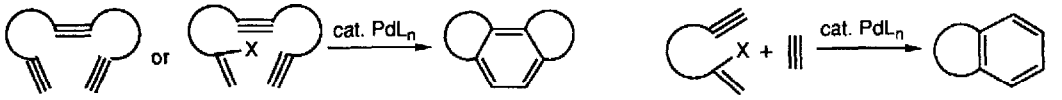
*Tetrahedron Lett.* **1992**, *33*, 3253

## CYCLIC CASCADE CARBOPALLADATION REACTIONS AS A ROUTE TO BENZENE AND FULVENE DERIVATIVES

Ei-ichi Negishi*, Lori S. Harring, Zbyslaw Owczarczyk, Mohamud M. Mohamud and Mehmet Ay, Department of Chemistry, Purdue University, W. Lafayette, IN 47907



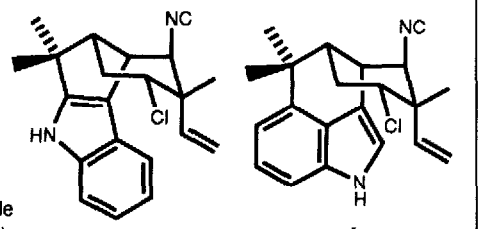

A Pd-catalyzed carbometallation route to benzene and fulvene derivatives has been developed.

*Tetrahedron Lett.* **1992**, *33*, 3257

## Fischerindole L, a New Isonitrile from the Terrestrial Blue-Green Alga *Fischerella muscicola*

Aeri Park, Richard E. Moore,* and Gregory M. L. Patterson
Department of Chemistry, University of Hawaii, Honolulu, Hawaii 96822

Fischerindole L (**3**) is a novel 5,6,6a,7,8,9,10,10a-octahydroindeno[2,1-*b*]indole isonitrile that possesses the same relative stereochemistry as hapalindole L (**4**).

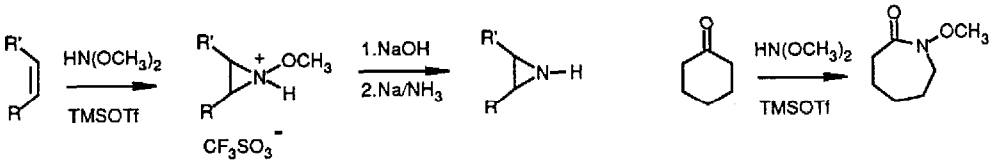



**3** **4**

*Tetrahedron Lett.* **1992**, *33*, 3261

## SYNTHESIS OF N-METHOXY AND N-H AZIRIDINES FROM ALKENES

Edwin Vedejs* and Hiroshi Sano
Chemistry Department, University of Wisconsin, Madison, Wis. 53706

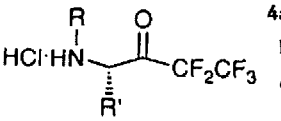



*Tetrahedron Lett.* **1992**, *33*, 3265

## EFFICIENT PREPARATION OF PEPTIDYL PENTAFLUOROETHYL KETONES

Michael R. Angelastro, Joseph P. Burkhart, Philippe Bey and Norton P. Peet*
Marion Merrell Dow Research Institute, 2110 East Galbraith Road, Cincinnati, OH 45215-6300

An efficient synthesis of pentafluoroethyl ketone salts from amino acids is described. These compounds (**4a-c**) are useful for the preparation of peptidyl pentafluoroethyl ketones.



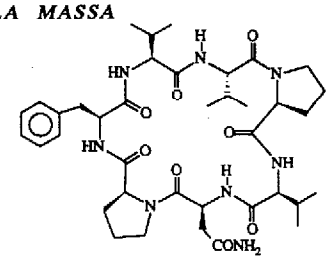

**4a**, R=H, R′=CH(CH$_3$)$_2$
**b**, R=H, R′=CH$_2$C$_6$H$_5$
**c**, R,R′=CH$_2$CH$_2$CH$_2$

*Tetrahedron Lett.* **1992**, *33*, 3269

## PSEUDOAXINELLIN, A CYCLIC HEPTAPEPTIDE ISOLATED FROM THE PAPUA NEW GUINEA SPONGE *PSEUDOAXINELLA MASSA*

F. Kong[1], D. L. Burgoyne[1], R.J. Andersen[1]* and T.M. Allen[2].
[1]Departments of Chemistry and Oceanography, UBC, Vancouver, B.C., CANADA V6T 1Z4.
[2]Department of Pharmacology, University of Alberta, Edmonton, Alberta, CANADA T6G 2H7

The structure of pseudoaxinellin (1) was solved by spectroscopic analysis and chemical degradation. Pseudoaxinellin is the first cyclic heptapeptide from a marine source. It has one cis amide bond.

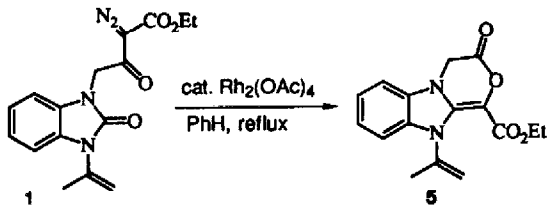


*Tetrahedron Lett.* **1992**, *33*, 3273

## A NOVEL CARBONYL YLIDE REARRANGEMENT

James D. Rodgers*
Janssen Research Foundation
Gary W. Caldwell, A. Diane Gauthier
R. W. Johnson Pharmaceutical Research Institute
Welsh & McKean Rd., Spring House PA 19477

$Rh_2(OAc)_4$ catalyzed decomposition of **1** gave the novel carbonyl ylide rearrangement product **5**.



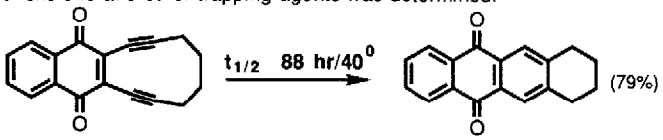

**1** **5**

*Tetrahedron Lett.* **1992**, *33*, 3277

## ARENE 1,4-DIRADICAL FORMATION FROM o-DIALKYNYLARENES

M. F. Semmelhack*, Thomas Neu, and Francisco Foubelo
Department of Chemistry, Princeton University, Princeton, NJ 08544

A series of cyclic o-dialkynylarenes was prepared, including derivatives of benzene, 1,4-dimethoxynaphthalene, 9/10-dimethoxyanthracene, and the corresponding quinones. The half-time for Bergman rearrangement in the presence of 1,4-cyclohexdiene and other trapping agents was determined.

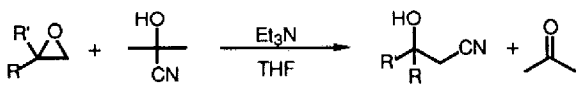



*Tetrahedron Lett.* **1992**, *33*, 3281

## REGIOSPECIFIC OPENING OF 1,2-EPOXIDES WITH ACETONE CYANOHYDRIN UNDER MILDLY BASIC CONDITIONS

David Mitchell* and Thomas M. Koenig
Lilly Research Laboratories, Eli Lilly and Company, Lilly Corporate Center, Indianapolis, Indiana 46285

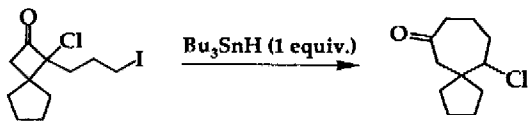
Acetone cyanohydrin with triethylamine opens epoxides regiospecifically to give β-hydroxy nitriles.



*Tetrahedron Lett.* **1992**, *33*, 3285

## A New Free Radical-Based Method for the Synthesis of Spiroannulated Medium Rings

Wei Zhang and Paul Dowd*
Department of Chemistry
University of Pittsburgh
Pittsburgh, Pennsylvania 15260



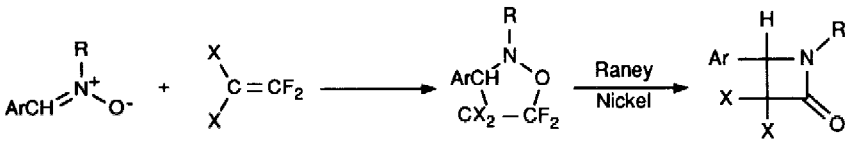

Free radical promoted cyclobutanone ring expansion provides a new entry to a variety of spiroannulated ring systems.

*Tetrahedron Lett.* **1992**, *33*, 3289

## β-LACTAMS FROM 5,5-DIFLUOROISOXAZOLIDINES.

Suzanne T. Purrington* and Kuen-Wanq Sheu
Department of Chemistry, North Carolina State University, Raleigh, NC 27695-8204

1,3-Dipolar cycloaddition of nitrones to 1,1-difluoroolefins give rise to fluorinated isoxazolidines in 85% yield; Raney nickel reduction of the adducts produces β-lactams.

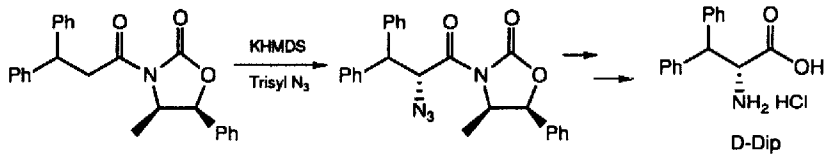



*Tetrahedron Lett.* **1992**, *33*, 3293

## Chiral Synthesis of D- and L-3,3-Diphenylalanine (Dip), Unusual α-Amino Acids for Peptides of Biological Interest

Huai G. Chen, V. G. Beylin, M. Marlatt, B. Leja and O. P. Goel*
Parke-Davis Pharmaceutical Research Division/Warner-Lambert Company, 2800 Plymouth Road, Ann Arbor, MI, 48105 USA

The asymmetric syntheses of D- and L-Dip are described.

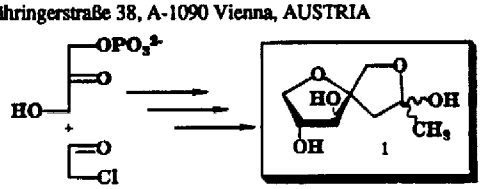



*Tetrahedron Lett.* **1992**, *33*, 3297

## CHEMO-ENZYMATIC SYNTHESIS OF NATURAL PRODUCTS: SYNTHESIS OF SPHYDROFURAN

Balu P. Maliakel and Walther Schmid *
Institut für Organische Chemie der Universität Wien, Währingerstraße 38, A-1090 Vienna, AUSTRIA

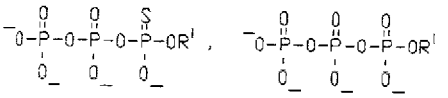
A novel synthesis of sphydrofuran 1 starting from achiral precursors has been developed. The stereocenters were introduced via a short chemo-enzymatic reaction sequence.



*Tetrahedron Lett.* **1992**, *33*, 3301

## NOVEL SOLID PHASE SYNTHESIS OF 2'-O-METHYLRIBONUCLEOSIDE 5'-TRIPHOSPHATES AND THEIR α-THIO ANALOGUES

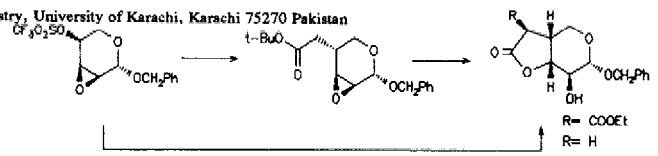
R.K. Gaur[#]*, B.S. Sproat[#] and Guido Krupp*
[#]European Molecular Biology Laboratory, Meyerhofstr. 1, W-6900 Heidelberg, FRG,
*Institut für Allgemeine Mikrobiologie der Universität Kiel, Am Botanischen Garten 1-9, W-2300 Kiel, FRG.



*Tetrahedron Lett.* **1992**, *33*, 3305

## An Expiditious Approach to Polysubstituted Chiral Butanolides

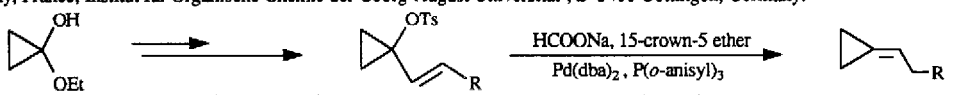
**Yousef Al-Abed,[a] Fakhar Zaman,[a] Mohammed Saleh Shekhani,*[b] Ayjaz Fatima,[a] and Wolfgang Voelter*[a]**
[a] Abteilung für Physikalische Biochemie des Physiologisch-chemischen Instituts der Universität Tübingen, Hoppe-Seyler-Straße 4, D-7400 Tübingen, Germany.
[b] HEJ Research Institute of Chemistry, University of Karachi, Karachi 75270 Pakistan




*Tetrahedron Lett.* **1992**, *33*, 3307

## REGIOSELECTIVE PALLADIUM(0) CATALYZED REDUCTION OF 1-ALKENYLCYCLOPROPYL ESTERS AS EQUIVALENT OF THE WITTIG REACTION

Jean Ollivier[a], Pier P. Piras[a], Andreas Stolle[a,b], Pierre Aufranc[a], Armin de Meijere[b]*, and Jacques Salaün[a]*
Laboratoire des Carbocycles[a], Associé au C.N.R.S., Institut de Chimie Moléculaire d'Orsay, Bât. 420, Université de Paris-Sud, 91405 Orsay, France; Institut für Organische Chemie der Georg-August Universität[b], D-3400 Göttingen, Germany.

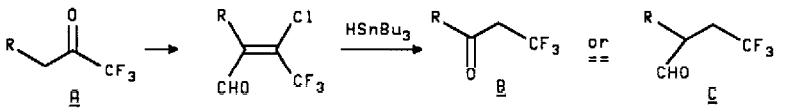



An alternative to the Wittig reactions of cyclopropylidenephosphorane or cyclopropanone hemiacetal is proposed.

*Tetrahedron Lett.* **1992**, *33*, 3311

## A New and Efficient Synthesis of Trifluoroalkyl Aldehydes or Ketones from the Same Starting Material

André J. LAURENT* and Stanislaw LESNIAK** (*)UCB-Lyon I, Lab. de Chimie Organique 3, associé au CNRS, 43 Bd du 11 Novembre 1918 69622 VILLEURBANNE Cedex (France) (**)UNIV. LODZ, Institut of Chemistry, Narutowicza 68, 90-136 LODZ (Pologne)

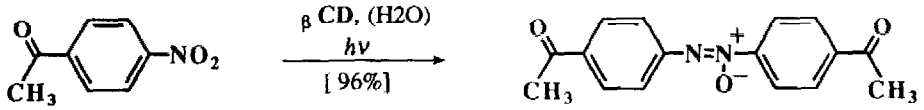



According to the experimental conditions employed, ketones A were converted in the regioisomer B or in the aldehyde C.

*Tetrahedron Lett.* **1992**, *33*, 3315

## PHOTOCHEMICAL REACTION BETWEEN β-CYCLODEXTRIN AND p-NITROACETOPHENONE IN AN INCLUSION COMPLEX IN WATER SOLUTION

Y.L. Chow[a], J. Michon[b], P. Michon[b], C. Morat[b], A. Rassat*[c]
a Simon Fraser University, Burnaby, B.C. Canada V5A 1S6
b L.E.D.S.S., Université Joseph Fourier, BP 53X, 38041 Grenoble Cedex, France
c Ecole Normale Supérieure, 24 rue Lhomond, 75231 Paris Cedex 05, France

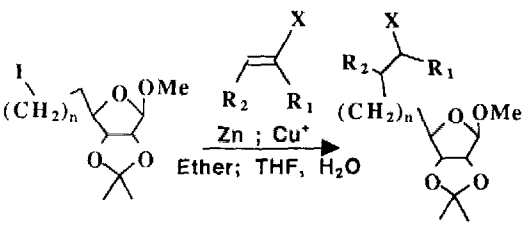



*Tetrahedron Lett.* **1992**, *33*, 3319

## A Conjugate Addition of Primary Alkyl Iodide Derived Species to Electron Deficient Olefins

P. Blanchard, M. S. El Kortbi, J-L. Fourrey* and M. Robert-Gero
Institut de Chimie des Substances Naturelles, C.N.R.S., 91198 Gif-sur-Yvette, France.

Simple reaction conditions for the addition of species generated by the Zn/Cu couple in the carbohydrate and amino acid series to electron deficient olefins have been defined.

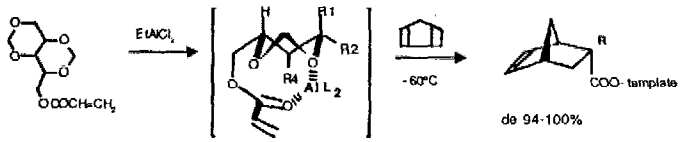



*Tetrahedron Lett.* **1992**, *33*, 3323

## LIGAND ASSISTED ASYMMETRIC SYNTHESIS. II. DIASTEREOSELECTIVE DIELS-ALDER ADDITIONS WITH LEWIS ACID ATTRACTING AUXILIARIES DERIVED FROM PENTITOLS.

Jean-Louis Gras *, Annie Poncet and Robert Nouguier
Laboratoire de Synthèse Organique, CNRS URA 1411, Faculté des Sciences St-Jérôme D12, 13397 - Marseille Cedex 13 - France

The promoted Diels-Alder addition of acrylates linked to a dimethylene pentitol or to methylene butanetriol results in total π-face stereodifferentiation, via a layered chelate-complex.

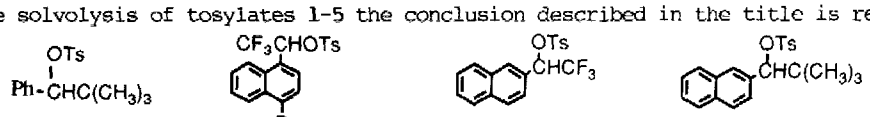



*Tetrahedron Lett.* **1992**, *33*, 3327

## Solvolyses of Substituted Naphthylmethyl Tosylates. Importance of the Extent of Solvation in the Delocalized Cationic Transition States on the Correlation of Solvolytic Reactivities

Kwang-Ting Liu, Hung-Yun Hsu, and Jye-Shane Yang
Department of Chemistry, National Taiwan University, Taipei, Taiwan 107, Republic of China

From the solvolysis of tosylates 1-5 the conclusion described in the title is reached.

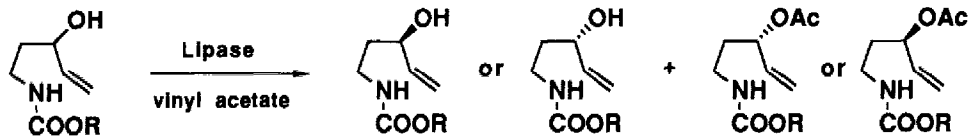


1 2 R=H 3 R=CH$_3$ 4 5

*Tetrahedron Lett.* **1992**, *33*, 3331

## TRANSESTERIFICATION-BASED ENZYMATIC RESOLUTIONS OF RACEMIC 3-HYDROXY-4-PENTENYLURETHANES IN ORGANIC SOLVENTS

Hiroki Takahata,* Yasuhiro Uchida, and Takefumi Momose*
Faculty of Pharmaceutical Sciences, Toyama Medical & Pharmaceutical University, Sugitani 2630, Toyama 930-01, Japan

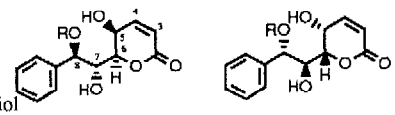



*Tetrahedron Lett.* **1992**, *33*, 3333

## GONIOTRIOL AND 8-ACETYLGONIOTRIOL: SYNTHESES AND ABSOLUTE CONFIGURATIONS

Tony K. M. Shing* and Zhao-hui Zhou
Department of Chemistry, The Chinese University of Hong Kong, Shatin, Hong Kong

The absolute configurations of natural goniotriol and 8-acetylgoniotriol are shown to be **1** and **2** repectively by unambiguous syntheses of their enantiomers **3** and **4** from D-*glycero*-D-*gulo*-heptono-γ-lactone.




(1) R = H
(2) R = Ac

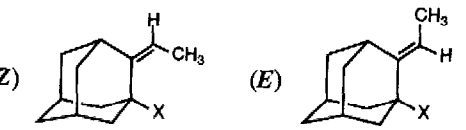
(3) R = H
(4) R = Ac

*Tetrahedron Lett.* **1992**, *33*, 3335

## QUANTITATIVE TREATMENT OF RATE ENHANCEMENT DUE TO F-STRAIN IN THE SOLVOLYSIS OF (Z)-2-ETHYLIDENE-1-ADAMANTYL MESYLATE AND HALIDES

Ken'ichi Takeuchi,* Yasushi Ohga, Motohiro Munakata, Toshikazu Kitagawa, and Tomomi Kinoshita
Department of Hydrocarbon Chemistry, Faculty of Engineering, Kyoto University, Sakyo-ku, Kyoto 606, Japan

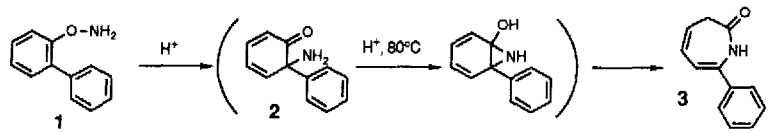
The *Z*:*E* rate ratios for the trifluoroethanolysis at 25 °C of the title mesylate, chloride, bromide, and iodide are 126, 1020, 2230, and 9680, respectively.




*Tetrahedron Lett.* **1992**, *33*, 3339

## ACID-CATALYZED REARRANGEMENT OF O-(2-ARYLPHENYL)HYDROXYLAMINES TO ARYLDIHYDROAZEPINONES.

Yasuyuki Endo*, Ken-ichiro Kataoka, Naoki Haga and Koichi Shudo
Faculty of Pharmaceutical Sciences, University of Tokyo, Hongo, Bunkyo-ku, Tokyo 113, Japan



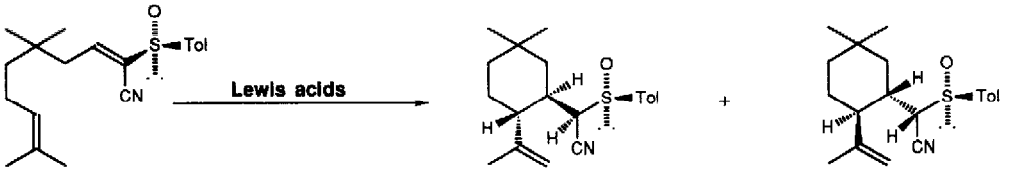

1 2 3

Acid-catalyzed rearrangement of O-(2-arylphenyl)hydroxylamines (**1**) to 2-amino-2-phenyl-3,5-cyclohexadienone (**2**) followed by ring enlargement affords 7-aryl-1,3-dihydro-1H-azepin-2-ones (**3**). The intermediate **2** was traped as the N-trifluoroacetamide.

*Tetrahedron Lett.* **1992**, *33*, 3343

## LEWIS ACID-CATALYZED INTRAMOLECULAR ASYMMETRIC ENE REACTIONS OF CHIRAL VINYL SULFOXIDES

Kunio Hiroi* and Masayuki Umemura
Department of Synthetic Organic Chemistry, Tohoku College of Pharmacy, 4-4-1 Komatsushima, Aoba-Ku, Sendai, Miyagi 981, Japan

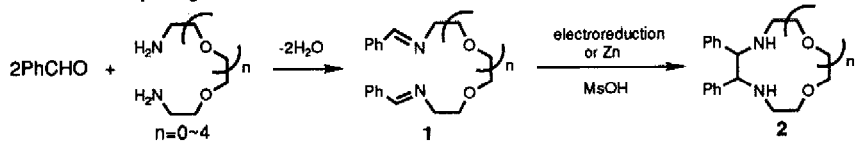



*Tetrahedron Lett.* **1992**, *33*, 3347

## NOVEL SYNTHESIS OF 1,4-DIAZACROWN ETHERS BY REDUCTIVE COUPLING OF AROMATIC DIIMINES

Tatsuya Shono,* Naoki Kise, and Eiichi Okazaki
Department of Synthetic Chemistry, Faculty of Engineering, Kyoto University, Yoshida, Sakyo, Kyoto 606-01, Japan

The electroreduction or chemical reduction with zinc powder has been found to be effective to intramolecular coupling of aromatic diimines 1 yielding 1,4-diazacrown ethers 2.

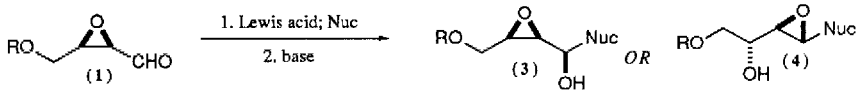



*Tetrahedron Lett.* **1992**, *33*, 3351

## Stereoselective Reactions of α,β-Epoxy-aldehydes; The Formation of "Chelation Controlled" Products

S. Wang, G.P. Howe, R.S. Mahal, and G. Procter, Department of Chemistry, University of Salford, Salford, M5 4WT, Great Britain.

Epoxy-aldehyde (1) can be converted into either (3) or (4) with stereoselectivity of >95:5 by choice of conditions.

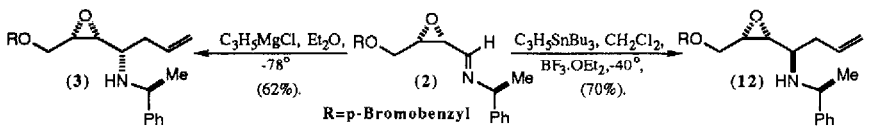



*Tetrahedron Lett.* **1992**, *33*, 3355

## Asymmetric Synthesis via Nucleophilic Addition to α,β-Epoxyimines

K.J.M. Beresford, G.P. Howe, and G. Procter, Department of Chemistry, University of Salford, Salford, M5 4WT, Great Britain.

Highly diastereoselective stereocontrolled addition to an α,β-epoxyimine has been carried out.

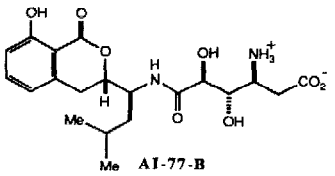


*Tetrahedron Lett.* **1992**, *33*, 3359

**A Total Synthesis of AI-77-B**

R.A. Ward and G. Procter, Department of Chemistry, University of Salford, Salford, M5 4WT, Great Britain.

A total synthesis of the natural enantiomer of the gastroprotective natural product AI-77-B has been carried out.



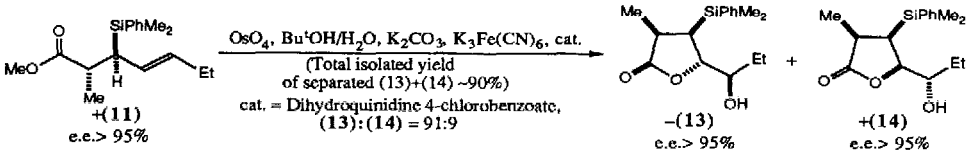

AI-77-B

*Tetrahedron Lett.* **1992**, *33*, 3363

**Allyl Silanes in Organic Synthesis; Double Asymmetric Induction in the Dihydroxylation of a Chiral Allylsilane**

R.A. Ward and G. Procter, Department of Chemistry, University of Salford, Salford, M5 4WT, Great Britain.

Sharpless asymmetric dihydroxylation of two chiral allylsilanes have been investigated.

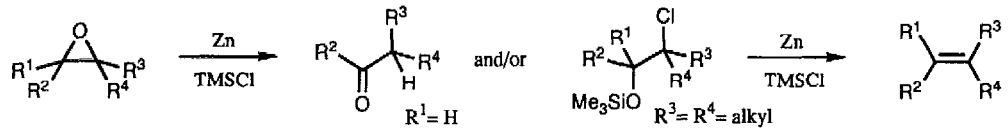



*Tetrahedron Lett.* **1992**, *33*, 3367

**OBSERVATIONS ON THE SELECTIVE DEOXYGENATION OF EPOXIDES TO OLEFINS WITH CHLOROTRIMETHYLSILANE AND ZINC.**

Carlos A. M. Afonso, William B. Motherwell* and Lee R. Roberts,
Department of Chemistry, Imperial College of Science, Technology and Medicine, South Kensington, London SW7 2AY, U.K.

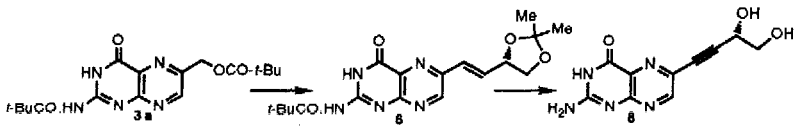
Deoxygenation of epoxides to olefins using zinc and chlorotrimethylsilane proceeds *via* two distinct mechanisms.




*Tetrahedron Lett.* **1992**, *33*, 3371

**Model Studies Related to the Cofactor of the Oxomolybdoenzymes Part 5. Synthesis of 6-Alkenyl- and 6-Alkynylpterins**

James R. Russell, C. David Garner, and John A. Joule*
Chemistry Department, University of Manchester, Manchester M13 9PL, U. K.

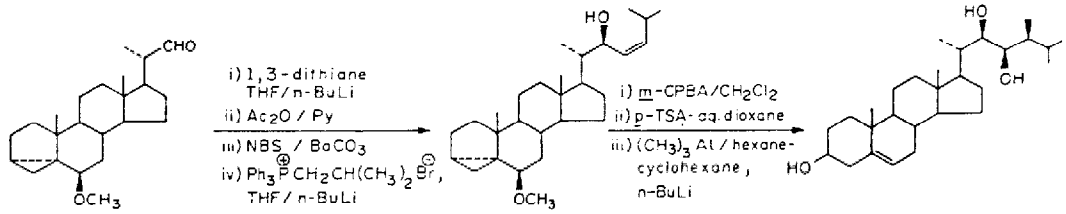



6-Alkenylpterin (**6**) was prepared from pteridine (**3a**) and (*R*)-glyceraldehyde acetonide *via* a Wittig condensation, then converted into the corresponding alkyne (**8**).

*Tetrahedron Lett.* **1992**, *33*, 3375

## A STEREOSELECTIVE APPROACH TO THE BRASSINOLIDE SIDE CHAIN VIA WITTIG REACTION

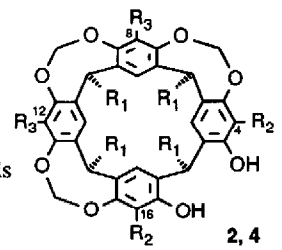
B.G.Hazra*, N.P.Argade and P.L.Joshi, National Chemical Laboratory, Pune-411 008, India.




*Tetrahedron Lett.* **1992**, *33*, 3377

## SELECTIVE FUNCTIONALIZATION OF CAVITANDS: SYNTHESIS OF A NEW HEMICARCERAND

Peter Timmerman,[a] Maarten G. A. van Mook,[a] Willem Verboom,[a] Gerrit J. van Hummel,[b] Sybolt Harkema[b] and David N. Reinhoudt[a,*]
Laboratories of [a]Organic Chemistry and [b]Chemical Physics,
University of Twente, P. O. Box 217, 7500 AE Enschede, The Netherlands




Cavitands can be functionalized selectively at the 4- and 16-positions via selective debromination of the corresponding diols **2** and **4**.

*Tetrahedron Lett.* **1992**, *33*, 3381

## Stereochemical Outcome of Benzyllithiums Synthesis from Selenides

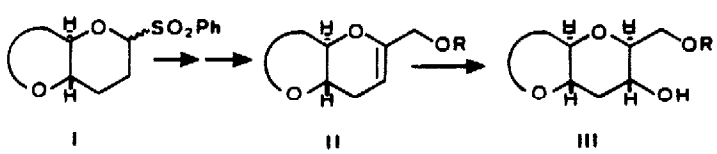
Alain Krief *[+], Myriam Hobe[+], Willy Dumont[+], Elie Badaoui[+], Eric Guittet [§] and Guy Evrard[+]
[+] Département de Chimie, Facultés Universitaires N -D de la Paix, 61 rue de Bruxelles, B-5000, Namur (Belgium).
[§] Laboratoire de RMN, Institut des Substances Naturelles du CNRS, 91900, Gif sur Yvette (France).

*Epimerisation usually occurs during the synthesis of arylalcanes from the corresponding benzylselenides which involves benzyllithiums as intermediates. This has been used to produce stereoselectively arylcyclopentanes and arylcyclopropanes. γ-Benzenesulfonyloxyalkyl selenides substituted on the carbon bearing the benzenesulfonyl group behave differently and lead stereospecifically to arylcyclopropane derivatives.*

*Tetrahedron Lett.* **1992**, *33*, 3385

## MODEL STUDIES DIRECTED TOWARDS MICROALGAL POLYETHER TOXINS. USE OF 2-PHENYLSULPHONYL CYCLIC ETHERS IN THE PREPARATION OF TRANS,SYN,TRANS α-ALKYL, β-HYDROXY-SUBSTITUTED TETRAHYDROPYRAN SUBUNITS

E. Alvarez, M. Rico, R.M. Rodríguez, D. Zurita, J.D. Martín. Centro de Productos Naturales Orgánicos Antonio González, Universidad de La Laguna - CSIC; Carretera de La Esperanza 2, 38206 La Laguna, Tenerife, Spain.



NEW SYNTHETIC STRATEGY FOR THE CONSTRUCTION OF TRANS FUSED MEDIUM SIZED CYCLIC ETHERS: SYNTHESIS OF THE IJK FRAMEWORK OF THE POLYETHER CIGUATOXIN.

*Tetrahedron Lett.* **1992**, *33*, 3389

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