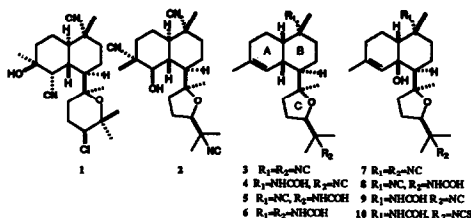


GRAPHICAL ABSTRACTS

VARIATION AMONG KNOWN KALIHINOL AND NEW KALIHINENE DITERPENES FROM THE SPONGE *ACANTHELLA CAVERNOSA*.

Jaime Rodríguez, Rosa M. Nieto, Lisa M. Hunter, M. Cristina Diaz, and Phillip Crews\* Department of Chemistry and Biochemistry and Institute for Marine Sciences, University of California, Santa Cruz, CA 95064. Emil Lobkovsky and Jon Clardy\* Department of Chemistry, Cornell University, Ithaca, NY, 14853-1301.

Seven new diterpene constituents in the kalihinane family were isolated from the sponge *Acanthella cavernosa*. These diterpenes are expected to be a chemotaxonomic marker for this sponge.



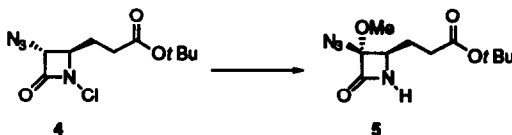
*Tetrahedron*, 1994, 50, 11079

Reactions of *N*-Chloro  $\beta$ -Lactams

Peter R. Guzzo and Marvin J. Miller\*

Department of Chemistry and Biochemistry, University of Notre Dame, Notre Dame, IN 46556

Methanol addition to C3 of *N*-chloro  $\beta$ -lactam 4 with concomitant loss of chloride gave  $\alpha$ -methoxy  $\beta$ -lactam 5 under mild alkaline conditions but was accompanied by methanolysis of the  $\beta$ -lactam ring as the major reaction pathway.



*Tetrahedron*, 1994, 50, 11091

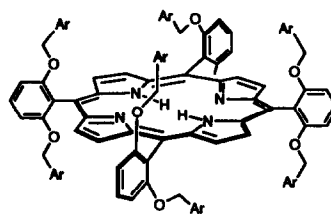
SYNTHESIS OF PORPHYRINS TAILORED WITH EIGHT FACIALLY-ENCUMBERING GROUPS. AN APPROACH TO SOLID-STATE LIGHT-HARVESTING COMPLEXES

Richard W. Wagner and Jonathan S. Lindsey\*  
Carnegie Mellon University, Pittsburgh, PA 15213 USA

Ilona Turowska-Tyrk and W. Robert Scheidt  
Notre Dame University, Notre Dame, IN 46556 USA

Routes are established to porphyrins bearing various Ar-groups. The crystal structure is determined for Ar = C<sub>6</sub>F<sub>5</sub>.

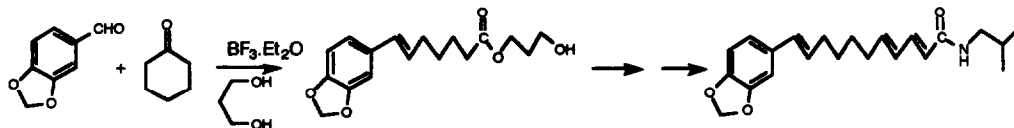
*Tetrahedron*, 1994, 50, 11097



CONCISE, EFFICIENT NEW SYNTHESIS OF PIPERCIDE, AN INSECTICIDAL UNSATURATED AMIDE FROM *PIPER NIGRUM*, AND RELATED COMPOUNDS.

George M. Strunz and Heather Finlay,  
Canadian Forest Service, P.O.Box 4000, Fredericton, New Brunswick, Canada, E3B 5P7.

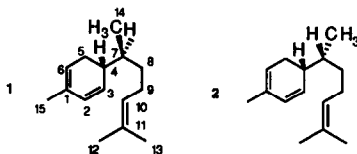
Pipericide and piperolein A, from *Piper nigrum*, were synthesized in overall yields of 21% and 35% respectively, by a short route using the Sakai aldol-Grob fragmentation sequence.



*Tetrahedron*, 1994, 50, 11113

**7-EPIZINGIBERENE, A NOVEL BISABOLANE SESQUITERPENE**

FROM WILD TOMATO LEAVES David C. Breeden and Robert M. Coates,

Department of Chemistry, University of Illinois, 600 S. Mathews, Urbana, IL 61801, USA. The identification of 7-epizingiberene (2), as the 7*R* diastereomer of zingiberene (1) from oil of ginger implicates the probable occurrence of opposite sidechain rotations in their biosyntheses.*Tetrahedron*, 1994, 50, 11123**SYNTHESIS AND ABSOLUTE CONFIGURATION OF AN ISOTACTIC NONAMETHOXY-1-PENTACOSENE FROM THE BLUE-GREEN ALGA *Scytonema ocellatum***

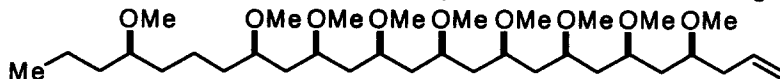
Yuji Mori,\* Narumi Kawajiri, Hiroshi Furukawa, and Richard E. Moore

Faculty of Pharmacy, Meijo University, Tempaku-ku, Nagoya 468, Japan

Department of Chemistry, University of Hawaii, Honolulu, HI 96822, USA

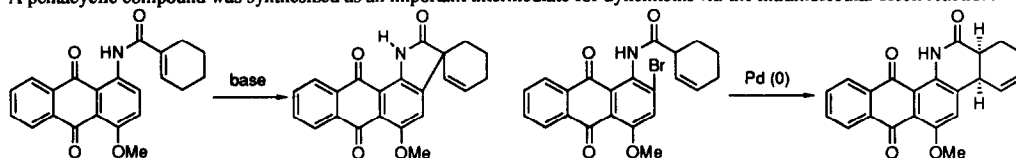
*Tetrahedron*, 1994, 50, 11133

The novel isotactic nonamethoxy-1-pentacosene was synthesized and the absolute configuration was established

**Synthesis of the Pentacyclic Intermediate for Dynemicin A and Unusual Formation of Spiro-oxindole Ring**

Takaaki Okita and Minoru Isobe\*

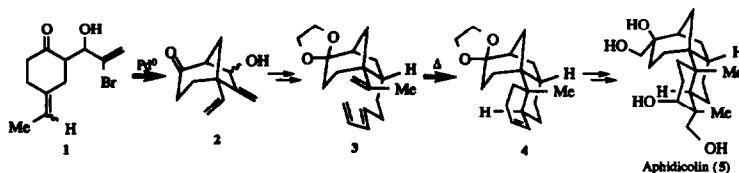
Laboratory of Organic Chemistry, School of Agriculture, Nagoya University, Chikusa, Nagoya 464-01, Japan

A pentacyclic compound was synthesized as an important intermediate for dynemicins *via* the intramolecular Heck reaction.*Tetrahedron*, 1994, 50, 11143**Aphidicolin Synthesis (II)—An Expedient and Efficient**

Formal Synthesis of (±)-Aphidicolin

Masahiro Toyota, Youichi Nishikawa, and Keichiro Fukumoto\* Pharmaceutical Institute, Tohoku University, Aobayama, Sendai 980-77, Japan

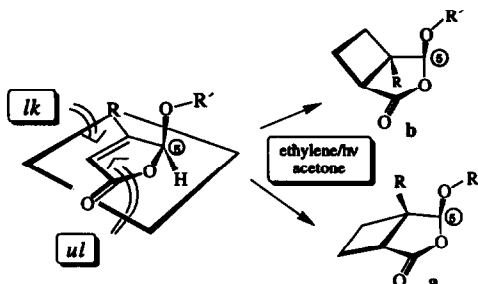
An expedient and efficient formal total synthesis of an antiviral and antitumor tetracyclic diterpene aphidicolin (5) has been achieved. An intramolecular Heck reaction (1→2) and an intramolecular Diels-Alder reaction (3→4) were utilized for the key steps of the sequence.

*Tetrahedron*, 1994, 50, 11153

**CHIRAL INDUCTION IN PHOTOCHEMICAL REACTIONS 15.<sup>1</sup>**  
**DETECTION OF STEREOELECTRONIC EFFECTS BY TEMPERATURE**  
**DEPENDENT MEASUREMENTS OF THE DIASTEREOSELECTIVITY**  
**IN THE PHOTSENSITIZED [2 + 2]-CYCLOADDITION**

Norbert Hoffmann, Helmut Buschmann, Gerhard Raabe and  
 Hans-Dieter Scharf\*  
 Institut für Organische Chemie der RWTH Aachen  
 Prof.-Pirlet-Str. 1, D-52056 Aachen

The mechanism of the diastereoselection in the corresponding reaction is investigated by determination of the dependence of the stereoselectivity on the temperature and on R and R'.



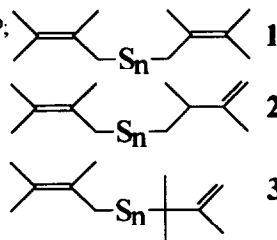
*Tetrahedron*, 1994, 50, 11167

**BIS(2,3-DIMETHYLBUTENYL)SULFANES, THE PRODUCTS OF**  
**SULFANE ADDITION TO 2,3-DIMETHYL-1,3-BUTADIENE AND**  
**OF THE REACTION OF SULFUR WITH 2,3-DIMETHYL-2-BUTENE**

D. Jungk, N. Schmidt and J. Hahn<sup>a,\*</sup>, P. Versloot, J. G. Haasnoot and J. Reedijk<sup>b</sup>;  
<sup>a</sup>Universität Köln (FRG), <sup>b</sup>Leiden University (NL)



TMD = tetramethylthiuram disulfide

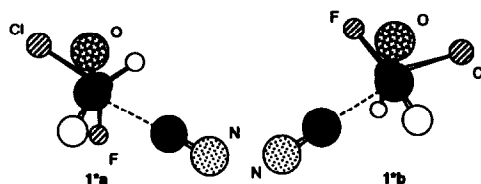


*Tetrahedron*, 1994, 50, 11187

**Conformational Analysis of 2-Chloro-2-fluoroacetaldehyde and Calculated Transition State Structures of Nucleophilic Addition Reactions.**

G. Frenking\*, K.F. Köhler, and M.T. Reetz\*\*

Fachbereich Chemie, Philipps-Universität Marburg, Hans-Meerwein-Straße, D-35032 Marburg, Germany, and \*\*Max-Planck-Institut für Kohlenforschung, Kaiser-Wilhelm-Platz 1, D-45470 Mülheim/Ruhr, Germany.

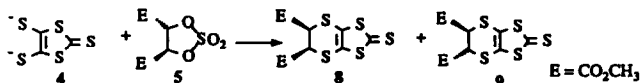


Quantum mechanical calculations of the transition states for CN<sup>-</sup> addition to 2-chloro-2-fluoroacetaldehyde predict anti-Felkin-Anh diastereoselectivity for the addition reaction. Transition state 1\*a is 0.7 kcal mol<sup>-1</sup> (MP2/6-31G(d)/HF/6-31G(d) + ZPE) lower in energy than 1\*b, because the conformation of the substrate is more favorable in the former transition state than in the latter. The importance of the conformation of the substrate for the diastereoselectivity is emphasized.

*Tetrahedron*, 1994, 50, 11197

**SHORT INTERMOLECULAR S...S CONTACTS IN A REACTION**  
**PRODUCT FROM THE CYCLIC SULFATE ESTER OF DIMETHYL**  
**L-TARTRATE AND 2-THIOXO-1,3-DITHIOLE-4,5-DITHIOLATE.**

Turan Ozturk\*, David C. Povey<sup>b</sup> and John D. Wallis\*, <sup>a</sup>Centre for Materials Research, University of Kent, Canterbury, CT2 7NH, <sup>b</sup>Chemistry Department, University of Surrey, Guildford, GU2 5XH, U.K.



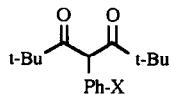
Reaction of 4 and 5 give *meso* and *dl* products 8 and 9. Short S...S contacts in crystalline 9 arise from mutual polarisations and the asymmetric shape of the bonded S atom.

*Tetrahedron*, 1994, 50, 11205

**CONFORMATIONAL ANALYSIS OF 4-ARYL-2,2,6,6-TETRAMETHYLHEPTANE-3,5-DIONES. DIPOLE MOMENT DETERMINATIONS AND MOLECULAR MECHANICS CALCULATIONS.**

M. Moreno-Mañas,\*<sup>a</sup> M. Fathallah,<sup>a</sup> I. Hernández-Fuentes,<sup>b</sup> C. Jaime,<sup>a</sup> M.E. Lloris,<sup>a</sup> J. Marquet,<sup>a</sup> M.F. Rey-Stolle<sup>b</sup>

<sup>a</sup> Department of Chemistry, Universitat Autònoma de Barcelona, Bellaterra, 08193-Barcelona, Spain. <sup>b</sup> Department of Physical Chemistry I, Faculty of Chemistry, Universidad Complutense, 28040-Madrid, Spain



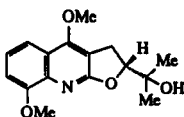
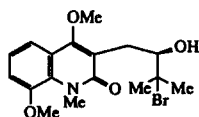
Dipole moment determinations and MM calculations show that these diketones exist (74-94%) in pairs of enantiomeric conformations with angles between both carbonyl dipoles in the range 62-66°

*Tetrahedron*, 1994, 50, 11213

**RESOLUTION OF PRENYL BROMOHYDRIN ESTERS AND DERIVATIVES: SYNTHESIS OF THE QUINOLINE ALKALOID (+)-(R)- AND (-)-(S)-LUNACRIDINE**

S.A. Barr,<sup>a</sup> D.R. Boyd,\*<sup>a</sup> N.D. Sharma,<sup>a,b</sup> T.A. Evans,<sup>a</sup> J.F. Malone<sup>a</sup> and V.D. Mehta<sup>b</sup>

<sup>a</sup>School of Chemistry, The Queen's University of Belfast, Belfast, BT9 5AG, U.K. <sup>b</sup>Department of Chemistry, University of Delhi, Delhi 110007, India.



Chromatographic separation of the bromo MTPA ester derivatives of prenylated compounds provides a new route to enantiopure prenyl epoxides and derivatives e.g. (+)-(R)- and (-)-(S)-lunacridine and 8-methoxyplatydesmine.

*Tetrahedron*, 1994, 50, 11219

**C<sub>2</sub>CO<sub>3</sub> OR CaO AS PROMOTERS OF ETHYL N-[(4-METHYLPHENYL)SULFONYL]OXY} CARBAMATE IN AMINATION REACTIONS**

Marco Barani, Stefania Fioravanti,\* Lucio Pellacani,\* and Paolo A. Tardella\*

Dipartimento di Chimica, Università "La Sapienza", P.le Aldo Moro 2, I-00185 Roma, Italy

A convenient functionalisation of benzene and substituted alkenes of different reactivity was achieved by the action of heterogeneous inorganic bases on the title reagent.



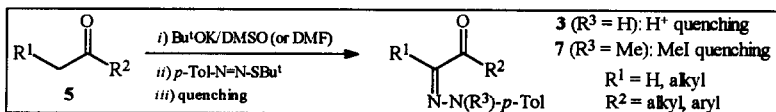
*Tetrahedron*, 1994, 50, 11235

**AN EASY ACCESS TO 2-OXOHYDRAZONES VIA ELECTROPHILIC  $\alpha$ -p-TOLYLHYDRAZONYLATION OF KETONE ENOLATES WITH tert-BUTYL p-TOLYLAZO SULFIDE**

Carlo Dell'Erba, Marino Novi, Giovanni Petrillo\* and Cinzia Tavani

Istituto di Chimica Organica dell'Università, C.N.R. Centro di Studio per la Chimica dei Composti Cicloalifatici ed Aromatici, Corso Europa 26, 16132 Italy

$\alpha$ -(p-Tolylhydrazone)ketones **3** or their N-methyl derivatives **7** are conveniently prepared through the title reaction from ketones **5**.



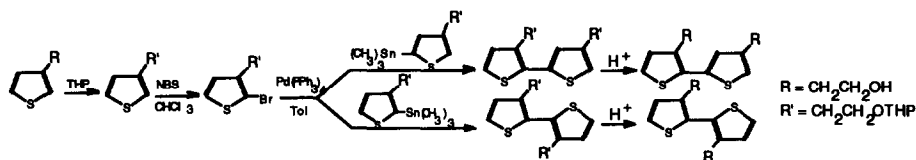
*Tetrahedron*, 1994, 50, 11239

**Polyhydroxyl Oligothiophenes. I. Regioselective Synthesis of 3,4'- and 3,3'-di(2-hydroxyethyl)-2,2'-bithiophene via Palladium Catalyzed Coupling of Thiénylstannanes with Thiénylbromides.**

Giovanna Barbarella\* and Massimo Zambianchi

I.Co.C.E.A., Area Ricerca C.N.R., Via Gobetti 101, 40129 Bologna, Italy

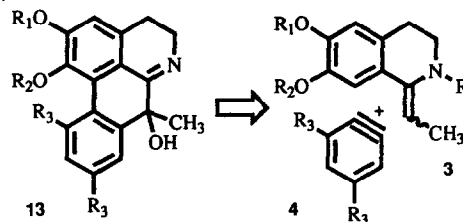
*Tetrahedron, 1994, 50, 11249*



**SYNTHESIS OF 7-SUBSTITUTED DEHYDRONORAPORPHINES, WITH SOME BIOGENETIC CONSIDERATIONS**

N. Atanes, S. Pérez, E. Guitián\*, L. Castedo, J.M. Saá.  
Universidad de Santiago, Santiago de Compostela and  
Universidad de les Illes Balears, Palma de Mallorca. SPAIN

N-protected 7-methyl-6a,7-dehydronoraporphines **2** were synthesized by the IBC approach. Oxidation of these compounds by oxygen led to 7-hydroxy-7-methyl-6,6a-dehydronoraporphines **13** in what may be a biomimetic process.



*Tetrahedron, 1994, 50, 11257*

**ALKYL RADICAL CYCLISATIONS OF METHYLENOCYCLOPROPANE DERIVATIVES**

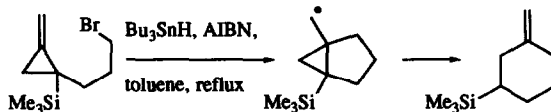
Christine Destabel,<sup>a</sup> Jeremy D Kilburn<sup>a\*</sup> and John Knight<sup>b</sup>

<sup>a</sup> Department of Chemistry, University of Southampton, Southampton, SO9 5NH, UK

<sup>b</sup> Glaxo Research and Development Limited, Park Road, Ware, Hertfordshire, SG12 0DP, UK

(Methylenecyclopropyl)propyl radicals underwent selective 5-*exo* cyclisation, followed by opening of the resulting cyclopropylmethyl radical to give methylenecyclohexanes.

(Methylenecyclopropyl)butyl radicals gave a mixture of products.



*Tetrahedron, 1994, 50, 11267*

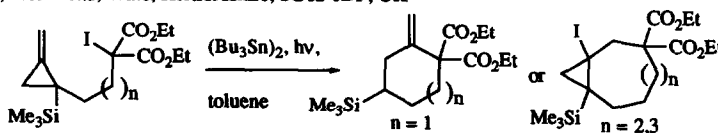
**MALONATE RADICAL CYCLISATIONS OF METHYLENOCYCLOPROPANE DERIVATIVES**

Christine Destabel,<sup>a</sup> Jeremy D Kilburn<sup>a\*</sup> and John Knight<sup>b</sup>

<sup>a</sup> Department of Chemistry, University of Southampton, Southampton, SO9 5NH, UK

<sup>b</sup> Glaxo Research and Development Limited, Park Road, Ware, Hertfordshire, SG12 0DP, UK

Cyclisations of methylenecyclopropyl substituted malonate radicals have been investigated. Highly regioselective 5-*exo*, 7-*endo* and 8-*endo* cyclisations are reported.



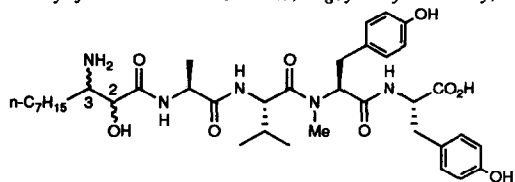
*Tetrahedron, 1994, 50, 11289*

**TOTAL SYNTHESIS OF MICROGININ, AN ANGIOTENSIN-CONVERTING ENZYME INHIBITORY PENTAPEPTIDE FROM THE BLUE-GREEN ALGA *MICROCYSTIS AERUGINOSA***

Fumiyoshi Matsuura, Yasumasa Hamada, and Takayuki Shioiri\*

Faculty of Pharmaceutical Sciences, Nagoya City University, Tanabe-dori, Mizuho-ku, Nagoya 467, JAPAN

*Tetrahedron*, 1994, 50, 11303



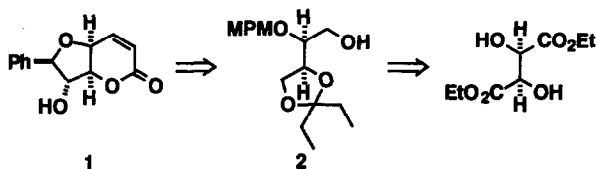
microginins	C-2	C-3
proposed structure 1	R	-
1a	R	R
1b	R	S
1c	S	S
revised structure 1d	S	R

**An Enantioselective Total Synthesis of (+)-Altholactone from Diethyl L-Tartrate**

Peter Somfai, Organic Chemistry 2, Chemical Center, Lund Institute of Technology, University of Lund, P. O. B. 124, S-221 00 Lund, Sweden

An enantioselective total synthesis of (+)-altholactone (1) from diethyl L-tartrate via the L-threitol derivative 2 is described.

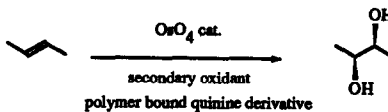
*Tetrahedron*, 1994, 50, 11315



**HETEROGENEOUS CATALYTIC ASYMMETRIC DIHYDROXYLATION OF OLEFINS: A NEW POLYMERIC SUPPORT AND A PROCESS IMPROVEMENT**

Dario Pini, Antonella Petri, Piero Salvadori\*

Centro CNR Macromolecole Stereordinate ed Otticamente Attive, Dipartimento di Chimica e Chimica Industriale, Università di Pisa, Via Risorgimento 35, 56126 Pisa, ITALY



*Tetrahedron*, 1994, 50, 11321

A new polymeric support containing a derivative of 4-chlorobenzoylquinine was found to give good enantioselectivity (up to 95%) in the catalytic asymmetric dihydroxylation of olefins.