 was determined by the structure of zwitterions (B).



Tetrahedron Lett. 30, 729 (1989)

CHEMISTRY OF O-SILYLATED KETENE ACETALS: BIOMIMETIC SYNTHESIS OF CIS-β-LACTAMS

Yasuyuki Kita,* Osamu Tamura, Takashi Miki, Hideyuki Tono, Norio Shibata, and Yasumitsu Tamura
Faculty of Pharmaceutical Sciences, Osaka University, 1-6, Yamada-oka, Suita, Osaka 565 Japan

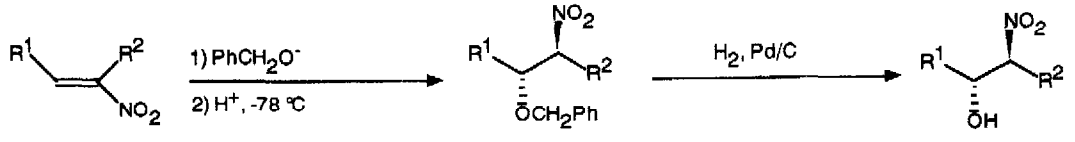


Z=benzyloxycarbonyl

Tetrahedron Lett. 30, 731 (1989)

DIASTEREOSELECTIVE PREPARATION OF ANTI-β-AMINO ALCOHOLS VIA MICHAEL ADDITION OF ALKOXIDE ANIONS TO NITROOLEFINS AND SUBSEQUENT HYDROGENATION REACTION

Akio Kamimura 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

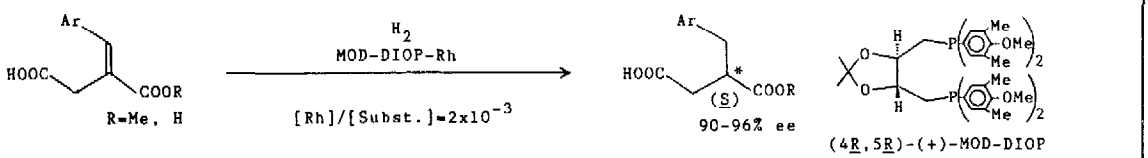


Tetrahedron Lett. 30, 735 (1989)

HIGHLY EFFICIENT ASYMMETRIC HYDROGENATION OF ITACONIC ACID DERIVATIVES CATALYZED BY A MODIFIED DIOP-RHODIUM COMPLEX

Toshiaki Morimoto, Mitsuo Chiba, and Kazuo Achiwa*

School of Pharmaceutical Sciences, University of Shizuoka, 2-2-1 Oshika, Shizuoka 422, Japan

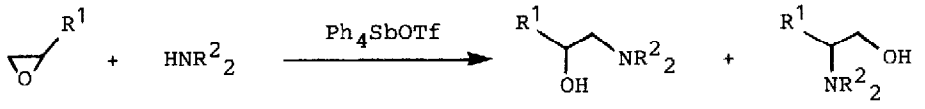


Tetrahedron Lett. 30, 739 (1989)

TETRAPHENYLSTIBONIUM TRIFLATE AS A REGIO- AND CHEMOSELECTIVE CATALYST IN THE REACTION OF OXIRANES WITH AMINES.

Masahiro Fujiwara, Makoto Imada, Akio Baba* and Haruo Matsuda
Department of Applied Chemistry, Faculty of Engineering, Osaka University, 2-1 Yamadaoka, Suita, Osaka 565, Japan

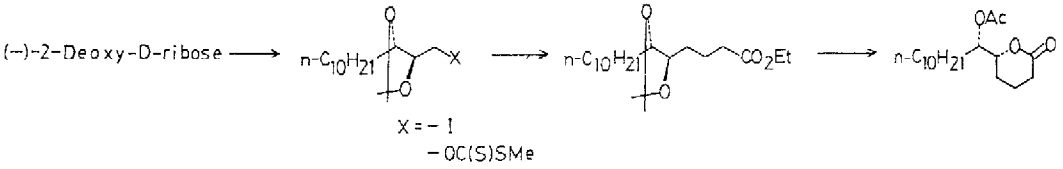
Regio- and chemoselective addition of amines to oxiranes is achieved by Ph_4SbOTf catalyst.



Tetrahedron Lett. 30, 743 (1989)

AN ENANTIOSPECIFIC SYNTHESIS OF (−)-(5R, 6S)-6-ACETOXY-5-HEXADECANOLIDE, THE MOSQUITO OVIPOSITION PHEROMONE

Suk-Ku Kang* and Il-Hwan Cho, Department of Chemistry,
Sung Kyun Kwan University, Natural Science Campus, Suwon 440 746, Korea

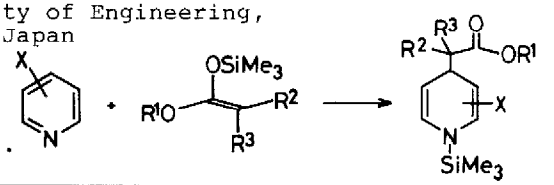


Tetrahedron Lett. 30, 747 (1989)

CLAY MONTMORILLONITE-CATALYZED REGIOSELECTIVE ADDITION OF SILYL KETENE ACETALS TO PYRIDINE DERIVATIVES: SYNTHESIS OF N-SILYLDIHYDROPYRIDINES.

Makoto Onaka,* Ryosuke Ohno, and Yusuke Izumi*
Department of Synthetic Chemistry, Faculty of Engineering,
Nagoya University, Chikusa, Nagoya 464, Japan

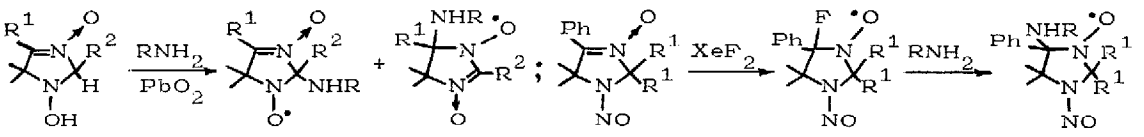
Clay montmorillonite catalyzes addition of silyl ketene acetals to pyridine derivatives with electron-withdrawing groups to afford N-silyldihydropyridines.



Tetrahedron Lett. 30, 751 (1989)

SYNTHESIS OF STABLE NITROXIDES WITH AMINO GROUPS AND FLUORINE ATOMS AT α-CARBON OF THE RADICAL CENTRE

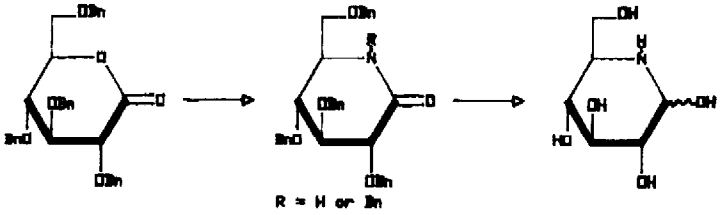
I.A.Grigor'ev, L.B.Volodarsky, V.F.Starichenko, I.A.Kirilyuk
Institute of Organic Chemistry, Novosibirsk, 630090, USSR



Tetrahedron Lett. 30, 755 (1989)

A Facile Synthesis of Nojirimycin

S.Rajanikanth and R.Seshadri
Central Food Technological Research Institute, Mysore-570 013, India.

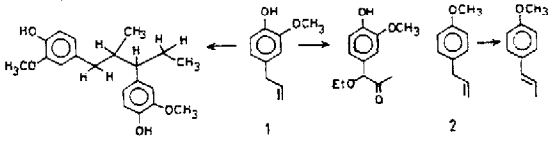


Tetrahedron Lett. 30, 759 (1989)

ANOMALOUS BEHAVIOUR OF SUBSTITUTED ALLYL BENZENES IN PALLADIUM(II) CATALYSED REACTION

Meera Iyer, Dinesh N. Rele and G.K.Trivedi*
Department of Chemistry, Indian Institute of Technology, Powai, Bombay-400076, India

An unprecedented palladium (II) catalysed oxidation of eugenol (1) and methyl chavicol (2)



Tetrahedron Lett. 30, 763 (1989)

DIRECT IR-SPECTROSCOPIC OBSERVATION OF (1+2)--CYCLOADDITION OF CYCLOPENTADIENYLIDENE TO ETHYLENE IN ARGON MATRIX

Oleg M. Nefedov, Petr S. Zuev*, Andrey K. Maltsev, Yuri V. Tomilov
Institute of Organic Chemistry of the USSR Academy of Sciences, Moscow, Leninsky prospect, 47, 117913, USSR

The first direct observation of the typical reaction of carbene with olefinic substrate in low-temperature inert matrix (Ar, 12-45 K).

Tetrahedron Lett. 30, 765 (1989)

THE SYNTHESES OF β-LACTAMS FROM ZINC ENOLATES OF N,N-DISUBSTITUTED α-AMINOACID ESTERS AND IMINES: SUBSTITUENT AND SOLVENT EFFECTS.

Fred H. van der Steen, Henk Kleijn, Johann T.B.H. Jastrzebski and Gerard van Koten*.
University of Utrecht, Laboratory of Organic Chemistry, Dept. of Metal-Mediated Synthesis, Padualaan 8, 3584 CH UTRECHT, The Netherlands.

Syntheses of β-lactams **4** *via* condensation of zinc enolates **2** with imines **3**. Ten examples; substituent and solvent effects on the product distribution are discussed.