

GRAPHICAL ABSTRACTS

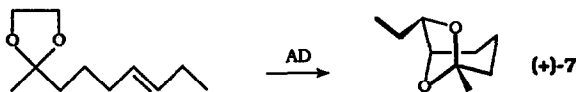
*Tetrahedron Lett.* 1993, 34, 5031

**(+)-EXO-BREVICOMIN VIA AN ORGANOMETALLIC BOULEVARD**

John A. Soderquist\* and Anil M. Rane

Department of Chemistry, University of Puerto Rico, Rio Piedras, Puerto Rico 00931

Through three isolated intermediates, either (1*R*,5*S*,7*R*)-(+)-exo-brevicomin, (+)-7, or its enantiomer, (-)-7 are prepared in 95% ee from allyl bromide in 61% overall yield employing organocuprate and Suzuki couplings and the Sharpless catalytic asymmetric dihydroxylation (AD).



*Tetrahedron Lett.* 1993, 34, 5035

**REDUCTIVE DEOXYGENATION BY Cp<sub>2</sub>ZrHCl: SELECTIVE FORMATION OF IMINES VIA ZIRCONATION/HYDROZIRCONATION OF AMIDES**

David J. A. Schedler, Alexander G. Godfrey and Bruce Ganem\*

Department of Chemistry, Baker Laboratory

Cornell University

Ithaca, New York 14853-1301 USA



Six examples: yields 45-86%

*Tetrahedron Lett.* 1993, 34, 5039

**THERMAL DECOMPOSITION OF DIMETHYLDIOXIRANE**

Leslie A. Hull\* and Lalbachan Budhai

Department of Chemistry, Union College, Schenectady, New York, 12308.

The E<sub>a</sub> for the thermal decomposition of dimethyldioxirane was determined.



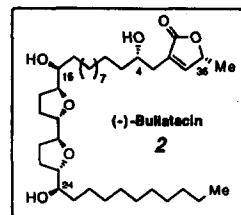
*Tetrahedron Lett.* 1993, 34, 5043

**SYNTHESIS OF (-)-BULLATACIN: THE ENANTIOMER OF A POTENT, ANTITUMOR, 4-HYDROXYLATED, ANNONACEOUS ACETOGENIN**

Thomas R. Hoye\* and Paul R. Hanson

Department of Chemistry, University of Minnesota, Minneapolis, MN 55455

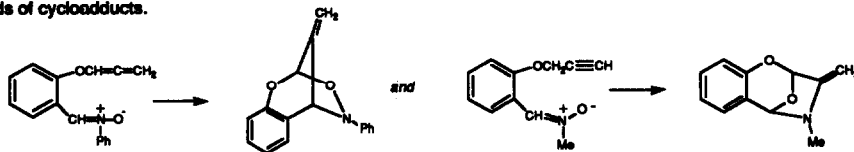
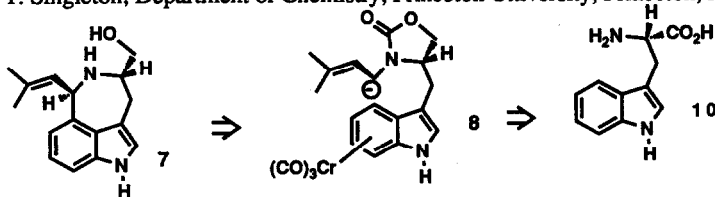
The first synthesis of a molecule containing all of the relative stereochemistry of one of the Annonaceous acetogenins, the title compound (2), is described.

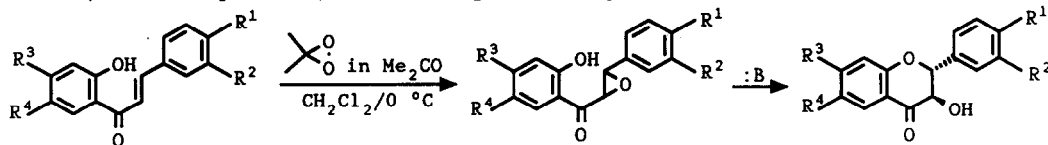


**INTRAMOLECULAR [3+2]-CYCLOADDITION OF NITRONES WITH ALLENES AND ALKYNES**

 Albert Padwa\*, Michael Meske, and Zhijie Ni  
 Department of Chemistry, Emory University, Atlanta, Georgia 30322

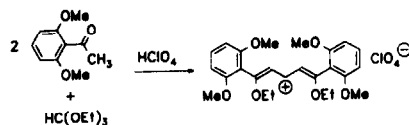
The intramolecular dipolar cycloaddition reactions of allenyl and alkynyl nitrones proceed smoothly to give high yields of cycloadducts.


**A NEW APPROACH TO INDOLE ALKALOIDS VIA INDOLE CHROMIUM COMPLEXES.** M. F. Semmelhack, Paul Knochel, and T. Singleton; Department of Chemistry, Princeton University, Princeton, NJ 08544

**A CONVENIENT AND GENERAL SYNTHESIS OF *trans*-3-HYDROXYFLAVANONES FROM CHALCONES BY DIMETHYLDIOXIRANE EPOXIDATION AND SUBSEQUENT BASE-CATALYZED CYCLIZATION**

 T. PATONAY\*, Dept. Org. Chem., Kossuth University, H-4010 Debrecen, Hungary  
 G. TÓTH, Inst. Gen. Anal. Chem., Technical University, H-1111 Budapest, Hungary  
 W. ADAM\*, Inst. Org. Chem., University Würzburg, D-97074 Würzburg, Germany

**An Isolable Dioxasubstituted Pentadienylum Ion**

Ulrich Lüning, Roland Baumstark, Chemisches Laboratorium, Albertstr. 21, D-79104 Freiburg (Germany)

Condensation of 2,6-dimethoxyacetophenone with triethyl orthoformate by perchloric acid does not yield a pyrylium salt but an isolable pentadienylum salt.

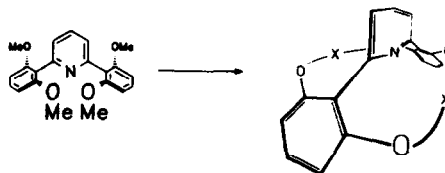


*Tetrahedron Lett.* 1993, 34, 5063

#### Concave Reagents - 14. Concave Pyridines with a 2,6-Diarylpyridine Core

Ulrich Lüning, Roland Baumstark, Wolfgang Schyja, *Chemisches Laboratorium, Albertstr. 21, D-79104 Freiburg (Germany)*

A new class of bimacrocyclic (concave) pyridines is accessible via a 2,6-diarylsubstituted pyridine which can be synthesized from two different starting compounds.



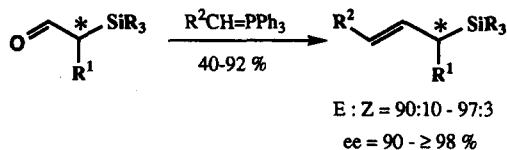
*Tetrahedron Lett.* 1993, 34, 5067

#### EFFICIENT ENANTIOSELECTIVE SYNTHESIS OF ALLYLSILANES BY WITTIG OLEFINATION OF $\alpha$ -SILYLALDEHYDES

Vidya Bhushan, Braj B. Lohray and Dieter Enders\*

*Institut für Organische Chemie, Rheinisch-Westfälische Technische Hochschule, Professor-Pirlet-Straße 1, D-52074 Aachen, Germany*

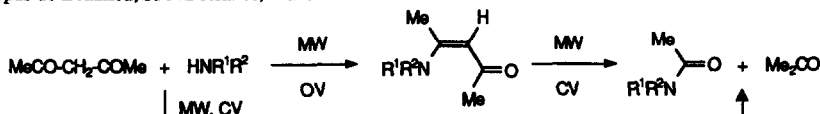
Allylsilanes of high enantiomeric purity are prepared in good yields and with high E : Z ratios from  $\alpha$ -silylaldehydes via Wittig olefination. The latter are obtained from simple aldehydes employing the SAMP/RAMP-hydrazone method.



*Tetrahedron Lett.* 1993, 34, 5071

#### Synthesis in Dry Media Coupled with Microwave Irradiation : Application to the Preparation of Enaminoketones.

Benno Rechsteiner, Françoise Texier-Boulet and Jack Hamelin\*. *Université de Rennes I, Groupe de Physicochimie Structurale 3, associé au C.N.R.S., Campus de Beaulieu, 35042 Rennes, France.*

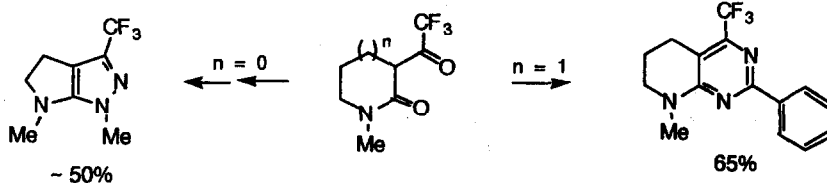


MW : Microwave. OV : Open Vessel. CV : Closed Vessel.

*Tetrahedron Lett.* 1993, 34, 5075

#### Trifluoromethylated Heterocycles from $\beta$ -Trifluoroacetyl-Lactams and -Benzolactams

Jean-Philippe Bouillon, Célâl Ates, Zdenek Janousek, Heinz G. Viehe\*  
*Laboratoire de Chimie Organique, Place L. Pasteur 1, B-1348 Louvain-la-Neuve*

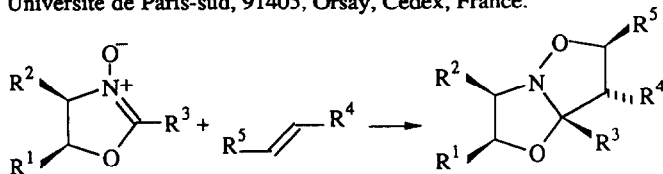


### Oxazolines N-oxides as powerful dipoles in Asymmetric [2+3] Cycloadditions

*Tetrahedron Lett.* 1993, 34, 5079

T. Béranger, C. André-Barrès, M. Kobayakawa and Y. Langlois.

Laboratoire de Synthèse des Substances Naturelles, Associé au CNRS, ICMO, Bât. 410, Université de Paris-sud, 91405, Orsay, Cedex, France.



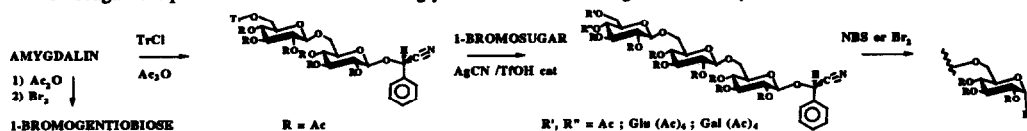
### Amygdalin as Building Block in Oligosaccharide Synthesis

*Tetrahedron Lett.* 1993, 34, 5083

Christophe Bliard\*, Georges Massiot and Serge Nazabadioko.

Laboratoire de Pharmacognosie, associé au CNRS, 51 Rue Cognacq-Jay, 51096 REIMS CEDEX, FRANCE

1-Bromosugars are produced from mandelonitrile glycosides and used in oligosaccharide synthesis.

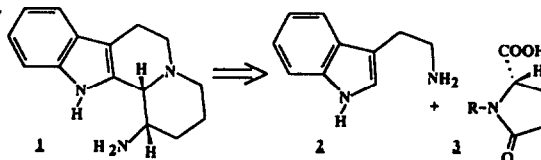


### A NEW DIASTEREOSELECTIVE SYNTHESIS OF (±) CIS 1-AMINOINDOLOQUINOLIZIDINE

*Tetrahedron Lett.* 1993, 34, 5085

Patricia Melnyk, Pierre Ducrot, Luc Demuynck, Claude Thal\*  
ICSN, CNRS, Avenue de la Terrasse, 91198 Gif-sur-Yvette, France

Unexpected Bischler-Napieralski reaction between tryptamine **2** and pyroglutamic acids **3** led to a new diastereoselective access to 1-aminoindolo[2,3-a]quinolizidine **1**.

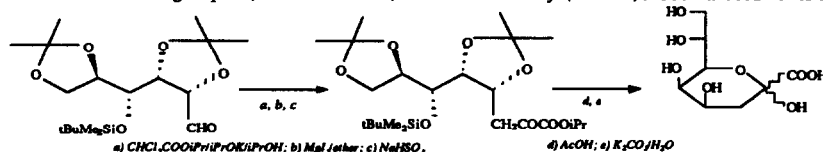


### A New Synthesis of 3-Deoxy-D-Manno-2-Octulosonic Acid (KDO)

*Tetrahedron Lett.* 1993, 34, 5089

Ph. Coutrot\*, C. Grison and M. Tabyaoui

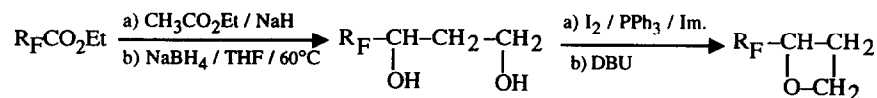
Laboratoire de Chimie Organique II, associé au CNRS, Université de Nancy I, BP 239, 54506 Vandoeuvre-les-Nancy, France



A KDO synthesis is described using in the key step a potassic anion derived from isopropyl dichloro- or dibromoacetate as an efficient synthetic equivalent to install an  $\alpha$ -ketoester unit onto a conveniently protected D-mannose.

## SYNTHESIS OF OXETANES WITH PERFLUORINATED-ALKYL SUBSTITUENTS

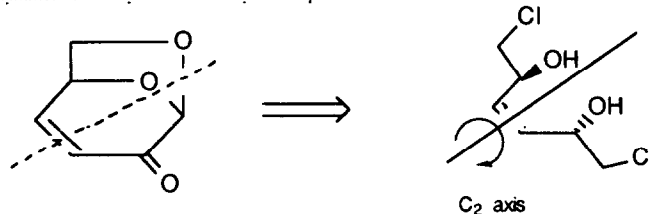
Marion Lanier, Raphael Pastor\*, and Jean G. Riess.  
 Laboratoire de Chimie Moléculaire, associé au CNRS, URA 426,  
 Université de Nice - Sophia Antipolis, Faculté des Sciences,  
 06108 Nice Cedex 2, France.



RF = C<sub>5</sub>F<sub>11</sub>, C<sub>7</sub>F<sub>15</sub>

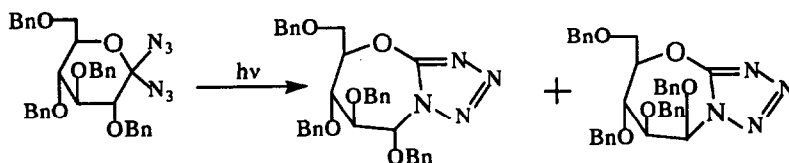
## A LEVOGLUCOSE-ONONE-DERIVED SYMMETRICAL CHIRON

Christophe Morin : Department of Chemistry, Université de Grenoble. 38402 St Martin d'Hères (France).  
 The conversion of levoglucosenone into a symmetrical allylic bis chlorhydrin is presented :



## Synthesis of 6-Oxa-1,5-Pentamethylenetetrazoles (Sugar Tetrazoles)

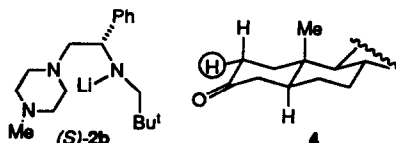
Masataka Yokoyama,\* Michio Matsushita, Sachiko Hirano, and Hideo Togo  
 Department of Chemistry, Faculty of Science, Chiba University, Yayoi-cho, Inage-ku, Chiba 263, Japan



## Determination of the Protons Eliminated in the Regioselective Deprotonation of Some Optically Active 3-Keto Steroids by a Chiral Lithium Amide

Masao Sobukawa and Kenji Koga\*  
 Faculty of Pharmaceutical Sciences, University of Tokyo, Hongo, Bunkyo-ku,  
 Tokyo 113, Japan

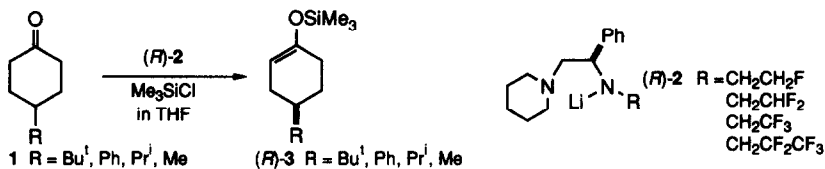
Deprotonation of optically active 3-cholestanone (4) by a chiral lithium amide ((S)-2b) in the presence of trimethylsilyl chloride gives Δ<sup>2</sup>-silyl enol ether as a major product by preferential elimination of 2α-hydrogen.



*Tetrahedron Lett.* 1993, 34, 5105

**Enantioselective Deprotonation of 4-Substituted Cyclohexanones by Chiral Chelated Lithium Amides Having a Fluorine-containing**

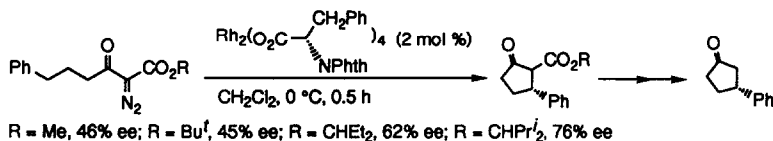
**Alkyl Group on Amide Nitrogen.** Kazumasa Aoki, Hiroshi Noguchi, Kiyoshi Tomioka, and Kenji Koga\*  
Faculty of Pharmaceutical Sciences, University of Tokyo, Hongo, Bunkyo-ku, Tokyo 113, Japan



*Tetrahedron Lett.* 1993, 34, 5109

**Enhancement of Enantioselectivity in Intramolecular C-H Insertion Reactions of  $\alpha$ -Diazo  $\beta$ -Keto Esters Catalyzed by Chiral Dirhodium(II) Carboxylates**

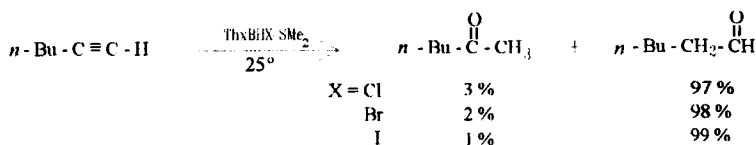
Shun-ichi Hashimoto, Nobuhide Watanabe, Tomohiro Sato,<sup>†</sup> Motoo Shiro,<sup>†</sup> and Shiro Ikegami\*  
Faculty of Pharmaceutical Sciences, Teikyo University, Sagamiko, Kanagawa 199-01, Japan  
<sup>†</sup>Shionogi Research Laboratories, Fukushima-ku, Osaka 553, Japan



*Tetrahedron Lett.* 1993, 34, 5113

**Thexylhaloborane-Methyl Sulfide as Monohydroboration Reagent. Directive Effects in the Hydroboration of Alkynes**

Jin Soon Cha\*, Soo Jin Min, Jong Mi Kim, and Oh Own Kwon  
Department of Chemistry, Yeungnam University, Kyongsan 712-749, Republic of Korea

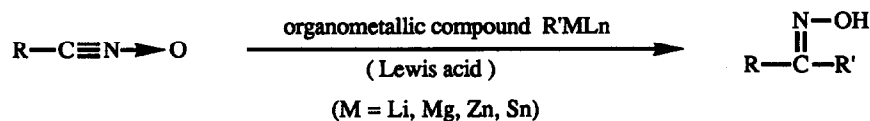


*Tetrahedron Lett.* 1993, 34, 5117

**The Reaction of Nitrile Oxide with Organometallic Compounds**

Jae Nyoung Kim, Hyoung Rae Kim, and Eung K. Ryu\*

Korea Research Institute of Chemical Technology, Daedeog-Danji, Daejeon 305-606, Korea

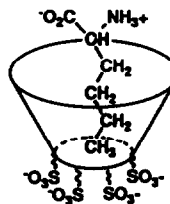


**Binding of Amino Acids in Water to a Highly Electron-Rich Aromatic Cavity of Pyrogallol or Resorcinol Cyclic Tetramer as  $\pi$ -Base**

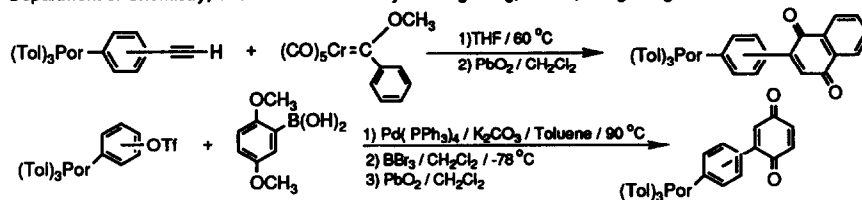
Kenji Kobayashi, Makio Tominaga, Yuji Asakawa, and Yasuhiro Aoyama\*

Department of Chemistry, Nagaoka University of Technology, Kamitomioka, Nagaoka, Niigata 940-21, Japan

Water-soluble pyrogallol or resorcinol cyclic tetramer binds not only aromatic but also aliphatic amino acids in water.

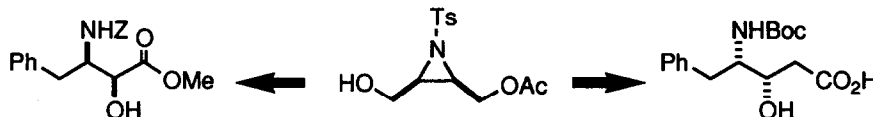


**SYNTHESIS OF MONOQUINONYL PORPHYRINS VIA BENZANNULATION OF FISCHER CARBENE COMPLEXES AND PALLADIUM CATALYSED CROSS COUPLING REACTION.** Chi-Shing Chan, Chi Ching Mak, Kin Shing Chan,\*  
Department of Chemistry, The Chinese University of Hong Kong, Shatin, Hong Kong.



**AN ENANTIODIVERGENT SYNTHESIS OF *THREO*  $\beta$ -AMINO ALCOHOLS: PREPARATION OF KEY INTERMEDIATES FOR BESTATIN AND THE RELATED PEPTIDES**

Takeo Kawabata, Yoshimitsu Kiryu, Yukio Sugiura, and Kaoru Fuji\*  
Institute for Chemical Research, Kyoto University Uji, Kyoto 611, Japan



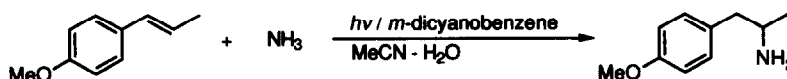
**Synthesis of Phenethylamine Moiety by Photoamination of Styrene Derivatives with Ammonia**

Toshiaki Yamashita,\*<sup>a</sup> Toshihiro Isami,<sup>b</sup> Shozo Nakano,<sup>b</sup> Kimiko Tanabe,<sup>b</sup> Masahide Yasuda,\*<sup>b</sup> and Kensuke Shimada<sup>b</sup>

<sup>a</sup>Department of Industrial Chemistry, Miyakonojo National College of Technology, Miyakonojo, Miyazaki 885, Japan

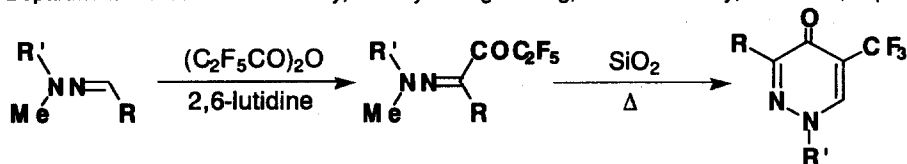
<sup>b</sup>Department of Materials Science, Faculty of Engineering, Miyazaki University, Gakuen-Kibanadai, Miyazaki 889-21, Japan

Photoamination of styrene derivatives with ammonia in the presence of *m*-dicyanobenzene gave phenethylamine derivatives.



### A FACILE AND CONVENIENT SYNTHESIS OF 5-TRIFLUOROMETHYL-4-PYRIDAZINONE FROM ALDEHYDE DIALKYLHYDRAZONES

Yasuhiro Kamitori, Masaru Hojo, Ryoichi Masuda, Toshiaki Ikemura, and Yoshiko Mori  
Department of Industrial Chemistry, Faculty of Engineering, Kobe University, Kobe 657, Japan

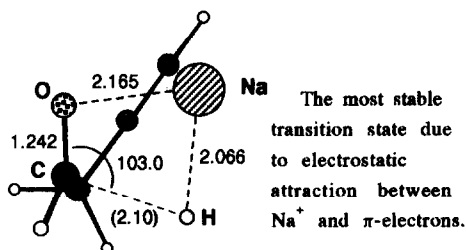


### Significant Electrostatic Effects in $\pi$ -Facial Stereoselection of Nucleophilic Addition Reactions to $\beta,\gamma$ -Unsaturated Carbonyl Compounds

Makoto Fujita,\* Satoshi Akimoto, and Katsuyuki Ogura\*

Department of Applied Chemistry, Faculty of Engineering, Chiba University  
1-33 Yayoicho, Inageku, Chiba 263, Japan

Ab initio MO calculations of the transition structures of NaH + HCOCH<sub>2</sub>C=CH showed the significance of electrostatic effects as supported by experimental studies.

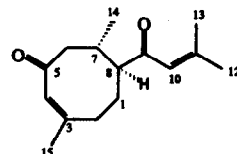


### Spartidienedione, a New Sesquiterpene with a Novel Carbon Skeleton from *Baccharis spartioides*.

Manuel Norte\*, Fernando Cataldo, Armando Sánchez and Antonio G. González, C.P.N.O. "Antonio González", Instituto Universitario de Bioorgánica. Universidad de La Laguna. 38206 La Laguna, Tenerife, Spain.

Patricio Rivera and Mariano Castillo, Departamento de Química, Facultad de Ciencias, Universidad de Chile, P.O. Box 653, Santiago, Chile

Spartidienedione **1**, a new sesquiterpene possessing a novel carbon skeleton, was isolated from the aerial part of *Baccharis spartioides* and its structure established by spectroscopical methods.



### An Unexpected Stereochemical Control of Alkene Formation by the Choice of Radical Initiator. The Reversible Addition of (Me<sub>3</sub>Si)<sub>3</sub>Si• Radicals to Alkenes.

Carla Ferreri, Dipartimento di Chimica Organica e Biologica, Università di Napoli, Via Mezzocannone 16, I-80134 Napoli, Italy. Marco Ballestri and Chrystostomos Chatgililoglu,\* I.Co.C.E.A., Consiglio Nazionale delle Ricerche, I-40064 Ozzano Emilia (Bologna), Italy

Tris(trimethylsilyl)silyl radical is effective in isomerizing some (Z)-olefins into their thermodynamically more stable (E)-isomers by an addition-elimination path.

