

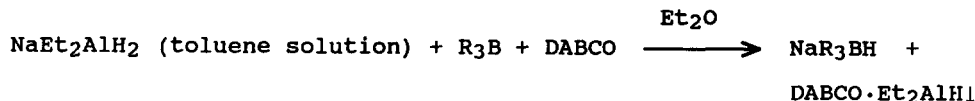
## GRAPHICAL ABSTRACTS

*Tetrahedron*, 1993, 49, 8311

**REACTION OF TRIALKYLBORANES WITH SODIUM DIETHYLDIHYDROALUMINATE IN THE PRESENCE OF 1,4-DIAZABICYCLO[2.2.2]OCTANE. A CONVENIENT, GENERAL METHOD FOR PREPARATION OF SODIUM TRIALKYLBOROHYDRIDES**

John L. Hubbard\*, Department of Chemistry, Marshall University, Huntington, West Virginia 25755-2520

Joseph C. Fuller, Thomas C. Jackson, Bakthan Singaram\*, Department of Chemistry and Biochemistry, University of California, Santa Cruz, California 95064

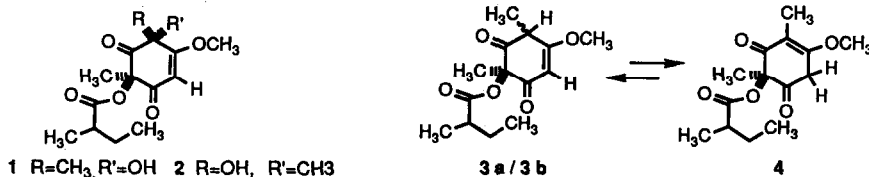


*Tetrahedron*, 1993, 49, 8317

**Phomaligols and Phomaligadiones: New Metabolites From The Blackleg Fungus.**

M. Soledade C. Pedras\*, Victor M. Morales, and Janet L. Taylor, Plant Biotechnology Institute, National Research Council of Canada, Saskatoon, Saskatchewan, S7N 0W9, Canada

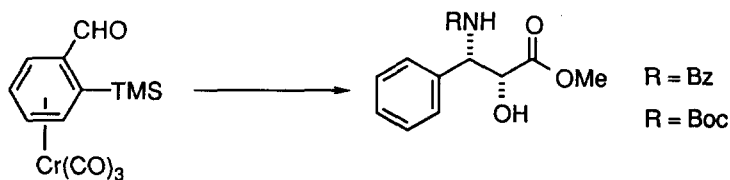
The isolation and structure elucidation of four new metabolites (1-4) from *Phoma lingam* (*Leptosphaeria maculans*) are described. The structures were determined employing 2D NMR spectroscopy.



*Tetrahedron*, 1993, 49, 8323

**HIGHLY STEREOCONTROLLED ASYMMETRIC SYNTHESSES OF TAXOL AND TAXOTÈRE C-13 SIDE CHAIN ANALOGUES**

Chisato Mukai, In Jong Kim, Etsuko Furu, and Miyoji Hanaoka Faculty of Pharmaceutical Sciences, Kanazawa University, Kanazawa 920, JAPAN The title compounds were synthesized in enantiomerically pure form on the basis of *anti*-selective aldol reaction of a chiral chromium(0)-complexed benzaldehyde derivative with titanium enolate of *S*-*tert*-butyl benzyloxyethanethioate.



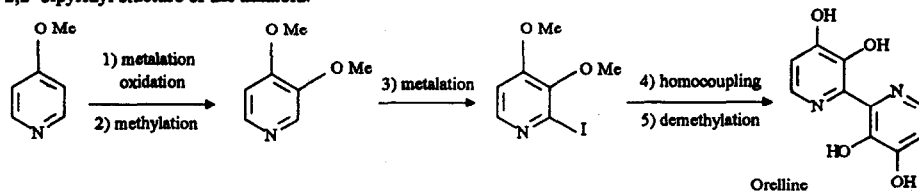


**New Synthesis of Orelline by Metalation of Methoxypyridines**

François Trécourt, Marc Mallet, Olivier Mongin, Bruno Gervais and Guy Quéguiner\*.

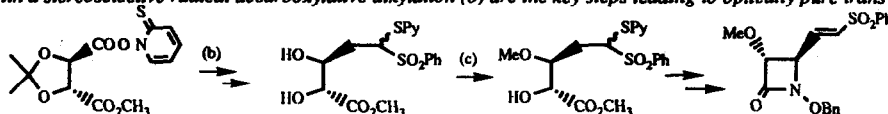
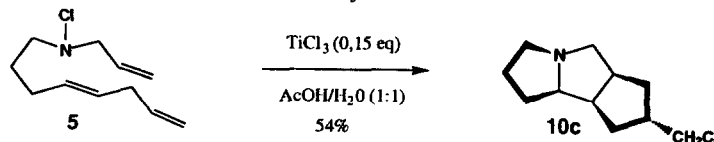
Laboratoire de Chimie Organique Fine et Hétérocyclique de l'IRCOF, URA 1429, INSA de Rouen, BP 08, 76131 Mont-Saint-Aignan Cedex (France)

A new total synthesis in five steps of the alkaloid Orelline is reported. The methodology involves metalation of methoxypyridines to afford 2-halo-3,4-dimethoxypyridine on which an homocoupling reaction is performed to build the 2,2'-bipyridyl structure of the alkaloid.

**SYNTHESIS OF 3 $\alpha$ -ALKOXY-4 $\beta$ -SUBSTITUTED-2-AZETIDINONES FROM L(+)-TARTARIC ACID**Derek H. R. Barton<sup>a</sup>, Jeanine Cléophas<sup>b</sup>, Alice Gâteau-Olesker<sup>b</sup>, Stephan D. Géro<sup>a,b</sup> and Catherine Tachdjian<sup>a</sup>.

a) Department of Chemistry, Texas A&amp;M University, College Station, Texas 77843. b) Institut de Chimie des Substances Naturelles, C.N.R.S., 91198 Gif-sur-Yvette, France.

The synthesis of 3 $\alpha$ -alkoxy-2-azetidinones from L(+)-tartaric acid is described. Regioselective saponification (a) and methylation (c) along with a stereoselective radical decarboxylative alkylation (b) are the key steps leading to optically pure trans- $\beta$ -lactams.

**SYNTHÈSE DU SYSTÈME CYCLIQUE DE L'AZA-TRIQUINANE LINEAIRE PAR TROIS CYCLISATIONS RADICALAIRES EN CASCADE**Doug Boate<sup>(a)</sup>, Catherine Fontaine<sup>(b)</sup>, Eric Guittet<sup>(b)</sup> et Lucien Stella<sup>(a)\*</sup>, (a) Laboratoire de Chimie Organique B - Associé au CNRS, Faculté des Sciences de Saint-Jérôme, Université d'Aix-Marseille III, Avenue Normandie-Niemen - 13397 Marseille Cédex 13 - France (b) Institut de Chimie des Substances Naturelles - CNRS - 91198 - Gif sur Yvette - France

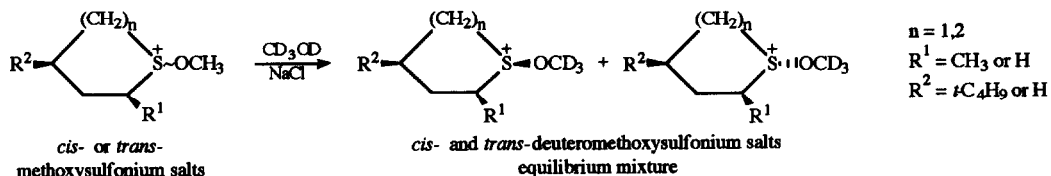
Treatment of the trienic N-chloroamine **5** by  $\text{TiCl}_3$  induces a chain process including three consecutive regio- and stereo-selective homolytic cyclisations affording, as the major product the new *cis-syn-cis* aza-triquinane **10c**

# STEREOELECTRONIC EFFECT IN EQUILIBRATION AND METHOXY EXCHANGE OF CYCLIC METHOXYSULFONIUM SALTS

I. Jalsovszky, F. Ruff and Á. Kucsman:

Department of Organic Chemistry, Eötvös University, PO Box 32, H-1518 Budapest 112, Hungary

*Cis*- and *trans*-methoxythiolanium and -thanium salts show equilibration and methoxy exchange in deuteromethanol containing chloride ions. The greater reactivity of the *trans* isomers is explained by stereoelectronic effect of  $\sigma(\text{C-H})-\sigma^*(\text{S-X})$  type with  $\text{X} = \text{OMe}$  or  $\text{Cl}$ .

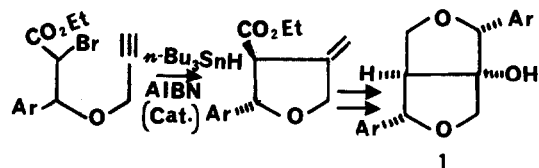


**STEREOSELECTIVE TOTAL SYNTHESIS OF (±)-PAULOWNIN AND (±)-ISOGMELINOL THROUGH RADICAL ANNULATION ROUTE**

**Subhas Chandra Roy<sup>\*</sup> and Sankar Adhikari**

Department of Organic Chemistry, Indian Association for the Cultivation of Science,  
Jadavpur, Calcutta - 700 032, India.

A highly stereocontrolled synthesis of (±)-paulownin (1a) and (±)-isogmelinol (1b) is described involving intramolecular radical cyclisation reaction as a key step.



a, Ar=3,4-methylenedioxyphenyl  
b, 3,4-dimethoxyphenyl

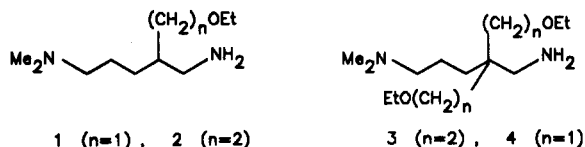
### C-ALKYLATION of NITRILES : a USEFUL ROUTE to 2-ETHOXYALKYL DERIVATIVES of CADAVERINE PLANNED for ENZYME STUDY

V. Bertini<sup>1</sup>, F. Lucchesini<sup>1\*</sup>, M. Pucci<sup>1</sup>, A. De Munno<sup>2</sup>, N. Picci<sup>3</sup>, and F. Iemma<sup>3</sup>

<sup>1</sup>Istituto di Analisi e Tecnologie Farmaceutiche ed Alimentari, Università di Genova, Italy

<sup>2</sup>Dipartimento di Chimica e Chimica Industriale, Università di Pisa, Italy

<sup>3</sup>Dipartimento di Chimica, Università della Calabria, Italy



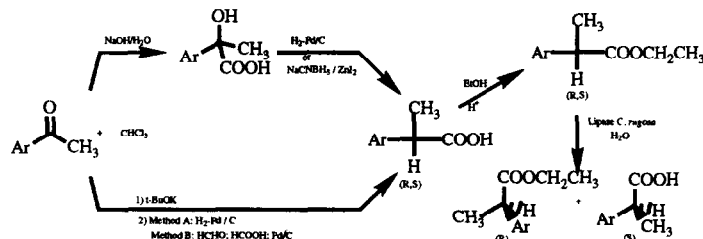
The cadaverine derivatives 1-4 designed for the diamine oxidase active site study, were synthesized and characterized.

# CHEMOENZYMATIC SYNTHESIS OF PURE ENANTIOMERIC 2-ARYL-PROPIONIC ACIDS

M.García, C. del Campo, E.F.Llana, J.M.Sánchez-Montero and J.V.Sinisterra\*

Department of Organic and Pharmaceutical, Chemistry Faculty of Pharmacy,

Universidad Complutense 28040 Madrid, Spain.



# HETEROAROMATICITY.8. THE INFLUENCE OF N-OXIDE FORMATION ON HETEROCYCLIC AROMATICITY

Clive W. Bird

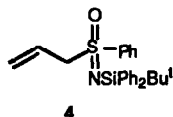
Department of Chemistry, King's College, The Strand, London WC2R 2LS, U.K.

A recently described aromaticity index has been used to examine the changes in the aromaticity of nitrogen heterocycles accompanying their N-oxidation. Some instances are noted where there is an unforeseen increase in aromatic character. The aromaticity indices of isomeric furoxans can be a useful indication as to their relative stabilities.

# SYNTHESIS AND CONJUGATE AND 1,2 ADDITION REACTIONS OF A STERICALLY HINDERED ALLYLIC SULFOXIMINE

Stephen G. Pyne\* and Gernot Boche, *Department of Chemistry, University of Wollongong, Wollongong, NSW, 2522, Australia and Fachbereich Chemie, Philipps Universität, Marburg, 3350, Germany.*

The synthesis and reactions of lithiated allylic sulfoximine 4 with electrophiles is described.



**ENOLIC RADICAL DERIVED FROM ACETIC ACID:  
A USEFUL RADICAL ALTERNATIVE TO ACETATE  
ENOLATE IN MICHAEL-TYPE REACTIONS**

F. Foubelo, F. Lloret and Miguel Yus\*

Departamento de Química Orgánica, Facultad de Ciencias, Universidad de Alicante, Apdo. 99, 03080 Alicante, Spain

