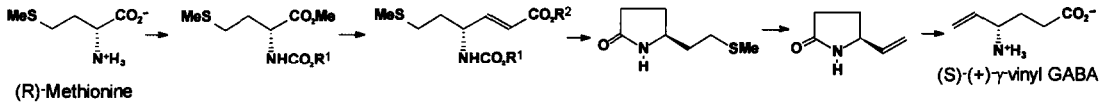
GRAPHICAL ABSTRACTS

Tetrahedron, **1994**, *50*, 5569

ASYMMETRIC SYNTHESIS OF BOTH ENANTIOMERS OF VIGABATRIN: AN APPROACH USING METHIONINE AS THE CHIRAL POOL. Zhong-Yong Wei and Edward E. Knaus*, Faculty of Pharmacy and Pharmaceutical Sciences, University of Alberta, Edmonton, Alberta, Canada T6G 2N8.

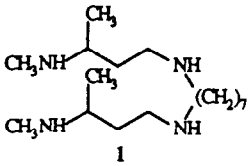
(R)-Methionine was elaborated to (S)-(+)-γ-vinyl GABA (> 98% ee) in five steps using methodologies where a α-amino acid was transformed into a γ-amino acid. A similar reaction sequence starting with (S)-methionine afforded (R)-(-)-γ-vinyl GABA.



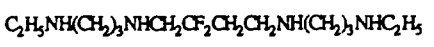
Tetrahedron, **1994**, *50*, 5579

Use of the Mitsunobu Reaction in the Synthesis of Polyamines. Michael L. Edwards*, David M. Stemerick and James R. McCarthy, Marion Merrell Dow Research Institute, 2110 E. Galbraith Road, Cincinnati, Ohio 45215.

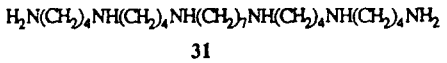
The Mitsunobu reaction has been used in the synthesis of polyamine analogues. The synthesis of the (R,R) and (S,S) isomers of 1, a fluorinated polyamine analog (2), and a hexaamine (31) are described.



1



2



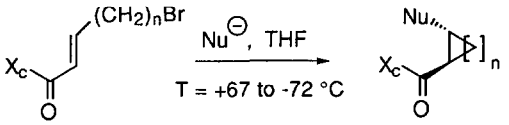
31

Tetrahedron, **1994**, *50*, 5591

ASYMMETRIC INDUCTION IN THE MICHAEL INITIATED RING CLOSURE REACTION

Mary A. Amputch, Regina Matamoros, R. Daniel Little*, Department of Chemistry, University of California, Santa Barbara Santa Barbara, California 93106

The *MIRC* reaction was studied with an eye toward obtaining asymmetric induction. The basic results are summarized below.



n = 1, 2, 3; Nu = *t*-BuS, (*i*-Pr)$_2$N
X_c = (-)-menthyl, (-)-8-phenylmenthyl, 10-dicyclohexylsulfamoyl-D-isobornyl
2-95% de, 52-97% yield

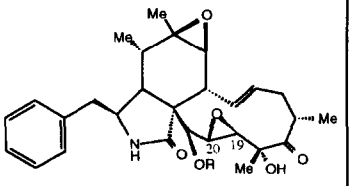
Tetrahedron, **1994**, *50*, 5615

TWO NEW CYTOTOXIC CYTOCHALASINS FROM *XYLARIA OBOVATA*

Ermias Dagne,*,[a,b] A. A. Leslie Gunatilaka,*,[a] Senait Asmellash,[b] Dawit Abate,[b] David G.I. Kingston,*,[a] Glenn A. Hofmann,[c] and Randall K. Johnson[c]

[a]Department of Chemistry, Virginia Polytechnic Institute and State University, Blacksburg, Virginia 24061-0212; [b]Faculty of Science, Addis Ababa University, P.O. Box 1176, Addis Ababa, Ethiopia; [c]Research and Development, SmithKline Beecham Pharmaceuticals, P.O. Box 1539, King of Prussia, Pennsylvania 19406-0939

Two new cytotoxic cytochalasins isolated from the fungus, *Xylaria obovata*, have been identified as 19,20-epoxycytochalasin Q (**1**) and its deacetyl analog **2** by the application of spectroscopic techniques and chemical correlation with cytochalasin R.



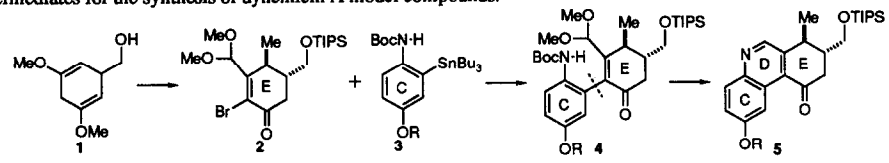
1 R = Ac
2 R = H

Tetrahedron, **1994**, *50*, 5621

SYNTHETIC STUDIES ON ANTIBIOTIC DYNEMICIN A. NEW QUINOLINE SYNTHESIS FOR C, D AND E RINGS.

Toshio Nishikawa and Minoru Isobe*
Laboratory of Organic Chemistry, School of Agricultural Sciences, Nagoya University, Chikusa, Nagoya 464-01, Japan

The quinoline **5** was synthesized from **4** which was obtained by Pd coupling between **2** and **3**. **4** and **5** are important intermediates for the synthesis of dynemicin A model compounds.

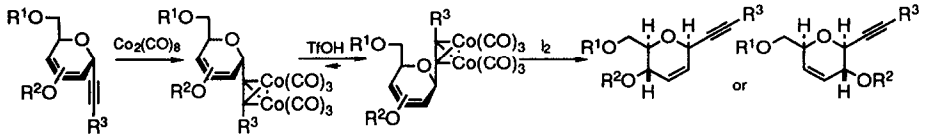


Tetrahedron, **1994**, *50*, 5633

ENANTIOMERIC SYNTHESIS OF PYRAN SUBUNITS OF MARINE TRANS-FUSED POLYETHER TOXINS : EPIMERIZATION OF ALKYNYL SUGARS THROUGH COBALT COMPLEXES

Shigeyoshi Tanaka and Minoru Isobe*
Laboratory of Organic Chemistry, School of Agricultural Science, Nagoya University, Chikusa, Nagoya 464-01, Japan

Alkynyl group attached on the C-1 position of pyranose ring was epimerized through dicobalt hexacarbonyl complex with trifluoromethanesulfonic acid.

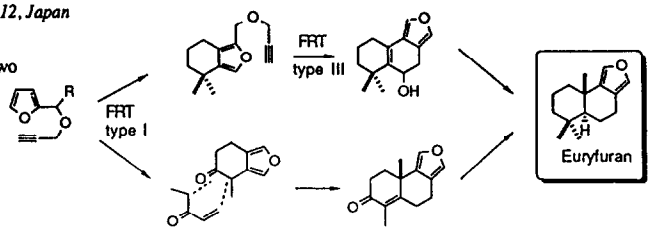


Tetrahedron, **1994**, *50*, 5645

Alternative Synthetic Approaches to (±)-Euryfuran *via* The Furan Ring Transfer Reaction

Yoshiyasu Baba, Toshihiro Sakamoto, Seizo Soejima, and Ken Kanematsu*
Institute of Synthetic Organic Chemistry, Faculty of Pharmaceutical Sciences, Kyushu University 62, Higashiku, Fukuoka812, Japan

Total synthesis of (±)-euryfuran based on two alternative methodologies using furan ring transfer reaction type I and/or type III are described.

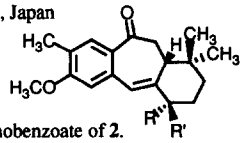


Tetrahedron, **1994**, *50*, 5659

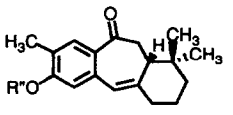
Absolute Stereochemistry of Benzocycloheptenone Derivatives from *Cnidoscolus phyllacanthus*

Tomihisa Ohta,[a] Yuichi Endo,[a] Rikako Kikuchi,[a] Chizuko Kabuto,[b] Nobuyuki Harada,[c] and Shigeo Nozoe*[,a]
Pharmaceutical Institute,[a] Instrumental Analysis Center for Chemistry,[b] Institute for Chemical Reaction Science,[c] Tohoku University, Aobayama, Sendai 980, Japan

Absolute stereochemistry of compounds (**1-4**, **10**) were determined by CD study, which was confirmed by X-ray crystallographic analysis of 4-bromobenzoate of **2**.



1 : R=OH, R'=H;
2 : R=H, R'=OH;
3 : R=R'=O



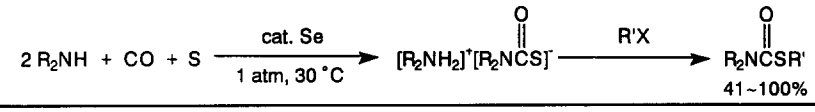
4 : R''=CH_3;
10 : R'=H

Tetrahedron, **1994**, *50*, 5669

NOVEL SYNTHESIS OF *S*-ALKYL THIOCARBAMATES FROM AMINES,CARBON MONOXIDE, ELEMENTAL SULFUR, AND ALKYL HALIDES IN THE PRESENCE OF A SELENIUM CATALYST

Takumi Mizuno,* Ikuzo Nishiguchi, and Noboru Sonoda†
Osaka Municipal Technical Research Institute, 1-6-50, Morinomiya, Joto-ku, Osaka 536, JAPAN
†Department of Applied Chemistry, Faculty of Engineering, Osaka University, 2-1, Yamadaoka, Suita, Osaka 565, JAPAN

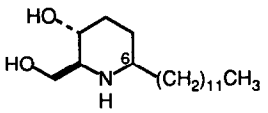
A facile synthesis of *S*-alkyl thiocarbamates under mild conditions was performed using elemental selenium as a novel catalyst.



Tetrahedron, **1994**, *50*, 5681

STEREOSELECTIVE TOTAL SYNTHESES OF (-)-DESOXOPROSOPININE AND (-)-DESOXOPROSOPHYLLINE: PALLADIUM(0)-CATALYZED INTRAMOLECULAR *N*-ALKYLATION FOR THE KEY PIPERIDINE RING FORMATION

Ken-ichi Takao, Yuya Nigawara, Emiko Nishino, Izumi Takagi, Koji Maeda, Kin-ichi Tadano,* and Seiichiro Ogawa
Department of Applied Chemistry, Keio University, Hiyoshi, Yokohama 223, Japan



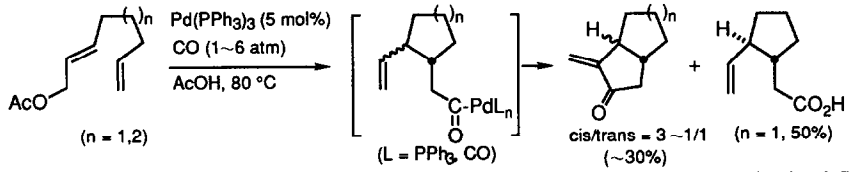
α–configuration at C-6 = **1**
β–configuration at C-6 = **2**

Two prosopis alkaloids (-)-desoxoprosopinine (1) and (-)-desoxoprosophylline (2) were synthesized stereoselectively. The total syntheses featured by a Pd(0)-catalyzed intramolecular *N*-alkylation of a D-glucose-derived substrate.

Tetrahedron, **1994**, *50*, 5705

Palladium(0)-Catalyzed Cyclization-Carbonylation of 2,7-Octadienyl Acetate and Homologues.

Masahiko Terakado, Kouya Murai, Masahiro Miyazawa, Keiji Yamamoto,*
Department of Chemical Engineering, Tokyo Institute of Technology, Ookayama, Meguro-ku, Tokyo 152, JAPAN

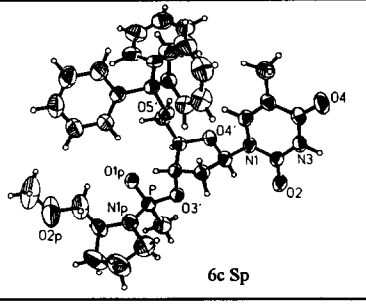


The Pd(0)-catalyzed carbonylation via π-allylpalladium species was preceded by their intramolecular olefin insertion.

Tetrahedron, **1994**, *50*, 5719

New Proline derived Chiral Building Blocks for Nucleoside Methylphosphonate Synthesis

Pia Rosmanitz, Stefan Eisenhardt, Jan W. Bats and Joachim W. Engels*
Institut für Organische Chemie, Johann Wolfgang Goethe Universität Frankfurt, Marie Curie Straße 11
D-60439 Frankfurt, Germany



6c Sp

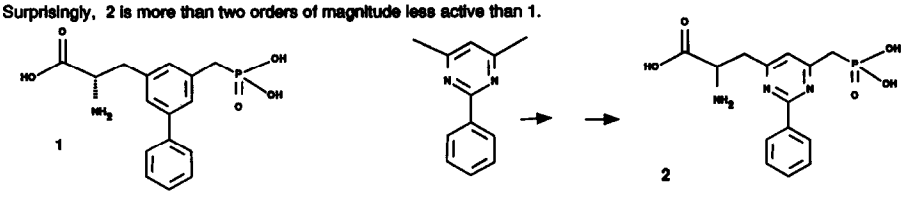
Synthesis of P-chiral building blocks for nucleoside methylphosphonates is reported by two different methods. The absolute configuration of the phosphorus centre could be determined by single crystal X-ray diffraction of **6c (Sp)**.

SYNTHESIS OF A PYRIMIDINE ISOSTERE OF THE N-METHYL-D-ASPARTATE ANTAGONIST SDZ EAB 515

Tetrahedron, **1994**, *50*, 5735

Cai Chengzhi, Dieter Buechler, David Lowe , Stephan Urwyler and Gideon Shapiro*
Preclinical Research, Sandoz Pharma Ltd., CH-4002 Basel, Switzerland

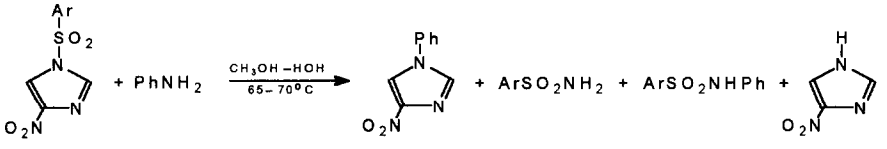
The synthesis of a pyrimidine isostere, 2, of the potent NMDA antagonist, 1 has been achieved.
Surprisingly, 2 is more than two orders of magnitude less active than 1.



REACTION OF 1-ARENESULFONYL-4-NITROIMIDAZOLES WITH ANILINE IN AQUEOUS METHANOL SOLUTION

Tetrahedron, **1994**, *50*, 5741

J. Suwiński and E. Salwińska; Institute of Organic Chemistry and Technology, Silesian Technical University, Gliwice (Poland)

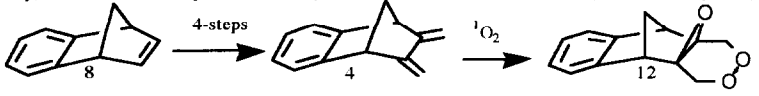


The effect of Ar on the products ratio was studied.

A CONCISE SYNTHESIS OF THE 2,3-DIMETHYLENE-1,4-METHANO-1,2,3,4-TETRAHYDRONAPHTHALANE AND ITS RECTION WITH SINGLET OXYGEN

Tetrahedron, **1994**, *50*, 5753

Basri Atasoy,[a*] Fatma Bayramoğlu[a] and Tuncer Hökelek[b] / Ankara-TURKEY
[a]Gazi university,Education Faculty of Gazi, Department of Science; [b]Hacettepe University, Department of Physic

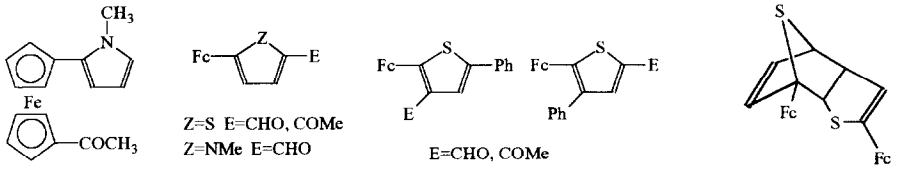


Palladium-catalyzed carbometoxylation of **8** yielded dimethyl-1,4-methano-1,2,3,4-tetrahydronaphthalene-2,3-dicarboxylate which was transformed in three steps into **4**. The reaction of **4** with singlet oxygen resulted in the formation of epoxy-endoperoxide (12).

ELECTROPHILIC SUBSTITUTIONS ON SOME FERROCENYLHETEROARENES

Tetrahedron, **1994**, *50*, 5765

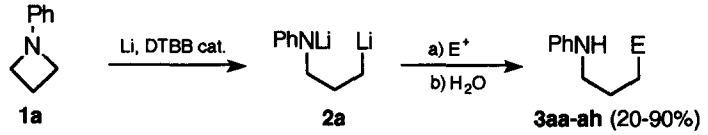
M. Puciová, E. Solčániová & Š. Toma; Comenius University, Bratislava, Slovakia



Tetrahedron, **1994**, *50*, 5775

4,4'-DI-*TERT*-BUTYLBIPHENYL-CATALYSED REDUCTIVE OPENING OF AZETIDINES WITH LITHIUM: A DIRECT PREPARATION OF 3,*N*-DILITHIOALKYLAMINES

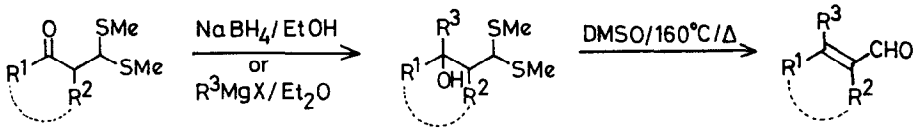
J. Almena, F. Foubelo and M. Yus*
Departamento de Química Orgánica, Facultad de Ciencias, Universidad de Alicante, Apdo. 99, 03080 Alicante, Spain



Tetrahedron, **1994**, *50*, 5783

FACILE ONE POT THERMAL DEHYDRATION AND DETHIOACETALIZATION OF β-HYDROXYDITHIOACETALS WITH DIMETHYL SULPHOXIDE : SYNTHESIS OF α,β-UNSATURATED ALDEHYDES

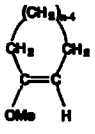
Ch. Srinivasa Rao, M. Chandrasekharam, Balaram Patro, H. Ila* and H. Junjappa*
Department of Chemistry, North-Eastern Hill University, Shillong- 793 003, Meghalaya, India.



Tetrahedron, **1994**, *50*, 5795

NUCLEAR MAGNETIC RESONANCE, FORCE FIELD, AND MNDO STUDIES ON 1-METHOXYCYCLOALKENES

Esko Taskinen, Department of Chemistry, University of Turku, FIN-20500 Turku, Finland



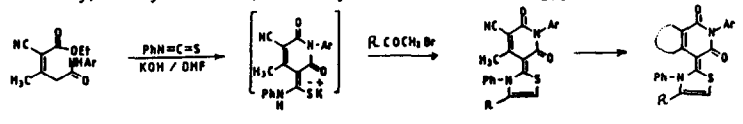
The structures of 4- to 9-membered 1-methoxycycloalkenes have been studied by several experimental and computational methods. The MeO group of 1-methoxycyclobutene appears to assume the unexpected s-*trans* conformation.

Tetrahedron, **1994**, *50*, 5807

HETEROCYCLIC SYNTHESIS WITH ISOTHIOCYANATES: AN EXPEDITIOUS SYNTHETIC ROUTE FOR POLYFUNCTIONALLY SUBSTITUTED 3-(THIAZOL-2'-YLIDENE)PYRIDINES AND THEIR FUSED DERIVATIVES

Rafat M. Mohareb,* Hussein F. Zohdi, Sherif M. Sherif and Wagnat W. Wardkhan

Department of Chemistry, Faculty of Science, University of Cairo, Giza, A. R. Egypt

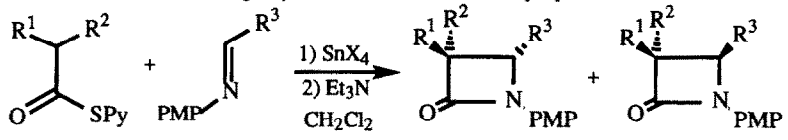


Tetrahedron, **1994**, *50*, 5821

SYNTHESIS OF β-LACTAMS BY CONDENSATION OF THE TIN ENOLATES OF 2-PYRIDYLTHIOESTERS WITH IMINES. A COMPARISON BETWEEN TITANIUM AND TIN ENOLATES.

Annunziata, R.; Benaglia, M.; Cinquini, M.; Cozzi, F.; Raimondi, L.
Centro CNR and Dipartimento di Chimica Organica e Industriale - Università di Milano (Italy)

Addition of triethylamine to a mixture of 2-pyridylthioesters and $SnCl_4$ or $SnBr_4$ affords the corresponding tin enolates that add to imines to give β-lactams in a convenient one-pot procedure.



R^1, R^2= H, Alk, $PhCH_2O$, CH_3CO, $CH(OTBS)CH_3$.
R^3= Ph, Ph-CH=CH, $CHOR\text{-}CH_2OR$.

Tetrahedron, **1994**, *50*, 5829

A GENERAL METHOD FOR THE SYNTHESIS OF 2-ALKYL SUBSTITUTED 1,3-DIENES STARTING FROM 2-(CHLOROMETHYL)-3-TOSYLPROPENE

Carmen Nájera and José M. Sansano
Departamento de Química Orgánica, Facultad de Ciencias, Universidad de Alicante, Apdo. 99, 03080 Alicante, Spain