

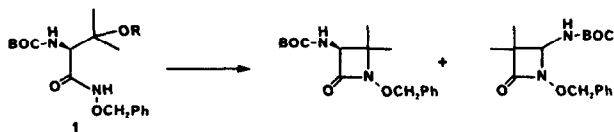
## GRAPHICAL ABSTRACTS

### $\beta$ -LACTAM SYNTHESIS: CHEMOSPECIFIC SULFONATION AND CYCLIZATION OF THE $\beta$ -HYDROXYVALINE NUCLEUS

Tet.Lett., 27, 25, 2789 (1986)

W. A. Slusarchyk\*, T. Dejneka, J. Gougoutas, W. H. Koster, D. R. Kronenthal, M. Malley, M. G. Perri, F. L. Routh, J. E. Sundeen, E. R. Weaver, R. Zahler, J. D. Godfrey, Jr.\*, R. H. Mueller and D. J. Von Langen  
*The Squibb Institute for Medical Research and The Squibb Chemical Division*  
*P. O. Box 4000, Princeton, New Jersey 08540*

Synthesis of *gem*-dimethyl  $\beta$ -lactams from  $\beta$ -hydroxyvaline hydroxamates **1** (R = H or SO<sub>3</sub><sup>-</sup>)



### $\beta$ -LACTAM SYNTHESIS: CYCLIZATION VERSUS 1,2-ACYL MIGRATION-CYCLIZATION. THE MECHANISM OF THE 1,2-ACYL MIGRATION-CYCLIZATION

Tet.Lett., 27, 25, 2793 (1986)

Jollie D. Godfrey, Jr.\*, Richard H. Mueller and Derek J. Von Langen  
*The Squibb Chemical Division, Princeton, New Jersey 08540*

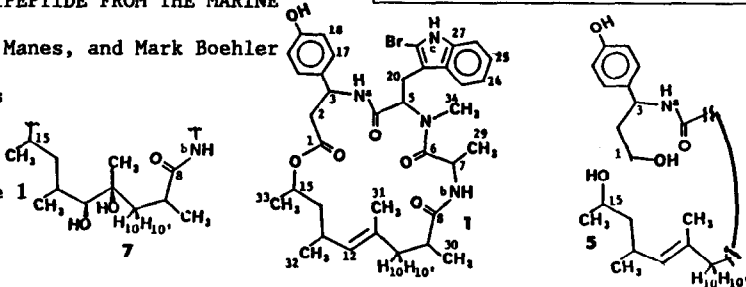
The conversion of **1** to **2** has been shown by carbon-13 labeling to involve a novel 1,2-acyl migration-cyclization process.



### JASPLAKINOLIDE, A CYCLODEPSIPEPTIDE FROM THE MARINE SPONGE, JASPIS SP.

Phillip Crews\*, Lawrence V. Manes, and Mark Boehler  
 Department of Chemistry and  
 Institute for Marine Studies  
 University of California,  
 Santa Cruz, CA 95064

Jasplakinolide has structure **1** based on spectroscopic data and interconversion to compounds **5** & **7**



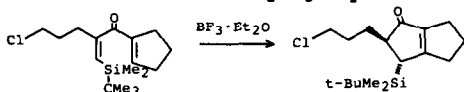
Tet.Lett., 27, 25, 2797 (1986)

### REACTIONS OF CIS-SILYL TIN OLEFINS: (ANTI-DENMARK) NAZAROV CYCLIZATION OF $\beta$ -SILYL DIVINYL KETONES

Tet.Lett., 27, 25, 2801 (1986)

B. L. Chenard\*, C. M. Van Zyl, and D. R. Sanderson  
 Central Research & Development Department, E. I. du Pont de Nemours & Co.,  
 Experimental Station, Wilmington, DE 19898 USA

Nazarov cyclization of divinyl ketones containing bulky  $\beta$ -silicon substituents gives products which retain the silyl group.



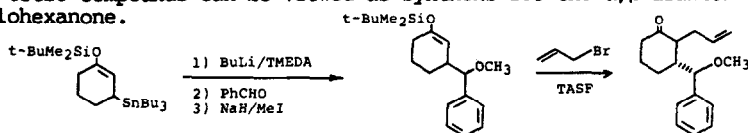
Tet.Lett., 27, 25, 2805 (1986)

**3-STANNYL-1-SILYLOXYCYCLOHEX-1-ENES:  
SYNTHETIC EQUIVALENTS FOR KETONE  $\alpha,\beta$ -DIANIONS**

B. L. Chenard

Central Research & Development Department, E. I. du Pont de Nemours & Co.,  
Experimental Station, Wilmington, DE 19898 USA

The title compounds can be viewed as synthons for the  $\alpha,\beta$ -dianion of cyclohexanone.



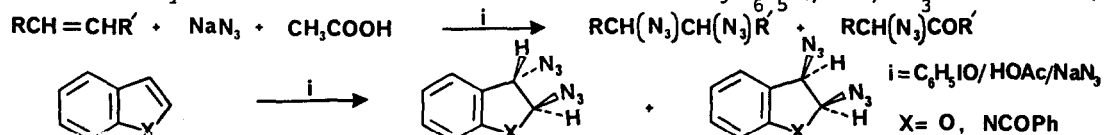
Tet.Lett., 27, 25, 2809 (1986)

**A VERSATILE SYNTHESIS OF VICINAL DIAZIDES USING  
HYPERVALENT IODINE**

Robert M. Moriarty and Jaffar S. Khosrowshahi

Department of Chemistry, University of Illinois at Chicago, Chicago, Illinois 60680

A convenient synthesis of vicinal diazides from olefins using  $C_6H_5IO/HOAc/NaN_3$  is described.



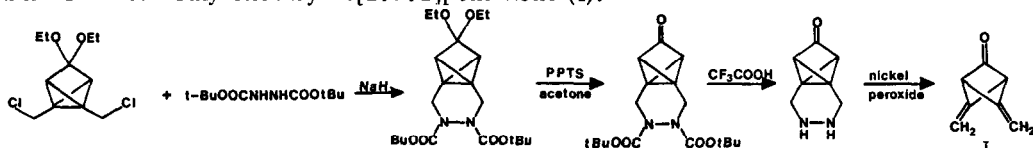
Tet.Lett., 27, 25, 2813 (1986)

**DIMETHYLENEBICYCLO[1.1.1]PENTANONE**

Paul Dowd and Yi Hyon Paik

Department of Chemistry, University of Pittsburgh, Pittsburgh, PA 15260 USA

Synthesis of dimethylenebicyclo[1.1.1]pentanone (I).



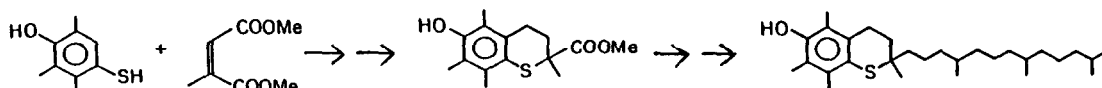
Tet.Lett., 27, 25, 2817 (1986)

**TOTAL SYNTHESIS OF 1-THIO- $\alpha$ -TOCOPHEROL: A SULFUR-  
CONTAINING ANALOGUE OF VITAMIN E.**

Bertrand Robillard and Keith U. Ingold\*

Division of Chemistry, National Research Council of Canada, Ottawa, Canada K1A 0R6

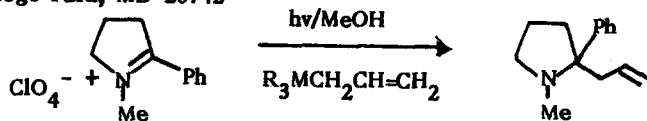
The title compound has been synthesized in an overall yield of 2%.



Tet.Lett., 27, 25, 2821 (1986)

**ALLYLSTANNANE PHOTOADDITIONS TO IMINIUM SALTS. EFFICIENCIES OF SEQUENTIAL ELECTRON TRANSFER DESTANNATION VS DESILYLATION PATHWAYS**

Robert m. Borg and Patrick s. Mariano  
Department of Chemistry, University of Maryland  
College Park, MD 20742



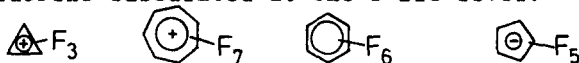
$R_3M$	Yield	$\phi$ (lim)
$Me_3Sn$	71%	0.23
$nBu_3Sn$	60%	0.21
$Me_3Si$	66%	0.02

Tet.Lett., 27, 25, 2825 (1986)

**RELATIONSHIP BETWEEN  $^{19}F$  CHEMICAL SHIFTS AND CALCULATED ELECTRON DENSITIES IN PERFLUORINATED ANNULENES**

William P. Dailey, Department of Chemistry,  
University of Pennsylvania, Philadelphia, PA 19104

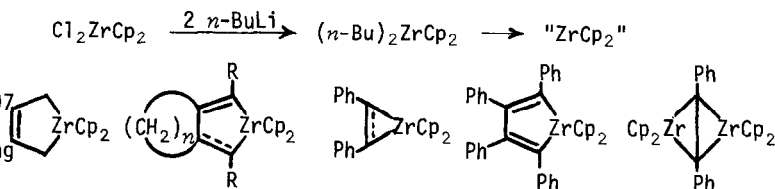
The  $^{19}F$  chemical shifts correlate with the total electron density at fluorine calculated at the 3-21G level.



Tet.Lett., 27, 25, 2829 (1986)

REACTION OF ZIRCONOCENE DICHLORIDE WITH ALKYL LITHIUMS OR ALKYL GRIGNARD REAGENTS AS A CONVENIENT METHOD FOR GENERATING A "ZIRCONOCENE" EQUIVALENT AND ITS USE IN ZIRCONIUM-PROMOTED CYCLIZATION OF ALKENES, ALKYNES, DIENES, ENYNES, AND DIYNES

Ei-ichi Negishi,\* Fredrik E. Cederbaum, and Tamotsu Takahashi  
Department of Chemistry, Purdue University, W. Lafayette, IN 47907



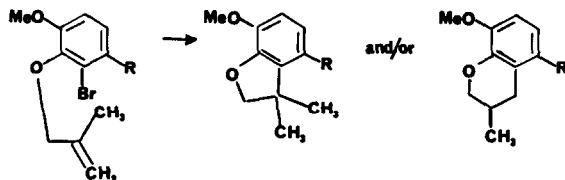
A convenient method for converting  $Cl_2ZrCp_2$  into "ZrCp<sub>2</sub>" and its reaction with alkenes and alkynes

Tet.Lett., 27, 25, 2833 (1986)

**ARYL RADICAL-INITIATED CYCLIZATION: EFFECT OF ARYL SUBSTITUENTS ON RING-SIZE**

Kathlyn A. Parker\*, Denice M. Spero and (in part) Karen C. Inman, Department of Chemistry,  
Brown University, Providence, RI 02912  
USA

Electron-withdrawing substituents favor dihydrobenzopyran formation; a neophyl rearrangement mechanism is proposed.



Tet.Lett., 27, 25, 2839 (1986)

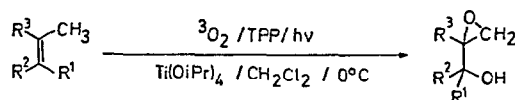
**A CONVENIENT "ONE-POT" SYNTHESIS OF EPOXY ALCOHOLS**

**VIA PHOTOXYGENATION OF OLEFINS IN THE PRESENCE OF TITANIUM(IV) CATALYST**

Haldemar Adam\*, Axel Griesbeck and Eugen Staab

Institut für Organische Chemie, Universität Würzburg, Am Hubland, 8700 Würzburg, BRD

A synthesis of epoxy alcohols via ene reaction of singlet oxygen in the presence of titanium alkoxides.



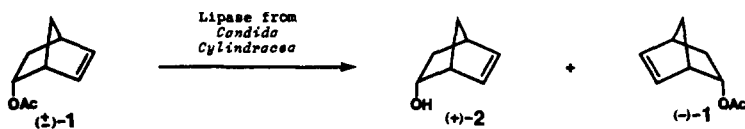
Tet.Lett., 27, 25, 2843 (1986)

**LARGE SCALE PREPARATION OF (+)- AND (-)-ENDO-NORBORNENOL BY ENZYMATIC HYDROLYSIS**

Günter Eichberger, Gerhard Penn, Kurt Faber and Herfried Griengl\*

Institute of Organic Chemistry, Technical University of Graz, Stremayrgasse 16, A-8010 Graz

A kinetic resolution of ( $\pm$ )-endo-bicyclo[2.2.1]hepten-5-en-2-yl acetate by enzymatic hydrolysis with lipase from *Candida cylindracea* is reported.



Tet.Lett., 27, 25, 2855 (1986)

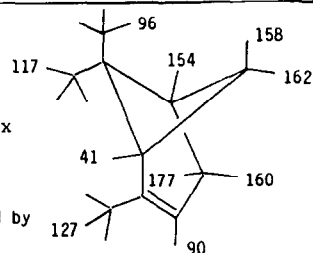
**A RELATION BETWEEN THE SITE-SPECIFIC NATURAL DEUTERIUM CONTENTS IN  $\alpha$ -PINENES AND THEIR OPTICAL ACTIVITY.**

Gérard J. Martin\*, Pascal Janvier, Serge Akoka, Françoise Mabon and Janus Jurczak†

\*Laboratoire de RMN et de Réactivité Chimique UA 472 CNRS 2 rue de la Houssinière, Univ. de Nantes (F)44072 NANTES-Cedex

†Institute of Organic Chemistry, Polish Academy of Sciences 01-224 Warszawa - POLAND

The site-specific isotope ratios, (D/H)<sub>i</sub>, of  $\alpha$ -pinene samples are determined by deuterium NMR at the natural abundance level (SNIF-NMR) and correlations are observed with optical rotation parameters.



S(-)- $\alpha$ -pinene (D/H)<sub>i</sub> ppm

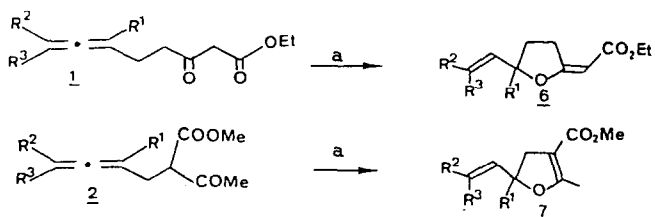
Tet.Lett., 27, 25, 2859 (1986)

**O - CYCLISATION OF ALLENIC  $\beta$ -KETOESTERS**

Thierry DELAIR and Alain DOUTHEAU

Laboratoire de Chimie Organique-1 43, Bd du 11 Novembre 1918 69622 Villeurbanne Cédex FRANCE

On treatment with catalytic amounts of yellow mercury (II) oxide and PTSA, allenic  $\beta$ -ketoesters **1** and **2**, cyclize respectively to compounds **6** and **7**



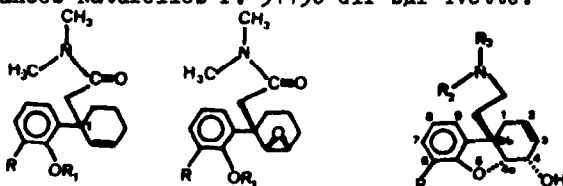
a) HgO, PTSA / cyclohexane, reflux

Tet.Lett., 27, 25, 2861 (1986)

**SYNTHÈSE D'ANALOGUES MORPHINIQUES A SQUELETTE  
TETRAHYDRODIBENZOFURANNIQUE**

S. Labidalle<sup>+</sup>, Zhang Yong Min<sup>+</sup>, A. Reynet<sup>+</sup>, C. Thal<sup>++</sup>, M. Moskowitz<sup>++</sup> - Laboratoire de Chimie Organique, UA 496, Faculté de Pharmacie Rue J.B. Clément F. 92296 Châtenay-Malabry. <sup>++</sup> Institut de Chimie des Substances Naturelles F. 91190 Gif sur Yvette.

Synthesis of morphin-like derivatives by epoxidation of substituted arylcyclohexene and subsequent selective cyclisation.

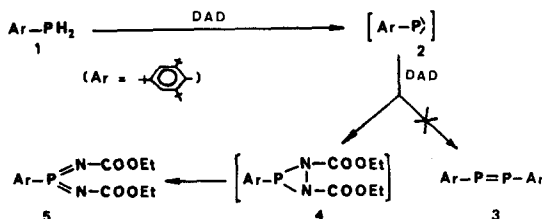


Tet.Lett., 27, 25, 2863 (1986)

**ACTION OF DIETHYLAZODICARBOXYLATE WITH TRIS(TERT-BUTYL) PHENYLPHOSPHINE**

J. Navech and M. Revel  
UA 454, University Paul Sabatier  
31 062 Toulouse Cédex FRANCE

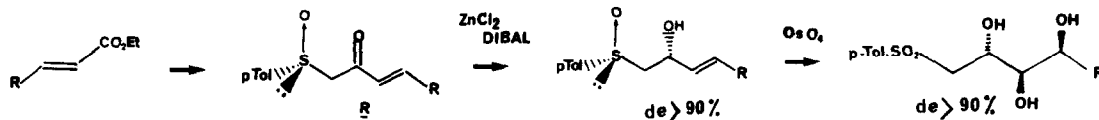
Obtention of  $\sigma^{3-\lambda^5}$ -phosphorane 5 via phosphinidene 2 and diazaphosphiridine 4



Tet.Lett., 27, 25, 2867 (1986)

**STEREOSPECIFIC HYDROXYLATION OF CHIRAL ALLYLIC  $\beta$ -HYDROXY-SULFOXIDES : APPLICATIONS TO THE ASYMMETRIC SYNTHESIS OF OPTICALLY ACTIVE VICINAL TRIOLS**

Guy Solladié\*, Catherine Fréchou and Gilles Demailly  
Ecole Nationale Supérieure de Chimie (U.A. 466), Université Louis Pasteur, 6700 STRASBOURG (France).



Tet.Lett., 27, 25, 2871 (1986)

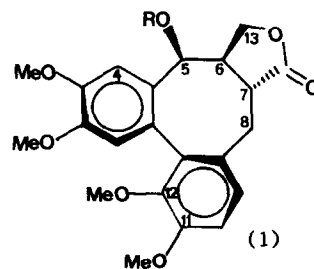
**STEGANOLIDES B AND C, NEW EPISTEGANACIN ANALOG LIGNANS, ISOLATED FROM STEGANOTAENIA ARALIACEA HOCHST. - A <sup>13</sup>C-<sup>1</sup>H CORRELATED 2D NMR OF STEGANACIN -**

J.P. Robin\*, D. Davoust<sup>§</sup> and M. Taafrouit.

Groupe Phytochimie et Cancer, Institut Universitaire Technologie, Université du Maine, Rte de Laval, 72017 Le Mans, France

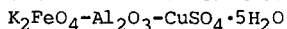
<sup>§</sup>Laboratoire de Chimie Organique Structurale associé au CNRS Université P. et M. Curie, 4, Pl. Jussieu, 75230 Paris Cedex 05

Steganolide B (1) R = angelate and C (1) R = tiglate was isolated from the title higher plant. Structure determination was carried out with the help of <sup>1</sup>H and <sup>13</sup>C high resolution NMR.

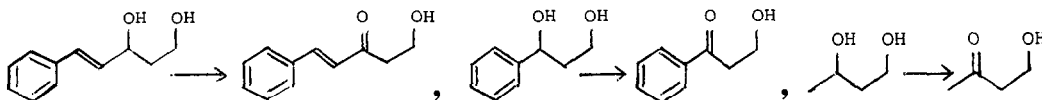


Tet.Lett., 27, 25, 2875 (1986)

SELECTIVE OXIDATION OF ALCOHOLS BY



Kwan Soo Kim\*, Yang Heon Song, Nam Ho Lee, and Chi Sun Hahn  
Department of Chemistry, Yonsei University, Seoul 120, Korea



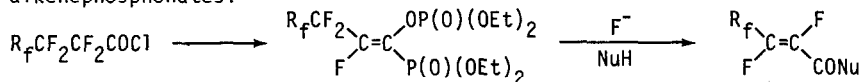
Tet.Lett., 27, 25, 2879 (1986)

A NOVEL REACTION OF 1-PHOSPHONYLOXY-F-1-ALKENEPHOSPHONATES: HIGHLY EFFECTIVE METHOD FOR THE SYNTHESIS OF  $\alpha,\beta$ -UNSATURATED F-CARBOXYLIC ACID DERIVATIVES

Takashi Ishihara,\* Yasuhiro Yamasaki, and Teiichi Ando

Department of Industrial Chemistry, Faculty of Engineering, Kyoto University, Kyoto 606, Japan

A synthesis of  $\alpha,\beta$ -unsaturated F-carboxylic acid derivatives from 1-phosphonyloxy-F-1-alkenephosphonates.



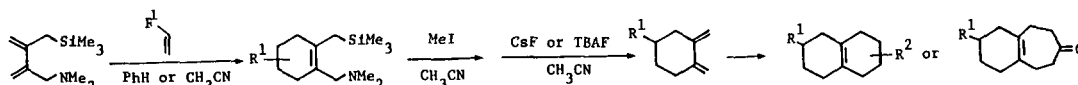
Tet.Lett., 27, 25, 2881 (1986)

2-DIMETHYLAMINOMETHYL-3-TRIMETHYLSILYLMETHYL-1,3-BUTADIENE AS 2,2'-BIALLYL DIRADICAL SYNTHON. A NEW AND FACILE ENTRY TO 1,2-DIMETHYLENECYCLOHEXANES, AND [6.6] AND [6.7] RING SYSTEMS

Akira Hosomi, Ken Otaka, and Hideki Sakurai

Department of Chemistry, Faculty of Science, Tohoku University Sendai 980, Japan

A functionalized allylsilane (1) undergoes Diels-Alder reaction to 1,2-dimethylene cyclohexanes which can be used for the formation of [6,6] and [6,7] ring systems.



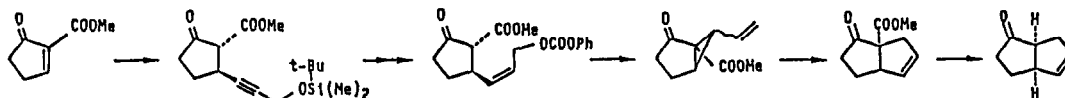
Tet.Lett., 27, 25, 2885 (1986)

A NOVEL LITHIUM IODIDE-PROMOTED VINYL-CYCLOPROPANE-CYCLOPENTENE REARRANGEMENT: EFFICIENT SYNTHESIS OF BICYCLO[3.3.0]OCT-6-EN-2-ONE, VERSATILE BUILDING BLOCK FOR POLYCYCLOPENTANOID NATURAL PRODUCTS

Shun-ichi Hashimoto, Tomohiro Shinoda, and Shiro Ikegami\*

Faculty of Pharmaceutical Sciences, Teikyo University, Sagamiko, Kanagawa 199-01, Japan

Bicyclo[3.3.0]oct-6-en-2-one has been synthesized via a stepwise [3+2] annulation process involving the combination of Pd(0)-catalyzed cyclopropanation and LiI-promoted vinylcyclopropane rearrangement.

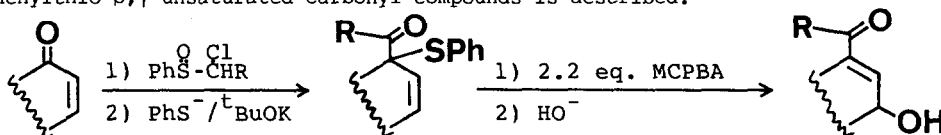


Tet.Lett., 27, 26, 2889 (1986)

A NOVEL SYNTHESIS OF  $\alpha,\beta$ -UNSATURATED  $\gamma$ -HYDROXY CARBONYL COMPOUNDS FROM ENONES WITH CARBON HOMOLOGATION

Tsuyoshi Satoh, Shigeyasu Motohashi, and Koji Yamakawa\*  
Science Univ. of Tokyo, Ichigaya-funagawara-machi, Shinjuku-ku, Tokyo 162, Japan

A novel synthesis of  $\alpha,\beta$ -unsaturated  $\gamma$ -hydroxy carbonyl compounds from enones through  $\alpha$ -phenylthio- $\beta,\gamma$ -unsaturated carbonyl compounds is described.

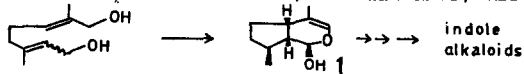


Tet.Lett., 27, 26, 2893 (1986)

SYNTHESIS OF IRIDODIAL BY CELL FREE EXTRACTS FROM RAUWOLFIA SERPENTINA CELL SUSPENSION CULTURES

Shinichi Uesato, Yasuko Ogawa, Hiroyuki Inouye,<sup>a)</sup> Kayoko Saiki,<sup>b)</sup> and Meinhart H. Zenk<sup>c)</sup>  
Faculty of Pharmaceutical Sciences, Kyoto University, Sakyo-ku, Kyoto 606, Japan,<sup>a)</sup> Kobe Women's College of Pharmacy, Higashinada-ku, Kobe 658, Japan,<sup>b)</sup> and Institut für Pharmazeutische Biologie, Universität München, 8000 München 2, W. Germany<sup>c)</sup>

Incubation of <sup>3</sup>H- or <sup>13</sup>C-labelled 10-hydroxygeraniol/10-hydroxyneryl with the cell free extracts from *Rauwolfia serpentina* cultured cells in the presence of NAD/NADH and NADP/NADPH afforded labelled iridodial (1).



Tet.Lett., 27, 26, 2897 (1986)

QUANTITATIVE STRUCTURE-CHEMOSELECTIVITY RELATIONSHIP AMONG ALKANESULFONATES OF PRIMARY ALCOHOLS

Y. Kawazoe, S. Ninomiya, K. Kohda (Nagoya City University, Japan) and H. Kimoto (Government Industrial Research Institute, Nagoya, Japan)

Swain-Scott's substrate constants are correlated with electronic and steric parameters of alkyl substituents.

$$R^1-CH_2-OSO_2-R^2$$

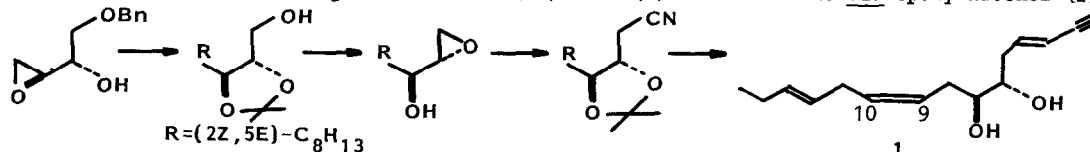
$$s = 0.110\sigma^*(R^1) + 0.111E_s(R^1) - 0.033\sigma(R^2) + 0.645$$

Tet.Lett., 27, 26, 2901 (1986)

SYNTHESIS OF (6S,7S)-TRANS-LAUREDIOL AND ITS [9,10-<sup>2</sup>H<sub>2</sub>]-ANALOGUE

A. Fukuzawa, H. Sato, M. Miyamoto, and T. Masamune\*  
Department of Chemistry, Faculty of Science, Hokkaido University, Sapporo 060, Japan

A Synthesis of the title compounds (1) and (1D) from (+)-tartaric acid via epoxy alcohol (2).



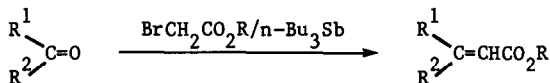
A NOVEL OLEFINATION OF CARBONYL COMPOUNDS WITH  
 $\alpha$ -BROMOACETIC ESTER MEDIATED BY TRI-*n*-BUTYLSTIBINE

Tet.Lett., 27, 25, 2903 (1986)

Yaozeng Huang, Yanchang Shen, Chen Chen

Shanghai Institute of Organic Chemistry, Academia Sinica, Shanghai, China

Tri-*n*-butylstibine has been found to mediate the olefination of carbonyl compounds by  $\alpha$ -bromoacetic ester to give corresponding olefins in good yields.



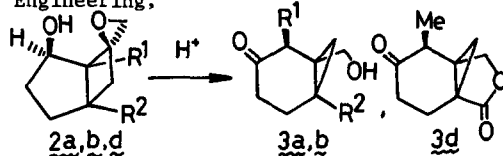
CYCLOBUTYL-CYCLOPROPYLCARBINYL TYPE REARRANGEMENT OF  
 1-OXASPIROHEXANE DERIVATIVES. A NEW ENTRY TO  
 FUNCTIONALIZED NORCARANES

Tet.Lett., 27, 25, 2905 (1986)

Yoshito Tobe,\* Jun-ichi Sato, Tadahiro Sorori, Kiyomi Kakiuchi, and Yoshinobu Odaira  
 Department of Applied Fine Chemistry, Faculty of Engineering,  
 Osaka University, Suita, Osaka 565, Japan

Synthesis of functionalized norcaranes (3a, 3b, 3d)  
 by acid-catalyzed rearrangement of  
 1-oxaspirohexane derivatives (2a, 2b, 2d).

a R<sup>1</sup>=Me, R<sup>2</sup>=H; b R<sup>1</sup>=R<sup>2</sup>=Me; d R<sup>1</sup>=Me, R<sup>2</sup>=CO<sub>2</sub>Me



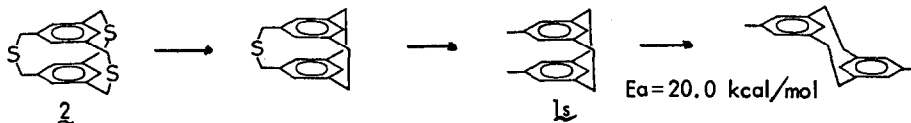
SYN-5,13-DIMETHYL[2.2]METACYCLOPHANE. SYNTHESIS,  
 SPECTRA AND THERMAL STABILITY

Tet.Lett., 27, 25, 2907 (1986)

Yutaka Fujise, Yoshisuke Nakasato and Shô Itô\*

Department of Chemistry, Tohoku University, Sendai 980, Japan

A three-step synthesis of the title compound 1s from trithia[3.3](1,3,5)cyclophane 2.



CYCLOADDITION REACTIONS OF 2-TRIBUTYLSTANNYL-1,3-BUTADIENE  
 Maurizio Taddei\* and Andre Mann.

Tet.Lett., 27, 25, 2913 (1986)

Dipartimento Chimica Organica Università, Firenze, Italy.

A study on cycloadditions of 2-tributylstannyl-1,3-butadiene with symmetrical and unsymmetrical dienophiles is reported.

