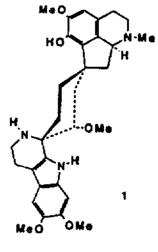
# GRAPHICAL ABSTRACTS

Tetrahedron Lett.30,1165(1989)

## A NEW CLASS OF ISOQUINOLINE ALKALOIDS: THE PROAPORPHINE-TRYPTAMINE DIMERS

Belkis Gözler, Alan J. Freyer and Maurice Shamma
Department of Chemistry,
The Pennsylvania State University,
University Park, PA 16802, U.S.A.

The previously isolated Roemeria hybrida alkaloids (-)-roehybridine and (-)-roemeridine are now shown to be the first proaporphine-tryptamine dimers, and possess structures 1 and 2, respectively.



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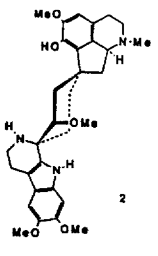

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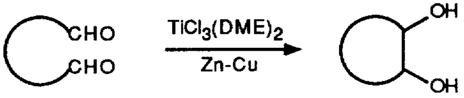
Tetrahedron Lett.30,1169(1989)

## SYNTHESIS OF 1,2-CYCLOALKANEDIOLS BY INTRAMOLECULAR TITANIUM-INDUCED PINACOL COUPLING

John E. McMurry* and Joseph G. Rico, Baker Laboratory, Department of Chemistry, Cornell University, Ithaca, NY 14853

1,2-Cycloalkanediols of any ring size can be prepared in high yield by titanium-induced pinacol reaction of a dicarbonyl compound at low temperature.



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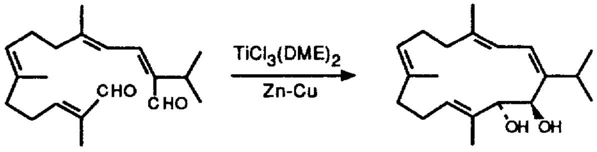
Tetrahedron Lett.30,1173(1989)

## SYNTHESIS AND STEREOCHEMISTRY OF SARCOPHYTOL B, AN ANTICANCER CEMBRANOID

John E. McMurry,* Joseph G. Rico, and You-nan Shih, Cornell University, Ithaca, NY 14853

Sarcophytol B is prepared by a route involving titanium-induced pinacol coupling of a dialdehyde, and the stereochemistry of the product is determined by x-ray crystallography.



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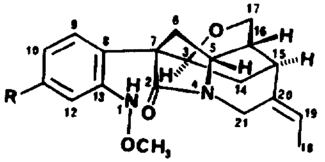
Tetrahedron Lett.30,1177(1989)

## GELSEMAMIDE AND 11-METHOXYGELSEMAMIDE, TWO NOVEL SECOINDOLE ALKALOIDS FROM GELSEMIUM ELEGANS

Long-Ze Lin and Geoffrey A. Cordell*, Program for Collaborative Research in the Pharmaceutical Sciences, College of Pharmacy, University of Illinois at Chicago, Chicago, IL. 60612, USA;
Chou-Zhou Ni and Jon Clardy, Department of Chemistry, Baker Laboratory, Cornell University, Ithaca, NY. 14853-1301, USA

Gelsemamide (1) and 11-methoxygelsemamide (2), two novel secoindole alkaloids, were isolated from Gelsemium elegans.

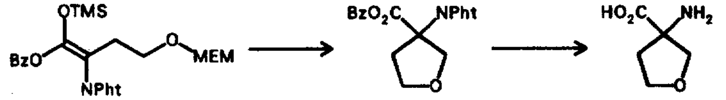


**1** R=H
**2** R=OCH$_3$

Tetrahedron Lett.30,1181(1989)

## PREPARATION OF HETEROCYCLIC AMINO ACIDS VIA INTRAMOLECULAR MUKAIYAMA ALDOL CONDENSATION: SYNTHESIS OF A NOVEL CYCLOLEUCINE ANALOGUE

Daniel M. Walker* and Eugene W. Logusch, Monsanto Agricultural Company,
A Unit of Monsanto Company, 800 N. Lindbergh Boulevard, St. Louis, Missouri 63167 USA



A novel 5-*endo*$_e$*exo*$_n$ intramolecular Mukaiyama aldol condensation was employed in a simple synthesis of 3-amino-3-tetrahydrofurancarboxylic acid, an oxygenated cycloleucine analogue.

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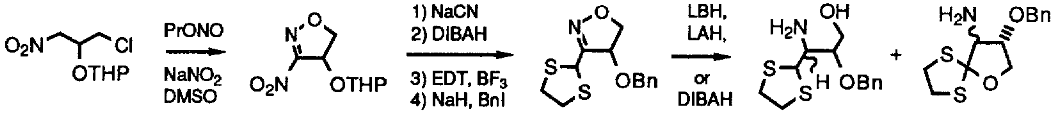
Tetrahedron Lett.30,1185(1989)

## A NEW ROUTE TO 4-OXYGENATED ISOXAZOLINES. APPLICATION TO THE SYNTHESIS OF 2-DEOXY-2-AMINOBUTOSE DERIVATIVES

Peter A. Wade* and David T. Price, Department of Chemistry, Drexel University, Philadelphia, PA 19104, U.S.A.

A 3-nitro-4-oxygenated isoxazoline, prepared from $ClCH_2CHO$ in 28% overall yield, was transformed to a 3-(dithiolanyl)isoxazoline. Reduction afforded γ-amino-alcohols (1-92 d.e.) and a spirotetrahydrofuran.



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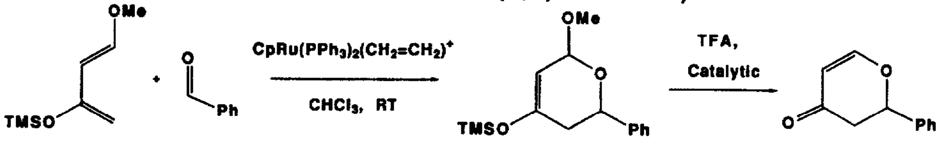
Tetrahedron Lett.30,1189(1989)

## Use of Organometallic Complexes of Ruthenium in the Lewis Acid Catalyzed Hetero Diels-Alder Reaction

J.W. Faller* and C.J. Smart, *Department of Chemistry, Yale University, New Haven, CT 06511*

Hetero Diels-Alder reactions between benzaldehyde and a functionalized diene can be catalyzed by the Lewis acid transition metal complexes, [CpRuLL'(ethylene)]$PF_6$ (L = L' = $PPh_3$, or LL' = 1,2-bis-diphenylphosphinoethane, (-)-DIOP or (S,S)-CHIRAPHOS).



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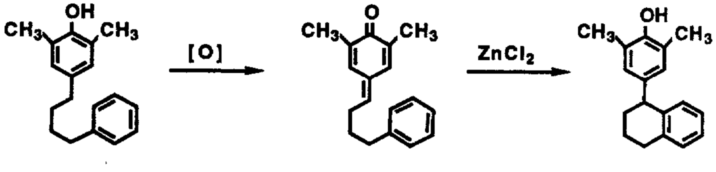
Tetrahedron Lett.30,1193(1989)

## *PARA*-QUINONE METHIDE INITIATED INTRAMOLECULAR ELECTROPHILIC SUBSTITUTION REACTIONS

Steven R. Angle,* Michael S. Louie, Heather L. Mattson and Wenjin Yang
Department of Chemistry, University of California, Riverside, California 92521

A study on the reactivity of *para*-quinone methides in intramolecular cyclizations is described. The quinone methides were isolated and completely characterized prior to cyclization.

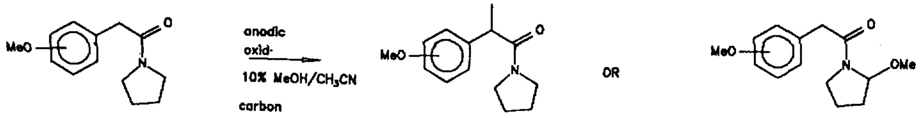


Tetrahedron Lett.30,1213(1989)

## ELECTROCHEMICAL AMIDE OXIDATIONS IN THE PRESENCE OF MONO-METHOXYLATED PHENYL RINGS. AN UNEXPECTED RELATIONSHIP BETWEEN THE CHEMOSELECTIVITY OF THE OXIDATION AND THE LOCATION OF THE METHOXY SUBSTITUENT.

Kevin D. Moeller,* Sharif Tarazi, and Mohammad Marzabadi, Department of Chemistry, Washington University, St. Louis, Mo. 63130.

The chemoselectivity of electrochemical amide oxidations in the presence of monomethoxy phenyl rings was found to be completely dependent on the position of the methoxy substituent.



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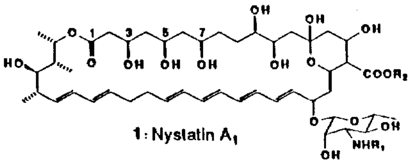
Tetrahedron Lett.30,1217(1989)

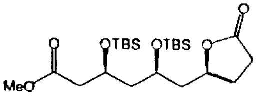
## SYNTHESIS AND STEREOCHEMICAL ASSIGNMENT OF THE $C_1$-$C_{10}$ FRAGMENT OF NYSTATIN $A_1$

K.C. Nicolaou* and Kyo Han Ahn
Department of Chemistry, University of Pennsylvania, Philadelphia, PA 19104

Compound **8** representing the $C_1$-$C_{10}$ fragment of nystatin A1 (**1**) has been synthesized from nystatin A1 (**1**) by degradation and by total synthesis. Comparison of the two samples revealed the 3R, 5R, 7R stereochemistry for the three nystatin centers.



**1**: Nystatin $A_1$



**8**

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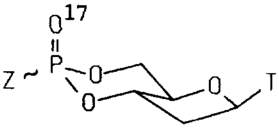
Tetrahedron Lett.30,1221(1989)

## $^{17}O$ NMR OF DIASTEREOMERIC 3',5'-CYCLIC THYMIDINE METHYL PHOSPHATES, METHYLPHOSPHONATES, AND N,N-DIMETHYL PHOSPHORAMIDATES. PHOSPHORUS CONFIGURATION OF P-CHIRAL [$^{17}O$, $^{18}O$]-NUCLEOSIDE PHOSPHATE DIESTERS.

Alan E. Sopchik and Wesley G. Bentrude*
Department of Chemistry, University of Utah, Salt Lake City, Utah 84112

$^{17}O$ Chemical shifts and line widths for cyclic nucleotide derivatives are related to configuration at phosphorus. Those for Z = MeO should be useful in determination of P-chirality of thymidine 4-nitrophenyl monophosphate diesters.



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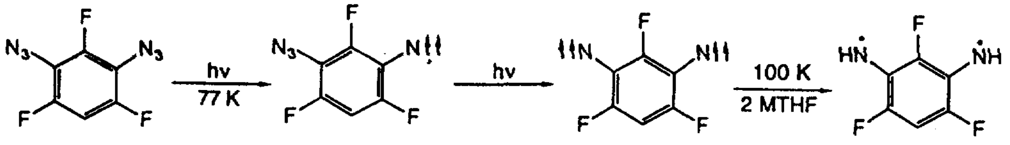
Tetrahedron Lett.30,1225(1989)

## EPR Spectroscopy of a Diaza Derivative of Meta-Xylylene

Karl Haider, N. Soundararajan, Myron Shaffer and Matthew S. Platz
Department of Chemsitry, Ohio State University, Columbus, OH, 43210

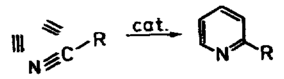


Tetrahedron Lett.30,1229(1989)

## PHOTOASSISTED COCYCLIZATION OF ACETYLENE AND NITRILES CATALYZED BY COBALT COMPLEXES AT AMBIENT TEMPERATURE AND NORMAL PRESSURE

W. Schulz*, H. Pracejus, G. Oehme
Central Institute of Organic Chemistry, Academy of Science of GDR, Rostock, GDR-2500

A synthesis of 2-substituted pyridines by assistence of light in the visible range



cat: R'-cpCo(olefin)$_2$; irradiation 400 nm; room temperature

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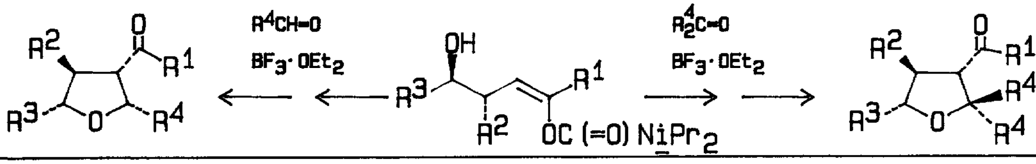
Tetrahedron Lett.30,1233(1989)

## SYNTHESIS OF HIGHLY SUBSTITUTED, DIASTEREOMERICALLY AND ENANTIOMERICALLY PURE 3-ACYL-TETRAHYDROFURANS FROM 4-HYDROXY-1-ALKENYL-CARBAMATES

Dieter Hoppe* and Thomas Krämer, Institut für Organische Chemie, Universität Kiel, Olshausenstr. 40-60, D-2300 Kiel 1, FRG.
Cristina Freire Erdbrügger and Ernst Egert*, Institut für Anorganische Chemie, Universität Göttingen, Tammannstr. 4, D-3400 Göttingen, FRG.



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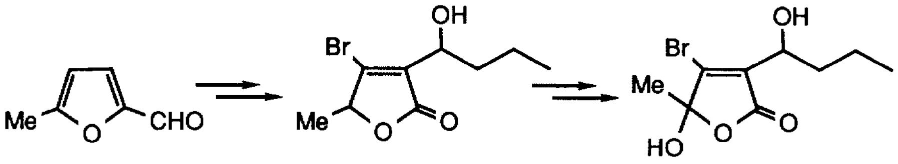
Tetrahedron Lett.30,1237(1989)

## TOTAL SYNTHESIS OF BROMOBECKERELIDE

Charles W. Jefford, Danielle Jaggi, and John Boukouvalas,
Department of Organic Chemistry, University of Geneva, 1211 Geneva 4, Switzerland



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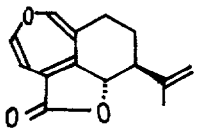
Tetrahedron Lett.30,1241(1989)

## SYNTHESIS OF (±)-SENOXEPIN -
## THE FIRST NATURALLY OCCURRING ANTI-HÜCKEL OXEPIN DERIVATIVE

A. Cleve and F. Bohlmann

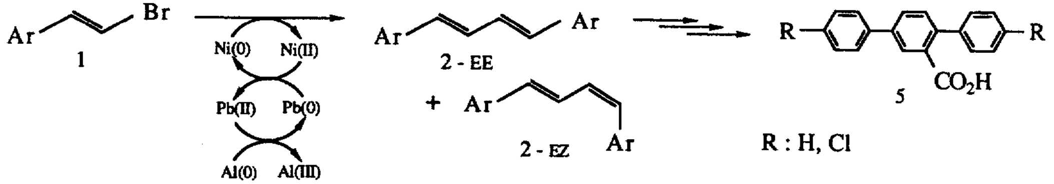
The first total synthesis of (±)-senoxepin **3** is described. **3** is prepared via an intramolecular 4+2 cycloaddition from a substituted decadienyne **7**. The resulting hexalin **8** was converted to a lactone, which on epoxidation, NBS bromination and elimination with NaI afforded senoxepin.



Tetrahedron Lett.30,1261(1989)

## REDUCTIVE DIMERIZATION OF VINYL HALIDES IN AN Ni/Pb/Al THREE METAL REDOX SYSTEM. A FACILE ACCESS TO TERFHENYL DERIVATIVES.

Hideo Tanaka, Atsuko Kosaka, Shiro Yamashita, Kazuo Morisaki, and Shigeru Torii*
Department of Applied Chemistry, School of Engineering, Okayama University, Okayama 700, Japan



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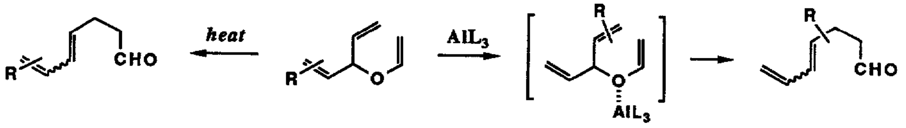
Tetrahedron Lett.30,1265(1989)

## ORGANOALUMINUM-PROMOTED CLAISEN REARRANGEMENT OF BISALLYL VINYL ETHERS

Keiji Maruoka, Hiroshi Banno, Katsumasa Nonoshita, and Hisashi Yamamoto*
Department of Applied Chemistry, Nagoya University, Chikusa, Nagoya 464-01, Japan



$AlL_3$ : **Bulky Organoaluminum Reagents**

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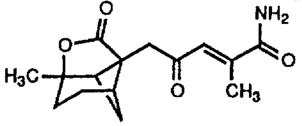
Tetrahedron Lett.30,1267(1989)

## PINTHUNAMIDE, A NEW TRICYCLIC SESQUITERPENE AMIDE PRODUCED BY A FUNGUS, *Ampulliferina* sp.

Yasuo Kimura,[a]* Hiromitu Nakajima[a] and Takashi Hamasaki.[a] Fumio Sugawara.[b] Laszlo Parkanyic[c] and Jon Clardy.[c]*
[a] Department of Agricultural Chemistry, Tottori University, Koyama, Tottori 680, Japan. [b] RIKEN (The Institute of Physical and Chemical Research) Wako, Saitama 351-01, Japan. [c] Baker Laboratory, Department of Chemistry, Cornell University, Ithaca New York 14853-1301



A New tricyclic sesquiterpene amide, pinthunamide, has been isolated from a fungus, *Ampulliferina* sp.

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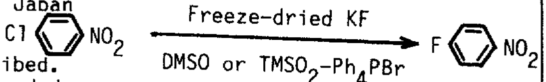
Tetrahedron Lett.30,1271(1989)

## FREEZE-DRIED POTASSIUM FLUORIDE: SYNTHETIC UTILITY AS A FLUORINATING AGENT

Yoshikazu Kimura* and Hiroshi Suzuki
Research and Development Department, Ihara Chemical Industry
Co., Ltd., Fujikawa-cho, Ihara-gun, Shizuoka 421-33, Japan



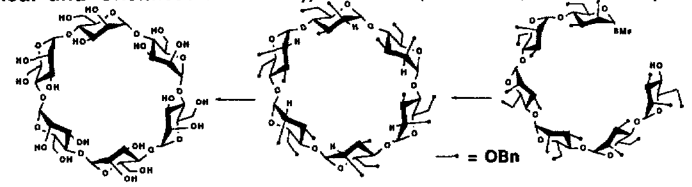
Halogen-exchange fluorination of activated chlorine compound by freeze-dried potassium fluoride is described. The fluorinating abilities of potassium fluoride depended strongly upon a concentration of aqueous solution to be lyophilized.

Tetrahedron Lett.30,1273(1989)

### A HIGHLY EFFICIENT AND STEREOSELECTIVE CYCLOGLYCOSYLATION. SYNTHESIS OF CYCLO{→4)-[α-Man-(1→4)]$_5$-α-Man-(1→}, A MANNO ISOMER OF α-CYCLODEXTRIN

**Masato Mori, Yukishige Ito, and Tomoya Ogawa**
**RIKEN (The Institute of Physical and Chemical Research), Wako-shi, Saitama, 351-01 Japan**

**A synthesis of a manno isomer of cyclodextrin via cycloglycosylation of methyl thioglycoside**



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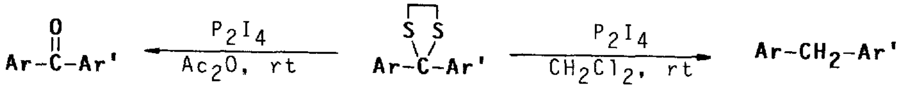
Tetrahedron Lett.30,1277(1989)

### A NEW METHOD FOR THE DEPROTECTION AND REDUCTION OF DITHIOACETALS

Yoshihiro Shigemasa, Minoru Ogawa, Hitoshi Sashiwa, and Hiroyuki Saimoto
Department of Industrial Chemistry, Faculty of Engineering
Tottori University, Tottori 680, Japan

A mild procedure for the reductive desulfurization and deprotection of 2,2-diaryl-1,3-dithiolanes is described.



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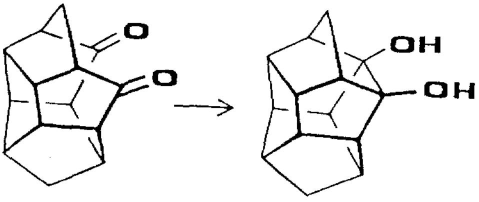
Tetrahedron Lett.30,1279(1989)

### TRANSANNULAR INTERACTIONS IN HEXACYCLO-$[6.6.0.0.^{2,6}0.^{3,13}0.^{4,11}0.^{5,9}]$TETRADECA-10,14-DIONE

Tahsin J. Chow* and Tung-Kung Wu
Institute of Chemistry, Academia Sinica, Nankang, Taipei, Taiwan, ROC; and Department of Chemistry, National Taiwan University, Taipei, Taiwan, ROC.



Transannular interaction between two carbonyl groups was evidenced by X-ray, C-13 NMR and chemical reactions.

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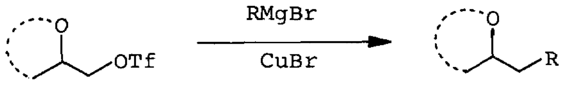
Tetrahedron Lett.30,1281(1989)

### A NOVEL METHOD FOR COPPER(I)-CATALYZED COUPLING REACTIONS OF TRIFLATES WITH GRIGNARD REAGENTS

Hiyoshizo Kotsuki,* Isao Kadota, and Masamitsu Ochi
Department of Chemistry, Faculty of Science, Kochi University, Akebono-cho, Kochi 780, Japan



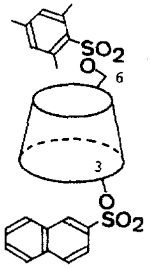
CuBr-catalyzed coupling reactions of triflates with Grignard reagents.

Tetrahedron Lett.30,1285(1989)

## SYNTHESIS AND STRUCTURE DETERMINATION OF $3^A,6^X$-Di-O-ARENESULFONYL-α-CYCLODEXTRINS

Kahee Fujita,* Yoshimitsu Egashira, Tsutomu Tahara, Taiji Imoto, and Toshitaka Koga
Fukuyama University, Fukuyama, Japan, Kyushu University, Fukuoka, Japan, and Daiichi College of Pharmaceutical Sciences, Fukuoka, Japan

A regioisomeric mixture of $3^A$-O-(β-naphthylsulfonyl)-$6^X$-O-mesitylsulfonyl-α-cyclodextrins (X = A-F) was prepared by the reaction of 3-O-(β-naphthylsulfonyl)-α-cyclodextrin with mesitylenesulfonyl chloride in pyridine. Each isomer was isolated and assigned.



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Tetrahedron Lett.30,1293(1989)

## A SHORT ASYMMETRIC SYNTHESIS OF A $C_{19}$-$C_{27}$ SEGMENT OF RIFAMYCIN S. KINETIC RESOLUTION IN THE ALDOL REACTIONS OF ETHYLKETONES USING CHIRAL BORON REAGENTS.

Ian Paterson,* Cynthia K. McClure, and Russell C. Schumann, University Chemical Laboratory, Lensfield Rd, Cambridge CB2 1EW, UK.

*Kinetic resolution in the aldol reaction of racemic ethylketones with aldehydes can be obtained using (-)- and (+)-$(Ipc)_2BOTf$. Aldol adduct (+)-4, obtained in this way, was converted into (-)-2 used in the Kishi synthesis of rifamycin S.*