

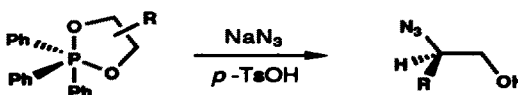
GRAPHICAL ABSTRACTS

*Tetrahedron*, 1991, 47, 1603

**THE REGIOSELECTIVE AND STEREOSPECIFIC SUBSTITUTION OF UNSYMMETRICAL 1,2-DIOLS USING THE**

**1,3,2λ<sup>5</sup>-DIOXAPHOSPHOLANE METHODOLOGY** Anne Pautard-Cooper and Slayton A. Evans, Jr., \* Wm. R. Kenan, Jr., Laboratories of Chemistry, The University of North Carolina, Chapel Hill, NC 27599-3290

Reactions of substituted 1,3,2λ<sup>5</sup>-dioxaphospholanes with *p*-TsOH and NaN<sub>3</sub> are regioselective and largely stereospecific.

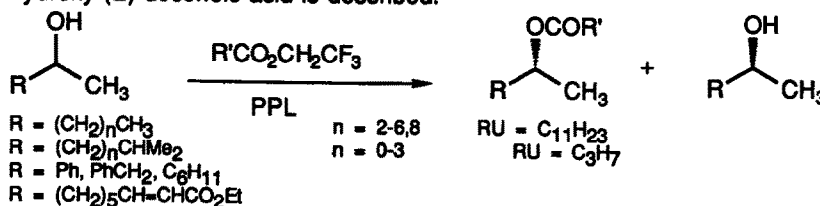


*Tetrahedron*, 1991, 47, 1611

**ENZYME REACTIONS IN APOLAR SOLVENTS. THE RESOLUTION OF BRANCHED AND UNBRANCHED 2-ALKANOLS BY PORCINE PANCREATIC LIPASE.**

Brian Morgan, Allan C. Oehlschlager\* and Thomas M. Stokes

High enantioselectivity was observed in the transesterification of straight-chain and branched 2-alkanols using porcine pancreatic lipase in ether. A chemoenzymatic synthesis of (R)-(-)-9-hydroxy-(E)-decanoic acid is described.

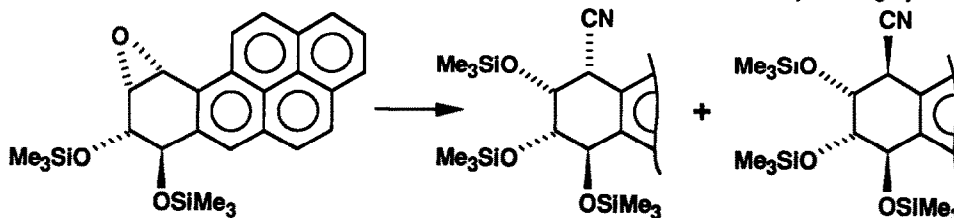


*Tetrahedron*, 1991, 47, 1621

**FORMATION OF A NITRILE VIA ZINC IODIDE-CATALYSED OPENING OF A BAY-REGION POLYCYCLIC AROMATIC HYDROCARBON EPOXIDE BY TRIMETHYLSILYL CYANIDE**

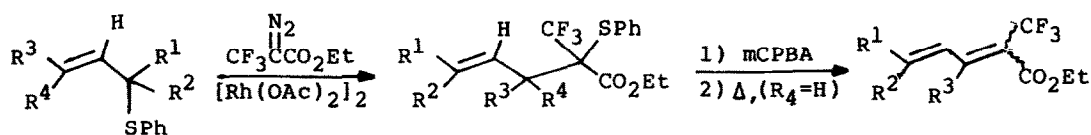
A. K. Jhingan and T. Meehan, Dept. of Pharmacy, University of California, San Francisco, CA 94143-0446

Protection of the hydroxyl groups of the carcinogen (±)-7β,8α-dihydroxy-9α,10α-epoxy-7,8,9,10-tetrahydrobenzo[a]pyrene followed by epoxide opening provides a mixture of *trans* and *cis* 9-trimethylsilyl-10-cyano derivatives, in contrast to the formation of isonitriles reported with mono- and bicyclic ring systems



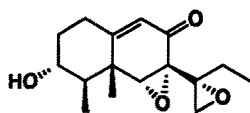
**CARBENOID ENTRY INTO TRIFLUOROMETHYLATED MOLECULES: PREPARATION OF FUNCTIONALIZED CF<sub>3</sub>-CONTAINING  $\gamma$ ,  $\delta$ -UNSATURATED CARBOXYLIC ESTERS BY RHODIUM-CATALYZED REACTION OF ETHYL 3,3,3-TRIFLUORO-2-DIAZO-PROPIONATE WITH ALLYLIC SULFIDES AND THEIR FURTHER FACILE CONVERSION TO TRIFLUOROMETHYLATED CONJUGATED DIENOIC ESTERS**

Guoqiang Shi, Yuanyao Xu\* and (in part) Ming Xu  
Laboratory of Organometallic Chemistry, Shanghai Institute of Organic Chemistry, Academia Sinica, 345 Lingling Lu, Shanghai 200032, China

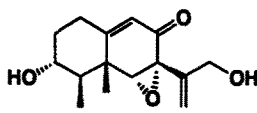


**SYNTHESIS OF OXYGENATED EREMOPHILANES, GIGANTENONE, PHOMENONE AND PHASEOLINONE, PHYTOTOXINS FROM PATHOGENIC FUNGI**

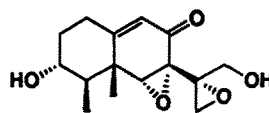
TAKESHI KITAHARA,\* HIROMASA KIYOTA, HITOSHI KURATA and KENJI MORI, Department of Agricultural Chemistry, The University of Tokyo, 1-1-1 Yayoi, Bunkyo-ku, Tokyo 113, Japan



Gigantenone



Phomenone



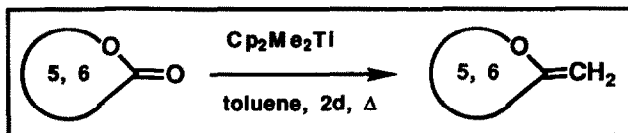
Phaseolinone

Stereoselective synthesis of several oxygenated eremophilane sesquiterpenes as phytotoxins, (+)-gigantenon (+)-phomenone 2 and (+)-phaseolinone 3, was achieved in short steps from (+)-sporogen-AO 1 4.

**METHYLENATION OF ALDONOLACTONES**

RENÉ CSUK AND BRIGITTE I. GLANZER  
PHARMAZEUTISCH-CHEMISCHES INSTITUT,  
UNIVERSITÄT HEIDELBERG, D-6900 HEIDELBERG, FRG

Reaction of dicyclopentadienyldimethyltitanium with furanoid and pyranoid aldonolactones provides an effective way of synthesizing carbohydrate derivatives possessing an *exo*-methylene group at C-1 adjacent to the ring oxygen

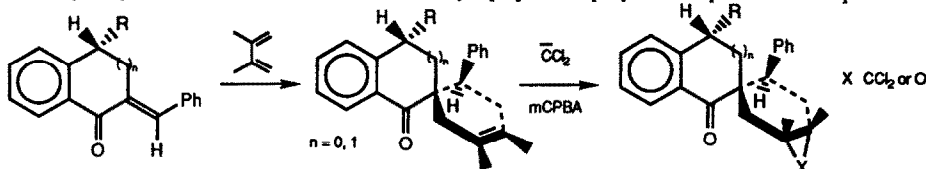


This approach offers several advantages over the use of *Tebbe's* reagent.

**CARBENATION ET EPOXYDATION DE 1-INDANONES 1'-SPIRO 3'-CYCLOHEXENE ET DE 1-TETRALONES 1'-SPIRO 3'-CYCLOHEXENE.**

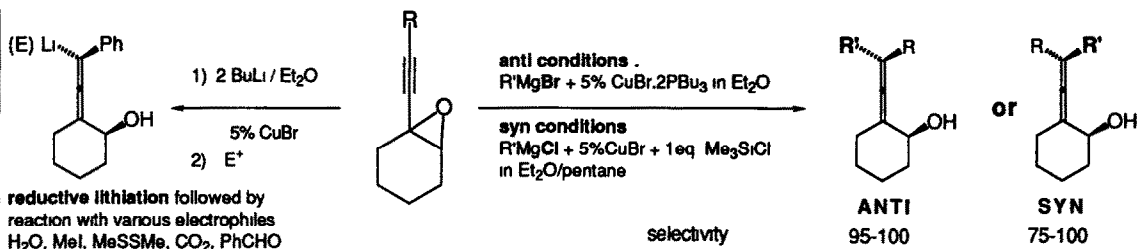
S Lafquih Titouani\*, M Soufiaoui\*, L Toupet\*\*, M Vaultier\*\* et R Carné\*\*  
 \* Université Mohammed V, Rabat, Maroc \*\* Université de Rennes I, 35042 Rennes, France

Synthèse stéréospécifique et étude conformationnelle de dichlorocyclopropanes et époxydes correspondant aux composés du titre



**DIASTEREOSELECTIVE SYN OR ANTI OPENING OF PROPARGYLIC EPOXIDES SYNTHESIS OF  $\alpha$ -ALLENIC ALCOHOLS**

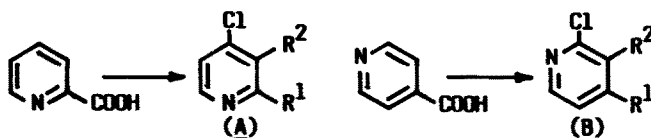
A Alexakis, I Marek, P Mangeney and J.F Normant  
 Laboratoire de Chimie des Organoéléments, Université P et M Curie, CNRS URA 473, T 44-45, 4 Place Jussieu, F-75232 Paris Cedex 05



**APPLICATION OF ORGANOLITHIUM AND RELATED REAGENTS IN SYNTHESIS. PART 9. SYNTHESIS AND METALLATION OF CHLORO-PICOLIN- AND CHLOROISONICOTIN-ANILIDES. A USEFUL METHOD FOR PREPARATION OF 2,3,4-TRISUBSTITUTED PYRIDINES**

J. Epsztajn\*, A. Bieniek\* and J.A. Kowalska  
 Department of Organic Chemistry,  
 University, 90-136 Łódź, Poland

A synthesis of the 2,3,4-trisubstituted pyridines (A) and (B) via total conversion of picolinic and isonicotinic acids, was developed.

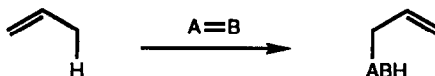


### A PM3 STUDY OF THE REACTIONS OF PROPENE WITH SINGLET OXYGEN AND OTHER ENOPHILES

Alwyn G Davies and Carl H Schiesser\*

Department of Chemical and Analytical Sciences, Deakin University, Geelong, Victoria, Australia, 3217 and  
Department of Chemistry, University College London, 20 Gordon Street, London, U K , WC1H 0AJ

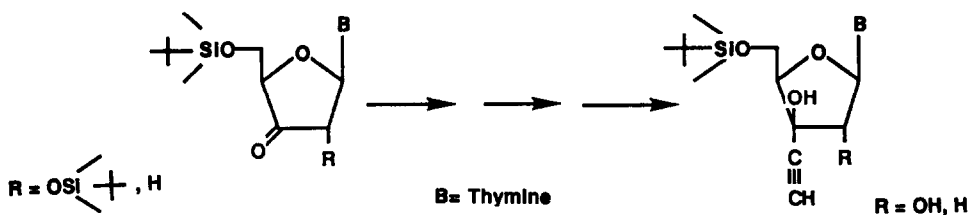
Two alternative reaction pathways, one involving a 6-membered ring transition state, the other, a strained 3-membered intermediate, have been located on the PM3 potential energy surfaces for the reactions of a number of enophiles, including singlet oxygen, with propene



### SYNTHESIS OF 3'-C-ETHYNYLNUCLEOSIDES OF THYMINE

Sophie Huss, Federico G. De las Heras and María José Camarasa\*

Instituto de Química Médica Juan de la Cierva, 3. 28006 Madrid, Spain

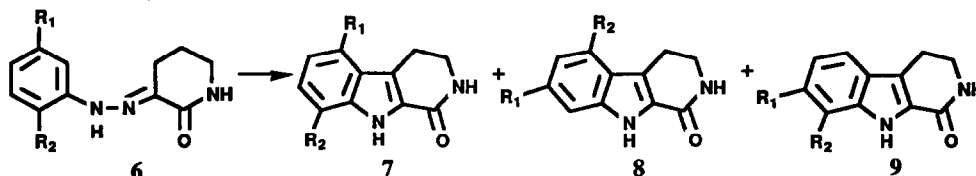


### THE FISCHER INDOLE SYNTHESIS OF 8-METHYL-5-SUBSTITUTED 1-OXO-8-CARBOLINES A REMARKABLE HIGH YIELD OF A [1,2]-METHYL MIGRATION

Santiago V. Luis\* and M. Isabel Burguete

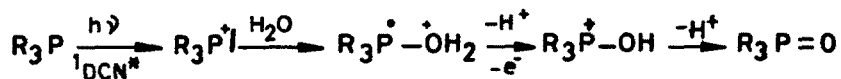
Dpto. Química Orgánica, Colegio Universitario de Castellón, Universidad de Valencia, 12080 Castellón, Spain

Indolization of hydrazones 6 occurs with an unusual high yield of the rearranged product 8 when R<sub>1</sub>=R<sub>2</sub>=CH<sub>3</sub>.



**PHOTOINDUCED SINGLE ELECTRON TRANSFER ACTIVATION  
OF ORGANOPHOSPHINES AND NUCLEOPHILIC TRAPPING OF  
PHOSPHINE RADICAL CATION**

Ganesh Pandey, Dinah Pooranchand and U.T. Bhalerao  
Organic Division II, Indian Institute of Chemical Technology, Hyderabad 500 007, India.



**A COMPUTATIONAL STUDY TOWARDS THE REACTIVITY  
OF 2-(2-ETHYNYLPHENYL-X)PYRIMIDINES IN INTRA-  
MOLECULAR DIELS-ALDER REACTIONS.**

W.A.W. Stolle, A.T.M. Marcelis and H.C. van der Plas\*

Laboratory of Organic Chemistry, Agricultural University, Dreyenplein 8, 6703 HB Wageningen,  
The Netherlands.

The order of reactivity of the title compounds 1 (X = CO, O, CH<sub>2</sub>, NH) was investigated, using the rigid rotor model (MM calculations) and by determination of the heat of activation (MNDO calculations) of the Diels-Alder reaction of 1 to 2

