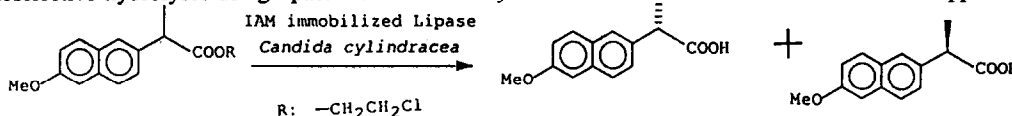


Tetrahedron Lett. 1993, 34, 4731

ON-LINE DETERMINATION OF LIPASE ACTIVITY AND ENANTIOSELECTIVITY USING AN IMMOBILIZED ENZYME REACTOR COUPLED TO A CHIRAL STATIONARY PHASE. Xiao-Ming Zhang and Irving W. Wainer, Department of Oncology, McGill University, Montreal, Quebec, Canada H3G 1Y6

Enantioselective hydrolyses using lipase from *Candida cylindracea* immobilized on an IAM HPLC support.

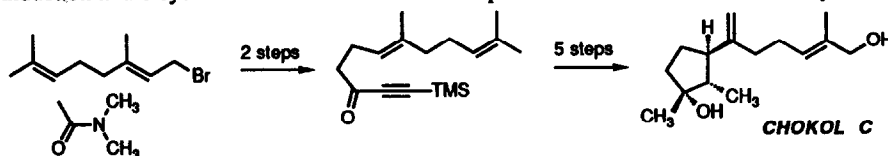


Tetrahedron Lett. 1993, 34, 4735

The Effect of Tether Substituents on the Selectivity of Pd Catalyzed Enyne Cyclizations. A Total Synthesis of Chokol C
Barry M. Trost and Ly T. Phan

Department of Chemistry, Stanford University, Stanford, CA 94305-5080

By establishing the feasibility of placing an unprotected carbonyl group in the tether of a 1,6-enyne, a seven step synthesis of chokol C from commercially available materials is achieved. High asymmetric induction in the cyclization from the tartrate ketal permits this route to become an asymmetric synthesis as well.

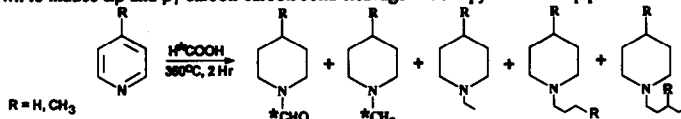


Tetrahedron Lett. 1993, 34, 4739

UNPRECEDENTED PYRIDINE RING C-C BOND CLEAVAGES BY FORMIC ACID.

Michael Siskin^{a*} Alan R. Katritzky^{a,b} Marudai Balasubramanian^b David T. Ferrughelli^a Glen Brons^a and Gopal H. Singhal^c, ^aExxon Research and Engineering Co., Annandale, NJ 08801 USA, ^bUniversity of Florida, Department of Chemistry, Gainesville, FL 32611 USA, ^cExxon Research and Development Laboratories, Baton Rouge, LA 70805 USA

Formic acid is shown to induce $\alpha\beta$ and $\beta\gamma$ carbon-carbon bond cleavage in both pyridines and piperidines.



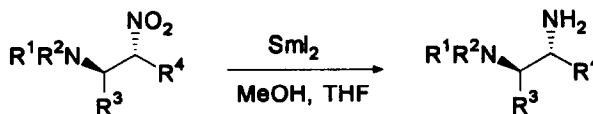
Tetrahedron Lett. 1993, 34, 4743

Rapid Stereoselective Reduction of Thermally Labile 2-Aminonitroalkanes

Michael A. Sturgess,^{*} David J. Yarberry

Dept. of Chemistry and Biochemistry, Univ. of Arkansas, Fayetteville AR 72701.

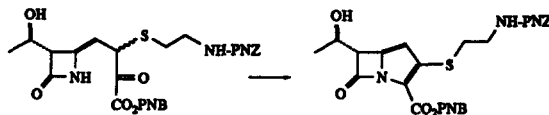
Samarium diiodide reduction of thermodynamically unstable stereochemically labile 2-amino-1-nitroalkanes occurs with predominant retention of configuration at the nitro-center.



Tetrahedron Lett. 1993, 34, 4747

**A NEW STRATEGY FOR THE SYNTHESIS OF CARBAPENEMS.
A FORMAL TOTAL SYNTHESIS OF (+)-THIENAMYCIN.**

Gregg B. Feigelson
Medical Research Division
American Cyanamid Company
Pearl River, New York 10965



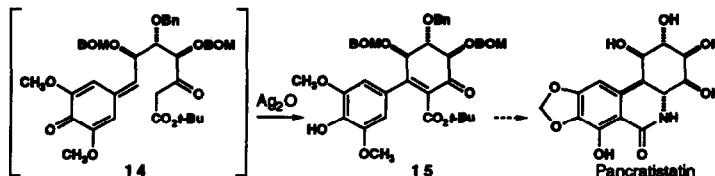
A new approach to formation of the carbapenem ring system is presented. The key step involves the acid mediated reaction of a β -lactam nitrogen and an α -keto ester side-chain. A formal total synthesis of thienamycin serves to demonstrate this strategy.

Tetrahedron Lett. 1993, 34, 4751

**Quinone Methide Initiated Cyclization Reactions:
Studies Toward The Synthesis of (+)-Pancratistatin**

Steven R. Angle* and Michael S. Louie Department of Chemistry,
University of California, Riverside, California 92521-0403

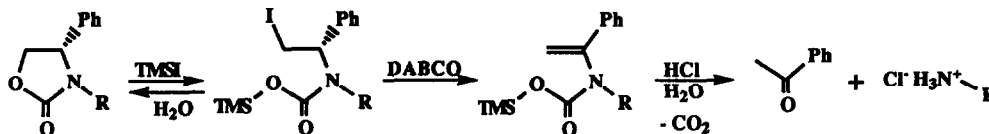
The synthesis of highly functionalized cyclohexenone 15, a possible precursor for (+)-pancratistatin via a quinone methide initiated cyclization reaction is described. Quinone methide 14 was prepared from diacetone glucose.



Tetrahedron Lett. 1993, 34, 4755

**CLEAVAGE OF CHIRAL 4-PHENYL-2-OXAZOLIDINONES WITH
TMSI: APPLICATION TO THE SYNTHESIS OF CARBACEPHEMS.**

Jack W. Fisher*, James M. Dunigan, Lowell D. Hatfield, Richard C. Hoying, James E. Ray and Kristina L. Thomas,
Chemical Process Research and Development Division, Lilly Research Laboratories,
Eli Lilly and Company, Indianapolis, IN 46285-4813 USA.

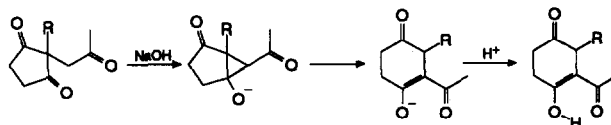


Tetrahedron Lett. 1993, 34, 4759

**TRANSFORMATION OF CYCLOPENTANE-1,3-DIONES INTO CYCLO-
HEXANE-1,4-DIONES - A NOVEL RING ENLARGEMENT PROCESS**

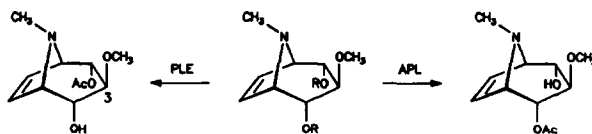
Siegfried Schramm, Birgit Roatsch, Egon Gründemann, Hans Schick*, Centre of Selective Organic Synthesis, Rudower
Chaussee 5, D-12489 Berlin-Adlershof, Germany

An intramolecular aldol reaction followed by a ring opening of the formed bicyclic intermediates allows the conversion of 2-alkyl-2-(2-oxopropyl)cyclopentane-1,3-diones into 2-acetyl-3-alkylcyclohexane-1,4-diones, which are completely enolized.



BIOCATALYSIS EN ROUTE TO DIAMINO-DI(TRI)DEOXYCYCLOHEXITOLS AND DIAMINO-TETRADEOXYCYCLOHEPTITOLS

Christoph Hoenke, Per Klüwer, Uwe Hugger,
Richard Krieger, and Horst Prinzbach
Chemisches Laboratorium der Universität Freiburg



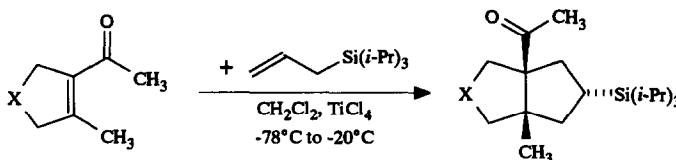
Efficient enzymatic resolutions and highly selective enzymatic asymmetrications provide enantiomerically pure aminoglycoside building blocks.

[3+2] CYCLOADDITIONS OF ALLYLSILANES, PART 3. DIASTERESELECTIVE CONSTRUCTION OF TWO CONTIGUOUS QUATERNARY CARBON CENTERS BY [3+2] CYCLOADDITION OF ALLYLTRISISOPROPYLSILANE

Hans-Joachim Knölker* and Regina Graf

Institut für Organische Chemie, Universität Karlsruhe, Richard-Willstätter-Allee, 76131 Karlsruhe, Germany

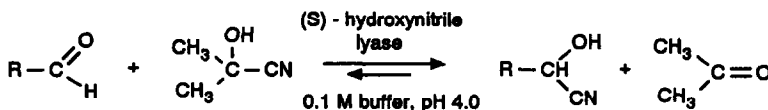
A diastereoselective synthesis of 1,2-annulated and spiroannulated bicyclic ring systems with concomitant generation of two contiguous quaternary carbon atoms is achieved by [3+2] cycloaddition of allyltrisisopropylsilane to the appropriate enones.



Aliphatic (S)-Cyanohydrins by Enzyme Catalyzed Synthesis

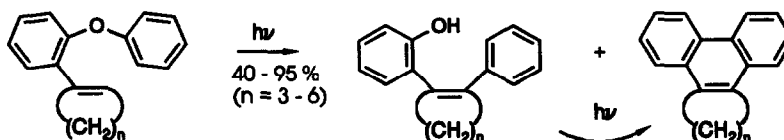
Norbert Klempier and Herfried Griengl*, Institute of Organic Chemistry, Graz University of Technology, Stremayrgasse 16, A-8010 Graz, Austria.

Marianne Hayn, Institute of Biochemistry, University of Graz, Schubertstraße 1, A-8010 Graz, Austria.



Photochemical Studies with o-Vinyl Diaryl Ethers A New Photo-Heterocyclization Reaction ?

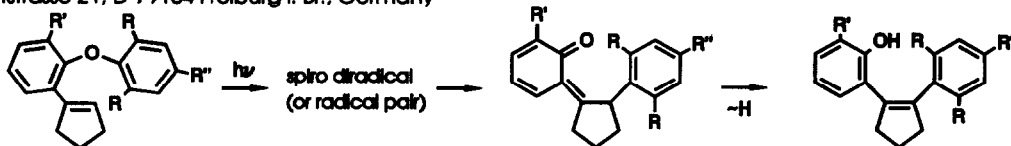
Wolfgang Eberbach* and Jürgen Hensle, Institut für Organische Chemie und Biochemie der Universität Albertstrasse 21, D-79104 Freiburg i. Br., Germany



The Photorearrangement of *o*-Vinyl Diaryl Ethers Into *o*-Hydroxy Stilbenes

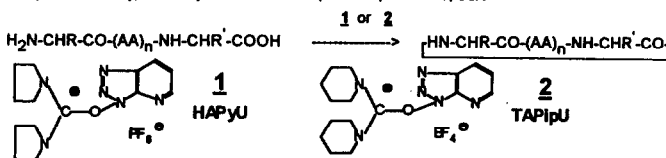
Evidence against Dipolar Intermediates

Wolfgang Eberbach* and Jürgen Hense, Institut für Organische Chemie und Biochemie der Universität
Albertstrasse 21, D-79104 Freiburg i. Br., Germany



Synthesis of Cyclic Peptides via Efficient New Coupling Reagents

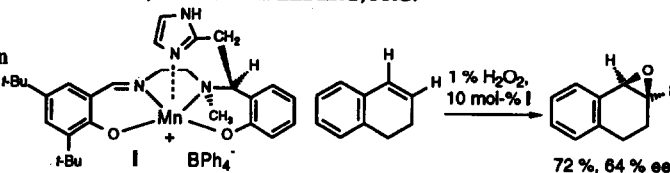
A. Ehrlich*, S. Rothermund, M. Brudel, M. Beyermann, L.A. Carpio[‡] and M. Bienert
Research Institute of Molecular Pharmacology, Alfred-Kowalko-Str. 4, D-1136 Berlin, Germany;
[‡] Dept. of Chemistry, University of Massachusetts, Amherst, MA 01003, USA



A BIOMIMETIC CATALYST FOR THE ASYMMETRIC EPOXIDATION OF UNFUNCTIONALIZED OLEFINS

WITH HYDROGEN PEROXIDE. Thomas Schwenkreis and Albrecht Berkessel*; Organisch-Chemisches Institut der
Ruprecht-Karls-Universität Heidelberg; Im Neuenheimer Feld 270, D-6900 HEIDELBERG, FRG.

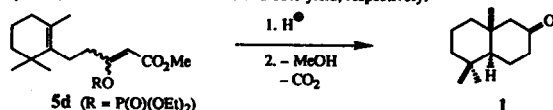
The manganese chelate **1** catalyzed the epoxidation of unfunctionalized olefins with dilute hydrogen peroxide as terminal oxidant. With 1,2-dihydronaphthalene as substrate, enantiomeric excess of the (1*R*,2*S*)-epoxide up to 64 % was achieved.



ACID-MEDIATED CYCLISATIONS: EFFICIENT ACCESS TO FUNCTIONALISED TRANS-DECALINS

Simon M. Linder, Daniel Reichlin, Dana P. Simmons and Roger L. Snowden*
Firmenich SA, Research Laboratories, P.O.B. 239, CH-1211 Geneva 8, Switzerland.

Abstract: Acid-mediated cyclisation of monocyclic (*E*- and (*Z*)- β -phosphoroxenone **5d** using 98% aq. H₂SO₄ in toluene at 2° affords, after decarbomethoxylation, *trans*-2-decalone **1** in 79% and 68% yield, respectively.

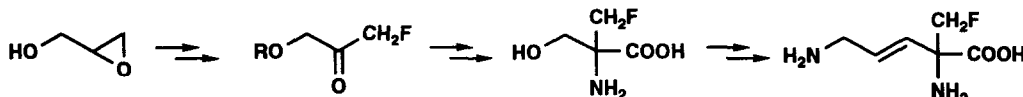


Tetrahedron Lett. 1993, 34, 4793

A VERSATILE ENTRY INTO THE SYNTHESIS OF α -(MONO-FLUOROMETHYL)AMINO ACIDS : PREPARATION OF α -(MONOFLUOROMETHYL) SERINE AND (*E*)-DEHYDRO- α -(MONOFLUOROMETHYL) ORNITHINE.

Luc Van Hijfte*, Véronique Heydt and Michael Kolb

Marion Merrell Dow Research Institute, Strasbourg Research Center, 16 Rue d'Ankara, 67009 Strasbourg Cedex, France



The Strecker Synthesis with α -(monofluoromethyl) ketones provides access to α -(monofluoromethyl) amino acids, as illustrated by the preparation of α -(monofluoromethyl) serine, subsequently transformed into (*E*)-dehydro- α -(monofluoromethyl) ornithine.

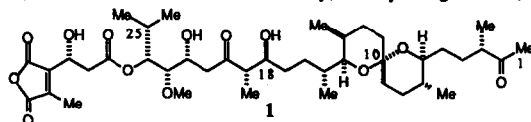
Tetrahedron Lett. 1993, 34, 4797

Synthetic Study on Tautomycin.

Stereocontrolled Synthesis of C(1)-C(18) Fragment using a Strategy of Selective Reduction of Spiroketal

Masato Oikawa, Hideaki Oikawa* and Akitami Ichihara*

Department of Bioscience and Chemistry, Faculty of Agriculture, Hokkaido University, Sapporo 060, Japan



A synthesis of C(1)-C(18) fragment of tautomycin 1 has been achieved employing asymmetric crotylboration, selective reduction of spiroketal and addition of crotylstannane as the key steps.

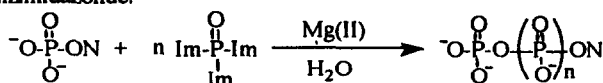
Tetrahedron Lett. 1993, 34, 4801

Mg(II) Ion-Mediated Conversion of Mono- and Oligonucleotides to 5'-Polyphosphates in Aqueous Solution

Hiroaki Sawai, Keiko Inaba, Atsushi Hirano, Hiromichi Wakai and Masamitsu Shimazu

Department of Chemistry, Faculty of Engineering, Gunma University, Kiryu, Gunma 376 Japan

5'-Phosphates of mono- and oligonucleotides were converted to the corresponding 5'-polyphosphates in aqueous solution by Mg(II) ion-mediated pyrophosphorylation with phosphorotriimidazole or phosphorotribenzimidazole.



N=Mono- and Oligonucleotide
Im=Imidazole or Benzimidazole
 $n=1,2,3--$

Tetrahedron Lett. 1993, 34, 4805

STRUCTURAL STUDY OF THE 1:2 METHANOL COMPLEX OF 1,1,2,2-TETRAKIS(4-HYDROXYPHENYL)ETHANE

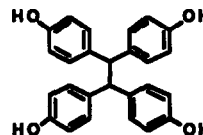
Hiroshi Suzuki^{a,*} and Hideo Takagi^b

^aR&D Laboratory for specialty Chemicals, Nippon Soda Co., Ltd., 12-54 Goi-Minamikaigan, Ichihara 290, Japan

^bOdawara Research Center, Nippon Soda Co., Ltd., 345 Takada, Odawara 250-02, Japan

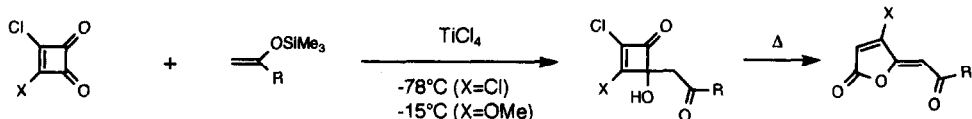
The structure of the 1:2 inclusion complex of 1,1,2,2-tetrakis(4-hydroxyphenyl)ethane with methanol has been revealed by ¹³C CP/MAS NMR and X-ray crystallography.

This inclusion complex exhibits O—H·····O hydrogen bonding interactions.

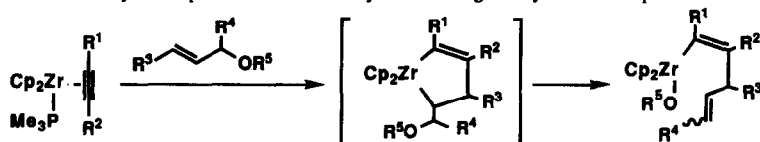


SYNTHESIS OF γ -ACYLMETHYLENETETRONATES FROM**SQUARIC ACID** Masatomi Ohno, Yoshihiko Yamamoto, and Shoji Eguchi*

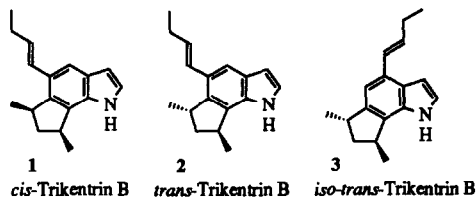
Institute of Applied Organic Chemistry, Faculty of Engineering, Nagoya University, Chikusa, Nagoya 464-01, Japan

Adducts of squaric acid chlorides with a silyl enol ether were converted thermally to γ -acylmethylenetetronates with stereospecificity.**ALLYLZIRCONATION OF ALKYNES BY THE REACTIONS OF ZIRCONOCENE-ALKYNE COMPLEXES WITH ALLYLIC ETHERS**Tamotsu Takahashi,* Noriyuki Suzuki, Motohiro Kageyama, Denis Y. Kondakov and Ryuichiro Hara
Coordination Chemistry Laboratories, Institute for Molecular Science, Okazaki 444, Japan

Zirconium alkyne complexes reacted with allylic ethers to give allylzirconation products of alkynes.

**TOTAL SYNTHESIS OF (6*R*,8*S*)-CIS-TRIKENTRIN B, (6*R*,8*R*)-TRANS-TRIKENTRIN B, AND (6*R*,8*R*)-ISO-TRANS-TRIKENTRIN B. DETERMINATION OF THE ABSOLUTE STRUCTURES OF THE NATURAL TRIKENTRINS B.**

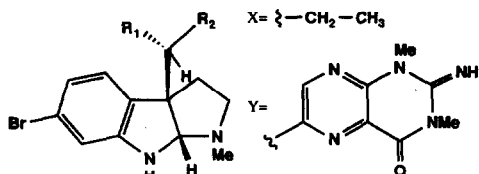
Hideaki Muratake, Takako Seino, and Mitsutaka Natsume,* Research Foundation Itsuu Laboratory, 2-28-10 Tamagawa, Setagaya-ku, Tokyo 158, Japan

The absolute structures of *cis*-trikentrin B (1), *trans*-trikentrin B (2), and *iso-trans*-trikentrin B (3) were determined by a chiral synthesis of the titled trikentrins 1, *ent*-2, and *ent*-3.**Urochordamines A and B: Larval Settlement/Metamorphosis-Promoting, Pteridine-Containing Physostigmine Alkaloids from the Tunicate *Ciona savignyi***

Sachiko Tsukamoto, Hiroshi Hirota, Haruko Kato, and Nobuhiro Fusetani*

Fusetani Biofouling Project, Exploratory Research for Advanced Technology (ERATO), Research Development Corporation of Japan (JRDC), c/o Niigata Engineering Co., Ltd., Isogo-ku, Yokohama 235, Japan

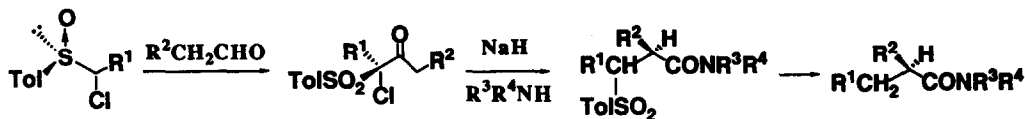
The titled compounds were isolated, and their structures were determined.

Urochordamine A : R₁=X, R₂=YUrochordamine B : R₁=Y, R₂=X

The Asymmetric Favorskii Rearrangement: A Synthesis of Optically Active α -Alkyl Amides from Aldehydes and (-)-1-Chloroalkyl *p*-Tolyl Sulfoxide

Tsuyoshi Satoh,^a Shigeyasu Motohashi,^b Sachiko Kimura,^c Norio Tokutake,^b and Koji Yamakawa^{a*}

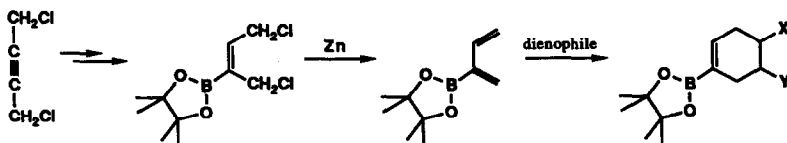
^aFaculty of Pharmaceutical Sciences, Science University of Tokyo; ^bCollege of Pharmacy, Nihon University; ^cCollege of Science and Technology, Nihon University



Synthesis and Cycloaddition of 2-(Dialkoxyboryl)-1,3-butadiene

Akira Kamabuti, Norio Miyaura* and Akira Suzuki*

Department of Applied Chemistry, Faculty of Engineering, Hokkaido University, Sapporo 060, Japan



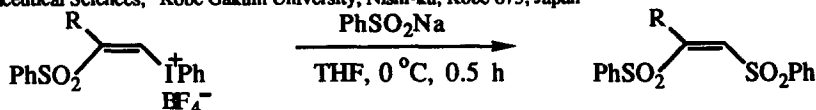
Nucleophilic Vinyllic Substitutions of (Z)-(β -(Phenylsulfonyl)alkenyl)iodonium Tetrafluoroborates with Sodium Benzenesulfinate: Stereoselective Synthesis of (Z)-1,2-Bis(phenylsulfonyl)alkenes

Masahito Ochiai,^{a*} Kunio Oshima,^b Yukio Masaki,^b Munetaka Kunishima,^c and Shohei Tani^c

Faculty of Pharmaceutical Sciences,^a University of Tokushima, 1-78 Shomachi, Tokushima 770, Japan

Gifu Pharmaceutical University,^b 5-6-1 Mitahora Higashi, Gifu 502, Japan

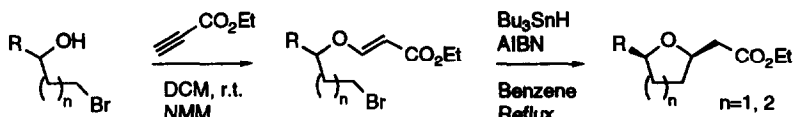
Faculty of Pharmaceutical Sciences,^c Kobe Gakuin University, Nishi-ku, Kobe 673, Japan



β -Alkoxyacrylates in Radical Cyclizations: Remarkably Efficient Oxacycle Synthesis

Eun Lee*, Jin Sung Tae, Chulbom Lee, and Cheol Min Park

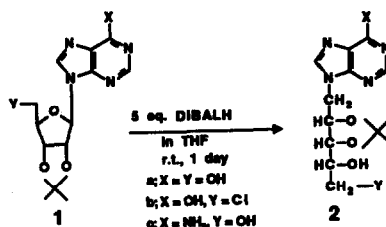
Department of Chemistry, College of Natural Sciences, Seoul National University, Seoul 151-742, Korea



Tetrahedron Lett. 1993, 34, 4835

Reductive Cleavage of the Ribose Moiety in Purine Nucleosides Using Diisobutylaluminum Hydride: A New Method for the Preparation of Acyclonucleosides
Yuko Kitade, Kosaku Hirota, and Yoshitumi Maki, *Laboratory of Medicinal Chemistry, Gifu Pharmaceutical University, 5-6-1 Mitahora-higashi, Gifu 502, Japan*

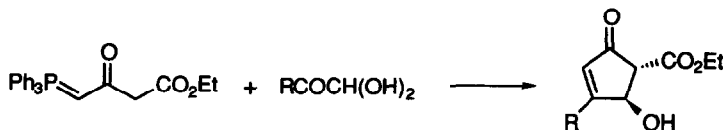
Reaction of purine nucleosides, such as 2',3'-O-isopropylideneinosine **1a** and 2',3'-O-isopropylidene-adenosine **1c**, with diisobutylaluminum hydride in dry tetrahydrofuran resulted in the reductive cleavage of the ribose moiety at the anomeric position to give the corresponding 9-(2',3'-O-isopropylideneribityl)purines **2a, c** in good yields.



Tetrahedron Lett. 1993, 34, 4837

A Single-Step Synthesis of 4-Hydroxycyclopentenones from 3-Ethoxycarbonyl-2-oxo-propylidetriphenylphosphorane and Glyoxals

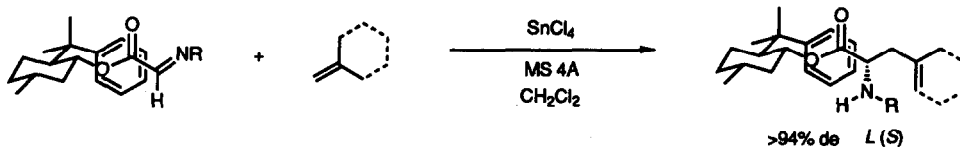
Minoru Hatanaka, Yasuhiro Tanaka, Yuichiro Himeda and Ikuo Ueda
The Institute of Scientific and Industrial Research, Osaka University, Mihogaoka, Ibaraki, Osaka 567, Japan



Tetrahedron Lett. 1993, 34, 4841

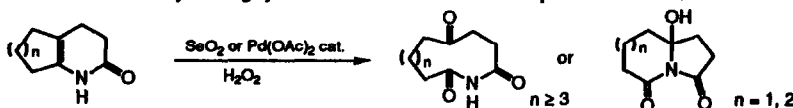
Asymmetric Imine-Ene Reactions with Chiral Glyoxylate-Derived α -Imino Esters: An Efficient Route to Asymmetric Synthesis of α -Amino Acids
Koichi Mikami,* Masami Kaneko, and Tomoko Yajima

Department of Chemical Technology, Tokyo Institute of Technology, Meguro-ku, Tokyo 152, Japan



Tetrahedron Lett. 1993, 34, 4843

Selenium- and Palladium-Catalyzed Oxidative Cleavage of Ene-lactams with Hydrogen Peroxide. Convenient Methods for Synthesis of Macrocyclic Ketoimides and N-Fused Azabicyclic Compounds Takeshi Naota, Shigehiro Sasao, Kojiro Tanaka, Hideo Yamamoto, and Shun-ichi Murahashi,* *Department of Chemistry, Faculty of Engineering Science, Osaka University, Toyonaka, Osaka 560, Japan*
Oxidative cleavage of ene-lactams can be performed efficiently by either SeO_2 or $\text{Pd}(\text{OAc})_2$ -catalyzed oxidation with H_2O_2 to give the corresponding ketoimides. The reaction provides convenient methods for the preparation of macrocyclic ketoimides and the construction of N-fused azabicyclic ring systems such as indolizidine and cephalotaxine skeletons.



Tetrahedron Lett. 1993, 34, 4847

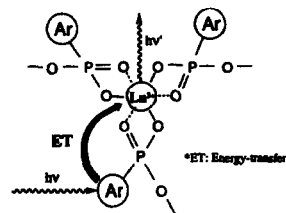
Lipophilic Phenylphosphonic Acid-Lanthanide Ion Complexes Which Show Efficient Energy-Transfer Luminescence

Nariaki Sato, Masahiro Goto,† Satoshi Matsumoto,† and Seiji Shinkai

CHEMIRECOGNICS Project, ERATO, Research Development Corporation of Japan,
2432-3 Aikawa-cho, Kurume, Fukuoka 830, Japan

†Department of Organic Synthesis, Faculty of Engineering, Kyushu University
Fukuoka 812, Japan

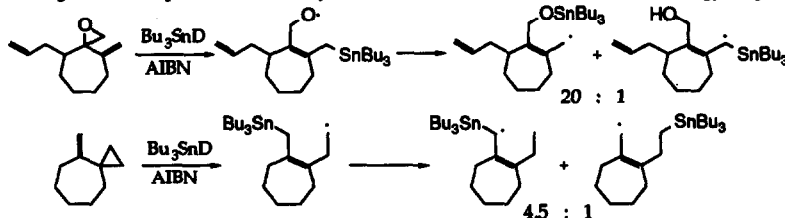
Lipophilic phenylphosphonic acids with a Ar-P linkage from stable complexes with lanthanide ions such as Tb³⁺ and Eu³⁺ and the complexes show the very high luminescence quantum yields (F=0.25-0.30 for Tb³⁺ and 0.09-0.13 for Eu³⁺) due to the efficient energy-transfer through the Ar-P linkage and the metal encapsulation effects.



Tetrahedron Lett. 1993, 34, 4851

**Further Studies on 1,5-Bu₃Sn Group Transfer Reactions.
1,5-Bu₃Sn Group and 1,5-Hydrogen Atom Transfer Competition.**

Sunggak Kim* and Kwang Min Lim, Department of Chemistry, Korea Advanced Institute of Science and Technology, Taejon 305-701, Korea.

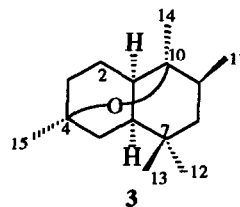


Tetrahedron Lett. 1993, 34, 4855

**A Sesquiterpene Oxide of a Novel Skeleton from the
Liverwort *Plagiochila peculiaris***

Chia-Li Wu,* Chyuan-De Huang and Tzeng-Lien Shih
Department of Chemistry, Tamkang University, Tamsui, Taiwan, R.O.C.

A sesquiterpenoid of a novel skeleton was
isolated from a liverwort.



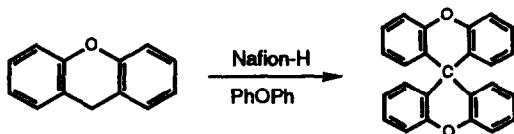
Tetrahedron Lett. 1993, 34, 4857

Nafion-H Catalyzed Friedel-Crafts Reaction of Methylene Groups:

Preparation of [9,9]Spirobixanthene. Oleg Aleksuik and Silvio E. Biali*,

Department of Organic Chemistry, The Hebrew University of Jerusalem, Jerusalem 91904, Israel

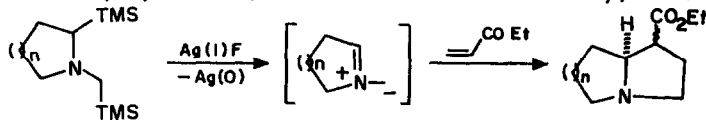
Treatment of p-tert-butylcalix[4]arene or xanthene with diphenyl ether/ Nafion-H yields [9,9]spirobixanthene .



Ag(I)F AS ONE ELECTRON OXIDANT FOR PROMOTING SEQUENTIAL DOUBLE DESILYLATION: AN IDEAL APPROACH TO NON-STABILIZED AZOMETHINE YLIDES FOR THE RAPID CONSTRUCTION OF 1-AZABICYCLO (m:3:0) ALKANES

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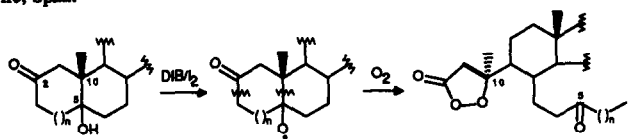


SEQUENTIAL ALKOXY RADICAL FRAGMENTATION. A ONE-STEP METHOD FOR BREAKING TWO 1,3-POSITIONED C-C BONDS

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A new sequential alkoxy radical fragmentation reaction is observed when cyclic hydroxy-ketones of the type shown are irradiated with visible light under an atmosphere of oxygen in the presence of (diacetoxyiodo)benzene (DIB) and iodine.



DIB = (Diacetoxyiodo)benzene, n = 1,0