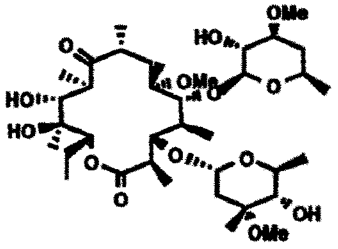
GRAPHICAL ABSTRACTS

Tetrahedron Letters, **1994**, *35*, 3837

Chemical Modification of Erythromycin: Novel Reaction Observed by Treatment with Metalloporphyrins

Joseph E. Celebuski, Mukund S. Chorghade* and Elaine C. Lee
Chemical and Agricultural Products Division, Abbott Laboratories,
Abbott Park, Illinois 60064.

Reaction of erythromycin and other macrolides with metalloporphyrins and exogenous co-oxidants leads to replacement of the N-dimethyl moiety in the desosamine sugar with complete retention of configuration.



Tetrahedron Letters, **1994**, *35*, 3841

REDUCTIVE ALKYLATIONS INVOLVING 2°- AND 3°-ENOLYL ADDUCT RADICALS.

Glen A. Russell* and Bing Zhi Shi, Department of Chemistry, Iowa State University, Ames, IA 50011 USA

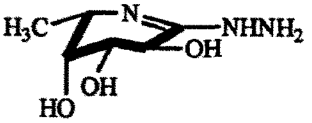
Reductive alkylation of α,β-unsaturated carbonyls occurs in Me_2SO upon reaction with alkylmercury halides and silyl hydrides. Towards *t*-Bu•, *s-cis* enones are more reactive than *s-trans*.

$$\underset{\mathbf{1}}{t\text{-BuCH}_2\text{C(Me)CO}_2\text{Et}} \xleftarrow[\text{Me}_2\text{SO}]{\text{Et}_3\text{SiH}} \text{CH}_2{=}\text{C(Me)CO}_2\text{ Et} + t\text{-BuHgCl} \xrightarrow[\text{Me}_2\text{SO}]{\text{KI}, h\nu} \mathbf{1} + (t\text{-BuCH}_2)_2\text{CHCO}_2\text{Et}$$

Tetrahedron Letters, **1994**, *35*, 3845

A NOVEL INHIBITOR OF HUMAN α-L-FUCOSIDASE: ENANTIOSELECTIVE SYNTHESIS OF L-FUCOAMIDRAZONE

David J. A. Schedler,[‡] Benjamin R. Bowen[§] and Bruce Ganem[‡]*
[‡]Department of Chemistry, Baker Laboratory
Cornell University, Ithaca, NY 14853-1301 USA
[§]Pharmaceuticals Division, CIBA-GEIGY Corporation
Summit, NJ 07901 USA



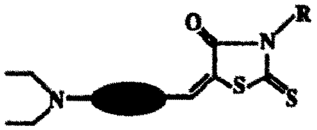
The L-fucoamidrazone shown is a competitive inhibitor of human α-L-fucosidase (K_i = 820 nM)

Tetrahedron Letters, **1994**, *35*, 3849

Rhodanine-methine as π-Electron Acceptor in Second-order Nonlinear Optical Chromophores

V. Pushkara Rao*, Alex K-Y. Jen and J. B. Caldwell
EniChem America Inc., Research and Development Center
2000 Cornwall Road, Monmouth Junction, New Jersey 08852, U. S. A.

Abstract: Experimental EFISH studies indicate that rhodanine-methine group is more effective than the well known nitro group as an electron-acceptor in enhancing the molecular nonlinear optical activity of the push-pull conjugated compounds.



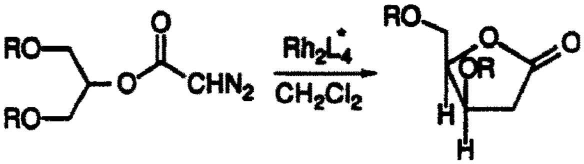
● = π-Conjugation Unit

R = H, CH_2CH_3, NH_2

Tetrahedron Letters, **1994**, *35*, 3853

SYNTHESIS OF 2-DEOXYXYLOLACTONE FROM GLYCEROL DERIVATIVES VIA HIGHLY ENANTIOSELECTIVE CARBON-HYDROGEN INSERTION REACTIONS. Michael P. Doyle, Alexey B. Dyatkin, and Jason S. Tedrow, Department of Chemisty, Trinity University, San Antonio, TX 78212.

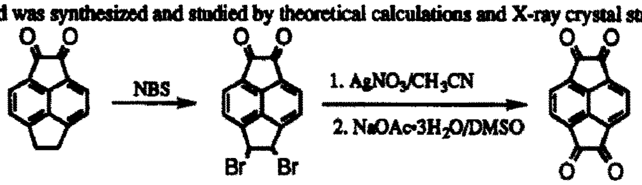
Diazodecomposition of 1,3-dialkoxy-2-propyl diazoacetates catalyzed by chiral dirhodium(II) carboxamides forms 3,5-dialkyl 2-deoxyxylolactones in up to 98% enantiomeric excess; 2-deoxyxylolactone is produced by hydrogenolysis of the dibenzyl derivative.



Tetrahedron Letters, **1994**, *35*, 3857

1,2,5,6-TETRAKETOPYRACENE: SYNTHESIS, AND STRUCTURE BY AB INITIO CALCULATION AND X-RAY ANALYSIS. Atteye H. Abdourazak, Zbigniew Marcinow, Haskell E. Folsom, Frank R. Fronczek, Renata Sygula, Andrzej Sygula and Peter W. Rabideau, Department of Chemistry, Louisiana State University, Baton Rouge, LA 70803, USA

The title compound was synthesized and studied by theoretical calculations and X-ray crystal structure determination.

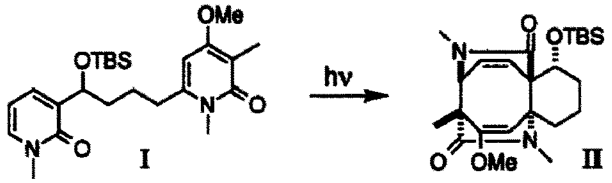


Tetrahedron Letters, **1994**, *35*, 3861

The BC Rings of Taxol by [4+4] Photocycloaddition

Scott McN. Sieburth* and K. Ravindran
Department of Chemistry,
State University of New York at Stony Brook
Stony Brook, New York 11794-3400 USA

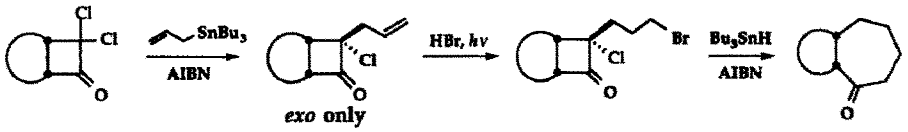
Bis-2-pyridone I photoisomerizes to [4+4] product II as a single isomer containing both quaternary carbons of taxol.



Tetrahedron Letters, **1994**, *35*, 3865

FREE RADICAL-BASED ANNULATION OF ALKENES YIELDING FUSED CYCLOHEPTANONES

Wei Zhang, Ye Hua, Garrett Hoge and Paul Dowd*
Department of Chemistry, University of Pittsburgh, Pittsburgh, PA 15260 USA



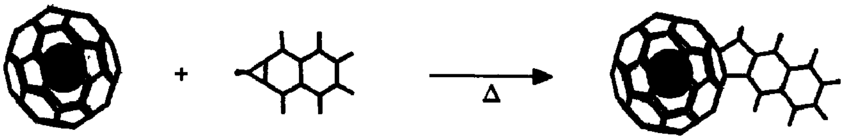
Stereospecific annulation of cyclic alkenes for the preparation of *cis*-fused seven-membered ring systems was accomplished by sequential [2 + 2] cycloaddition, *exo*-allylation, hydrohalogenation, and free radical ring expansion.

Tetrahedron Letters, **1994**, *35*, 3869

REACTION OF CYCLOPROPA[b]NAPHTHALENE WITH ^{3}He@C60.

Martin Saunders,* Hugo A. Jiménez-Vázquez, R. James Cross,* Department of Chemistry, Yale University, New Haven, CT 06520 USA. Edward Billups,* Christoph Gesenberg, and Dianne J. McCord, Department of Chemistry, Rice University, Houston, TX 77251 USA.

The C_{60} adduct obtained by the reaction shown in the scheme has been characterized by ^{1}H, ^{13}C, and ^{3}He NMR.

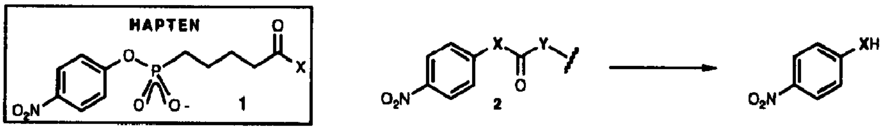


Tetrahedron Letters, **1994**, *35*, 3873

CATALYSIS OF CARBAMATE HYDROLYSIS BY AN ANTIBODY.

David L. Van Vranken, Demetra Panomitros and Peter G. Schultz*,
Department of Chemistry, University of California, Berkeley, CA 94720 USA.

Antibodies to phosphonate **1** catalyze the hydrolysis of **2a** and **2b** but not **2c** and **2d**.



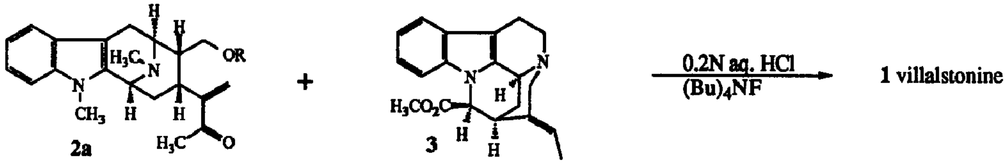
2a X=O, Y=CH_2
b X=O, Y=NH
c X=NH, Y=O
d X=NH, Y=CH_2

Tetrahedron Letters, **1994**, *35*, 3877

A PARTIAL SYNTHESIS OF THE *ALSTONIA* BISINDOLE ALKALOID VILLALSTONINE.

Yingzhi Bi and J.M. Cook,* Department of Chemistry, UW-Milwaukee, Milwaukee, WI 53201. Philip LeQuesne, Department of Chemistry, Northeastern University, Boston, MA 02115

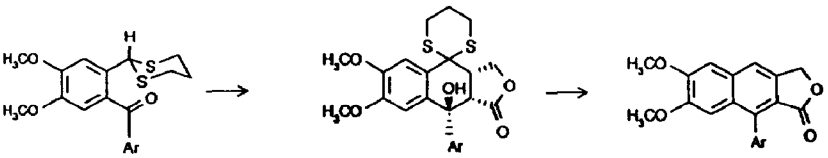
The synthetic macroline equivalent **2a** has been condensed with plant-derived pleiocarpamine **3** in stereospecific fashion to provide a partial synthesis of the bisindole alkaloid villalstonine.



Tetrahedron Letters, **1994**, *35*, 3879

A Rapid Entry into Podophyllotoxin Congeners: Synthesis of Justicidin B.

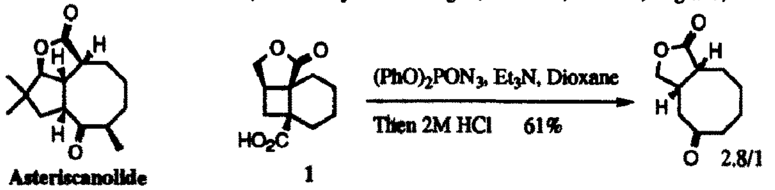
Ahmed Kamal*, Mohsen Daneshtalab,
Faculty of Pharmacy, University of Alberta, Edmonton, Canada T6G 2N8
Ronald G. Micetich, SynPhar Laboratories Inc., Edmonton, Canada T6E 5V2



Tetrahedron Letters, **1994**, *35*, 3883

Model Studies Towards the Total Synthesis of Asteriscanolide

Kevin I. Booker-Milburn*[a], Justin K. Cowell[b] and Laurence J. Harris[a]
[a]Department of Chemistry, University of Salford, Salford, England M5 4WT, U.K.
[b]School of Chemical Sciences, University of East Anglia, Norwich, Norfolk, England, NR4 7TJ, UK

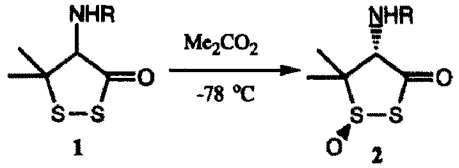


Model studies towards the Asteriscanolide skeleton are described. The key step involves the combination of a Curtius rearrangement/deMayo fragmentation of the acid lactone 1.

Tetrahedron Letters, **1994**, *35*, 3887

DIASTEREOSELECTIVE OXIDATION OF SUBSTITUTED 1,2-DITHIOLAN-3-ONES.

Richard S. Glass* and Yunqi Liu
Department of Chemistry, The University of Arizona, Tucson, AZ 85721



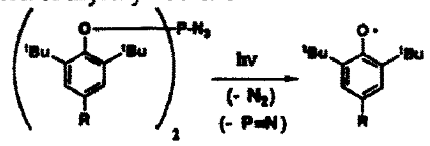
Oxidation of 1 with dimethyldioxirane at -78 °C in CH_2Cl_2 affords 2 in high yield with up to 18:1 diastereoselectivity favoring the trans isomer.

Tetrahedron Letters, **1994**, *35*, 3889

CONVENIENT UNIMOLECULAR SOURCES OF ARYLOXYL RADICALS. III – PHOTOLYSIS OF BIS(ARYLOXY)PHOSPHINE AZIDES.

by Rajdeep Kalgutkar, Alexey S. Ionkin, Louis D. Quin, and Paul M. Lahti*
Department of Chemistry, University of Massachusetts, Box 34510, Amherst, MA 01003 USA

Photolysis of sterically hindered bis(aryloxy)phosphine azides in solution, frozen matrix, or neat solid states leads to facile production of aryloxyl radicals.

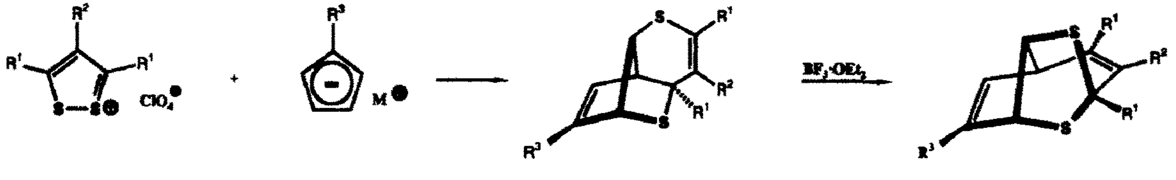


Tetrahedron Letters, **1994**, *35*, 3893

INTRAMOLECULAR DIELS ALDER ADDUCTS FROM 1,2-DITHIOLIUM SALTS AND METAL CYCLOPENTADIENIDES

Klaus Hartke, Andreas Kraska, Werner Massa, S. Molinier, and S. Wocadlo
Institut für Pharmazeutische Chemie and Fachbereich Chemie, D-35032 Marburg/Lahn, Germany

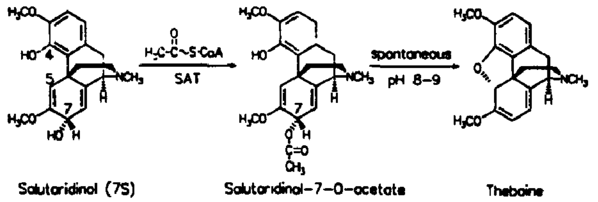
Reactions of 1,2-dithiolium salts with metal cyclopentadienides lead to Diels Alder adducts



CLOSURE OF THE OXIDE BRIDGE IN MORPHINE BIOSYNTHESIS

Tetrahedron Letters, **1994**, *35*, 3897

Rainer Lenz and Meinhart H. Zenk; Lehrstuhl für Pharmazeutische Biologie,
Universität München, Karlstrasse 29, 80333 München, Germany; A specific enzyme (SAT) was purified to homogeneity catalyzing the formation of 7-O-acetyl-salutaridinol which spontaneously rearranges to thebaine by closing the oxide bridge in morphine biosynthesis.

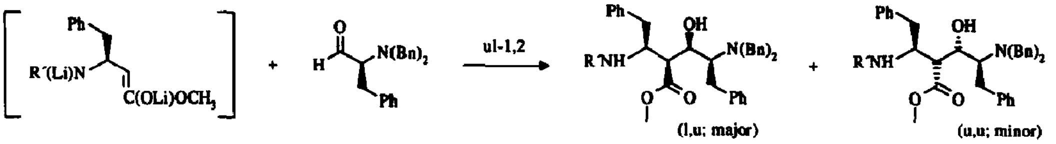


Addition of Dilithiated Methyl-3-Aminobutanoate to Aldehydes Proceeds with ul-1,2-Induction.

Tetrahedron Letters, **1994**, *35*, 3901

Peter Ettmayer*, Michael Hübner and Hubert Gstach, Sandoz Forschungsinstitut, Brunnerstraße 59; A-1235 Vienna, Austria.

Syntheses of 2-substituted-1-hydroxyethylene building blocks, useful as the central moiety of HIV-1 protease inhibitors, is described.

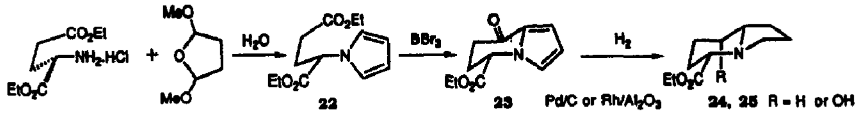


AN ENANTIOSPECIFIC ENTRY TO INDOLIZIDINES BY INTRAMOLECULAR ACYLATION OF N-PYRROLE ESTERS

Tetrahedron Letters, **1994**, *35*, 3905

C.W. Jefford, S.R. Thornton, and K. Sienkiewicz, Department of Organic Chemistry,
University of Geneva, 1211 Geneva 4, Switzerland

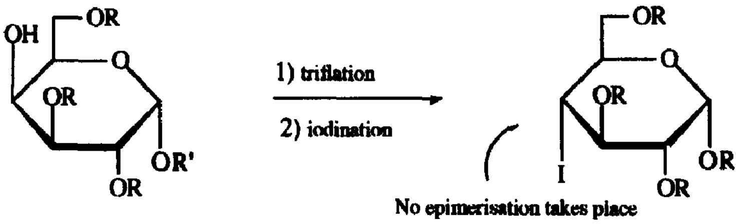
Diethyl L-glutamate hydrochloride was converted to its N-pyrrole derivative **22** by reaction with 2,5-dimethoxytetrahydrofuran. Cyclization of **22** by BBr_3 to **23** followed by catalytic hydrogenation affords mainly indolizidines **24** or **25**



Synthesis of 4-iodo-4-deoxy-D-glucose.

Tetrahedron Letters, **1994**, *35*, 3909

Gilles Bignan, Christophe Morin * and Michel Vidal
LEDSS, Chimie Recherches, Bâtiment 52
Université de Grenoble, 38402 Saint Martin d'Hères (France).



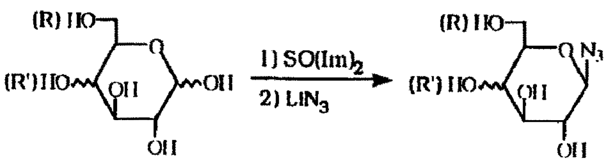
No epimerisation takes place

Tetrahedron Letters, **1994**, *35*, 3913

ONE-POT STEREOSELECTIVE SYNTHESIS OF GLYCOSYL AZIDES *via* 1,2-CYCLIC SULFITE.

Ahmed El Meslouti, Daniel Beaupère, Gilles Demailly and Raoul Uzan
Laboratoire de Chimie Organique, Groupe de Valorisation des Glucides, Faculté des Sciences,
33, rue St Leu - 80039 AMIENS (France) - Fax : 22.82.75.76

In a one-pot procedure, treatment of partially or unprotected aldoses with N,N'-thionyldiimidazole and then, lithium azide leads stereoselectively to glycosyl azides.

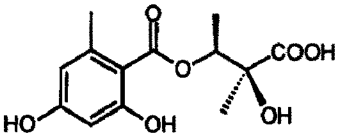


Tetrahedron Letters, **1994**, *35*, 3917

Synthesis and Absolute Configuration of Phomozin

Nicolas Vicart, Jean-Yves Ortholand, Gilbert Y. Emeric, Alfred Greiner*
Rhône Poulenc Agrochimie, Centre de Recherche de la Dargoire, BP 9163 F-69263 Lyon CEDEX 09, France

Abstract: The absolute configuration of the fungal phytotoxin phomozin has been unambiguously determined by the synthesis of its two enantiomers.



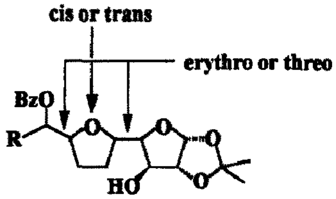
Phomozin

Tetrahedron Letters, **1994**, *35*, 3919

^{1}H NMR ANALYSIS AND CONFORMATION OF BIS-TETRAHYDROFURANS RELATED TO ANNONACEOUS ACETOGENINS.

L. Autissier, P. Bertrand, J.-P. Gesson* and B. Renoux, Laboratoire de Chimie 12 Associé au CNRS, 40, Avenue du Recteur Pineau, F-86022 Poitiers.

The conformation of diastereoisomeric bis-tetrahydrofurans related to annonaceous acetogenins are deduced from ^{1}H NMR.

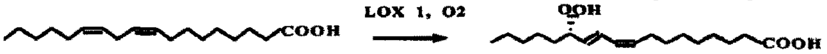


Tetrahedron Letters, **1994**, *35*, 3923

PRODUCTION OF 13(S)-HYDROPEROXY-9(Z),11(E)-OCTADECADIENOIC ACID USING SOYBEAN LIPOXYGENASE 1 IN A BIPHASIC OCTANE-WATER SYSTEM.

Philippe Drouet*, Daniel Thomas and Marie Dominique Legoy.
L.T E. U.T.C. BP 649. 60206 Compiègne. France.

Synthesis of 13(S)-Hydroperoxy-9(Z),11(E)-octadecadienoic acid with soybean lipoxygenase in a biphasic medium (octane; borate buffer, pH 9.6). Improvement of the reaction yield at very high concentrations and no change of the regioselectivity.

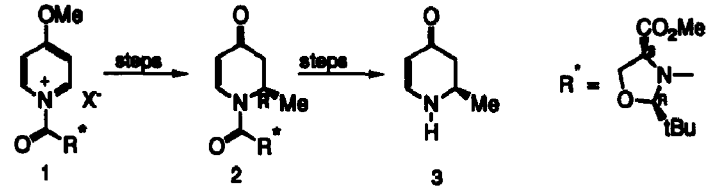


Tetrahedron Letters, **1994**, *35*, 3927

A SIMPLE ASYMMETRIC SYNTHESIS OF 2-SUBSTITUTED-2,3-DIHYDRO-4-PYRIDONES.

J. Streith*, A. Boiron, T. Sifferlen, C. Strehler, and T. Tschamber.
Ecole Nationale Supérieure de Chimie, Université de Haute-Alsace
3, rue Alfred Werner F-68093 Mulhouse, France.

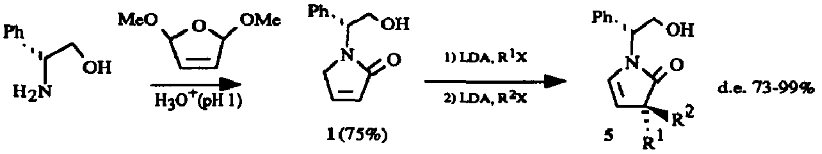
Asymmetric methylation of 1 was achieved with *d.e.*=95% and gave enantiopure 3 in good yield.



Tetrahedron Letters, **1994**, *35*, 3931

DIASTEREOSELECTIVE BIS-ALKYLATION OF CHIRAL NON-RACEMIC α,β-UNSATURATED γ-LACTAMS.

Isabelle Baussanne, Angèle Chiaroni, Henri-Philippe Husson, Claude Riche and Jacques Royer *
Institut de Chimie des Substances Naturelles, CNRS, 1 Avenue de la Terrasse, 91198 Gif-sur-Yvette Cedex. France

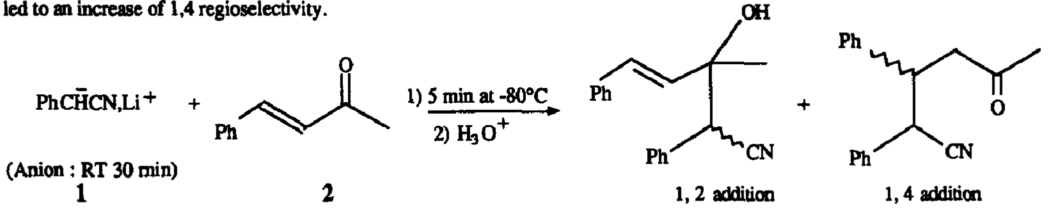


Tetrahedron Letters, **1994**, *35*, 3935

EFFECT OF AGGREGATION OF NITRILE ANIONS ON THE 1,2 VERSUS 1,4 REGIOSELECTIVITY TOWARDS BENZYLIDENEACETONE.

T. Strzalko, J. Seyden-Penne, L. Wartski* and F. Froment, J. Corset
Institut de Chimie Moléculaire d'Orsay, Laboratoire des Carbocycles, Université de Paris-Sud, 91405 Orsay (France) and LASIR - CNRS, BP 28, 94320 Thiais

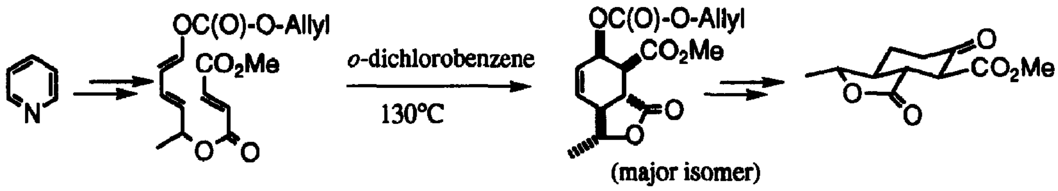
Progressive addition of hexane to THF solutions raised the aggregates proportion of 1 as evidenced by IR ν_{CN} band and led to an increase of 1,4 regioselectivity.



Tetrahedron Letters, **1994**, *35*, 3937

A *C-B-A-D* APPROACH TO BRASSINOSTEROIDS; OBTENTION OF A *C*-RING PRECURSOR FROM PYRIDINE.

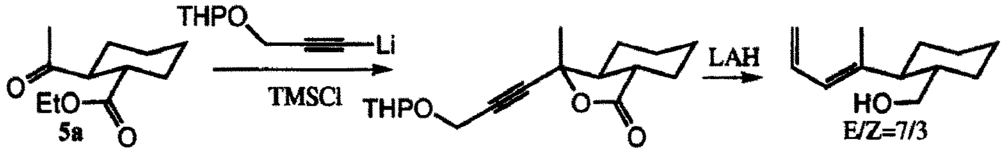
Laurence Berthon, Abdellah Tahri and Daniel Uguen*, Laboratoire de Synthèse Organique, E.H.I.C.S., 67008 Strasbourg (France)



Tetrahedron Letters, **1994**, *35*, 3941

A *C-B-A-D* APPROACH TO BRASSINOSTEROIDS; OBTENTION OF A *A-B-C* RING SYSTEM PRECURSOR.

Rachel Dizière, Abdellah Tahri and Daniel Uguen*, Laboratoire de Synthèse Organique, E.H.I.C.S., 67008 Strasbourg (France)

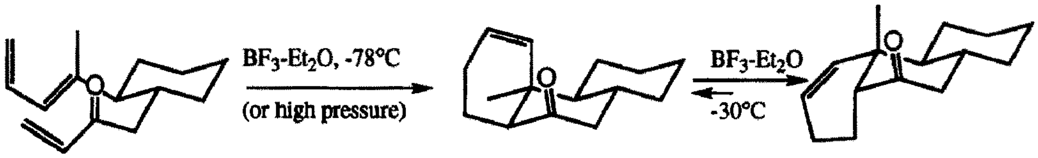


(5a does not react with usual Wittig-type reagents)

Tetrahedron Letters, **1994**, *35*, 3945

A *C-B-A-D* APPROACH TO BRASSINOSTEROIDS; GENERATION OF THE *A-B-C* RING SYSTEM.

Abdellah Tahri and Daniel Uguen*, Laboratoire de Synthèse Organique, E.H.I.C.S., 67008 Strasbourg (France)
André De Cian and Jean Fischer, Laboratoire de Cristallochimie, ULP, 67070 Strasbourg (France)

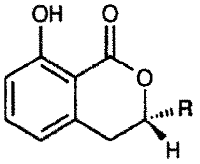


Tetrahedron Letters, **1994**, *35*, 3949

Isolation, Structure Determination and Synthesis of New Dihydroisocoumarins from *Ginkgo biloba* L.

Noureddine Choukchou-Braham[1], Yoshinori Asakawa[2] and Jean-Pierre Lepoittevin[1]*
1 Laboratoire de Dermatochimie associé au CNRS, Université Louis Pasteur, Clinique Dermatologique, CHU, F-67091 Strasbourg, France.
2 Pharmacognosy Laboratory, Tokushima Bunri University, Yamashiro-Cho, Tokushima, 770 Japan.

New optically active 8-hydroxy-3-alk(en)yl-3,4-dihydroisocoumarins 2a-c were isolated from *Ginkgo biloba* L. fruits. The absolute configuration was determined to be R by comparison with both enantiomers of the 8-hydroxy-3-tridecyl-3,4-dihydroisocoumarin synthesized from optically active epichlorhydrins.



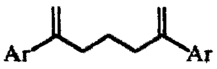
2a R = $C_{13}H_{27}$
2b R = $C_{15}H_{29}$
2c R = $C_{17}H_{31}$

Tetrahedron Letters, **1994**, *35*, 3953

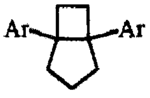
ELECTRON-TRANSFER INDUCED INTRAMOLECULAR [2 + 2] CYCLOADDITION OF 2,6-DIARYLHEPTA-1,6-DIENES.

Yasutake Takahashi, Osamu Okitsu, Masatoshi Ando, and Tsutomu Miyashi*
Department of Chemistry, Faculty of Science, Tohoku University, Aoba-ku, Sendai 980, Japan

Intramolecular [2 + 2] cycloaddition of dienes **1a—c** to **2** can be induced by electron-transfer photosensitization with 9,10-dicyanoanthracene.



1



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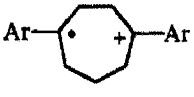

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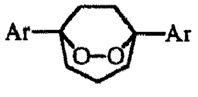


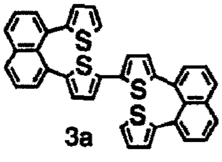
4

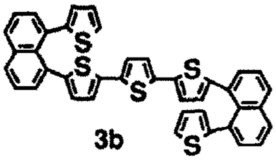
a: Ar = 4-MeO-C_6H_4, **b**: Ar = 4-Me-C_6H_4, **c**: Ar = C_6H_5

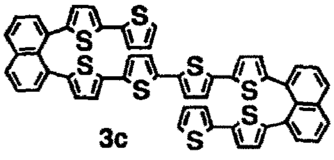
Tetrahedron Letters, **1994**, *35*, 3957

Synthesis and Properties of α-Oligothiophenes Carrying Three Cofacially Oriented Thiophene Rings Through Naphthalenes

M. Kuroda, J. Nakayama, M. Hoshino, N. Furusho,*† *and S. Ohba*†† Department of Chemistry, Faculty of Science, Saitama University, Urawa, Saitama 338, Japan. †Fuji Electroric Corporate Research and Development, Ltd., Yokosuka, Kanagawa 240-01, Japan. ††Department of Chemistry, Faculty of Science and Technology, Keio University, Kohoku-ku, Yokohama, Kanagawa 223, Japan


3a


3b


3c

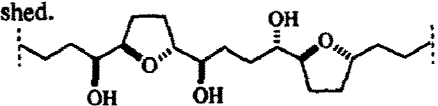
Synthesis and properties of compounds 3a-c are reported.

Tetrahedron Letters, **1994**, *35*, 3961

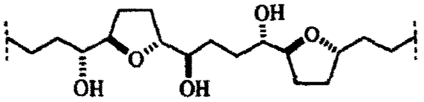
Absolute Stereochemistry of Non-adjacent Bis-tetrahydrofuranic Acetogenins

Hiroyasu Shimada, Seiichi Nishioka, Sanjewon Singh,§ Mahendra Sahai,§ and Yoshinori Fujimoto*
Department of Chemistry, Tokyo Institute of Technology, Meguro, Tokyo 152, Japan,
§Department of Medicinal Chemistry, I. M. S., Banaras Hindu University, Varanasi 221005, India

Absolute stereochemistry of the two types of non-adjacent bis-tetrahydrofuranic acetogenins has been established.



24S,23R,20R,19R,16S,15S,12R



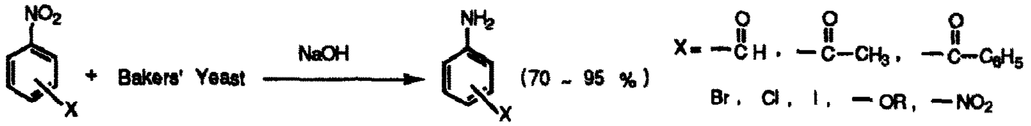
24R,23R,20R,19R,16S,15S,12R

Tetrahedron Letters, **1994**, *35*, 3965

SELECTIVE REDUCTION OF AROMATIC NITRO COMPOUNDS TO AROMATIC AMINES BY BAKER'S YEAST IN BASIC SOLUTION.

Woonphil Baik, Jeong Lim Han, Ki Chang Lee, Nam Ho Lee, Byeong Hyo Kim, and Jung-Tai Hahn
Department of Chemistry, Myong Ji University, KOREA

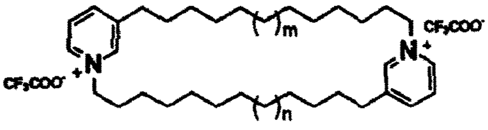
Aromatic nitro compounds were selectively reduced to their corresponding amino derivatives in good yields using Bakers' Yeast in basic solution.



Tetrahedron Letters, **1994**, *35*, 3967

Cyclostellettamines A-F, Pyridine Alkaloids Which Inhibit Binding of Methyl Quinuclidinyl Benzilate (QNB) to Muscarinic Acetylcholine Receptors, from the Marine Sponge, *Stelletta maxima*

Nobuhiro Fusetani,* Naoki Asai, and Shigeki Matsunaga
Laboratory of Marine Biochemistry, Faculty of Agriculture,
The University of Tokyo, Bunkyo-ku, Tokyo, 113, Japan
Kazuo Honda and Kenichi Yasumuro
Central Laboratories, Yamanouchi Pharmaceutical Co. Ltd.
Itabashi-ku, Tokyo, 175, Japan



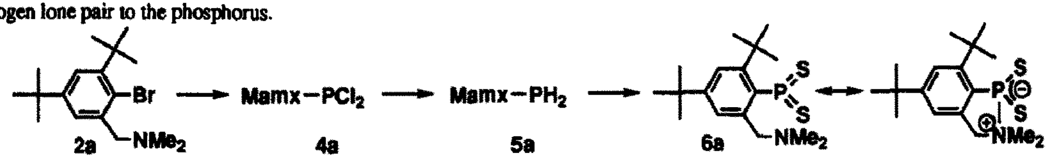
A m=1, n=1 D m=1, n=3
B m=1, n=2 E m=2, n=3
C m=2, n=2 F m=3, n=3

Tetrahedron Letters, **1994**, *35*, 3971

Preparation and X-Ray Structure of [2,4-Di-*t*-butyl-6-(*N*,*N*-dimethylaminomethyl)phenyl]dithioxophosphorane Stabilized by Intramolecular Coordination

Masaaki Yoshifuji,* Kazunori Kamijo, and Kozo Toyota
Department of Chemistry, Faculty of Science, Tohoku University, Aoba, Sendai 980, Japan

A bulky Mamx group (**2a** = MamxBr) was utilized to stabilize dithioxophosphorane (**6a**) indicating an intramolecular coordination of nitrogen lone pair to the phosphorus.

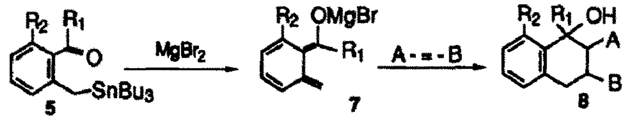


Tetrahedron Letters, **1994**, *35*, 3975

Lewis Acid - Promoted Generation of α - oxy *o* - Quinodimethanes and Cycloaddition Reactions

Soon Hyung Woo
Chemistry Group, Research Institute of Industrial Science and Technology, P.O. Box 135, Pohang 790-630, Korea

Anhydrous magnesium bromide can effectively promote to conversion of **5** to α - oxy - *o* -quinodimethanes **7**, which can then undergo Diels-Alder cycloaddition reactions.

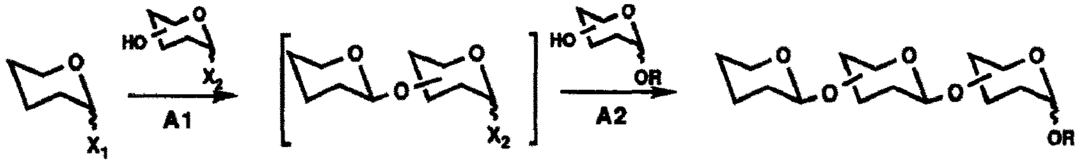


a : $R_1 = H, R_2 = H$
b : $R_1 = H, R_2 = OCH_3$
c : $R_1 = Me, R_2 = H$

Tetrahedron Letters, **1994**, *35*, 3979

One-Pot Sequential Glycosylation: A New Method for the Synthesis of Oligosaccharides

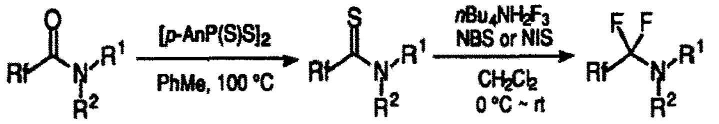
Haruo Yamada, Takeo Harada, Hiroshi Miyazaki, and Takashi Takahashi*
Tokyo Institute of Technology, Meguro, Tokyo 152, Japan.



Tetrahedron Letters, **1994**, *35*, 3983

A Convenient Synthesis of Perfluoroalkylated Amines by Oxidative Desulfurization-Fluorination

Manabu Kuroboshi* and Tamejiro Hiyama*
Research Laboratory of Resources Utilization, Tokyo Institute of Technology
4259 Nagatsuta, Midori-ku, Yokohama, Kanagawa 227, JAPAN

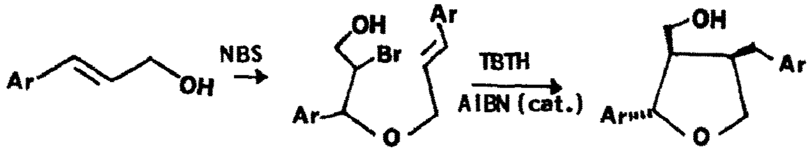


Perfluoroalkylamines were readily obtained from perfluoroalkanethioamides by the aid of $nBu_4NH_2F_3$ and NBS or NIS in good yields under mild conditions.

Tetrahedron Letters, **1994**, *35*, 3985

SHORT AND STEREOSELECTIVE SYNTHESIS OF (±)-DIHYDROSESAMIN BY A RADICAL CYCLISATION REACTION

Gourhari Maiti, Sankar Adhikari and Subhas Chandra Roy*
Department of Organic Chemistry, Indian Association for the Cultivation of Science, Jadavpur, Calcutta - 700 032, India.



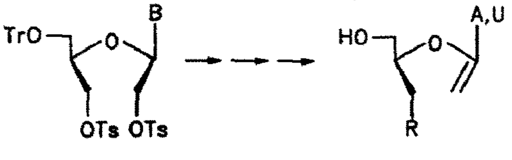
Ar=3,4-methylene-dioxyphenyl

Tetrahedron Letters, **1994**, *35*, 3987

A NOVEL TYPE OF UNSATURATED SECONUCLEOSIDE ANALOGUES.

Valerije Vrček and Vesna Čaplar*, Laboratory of Stereochemistry and Natural Compounds, Department of Organic Chemistry and Biochemistry, "Ruder Bošković" Institute, 41001 Zagreb, Croatia

1',2'-Unsaturated secoadenosine and secouridine analogues were synthesized by base prombted regioselective elimination of corresponding 2',3'-ditosylates. Efficient and selective O-detritylation of these acid sensitive compounds was achieved by $ZnBr_2$ in dichloromethane.



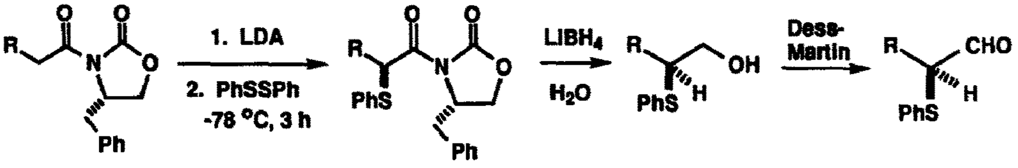
B=(Tr)A, (PMB)U
R=OTs, Cl, N_3, OH

Tetrahedron Letters, **1994**, *35*, 3991

The Synthesis of Optically Active 2-Phenylthio Aldehydes

Kelly Chibale and Stuart Warren*
University Chemical Laboratories, Lensfield Road, Cambridge CB2 1EW.

Optically active 2-PhS-aldehydes can be made in >98% e.e. with R = Et, Pr, i-Pr, t-Bu, providing enolisation is avoided.

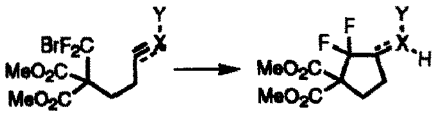


Tetrahedron Letters, **1994**, *35*, 3995

Comparative Studies on the Generation and Cyclisation Reactions of Difluoroalkyl Radicals

Lisa A. Buttle[a] and William B. Motherwell*[b]
Departments of Chemistry, (a) Imperial College of Science, Technology and Medicine, London, SW7 2AY, UK;
(b) University College London, 20 Gordon Street, London, WC1H 0AJ, UK.

Difluoroalkyl radicals exhibit nucleophilic character in cyclisation reactions



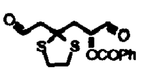
Reagents: $^nBu_3SnH$ or SmI_2 or Co(II)[DMG]$_2$;
X,Y = substituted alkene, alkyne or imine.

Tetrahedron Letters, **1994**, *35*, 3999

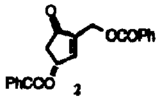
A FLEXIBLE SYNTHESIS OF SOME POLYSUBSTITUTED CYCLOPENTANES FROM QUINIC ACID.

M. Teresa Barros[a,b], António G. Santos[a,b], Lício S. Godinho[a], Christopher D. Maycock*[b,c]
[a]Faculdade de Ciências e Tecnologia da Universidade Nova de Lisboa, 2825 Monte da Caparica, [b]Centro de Tecnologia Química e Biológica, Rua de Quinta Grande 6, Apartado 127, 2780 Oeiras,.[c]Centro de Espectrometria de Massa and Universidade de Lisboa, Rua Ernesto de Vasconcelos, 1700 Lisboa, PORTUGAL.

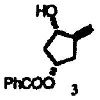
Aldol cyclisation of the dialdehyde 1 followed by several efficient steps yields the cyclopentenone 2 which is selectively reduced with borohydride to afford the key intermediate 3. This compound has been converted into a variety of cyclopentanol derivatives.



1



2

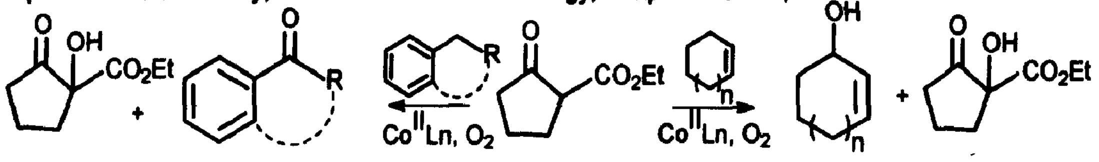


3

Tetrahedron Letters, **1994**, *35*, 4003

COBALT CATALYSED ALLYLIC AND BENZYLIC OXIDATIONS WITH DIOXYGEN IN THE PRESENCE OF ETHYL 2-OXOCYCLOPENTANECARBOXYLATE

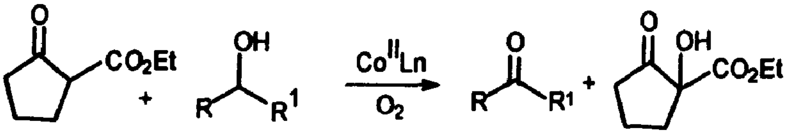
T. Punniyamurthy and Javed Iqbal*
Department of Chemistry, Indian Institute of Technology, Kanpur 208 016, INDIA



Tetrahedron Letters, **1994**, *35*, 4007

COBALT(II) SCHIFF BASE COMPLEX CATALYSED OXIDATION OF ALCOHOLS WITH DIOXYGEN IN THE PRESENCE OF ETHYL 2-OXOCYCLOPENTANECARBOXYLATE

T. Punniyamurthy and Javed Iqbal*
Department of Chemistry, Indian Institute of Technology, Kanpur 208 016, INDIA

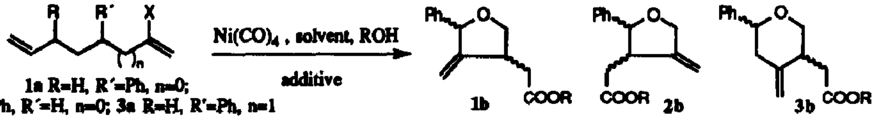


Tetrahedron Letters, **1994**, *35*, 4011

Stereoselective Synthesis of Tetrahydrofurans and Tetrahydropyrans by Ni(0) Promoted Tandem Cyclization--Carbonylation.

Antonio Delgado,*¶ Amadeu Llebaria, Francisco Camps, and Josep M. Moretó. Departament de Química Orgànica Biològica, C.I.D. (C.S.I.C.). ¶Universitat de Barcelona, Laboratori de Química Farmacèutica, Barcelona, Spain.

Reaction of vinyl bromides (**1a-3a**), with $Ni(CO)_4$ affords cyclic ethers **1b-3b** in moderate to good yields. Stereoselectivity in terms of substrate and additives is discussed.



1a R=H, R'=Ph, n=0;
2a R=Ph, R'=H, n=0; **3a** R=H, R'=Ph, n=1

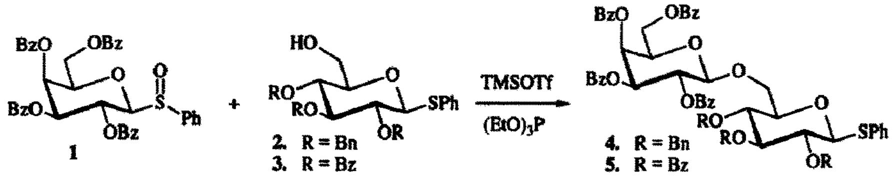
1b **2b** **3b**

Tetrahedron Letters, **1994**, *35*, 4015

TRIMETHYLSILYL TRIFLATE MEDIATED CHEMOSELECTIVE CONDENSATION OF ARYLSULFENYL GLYCOSIDES

L.A.J.M. Sliedregt, G.A. van der Marel and J.H. van Boom *Gorlaeus Lab., P.O. Box 9502, 2300 RA Leiden, The Netherlands.*

Glycosylation of "armed" or "disarmed" phenyl thioglycosides **2** or **3** with the phenylsulfenyl donor **1** using the promoter system trimethylsilyl triflate and triethylphosphite gave the β-linked disaccharides **4-5** in a good yield.



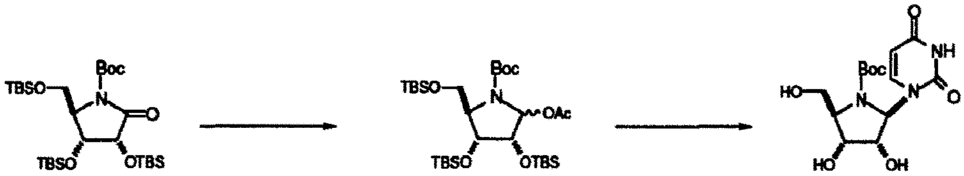
Tetrahedron Letters, **1994**, *35*, 4019

TOTAL SYNTHESES OF *N*-Boc-PROTECTED 3'-DEOXY-4'-AZA-THYMIDINE AND 4'-AZAURIDINE,

Gloria Rassu,* Luigi Pinna, Pietro Spanu, Fausta Ulgheri, and Giovanni Casiraghi*

Dipartimento di Chimica dell'Università and Istituto CNR, Via Vienna, 2, I-07100 Sassari, Italy.

A simple strategy for synthesis of azasugar-based nucleosides is described, consisting of formation of suitable azasugar substrates followed by $SnCl_4$-promoted coupling with a silylated nucleobase.

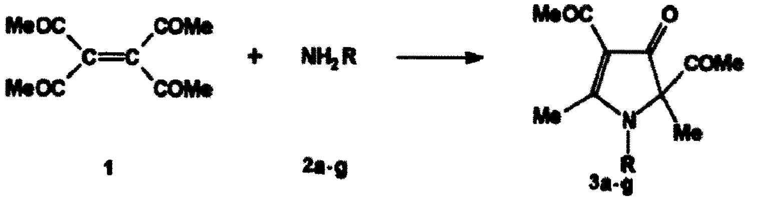


Tetrahedron Letters, **1994**, *35*, 4023

A NEW ROUTE TO HIGHLY SUBSTITUTED 1*H*-PYRROL-3(2*H*)-ONES.

Giorgio Adembri*, Angela M.Celli, Lucia R.Lampariello, Mirella Scotton, Alessandro Sega. Istituto di Chimica Organica,Piano dei Mantellini 44, 53100 Siena, Italy.

Reaction of 3,4-diacetyl-3-hexen-2,5-dione, **1**, with alkyl or aryl primary amines, **2a-g**, led to highly substituted 1*H*-Pyrrol-3(2*H*)-ones.



R: a= C_6H_5 b= pCl-C_6H_4

c= pBr-C_6H_4 d= pMe-C_6H_4

e= pMeO-C_6H_4 f= C_6H_5-CH_2

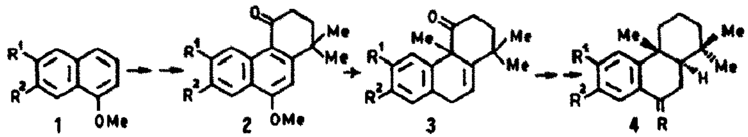
g= $CH_3(CH_2)_2$-CH_2

Tetrahedron Letters, **1994**, *35*, 4027

FACILE TRANSFORMATION OF 1-METHOXYNAPHTHALENES TO OCTAHYDROPHENANTHRENES. APPLICATION TO THE TOTAL SYNTHESIS OF (±)-SEMPERVIROL METHYL ETHER, (±)-SUGIOL METHYL ETHER, (±)-NIMBIOL METHYL ETHER,AND (±)-NIMBIDIOL DIMETHYL ETHER

Sarbani Das, Asok Kumar Saha and Debabrata Mukherjee

Department of Organic Chemistry, Indian Association for the Cultivation of Science, Jadavpur, Calcutta - 700 032, India.



1a,2a,3a,4a : R^1=i-Pr,R^2=OMe,R=H_2

1b,2b,3b,4b : R^1=OMe,R^2=i-Pr,R=O

1c,2c,3c,4c : R^1=OMe,R^2=Me,R=O

1d,2d,3d,4d : R^1=R^2=OMe, R=O

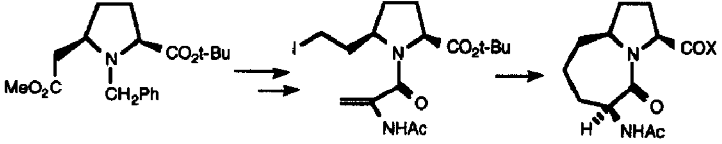
The transformation of the 1-methoxynaphthalenes **1a-d** into the diterpene ethers **4a-d**.

Synthesis of 7,5-Fused Bicyclic Lactams by Stereoselective Radical Cyclization

Tetrahedron Letters, **1994**, *35*, 4031

Lino Colombo,* Marcello Di Giacomo, Gianluca Papeo, Oliviero Carugo[a]
Dipartimento di Chimica Farmaceutica and a. Dipartimento di Chimica Generale, Università di Pavia, via Taramelli 12, I-27100 Pavia
Carlo Scolastico, Leonardo Manzoni, Dipartimento di Chimica Organica e Industriale, Università di Milano, via Venezian 21, I-20133 Milano

Stereoselective synthesis of **1a-d** is described.



1a X = Ot-Bu
1b X = OH
1c X = OMe
1d X = H