

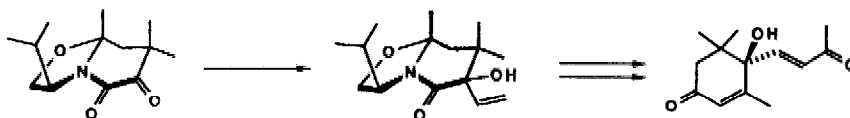
## GRAPHICAL ABSTRACTS

### THE ASYMMETRIC TOTAL SYNTHESIS OF (-)-DEHYDROVOMIFOLIOL. THE PENULTIMATE PRECURSOR TO (-)-ABSCISIC ACID (ABA)

A. I. Meyers\* and Michael A. Sturgess

Department of Chemistry, Colorado State University, Fort Collins, CO 80523 USA

Tetrahedron Lett. 30,1741 (1989)



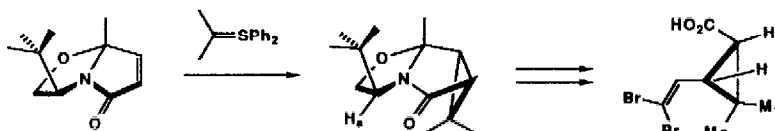
Vinyl Grignard addition gave > 100:1 selectivity

### CHIRAL BICYCLIC LACTAMS. AN ASYMMETRIC SYNTHESIS OF CIS-(1S, 3R) DELTAMETHRINIC ACID

A. I. Meyers\* and Daniel Romo

Department of Chemistry, Colorado State University, Fort Collins, CO 80523 USA

Tetrahedron Lett. 30,1745 (1989)



Cyclopropanation of bicyclic lactams gives > 200:1 stereoselectivity.

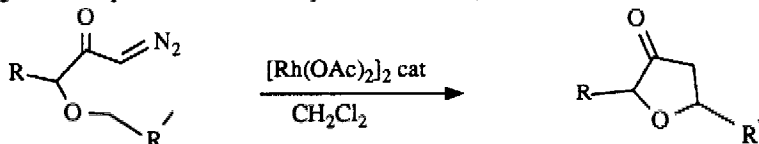
### Rhodium Acetate Catalyzes the Addition of Carbenoids $\alpha$ - to Ether Oxygens

Julian Adams\*, Marc-André Poupart, Louis Grenier, Chris Schaller, Nathalie Ouimet<sup>o</sup>, and Richard Frenette\*

Bio-Méga Inc. 2100 rue Cunard, Laval, Quebec, Canada H7S 2G5

Summary: Diazo-carbonyl compounds, when catalyzed by rhodium acetate, insert preferentially adjacent to ether oxygens. This phenomenon was exploited to develop a synthesis of 3(2H)-furanones.

Tetrahedron Lett. 30,1749 (1989)



### Diastereoselectivity in the Synthesis of 3(2H)-Furanones.

#### Total Synthesis of (+)-Muscarine

Julian Adams\*, Marc-André Poupart, Louis Grenier

Bio-Méga Inc. 2100 rue Cunard, Laval, Quebec, Canada H7S 2G5

Summary: The carbenoid cyclization reaction to form disubstituted 2,5-3(2H)-furanones exhibited a stereoselection favoring the *cis* isomers. This phenomenon was exploited in an enantioselective synthesis of (+)-muscarine

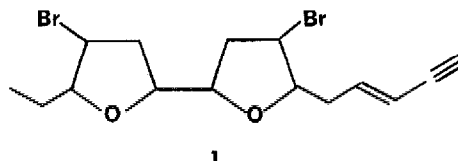
Tetrahedron Lett. 30,1753 (1989)



Tetrahedron Lett. 30, 1757 (1989)

LAUROXOLANES FROM THE MARINE ALGA LAURENCIA MAJUSCULA  
 In Kyu Kim, Mary R. Brennan, and Karen L. Erickson  
 Jeppson Laboratory, Department of Chemistry  
 Clark University, Worcester, Massachusetts 01610

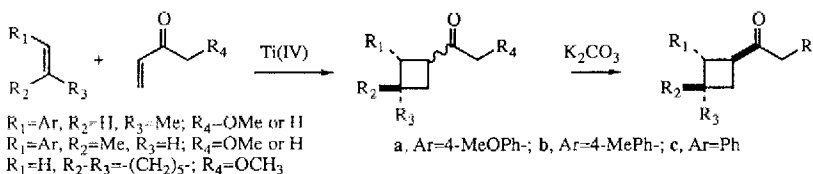
Enyne **1** was isolated and its structure determined by spectroscopic means. **1** is the first 2,2'-bis tetrahydrofuran lauroxane to be found in a Laurencia species.



Tetrahedron Lett. 30, 1761 (1989)

NON-PHOTOCHEMICAL 2+2 CYCLOADDITIONS OF ACYCLIC ENONES AND ALKENES

Thomas A. Engler,\* Mohammed Hashmat Ali and David Vander Velde, Department of Chemistry, University of Kansas, Lawrence, KS 66045.



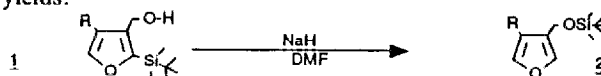
Tetrahedron Lett. 30, 1765 (1989)

THE 1,4 C→O SILYL MIGRATIONS OF VARIOUS FURAN AND THIOPHENE SYSTEMS

Patrick G. Spinazzé and Brian A. Keay\*

Department of Chemistry and Biochemistry, University of Windsor, Windsor, Ontario, Canada, N9B 3P4

2-Trialkylsilyl-3-hydroxymethyl-furans (**1**) and -thiophenes undergo a 1,4 C→O silyl migration when treated with bases containing potassium or sodium counterions to produce 3-[(trialkylsilyl)oxymethyl]-furans (**2**) and -thiophenes in excellent yields.

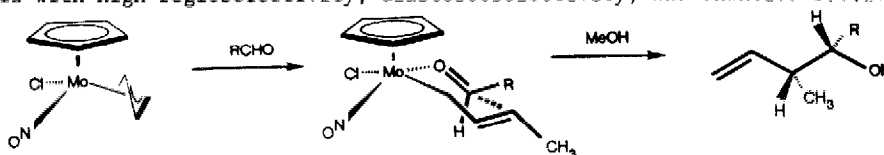


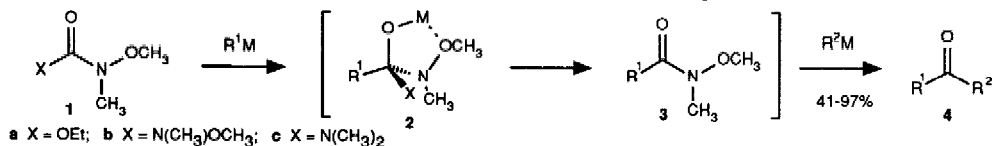
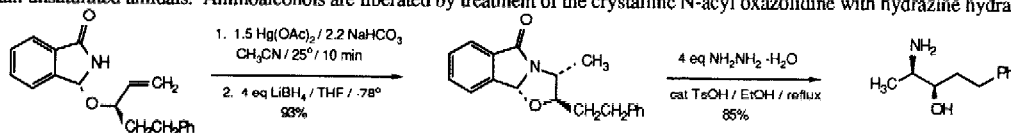
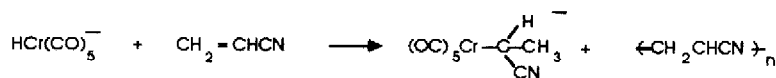
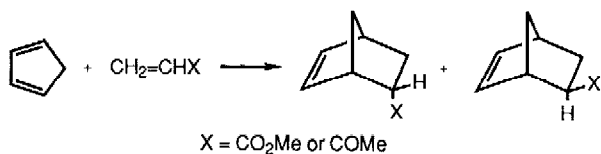
Tetrahedron Lett. 30, 1769 (1989)

CONTROLLING STEREOCHEMISTRY IN CROTYL ADDITIONS TO ALDEHYDES WITH CROTYLMOLYBDENUM COMPLEXES

J.W. Faller\*, J.A. John and M.R. Mazziere, Dept. Chemistry, Yale University, New Haven, CT

(Cyclopentadienyl)Mo(NO)(Cl)(π-crotyl) complexes add to aldehydes to yield homoallylic alcohols with high regioselectivity, diastereoselectivity, and enantioselectivity.



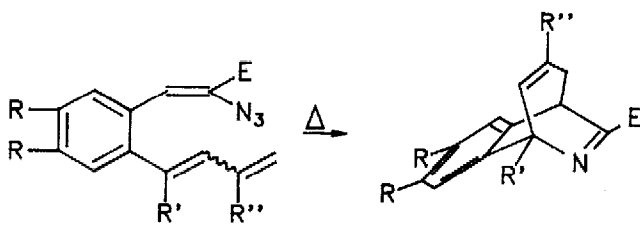
Tetrahedron Lett. 30,1773 (1989)**TANDEM ORGANOMETALLIC ADDITION REACTIONS TO N-METHOXY-UREAS AND URETHANES IN THE****PREPARATION OF UNSYMMETRICAL AND SYMMETRICAL KETONES**, Dennis J. Hlasta\* and John J. Court, Sterling Research Group, Department of Medicinal Chemistry, Rensselaer, New York 12144*The use of the novel reagents 1a-c for the synthesis of ketones in a one pot reaction is described.*Tetrahedron Lett. 30,1777 (1989)**A Removable Auxiliary for Amidomercuration Reactions: The Stereocontrolled Preparation of Vicinal Aminoalcohols.**James M. Takacs\*, Mark A. Helle, and Linrong Yang  
Department of Chemistry, University of Nebraska-Lincoln, Lincoln, NE 68588-0304*A phthalimide-derived auxiliary provides the dominant influence in directing the stereochemical course of the amidomercuration cyclization of certain unsaturated amidals. Aminoalcohols are liberated by treatment of the crystalline N-acyl oxazolidine with hydrazine hydrate.*Tetrahedron Lett. 30,1781 (1989)**ADDITION OF ACRYLONITRILE TO ANIONIC TRANSITION METAL HYDRIDES. AN IONIC MODEL FOR HOMOGENEOUS OLEFIN PROCESSES**Marcetta Y. Darensbourg\*, Barbara Floris, and Kay A. Youngdahl  
Department of Chemistry, Texas A&M University, College Station, Texas 77843*Kinetic and substituent effects suggest the following (and other activated olefins) to react by an associative hydride transfer mechanism.*Tetrahedron Lett. 30,1785 (1989)**DIELS-ALDER REACTIONS IN ETHYLAMMONIUM NITRATE, A LOW-MELTING FUSED SALT**David A. Jaeger\* and Charles E. Tucker  
Department of Chemistry, University of Wyoming, Laramie, WY 82071*Relative to nonpolar organic solvents, ethylammonium nitrate gave endo selectivity enhancements for the illustrated reactions.*

Tetrahedron Lett. 30,1789 (1989)

**A SYNTHESIS OF THE 6-AZA-BICYCLO(3,2,2)NONANE SKELETON**

Claus Vogel\* and Paul Delavier  
Inst. f. Organische Chemie, Hagen-  
ring 30, D-3300 Braunschweig, FRG

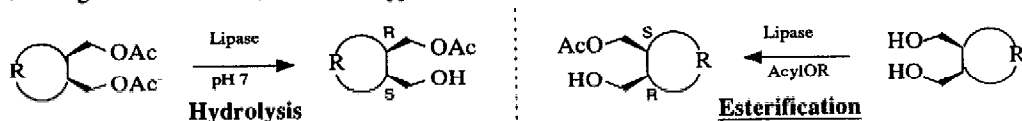
The title skeleton is formed by an intramolecular reaction of vinyl-azides with 1,3-dienes.



Tetrahedron Lett. 30,1793 (1989)

**ENZYMATIC ESTER HYDROLYSIS AND SYNTHESIS - TWO APPROACHES TO CYCLOALKANE DERIVATIVES OF HIGH ENANTIOMERIC PURITIES**

Ulrich Ader, Detlef Breitgoff, Peter Klein, Kurt E. Laumen, Manfred P. Schneider\*  
Fb 9 - Bergische Universität, D-5600 Wuppertal 1, Germany

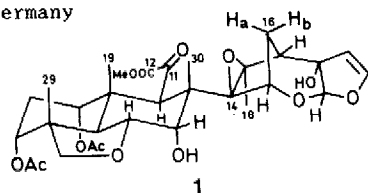


Tetrahedron Lett. 30,1797 (1989)

**1,3-DIACETYL-11,19-DEOXA-11-OXO-MELIACARPIN, A POSSIBLE PRECURSOR OF AZADIRACHTIN, FROM AZADIRACHTA INDICA A. JUSS (MELIACEAE)**

W. Kraus\*, H. Gutzeit, and M. Bokel, Institut für Chemie der Universität Hohenheim, Lehrstuhl für Organische Chemie, Garbenstr. 30, 7000 Stuttgart 70, West Germany

1,3-Diacetyl-11,19-deoxa-11-oxo-meliacarpin (1), a possible intermediate in the biosynthesis of azadirachtin, was isolated from methanolic extracts of *Azadirachta indica* seeds. Structure 1 is proposed on the basis of <sup>1</sup>H and <sup>13</sup>C NMR data.

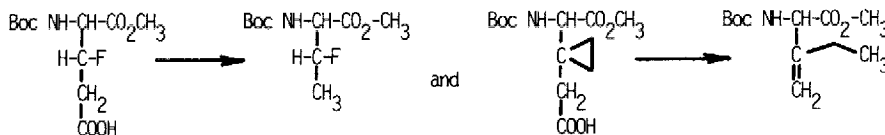


Tetrahedron Lett. 30,1799 (1989)

**HOMOLYTIC DECARBOXYLATION OF GLUTAMATE ANALOGUES**

Anne Vidal-Cros, Sonia Bory, Michel Gaudry and Andrée Marquet

Laboratoire de Chimie Organique Biologique - Univ. P. & M. Curie - 4, place Jussieu - 75252 PARIS CEDEX 05 - France



Probes designed to study vitamin K-dependent carboxylation

**ASYMMETRIC INDUCTION IN PALLADIUM CATALYZED [3+2] CYCLOADDITION  
REACTION OF TRIMETHYLENEMETHANE WITH HOMOCHIRAL VINYL SULFOXIDES**

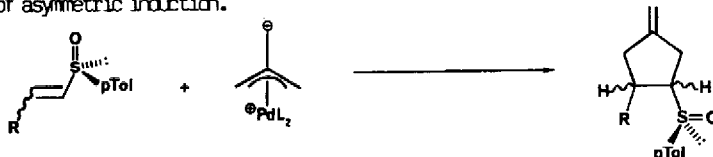
Tetrahedron Lett. 30, 1803 (1989)

Frantz Chaigne, Jean-Pierre Gotteland and Max Malacria\*

Laboratoire de Chimie Organique I, U.A 467 du CNRS, Université Claude Bernard

ESCL- 43 Bd du 11 Novembre 1918, 69622 VILLEURBANNE, France.

Asymmetric [3+2] cycloaddition using homochiral vinylsulfoxides proceed in good to excellent chemical yields and with a good level of asymmetric induction.



**STRUCTURES OF ISOMBAMICALCONE AND LOPHIROCHALCONE,  
BI- AND TETRA-FLAVONOIDS FROM *LOPHIRA LANCEOLATA***

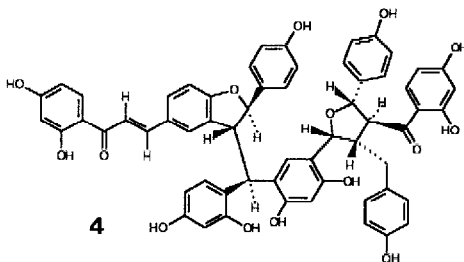
Tetrahedron Lett. 30, 1807 (1989)

R. GHOGOMU TIH, B.L. SONDENGAM, M.T. MARTIN\* and B.BODO\*

Département de Chimie organique, Université de Yaoundé, B.P. 812, Yaoundé, Cameroun.

\*Laboratoire de Chimie, Muséum national d'Histoire naturelle, 63, rue Buffon, 75231 Paris Cedex 05, France.

From the stem bark of *Lophira lanceolata* two new flavonoids, a chalcone dimer, isombamichalcone **1**, and a tetraflavonoid, lophirochalcone **4** have been isolated and their structures established from spectral and chemical evidences.

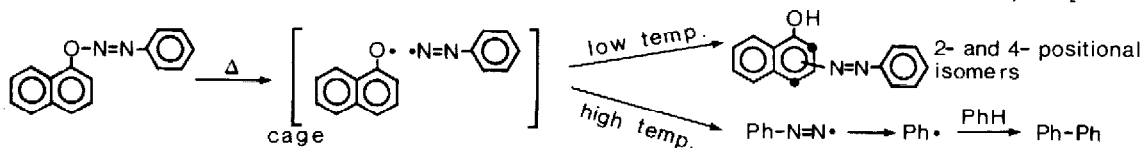


**THE RADICAL COUPLING MECHANISM IN THE DIAZO  
COUPLING REACTION. MIGRATION VS. DECOMPOSITION  
OF PHENYLAZO RADICAL GENERATED FROM PHENYLAZO 1-NAPHTHYL ETHER  
IN THE SOLVENT CAGE**

Tetrahedron Lett. 30, 1811 (1989)

Takahiro Tezuka, Hiroharu Tanikawa, Katsunori Sasaki, and Harumi Tajima

Department of Chemistry, University of Tsukuba, Tsukuba, Ibaraki 305, Japan



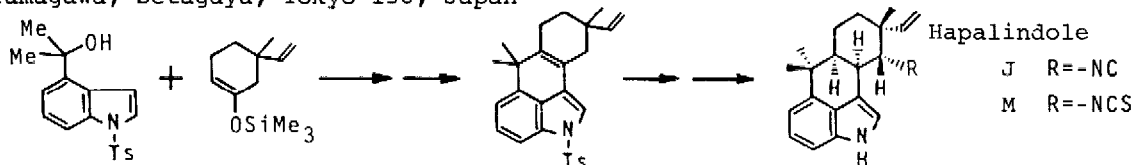
**TOTAL SYNTHESIS OF MARINE ALKALOIDS  
(±)-HAPALINDOLES J AND M**

Tetrahedron Lett. 30, 1815 (1989)

Hideaki Muratake and Mitsutaka Natsume\*

Research Foundation Itsuu Laboratory

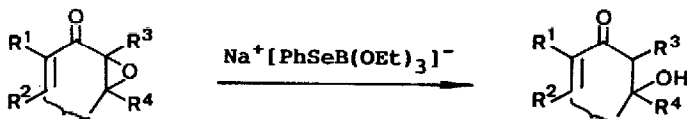
Tamagawa, Setagaya, Tokyo 158, Japan



Tetrahedron Lett. 30,1819(1989)

CHEMOSELECTIVE REDUCTION OF AN  $\alpha,\beta$ -EPOXY  
KETONE MOIETY COEXISTING WITH AN ENONE  
FUNCTION

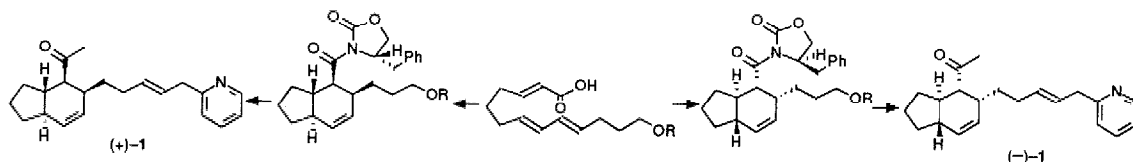
Masaaki Miyashita, Toshio Suzuki, and Akira Yoshikoshi\*  
Chemical Research Institute of Non-Aqueous Solutions,  
Tohoku University, Sendai 980, Japan



Tetrahedron Lett. 30,1821(1989)

ASYMMETRIC TOTAL SYNTHESSES OF (+)- and  
(-)-PULO'UPONE

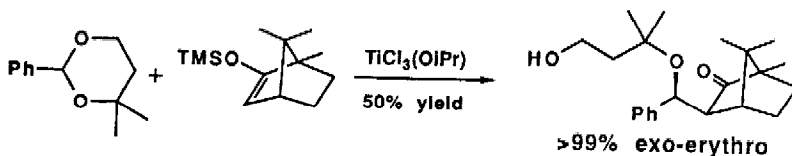
Tsutomu Sugahara, Takashi Iwata, Miyako Yamaoka, and Seiichi TAKAŃO  
Pharmaceutical Institute, Tohoku University, Aobayama, Sendai 980, Japan



Tetrahedron Lett. 30,1825(1989)

DIASTEREOSELECTIVE ALDOL SYNTHESIS  
USING ACETAL TEMPLATES

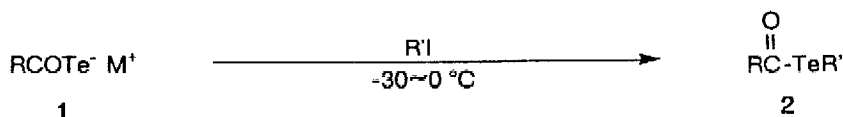
Kazuaki Ishihara and Hisashi Yamamoto\*, Department of Applied Chemistry, Nagoya University,  
Chikusa, Nagoya 464-01, Japan; Clayton H. Heathcock, Department of Chemistry, University of  
California, Berkeley, California 94720



Tetrahedron Lett. 30,1829(1989)

Te-ALKYL TELLUROCARBOXYLATES —  
ISOLATION AND CHARACTERIZATION

Takahiro Kanda, Shoho Nakaiida, Toshiaki Murai, and Shinzi Kato\*  
Department of Chemistry, Faculty of Engineering, Gifu University,  
Yanagido, Gifu 501-11 Japan

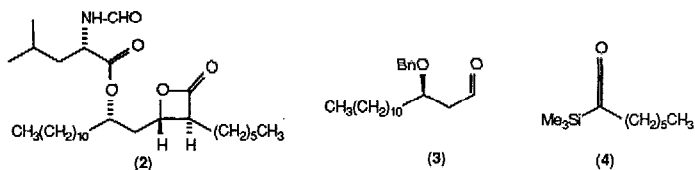


Tetrahedron Lett., 30, 1833 (1989)

**A SYNTHESIS OF (-)-TETRAHYDROLIPSTATIN**

Jean-Marc Pons and Philip Kocierfski  
Chemistry Department, The University, Southampton, SO9 5NH, U. K.

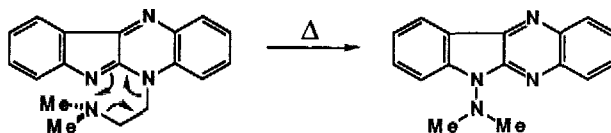
Cycloaddition of n-hexyl trimethylsilyl ketene (4) to (3R)-3-(benzyloxy)-tetradecanal (3) is the key step in a synthesis of the anti-obesity agent (-)-tetrahydrolipstatin (2).



Tetrahedron Lett., 30, 1837 (1989)

**Formation of N-N Bonds by Thermolysis of 5-(2-Dimethylaminoethyl)-5H-indolo[2,3-b]quinoxaline.**

Jan Bergman, Royal Institute of Technology, Department of Organic Chemistry, S-100 44 Stockholm, SWEDEN

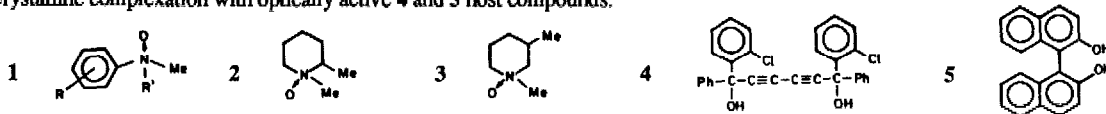


Tetrahedron Lett., 30, 1841 (1989)

**OPTICAL RESOLUTION OF AMINE N-OXIDE BY DIASTEREOISOMERIC COMPLEX FORMATION WITH OPTICALLY ACTIVE HOST COMPOUND**

Fumio Toda\* and Koji Mori, Department Of Industrial Chemistry, Ehime University, Matsuyama 790, Japan  
Zafra Stein and Israel Goldberg\*, School of Chemistry, Tel Aviv-University, 69978 Ramat-Aviv, Israel

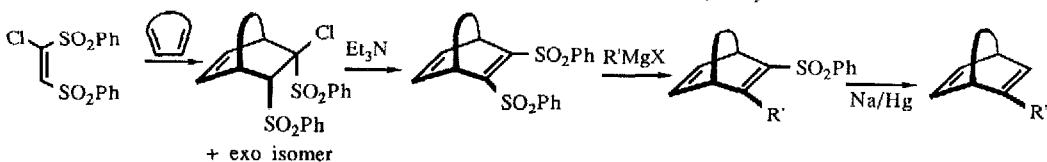
Enantiomers of 1 and diastereoisomers of 2 and 3 were resolved, and their absolute configuration was determined, by selective crystalline complexation with optically active 4 and 5 host compounds.



Tetrahedron Lett., 30, 1845 (1989)

**1,2-BIS(PHENYLSULFONYL)ALKENES AS VERSATILE GROUPS IN ORGANIC SYNTHESIS: THE PREPARATION OF ALKYL- AND ARYL-SUBSTITUTED NORBORNADIENES VIA THE DIELS-ALDER CYCLOADDITION - GRIGNARD REACTION - DESULFONYLATION SEQUENCE**

Ugo Azzena, Sergio Cossu, Ottorino De Lucchi,\* and Giovanni Melloni  
Dipartimento di Chimica dell'Universita', via Vienna 2, I-07100 Sassari, Italy

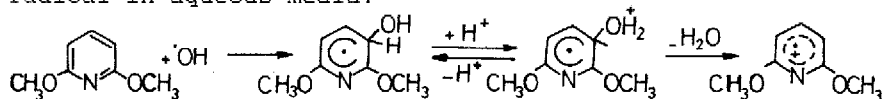


A CATION RADICAL FROM 2,6-DIMETHOXYPYRIDINE  
INVESTIGATIONS BY IN-SITU-RADIOLYSIS ESR

Siddik İçli

Department of Chemistry, Ege University, İzmir, TURKEY

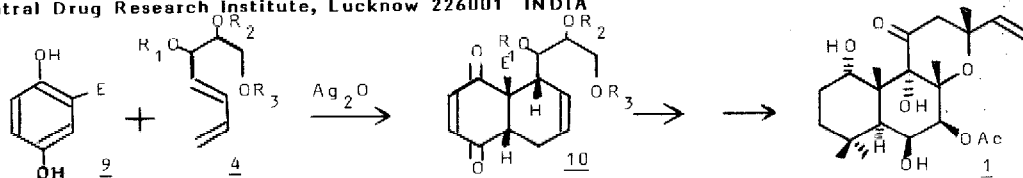
Formation and detection of a heteroaromatic cation radical in aqueous media.



DIELS-AIDER REACTION OF IN-SITU GENERATED  
2-METHOXYCARBONYL-p-QUINONE WITH D-GLUCOSE  
BASED DIENES: A NEW APPROACH TO FORSKOLIN

Aloka Mukhopadhyay, S.M. Ali, Mashkoor Husain, S.N. Suryawanshi\* and D.S. Bhakuni\*

Central Drug Research Institute, Lucknow 226001 INDIA

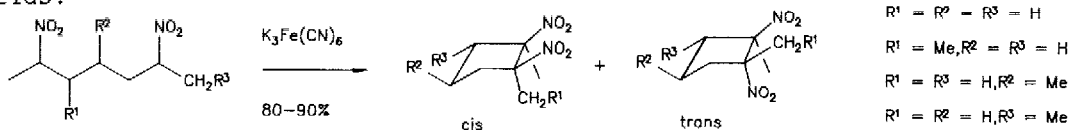


RADICAL CYCLISATION OF 2,6-DINITROALKANES

W. Russell Bowman\* and Stuart W. Jackson

Department of Chemistry, University of Technology, Loughborough, Leics.

The dinitronate dianions of 2,6-dinitroalkanes were oxidised to 1,2-dinitro-cyclopentanes via  $\alpha$ -nitroalkyl radicals by stereoselective cyclisation in high yields.

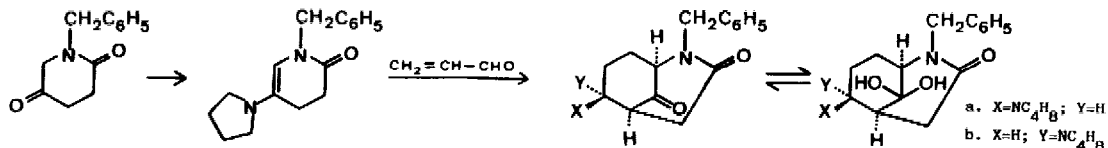


FUNCTIONALIZED 2-AZABICYCLO[3.3.1]NONANES. X.  $\alpha, \alpha'$ -ANNELATION

OF 1-BENZYL-2,5-PIPERIDINEDIONE AND ISOLATION OF AN AZABICYCLIC ADDUCT AS STABLE HYDRATE

Josep Bonjoch\*, Josefina Quirante, Isabel Serret, and Joan Bosch\*

Laboratory of Organic Chemistry, Faculty of Pharmacy, University of Barcelona, 08028-Barcelona, Spain.





Tetrahedron Lett. 30,1863 (1989)

**SYNTHESIS OF 2,2-DIALKYL-1-AMINOCYCLOPROPANE-CARBOXYLIC ACIDS FROM  $\alpha$ -CHLOROIMINES**

N. De Kimpe\*, P. Sulmon, P. Brunet, F. Lambein, N. Schamp,  
Fac. Agric. Sciences, Univ. of Gent, Gent, Belgium

The first examples of 2,2-dialkyl-ACC analogues were synthesized by cyclopropanation of  $\alpha$ -chloroimines.

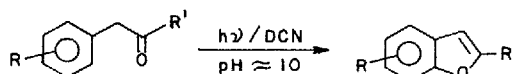


Tetrahedron Lett. 30,1867 (1989)

**A ONE STEP SYNTHESIS OF 2-SUBSTITUTED BENZOFURANS FROM 2-ARYL-1-SUBSTITUTED ETHANE-1-ONES BY PHOTO-INDUCED SET REACTIONS**

G. Pandey\*, A. Krishna and U.T. Bhalerao  
Organic Division, RRL, Hyderabad 500 007, India

*An efficient one step synthesis of 2-substituted benzofurans from the enolate of 2-Aryl-1-substituted ethane-1-ones have been reported.*



Tetrahedron Lett. 30,1871 (1989)

**STEREOSELECTIVE SYNTHESIS OF TILIVALLINE**

Tatsuo Nagasaka\*, Yuji Koseki, and Fumiko Hamaguchi  
Tokyo College of Pharmacy  
Horinouchi, Hachioji, Tokyo 192-03, Japan

A convenient and stereoselective synthesis of tilivalline, a metabolite from *Klebsiella pneumoniae* var. *oxytoca*, is described.

