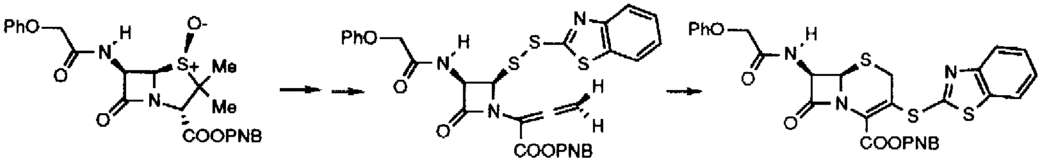
GRAPHICAL ABSTRACTS

Tetrahedron Lett. **1992**, *33*, 3559

A NEW STRATEGY FOR THE CONVERSION OF PENAMS INTO CEPHEMS VIA ALLENE CHEMISTRY

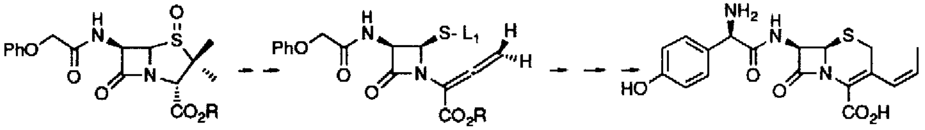
Vittorio Farina * and Joydeep Kant
Bristol-Myers Squibb Pharmaceutical Research Institute, 5 Research Parkway, P O.Box 5100, Wallingford CT 06492-7660.



Tetrahedron Lett. **1992**, *33*, 3563

A STEREOCONTROLLED SYNTHESIS OF CEFPROZIL AND RELATED CEPHEMS *VIA* ALLENYLAZETIDINONES

Joydeep Kant* and Vittorio Farina
Bristol-Myers Squibb Pharmaceutical Research Institute, 5 Research Parkway, P.O. Box 5100, Wallingford, CT 06492-7660



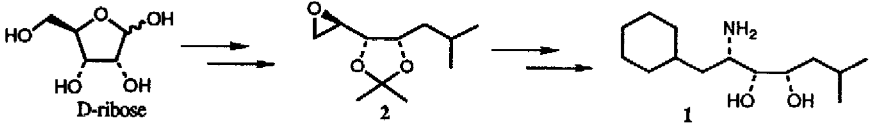
CEFPROZIL

Tetrahedron Lett. **1992**, *33*, 3567

A VERSATILE AND STEREOSPECIFIC SYNTHESIS OF A DIHYDROXYETHYLENE DIPEPTIDE ISOSTERE OF RENIN INHIBITORS FROM D-RIBOSE.

Ming Fai Chan and Chi-Nung Hsiao, Process Research, Chemical and Agricultural Products Division, Abbott Laboratories, North Chicago, IL 60064, U.S.A.

The dihydroxyethylene dipeptide isostere 1 for renin inhibitors was synthesized from D-ribose via the epoxide 2 stereospecifically. This method can be readily adapted to other dihydroxyethylene isosteres.

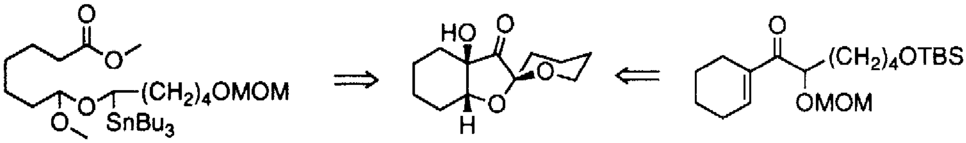


D-ribose 2 1

Tetrahedron Lett. **1992**, *33*, 3571

Novel Methods for the Construction of 3-(2H) Furanone Spiroketals.

Russell J Linderman*, Fabrice G Viviani and William R Kwochka
Department of Chemistry, North Carolina State University, Raleigh, NC 27695-8204 USA



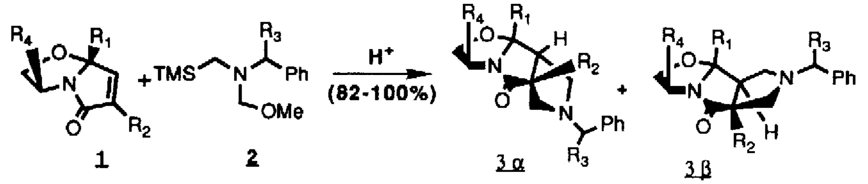
6 1 13

Two stereochemically complimentary routes to the furanone spiroketal 1 are described

Tetrahedron Lett. **1992**, *33*, 3575

DIASTEREOSELECTIVE AZOMETHINE YLIDE CYCLOADDITIONS TO UNSATURATED, CHIRAL BICYCLIC LACTAMS

Andrew H. Fray and A. I. Meyers*
Department of Chemistry, Colorado State University, Fort Collins, CO 80523 USA

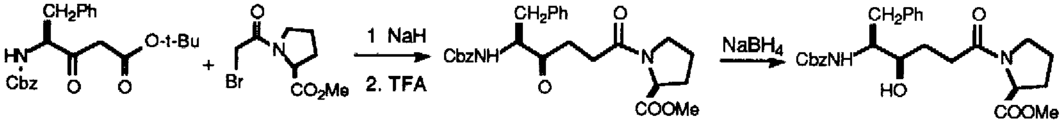


Tetrahedron Lett. **1992**, *33*, 3579

A SIMPLE SYNTHETIC APPROACH TO Phe-Ψ-(CH2)Gly-Pro-OMe AND RELATED PEPTIDE ISOSTERES

Robert V. Hoffman* and Hwa-Ok Kim
Department of Chemistry, New Mexico State University, Las Cruces, NM 88003-0001

A new approach to ketomethylene and hydroxymethylene peptide isosteres is described whose key feature is construction of the central bond of a γ-ketoester.

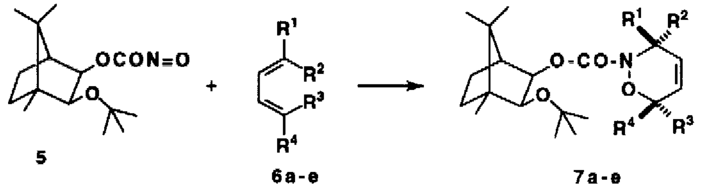


Tetrahedron Lett. **1992**, *33*, 3583

DIASTEREOSELECTIVE [4+2] CYCLOADDITIONS OF ACYL NITROSO COMPOUNDS

Stephen F. Martin,* Michael Hartmann, and John A. Josey
Department of Chemistry and Biochemistry, The University of Texas Austin TX 78712

The hetero Diels-Alder reactions of nitrosocarbamate **5** with dienes **6a-e** to give **7a-e** proceed with excellent diastereoselectivity and yield.

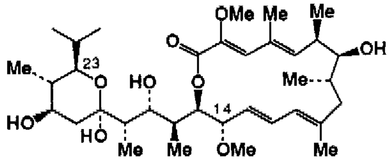


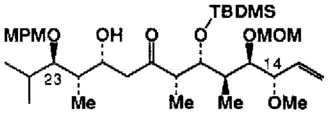
Tetrahedron Lett. **1992**, *33*, 3587

STEREOSELECTIVE SYNTHESIS OF THE C(13)-C(25) SEGMENT OF BAFILOMYCIN A$_1$

W. R. Roush* and T. D. Bannister, Department of Chemistry, Indiana University, Bloomington, IN 47405

bafilomycin A$_1$





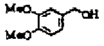
1

Tetrahedron Lett. **1992**, *33*, 3591

CYCLO-OLIGOMERIZATION OF VERATRYL ALCOHOL WITH TRIFLUOROACETIC ACID

Emile Al-Farhan, Philip M. Keehn* and Robert Stevenson
Department of Chemistry, Brandeis University, Waltham, Massachusetts 02254, U.S.A.

Treatment of veratryl alcohol with a dilute solution of trifluoroacetic acid in chloroform yields the oligomers, cyclotriveratrylene 3, cyclotetraveratrylene 4, cyclopentaveratrylene 5, and cyclohexaveratrylene 6.



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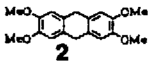

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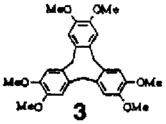

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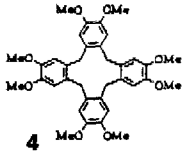

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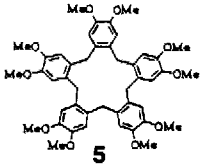

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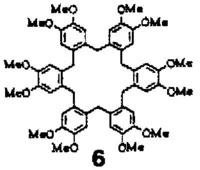


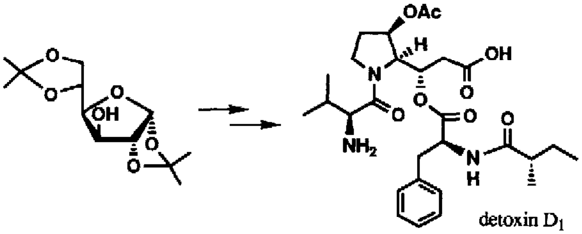
6

Tetrahedron Lett. **1992**, *33*, 3595

Total Synthesis of (–)-Detoxin D_1

Wen-Ren Li, So-Yeop Han, and Madeleine M. Joullié*
Department of Chemistry, University of Pennsylvania
Philadelphia, PA 19104-6323

An efficient stereocontrolled total synthesis of (–)-detoxin D_1, the most active component of the detoxin complex, is described.

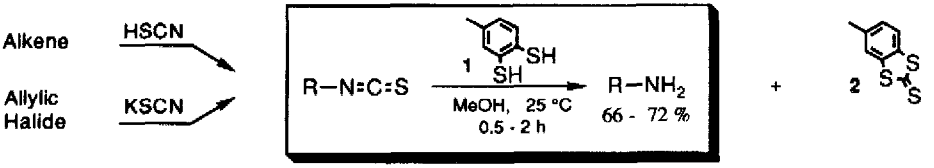


detoxin D_1

Tetrahedron Lett. **1992**, *33*, 3599

ALKYL AND ARYL ISOTHIOCYANATES AS MASKED PRIMARY AMINES

Cheon-Gyu Cho and Gary H. Posner*
Department of Chemistry, The Johns Hopkins University, Baltimore, MD 21218, USA



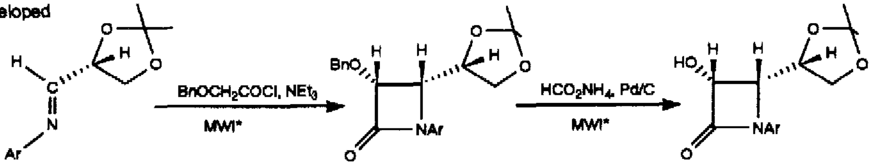
A new, mild and chemospecific procedure is described for unmasking amines from alkyl and aryl isothiocyanates.

Tetrahedron Lett. **1992**, *33*, 3603

MICROWAVE-INDUCED ORGANIC REACTION ENHANCEMENT CHEMISTRY. 4.
CONVENIENT SYNTHESIS OF ENANTIOPURE α-HYDROXY-β-LACTAMS

Bimal K. Banik, Maghar S. Manhas, Zbigniew Kaluza, Khaled J. Barakat, Ajay K. Bose,
Department of Chemistry and Chemical Engineering, Stevens Institute of Technology, Hoboken, New Jersey 07030, U.S.A

An improved, rapid synthesis of enantiopure α-hydroxy-β-lactams using microwave-induced organic reaction enhancement chemistry has been developed



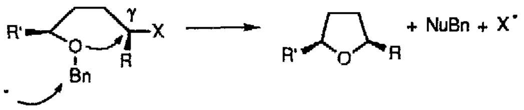
Tetrahedron Lett. **1992**, *33*, 3607

STEREOCONTROLLED FORMATION OF POLYSUBSTITUTED TETRAHYDROFURANS BY DEBENZYLATING CYCLOETHERIFICATION

Henrietta Dehmlow *, Johann Mulzer, Carsten Seilz, Achim R. Strecker, Andreas Kohlmann
Institut für Organische Chemie der Freien Universität Berlin, Takustrasse 3, W-1000 Berlin 33, FRG

Debenzylating tetrahydrofuran cyclizations of benzyl ethers with S_N2 active centers in γ-position following Scheme 1 are described.

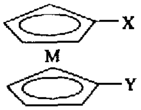
Scheme 1.:



Tetrahedron Lett. **1992**, *33*, 3611

CHIROPTICAL STUDY OF SOME METALLOCENYL(PHENYL)CARBINOLS AND CORRESPONDING α-METALLOCENYLCARBENIUM IONS

N.M. Loim [a], I. A. Mamedyarova [a], M N Nefedova [a], the late G. Snatzke [b], V. Sokolov [a,*]
[a] Institute of Organo-Element Compounds, I.N E O S, 28 Vavilov Street, 117813 Moscow, Russia;
[b] Ruhr-Universität Bochum, Lehrstuhl für Strukturchemie, Postfach 10 21 48, W-4630 Bochum, Germany



X = CH(OH)Ph, Y = H
M = Fe, Ru

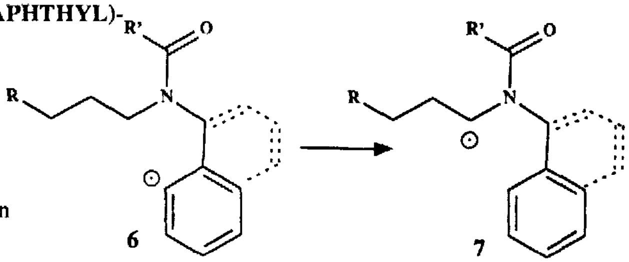
CD spectra have been measured in CH_3CN and CF_3COOH.

Tetrahedron Lett. **1992**, *33*, 3613

COMPETING RADICAL TRANSLOCATION OF TERTIARY N-(2-BROMOBENZYL)- AND N-(8-BROMONAPHTHYL)-ACETAMIDES

Daniella Denenmark, Tammo Winkler,
Adrian Waldner, Alain De Mesmaeker*
Central Research Laboratories, Ciba-Geigy Ltd.,
CH-4002 Basel, Switzerland

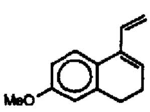
The radical translocation reactions in N,N-disubstituted acetamides and trifluoroacetamides have been studied by deuteration experiments with $n\text{-}Bu_3SnD$.



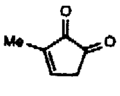
Tetrahedron Lett. **1992**, *33*, 3617

An Enantioselective Version of the AB+D ⟶ ABCD-Type Steroid Total Synthesis

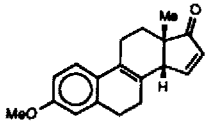
Gerhard Quinkert, Michael del Grosso, Astrid Bucher, Markus Bauch, Wolfgang Döring, Jan W. Bats, and Gerd Dürner
Institut für Organische Chemie der Universität, Niederurseler Hang, D-6000 Frankfurt am Main 50



1



4a



5b

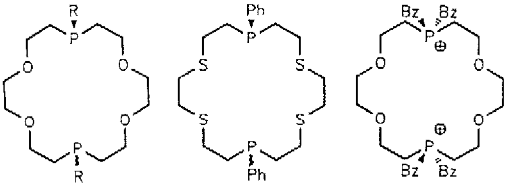
Enantioselection begins during the chirogenic Diels/Alder reaction of **1** and **4a** and is completed by recrystallization of the partielly deoxygenated adduct **5b**.

Tetrahedron Lett **1992**, *33*, 3621

[18]-1,4,10,13-Tetraoxa-7,16-diphosphino-crownether
[18]-1,4,10,13-Tetrathia-7,16-diphosphino-crownether

G. Märkl* und M. Hoferer, Institut für Organische Chemie der Universität, Universitätsstraße 31, D-8400 Regensburg.

The title compounds are easily available by one pot-reactions starting out with dilithiophosphides.

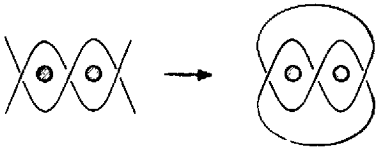


Tetrahedron Lett. **1992**, *33*, 3625

Molecular Knots : Template Synthesis of Dicopper(I) Trefoil Knots of Various Size.

C.O. Dietrich-Buchecker, J.-F. Nierengarten, J.-P. Sauvage, Laboratoire de Chimie Organo-Minérale, associé au CNRS, Institut de Chimie, 1, rue Blaise Pascal, F-67000 Strasbourg, France

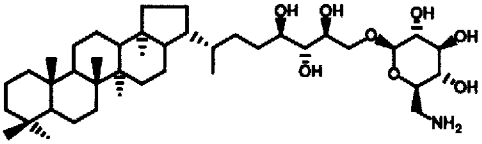
The template synthesis of four new dicopper(I) trefoil knots with a ring size ranging from 80 to 90 atoms is described.



Tetrahedron Lett. **1992**, *33*, 3629

35-O-β-6-AMINO-6-DEOXYGLUCOPYRANOSYLBACTERIOHOPANETETROL, A NOVEL TRITERPENOID OF THE HOPANE SERIES FROM THE CYANOBACTERIUM *SYNECHOCYSTIS* SP.

Pascale Simonin[a], Uwe Jürgens[b] and Michel Rohmer[a]*
[a] Ecole Nationale Supérieure de Chimie de Mulhouse, 3 rue Alfred Werner, F68093 Mulhouse, France.
[b] Institut für Biologie II, Albert Ludwigs Universität, Schänzlestraße 1, D 7300 Freiburg im Breisgau, Federal Republic of Germany.

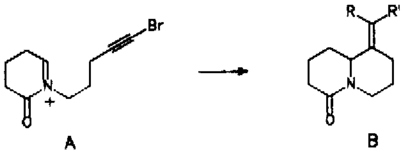


Tetrahedron Lett. **1992**, *33*, 3633

1-BROMOALKYNES AS π-NUCLEOPHILES IN ACYLIMINIUM ION CYCLIZATIONS. A FORMAL SYNTHESIS OF LUPININE AND EPILUPININE.

J.P. Gesson,* J.C. Jacquesy and D. Rambaud
Laboratoire de Chimie 12, associé au CNRS, 40, Avenue du Recteur Pineau, 86022 POITIERS (France).

Cyclization of a glutarimide derived acyliminium ion **A** with a 1-bromoalkyne has been studied using various anhydrous acids to give bromofluoro derivatives **B** (R, R'= Br, F) or a unusual bromoenol triflate (R, R'= Br, OSO_2CF_3), the latter being easily converted to known precursors of lupinine and epilupinine.

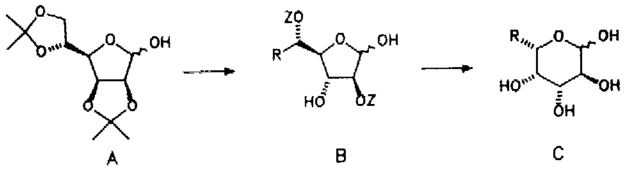


Tetrahedron Lett. **1992**, *33*, 3637

A Short Synthesis of L-Fucose and Analogs from D-Mannose

J.-P. Gesson,* J.-C. Jacquesy, M. Mondon and P. Petit
Laboratoire de Chimie 12, associé au CNRS
40, Avenue du Recteur Pineau
86022 POITIERS (France).

D-Mannose bis-acetonide **A** is converted in only 6 steps in L-fucose **C** (R=Me) and higher alkyl analogs (R=Et, Bu) through the corresponding 2,5-di-O-protected furanose derivatives **B**.

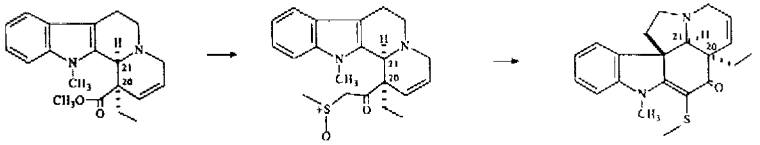


Tetrahedron Lett **1992**, *33*, 3641

β-Oxo-Sulfoxide Rearrangement in the Synthesis of Vindorosine : Study of the Racemization Step

Martial Dardaine, Nicole Langlois*
Institut de Chimie des Substances Naturelles, C.N.R.S., F91198 Gif-sur-Yvette

The racemization step in the synthesis of Aspidospermane indole alkaloids from indoloquinolizidines is discussed.

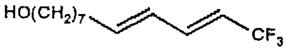


Tetrahedron Lett. **1992**, *33*, 3643

SYNTHESIS OF A NEW FLUORINATED ANALOG OF (E,E)-8,10-DODECADIENOL (CODLEMONE)

Frédérique Tellier[1]* and Raymond Sauvêtre[2]
1-INRA, Laboratoire des Médiateurs Chimiques, Domaine de Brouessy, 78114 Magny-les-Hameaux (France)
2-CNRS, Laboratoire de Chimie des Organoéléments, Université P.et M Curie, 4 place Jussieu, 75252 Paris Cedex 05 (France).

A stereospecific synthesis of trifluoromethylated codlemone is described, based on the treatment of 1,1-difluoro-1,4-dien-3-ol by DAST

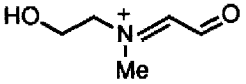


Tetrahedron Lett. **1992**, *33*, 3645

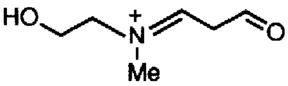
ON THE RELATIVE REACTIVITY OF CARBONYL AND IMINIUM ION MOIETIES

C. AGAMI,* F. COUTY, L. HAMON and C PUCHOT
Laboratoire de Chimie Organique Associé au CNRS, Université P. et M. Curie, 4 place Jussieu, 75005 Paris, France.

AM1 calculations on model compounds **5** and **6** show that the carbonyl and the iminium ion carbon atoms are respectively hard and soft nucleophilic centers.



5



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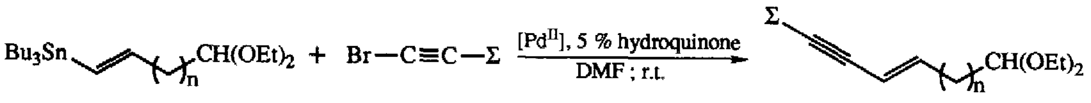
Tetrahedron Lett. **1992**, *33*, 3647

A CONVENIENT SYNTHESIS OF PROTECTED E-ENYNALS VIA CROSS COUPLING OF VINYLTIN ACETALS WITH BROMOALKYNES

Isabelle Beaudet, Jean-Luc Parrain and Jean-Paul Quintard* - Laboratoire de Synthèse Organique associé au CNRS,
Faculté des Sciences et des Techniques de Nantes, 2, rue de la Houssinière, 44072 Nantes Cedex 03 - France



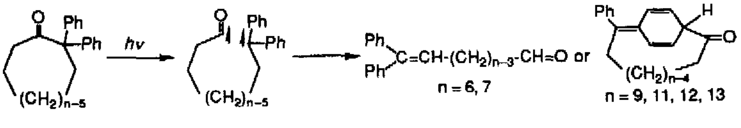
n = 0 or 1 ; Σ = Bu, Ph, COOMe, $CH(OEt)_2$, $CH_2CH(OEt)_2$, yields 28-83 %

Tetrahedron Lett. **1992**, *33*, 3651

EFFECTS OF CHAIN LENGTH ON BEHAVIOR OF BIRADICALS GENERATED FROM NORRISH TYPE I REACTION OF 2,2-DIPHENYLCYCLOALKANONES. ISOLATION AND PHOTOCHEMISTRY OF INTERMEDIATE METHYLENECYCLOHEXADIENYL KETONES

Ryoko Tanaka, Itsuko Suzuki, Akinori Yamaguchi, Hiroaki Misawa, Hirochika Sakuragi,* and Katsumi Tokumaru
Department of Chemistry, University of Tsukuba, Tsukuba, Ibaraki 305, Japan

The reaction course of biradicals, $O{=}C^{\uparrow}$-$(CH_2)_{n-2}$-$C^{\uparrow}Ph_2$, generated from photolysis of 2,2-diphenylcycloalkanones is switched from intramolecular disproportionation (n=6, 7) to acyl-phenyl recombination (n≥9).

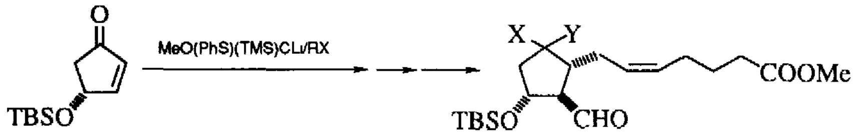


Tetrahedron Lett. **1992**, *33*, 3655

A Divergent Entry into Prostaglandin Synthesis through 1,4-Addition of *Methoxy(phenylthio)(trimethylsilyl)methyllithium to 4-Siloxy-2-cyclopentenone*

J. Otera, Y. Niibo, and H. Nozaki
Department of Applied Chemistry, Okayama University of Science, Ridai-cho, Okayama 700, Japan

A versatile intermediate for prostaglandins is obtained by the title reaction.

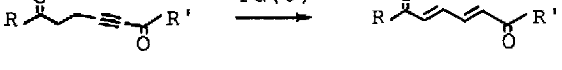


Tetrahedron Lett. **1992**, *33*, 3659

A Facile and Stereoselective Synthesis of Dienediones and 6-Oxo-2,4-dienoic Esters

Cheng Guo and Xiyan Lu*
Shanghai Institute of Organic Chemistry, Academia Sinica, Shanghai, China

Dienediones and 6-oxo-2,4-dienoic esters were synthesized by a short route based on the palladium catalyzed isomerization of ynone and ynoic ester, respectively.

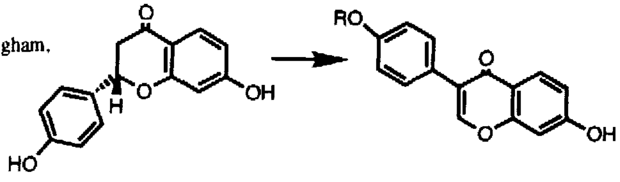


Tetrahedron Lett. **1992**, *33*, 3663

The Mechanism of the Enzymic Induced Flavanone - Isoflavone Change.

Leslie Crombie and Donald A. Whiting.
Department of Chemistry, The University of Nottingham,
Nottingham, NG7 2RD, U.K.

A new scheme for the P 450 enzymic conversion of flavanones into isoflavones, which surmounts known experimental constraints, is proposed.

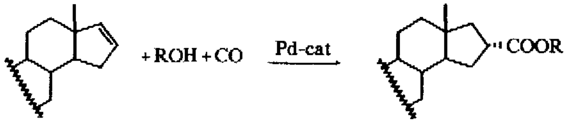


Tetrahedron Lett. **1992**, *33*, 3667

Hydroalkoxycarbonylation of Androstene Derivatives

Szilárd Törös[a], Bálint Heil [a], György Gálik[b], Zoltán Tuba[b]
[a] Department of Organic Chemistry, University of Veszprém, H-8201 Veszprém, P O Box 158, Hungary
[b] Chemical Works of Gedeon Richter Ltd., H-1103 Budapest, Gyömrői út 19/21, Hungary

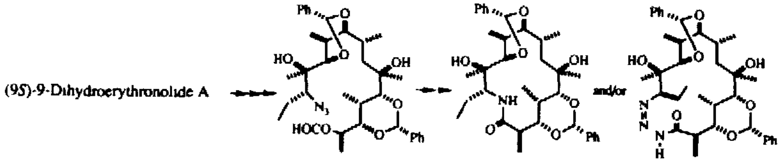
Various esters are conveniently prepared by hydroalkoxycarbonylation of the corresponding androstene derivatives with alcohol and carbon monoxide catalyzed by palladium catalyst with high stereoselectivity.



Tetrahedron Lett. **1992**, *33*, 3669

AN UNEXPECTED REACTION IN THE LACTAMISATION OF 13-AZIDO-13-DEOXY-(9*S*)-9-DIHYDROERYTHRONOLIDE A SECO-ACID DERIVATIVES

Martí Bartra, Fèlix Urpí, and Jaume Vilarrasa
Departament de Química Orgànica, Universitat de Barcelona, 08028 Barcelona

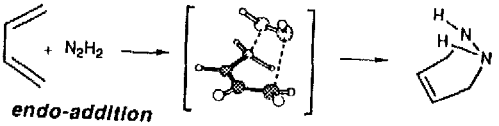


Tetrahedron Lett. **1992**, *33*, 3673

PM3 CALCULATIONS OF CYCLOADDITION REACTIONS OF DIIMIDE.

James M. Coxon and D. Quentin McDonald
Department of Chemistry, University of Canterbury, Christchurch, New Zealand.

The reaction of E-diimide to butadiene shows three stationary points for concerted cycloaddition with the lowest energy transition species asymmetrical and the reaction synchronous. *exo*-Addition of Z-diimide shows a symmetrical synchronous reaction pathway while *endo*-addition reveals two valleys for concerted addition related by symmetry consistent with an asynchronous pathway.

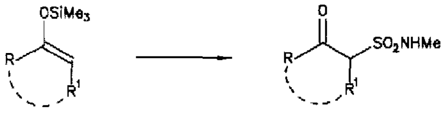


Tetrahedron Lett. **1992**, *33*, 3677

IMPROVED METHOD FOR THE SYNTHESIS OF N-METHYL-2-OXOALKANESULFONAMIDES.

Juan A. Vega, Andres Molina, Ramón Alajarín, Juan J. Vaquero, José L. García Navío and Julio Alvarez-Builla*.
Departamento de Química Orgánica, Universidad de Alcalá, 28871 Alcalá de Henares, Madrid (Spain).

The reaction of silyl enol ethers with N-methylsulfonylimine provides an improved method for the synthesis of N-methyl-2-oxoalkanesulfonamides.

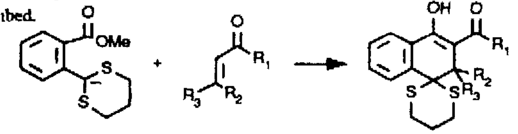


Tetrahedron Lett **1992**, *33*, 3679

An Improved Annelation Method with Methyl 2-(1,3-dithian-2-yl)benzoate as a Bidentate Synthon

Ajana Wadi[1], Francisco López-Calahorra*[1], Mercedes Alvarez[2] and John A. Joule[3]
[1]Dpto. de Química Orgánica, Martí i Franquès, 1-11,[2] Lab. de Química Orgánica, Fac. de Farmacia, Av Diagonal, s/n, U. de Barcelona, 08028 Barcelona, Spain, and [3]Chemistry Department, U. Manchester, Manchester M13 9PL, U. K.

Abstract: The use of methyl 2-(1,3-dithian-2-yl)benzonte as a bidentate synthon in an new annelation method, yielding polycyclic systems with three differentiated carbonyl groups, is described.

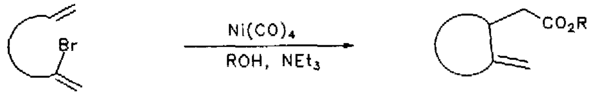


Tetrahedron Lett. **1992**, *33*, 3683

NICKEL-PROMOTED INTRAMOLECULAR CYCLIZATION OF VINYL BROMIDES WITH ALKENES AND ALKYNES

Amadeu Llebaria*, Francisco Camps and Josep Mª Moretó*
Department of Biological Organic Chemistry, C.I.D. (C S.I.C.) Jordi Girona 18-26, 08034-Barcelona, Spain

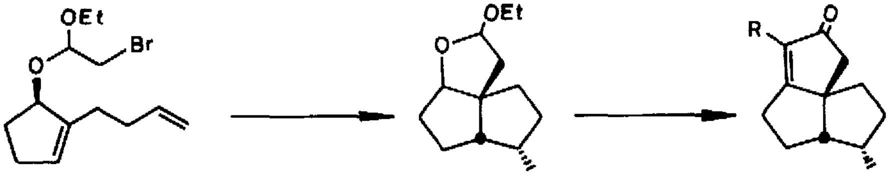
$Ni(CO)_4$ induces selective cyclization of vinyl bromides bearing distal unsaturations to exomethylene cyclic esters. Steric hindrance in ROH has high influence on this process.



Tetrahedron Lett. **1992**, *33*, 3687

AN EXPEDITIOUS APPROACH TO THE SYNTHESIS OF ANGULAR TRIQUINANE

Yadav J.S*, Praveen Kumar T.K. and Gadgil V.R.
Indian Institute of Chemical Technology, Hyderabad 500007, India

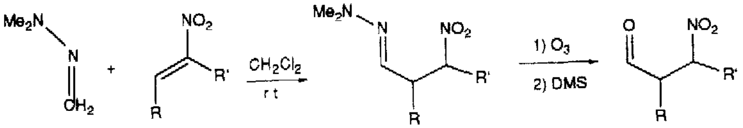


Tetrahedron Lett **1992**, *33*, 3691

MICHAEL ADDITION OF FORMALDEHYDE DIMETHYLHYDRAZONE TO NITROOLEFINS. A NEW FORMYL ANION EQUIVALENT.

Jose-María Lassaletta* and Rosario Fernández
Departamento de Química Orgánica, Universidad de Sevilla, Apartado de Correos No. 1078, E-41012 Seville, Spain.

Formaldehyde dimethylhydrazone readily adds to simple nitro-olefins in the absence of base giving β-nitrodimethylhydrazones in excellent yields. The corresponding β-nitroaldehydes can be obtained by ozonolysis.



Tetrahedron Lett. **1992**, *33*, 3695

ETHYL CYANOACETATE AS 1,3-BIFUNCTIONAL REAGENT IN THE PYRIMIDINE TO PYRIDINE RING TRANSFORMATIONS

O.N.Chupakhin, V.L.Rusinov, A.A.Tumashov, E.O.Sidorov and I.V.Karpin
Laboratory of Organic Chemistry, The Urals Polytechnical Institute, Sverdlovsk, USSR