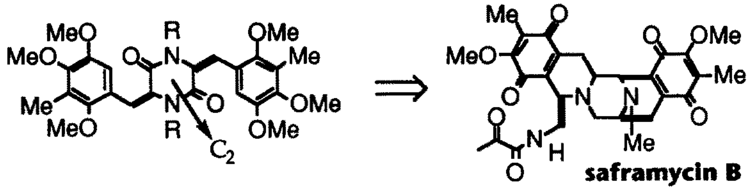
GRAPHICAL ABSTRACTS

Tetrahedron, **1991**, *47*, 5643

SAFRAMYCIN SYNTHETIC STUDIES

Thomas T Shawe and Lanny S Liebeskind*
Department of Chemistry, Emory University, Atlanta, Georgia 30322

A direct route to saframycin B relying on transformations of a key C-2 symmetric intermediate has been studied



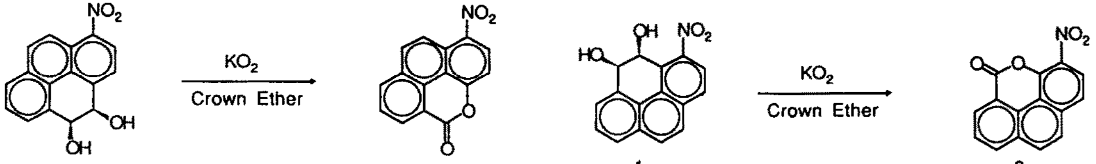
saframycin B

Tetrahedron, **1991**, *47*, 5667

SUPEROXIDE OXIDATION OF 1-NITROPYRENE-CIS-DIHYDRODIOLS

Samy Abdel-Baky, Chariklia Sotiriou-Leventis and Roger W. Giese. Department of Medicinal Chemistry in the College of Pharmacy and Allied Health Professions, and Barnett Institute of Chemical Analysis and Materials Science, Northeastern University, Boston, MA 02115

KO_2 oxidation of diols 1 and 3 gave lactones 2 and 4 respectively



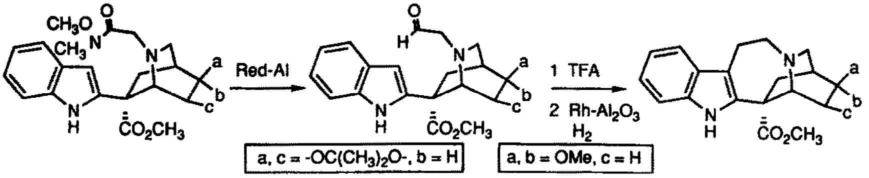
3 4 1 2

Tetrahedron, **1991**, *47*, 5673

AN IMPROVED REACTION SEQUENCE FOR ELECTROPHILIC CYCLIZATION OF METHYL 6-(2-INDOLYL)-2-AZABICYCLOOCT-7-ENE-6-CARBOXYLATES TO IBOGA ALKALOID ANALOGS

Richard J Sundberg and Kumar G Gadamasetti
Department of Chemistry, University of Virginia, Charlottesville, VA 22901

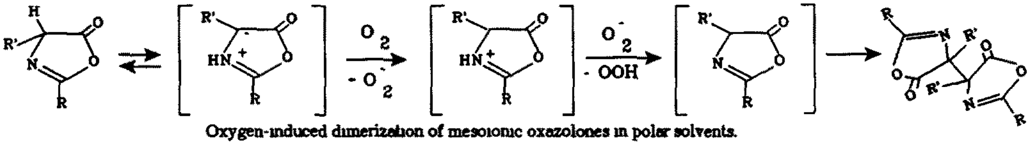
An improved reaction sequence for electrophilic cyclization to iboga alkaloids from indolylisoquinuclidines has been developed. Deethylcatharanthine and 15-oxygenated derivatives were prepared



Tetrahedron, **1991**, *47*, 5681

OXIDATION OF MESOIONIC OXAZOLONES BY OXYGEN

H. Rodriguez* (1), A. Marquez (1), C.A. Chuaqui* (2) and B. Gomez (1)
(1) Departamento de Quimica Organica, Facultad de Ciencias Quimicas y Farmaceuticas, Universidad de Chile, Casilla 233, Santiago, Chile; (2) Radiation Applications Research Branch, Whiteshell Laboratories, AECL Research, Pinava, Manitoba, ROE 1L0, Canada



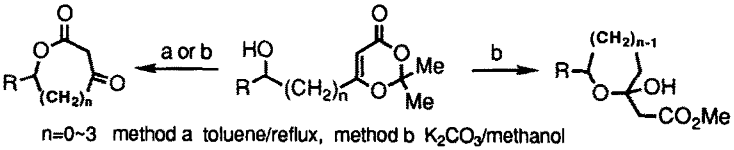
Oxygen-induced dimerization of mesoionic oxazolones in polar solvents.

Tetrahedron, **1991**, *47*, 5689

TWO LACTONE FORMATION REACTIONS FROM 1,3-DIOXIN-4-ONES HAVING HYDROXYALKYL GROUP AT THE 6-POSITION· DIFFERENCE IN RING OPENING AND CLOSURE

Masayuki Sato*, Jun-ichi Sakaki, Yoshiaki Sugita, Sanae Yasuda,
Hiroko Sakoda , and Chikara Kaneko*
Pharmaceutical Institute, Tohoku University, Aobayama, Sendai 980, Japan

Scope and mechanism of methods a and b are clarified



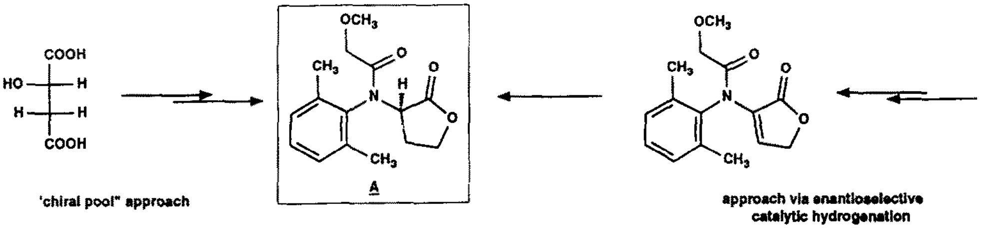
n=0~3 method a toluene/reflux, method b K_2CO_3/methanol

Tetrahedron, **1991**, *47*, 5709

TWO ENANTIOSELECTIVE SYNTHESES OF A PRECURSOR OF THE BIOLOGICALLY MOST ACTIVE ISOMER OF CGA 80000 (CLOZYLACON)

H P Buser*, B Pugin, F Spindler, M Sutter
Agricultural Division and Central Research Laboratories, CIBA-GEIGY Ltd , CH-4002 Basel, Switzerland

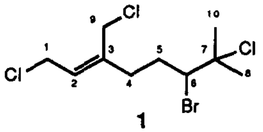
The aminobutyrolactone A was synthesized enantioselectively via the following two conceptually different routes



Tetrahedron, **1991**, *47*, 5717

FIVE NEW MONOTERPENES FROM THE MARINE RED ALGA *PORTIERIA HORNEMANNII*

Anthony D Wright[1], Gabriele M König[1], Otto Sticher[1] and Rocky de Nys[2]
[1]Department of Pharmacy, Swiss Federal Institute of Technology(ETH) Zurich,
[2]Department of Chemistry and Biochemistry, James Cook University, Townsville, Australia



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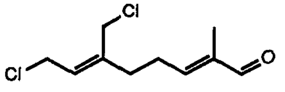

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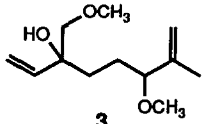

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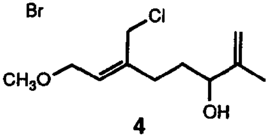

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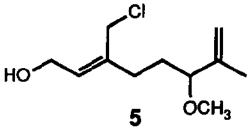


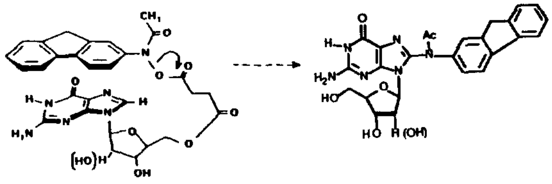
5

Tetrahedron, **1991**, *47*, 5725

ARYLAMIDATION DE LA GUANOSINE PAR UN AGENT CANCEROGENE, LE 2-AMINOFLUORENE. APPROCHE INTRAMOLECULAIRE.

E DEFRANCQ, A LETERME, N PELLOUX, M F LHOMME et J LHOMME*

Laboratoire d'Etudes Dynamiques et Structurales de la Sélectivité URA 332, Université Joseph Fourier, BP 53 X, 38041 GRENOBLE CEDEX - FRANCE

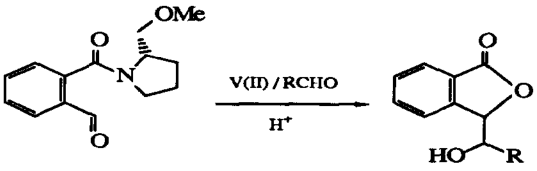


Tetrahedron, **1991**, *47*, 5737

DIASTEREO AND ENANTIOSELECTIVE SYNTHESIS OF 1,2-DIOLS BY VANADIUM (II) PROMOTED PINACOL CROSS COUPLING

R Annunziata, M Cinquini, F Cozzi, P Giaroni, and M Benaglia
Università di Milano (Italy) - Dipartimento di Chimica Organica e Industriale

The V(II) promoted pinacol coupling of chiral aromatic aldehyde **1** with aliphatic and alkoxy aldehydes afford syn-diols with good diastereo- and enantioselection



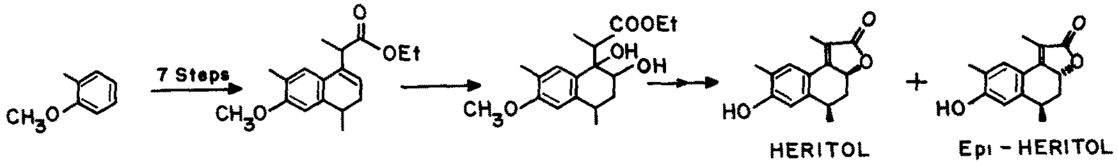
R = Pr-n, $PhCH_2$, Pr-i, C_6H_{11}-c, Bu-t, $PhCH_2OCH_2$, (S)- and (R)-CH(OR')R''

Tetrahedron, **1991**, *47*, 5759

SYNTHESIS OF (±)HERITOL

P.K. Zubaidha, Subhash P. Chavan, Uday S. Racherla and Nagaraj R. Ayyangar*
National Chemical Laboratory, Pune 411 008, INDIA.

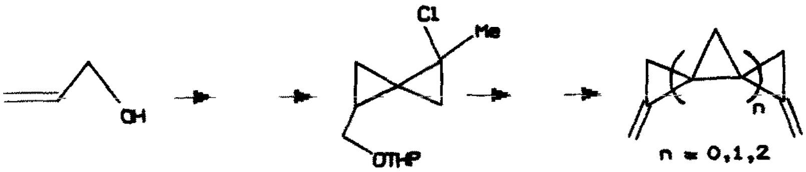
Synthesis of (±)Heritol and (±) epi-Heritol has been achieved by osmylation of the unsaturated ester as the key step to construct the butenolide moiety of the title compound.



Tetrahedron, **1991**, *47*, 5769

THE SYNTHESIS OF BISMETHYLENE DERIVATIVES OF TRIANGULANES

Kirill A. Lukin, Anna Yu. Masunova, Bogdan I. Ugrak, Nikolai S. Zefirov*
Department of Chemistry Moscow State University, Moscow, 119899, USSR

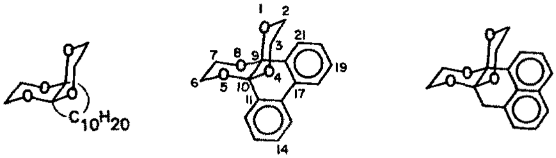


Tetrahedron, **1991**, *47*, 5781

STRUCTURE, CONFORMATION AND STEREOELECTRONICS OF 9,10-ANNELATED-1,4,5,8-TETRAOXADECALINS A MULTIDISCIPLINARY PROBE

Pinchas Aped[a], Benzion Fuchs[a*], Israel Goldberg[a*], Hanoch Senderowitz[a], Leah Schleifer[a], Evgeny Tartakovsky[a], Marc Anteunis[b] and Frans A. M Borremans[b]

[a]School of Chemistry, Tel-Aviv University, Ramat-Aviv, 69978 Tel-Aviv, Israel
[b]Department of Organic Chemistry, State University of Gent, B-9000 Gent, Belgium

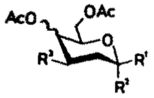


Tetrahedron, **1991**, *47*, 5797

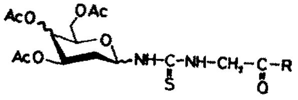
PREPARATION AND PROPERTIES OF 2-DEOXYGLYCOSYL ISOTHIOCYANATES

J. Fuentes, M. A. Pradera and I. Robina, Departamento de Química Orgánica, Facultad de Química, Universidad de Sevilla, Sevilla, Spain

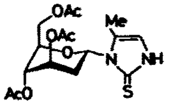
The syntheses and spectroscopic data of 2-deoxy-α and β-D-*arabino*-(D-*lyxo*)hexopyranosyl isothiocyanates, 2-deoxy hexopyranosylthioureas, and 2-deoxyhexopyranosyl-4-imidazoline-2-thione are reported.



R^1= H, NCS
R^2= NCS, H
R^3= OAc, Br



R= Ph, Me

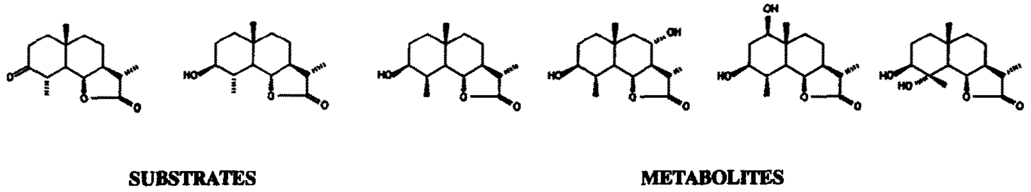


Tetrahedron, **1991**, *47*, 5811

BIOTRANSFORMATION OF 6β-EUDESMANOLIDES FUNCTIONALIZED AT C-3 WITH *CURVULARIA LUNATA* AND *RHIZOPUS NIGRICANS* CULTURES

Y Amate[a], J L. Bretón[b], A. García-Granados[a*], A. Martínez[a], M E. Onorato[a], A. Sáenz de Buruaga[a] and J M. Arias[c]; [a]Departamento de Química Orgánica, [c]Departamento de Microbiología, Facultad de Ciencias, Universidad de Granada,18071-Granada,[b]Instituto de Productos Naturales Orgánicos (C.S.I C.),La Laguna (Tenerife), Spain.

Biotransformation of substrates by *Rhizopus nigricans* gave these metabolites in acceptable yield Epimerization at C-4 was produced

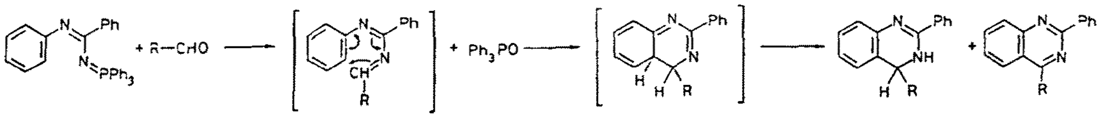


Tetrahedron, **1991**, *47*, 5819

A CONVENIENT SYNTHESIS OF QUINAZOLINE RING BY TANDEM AZA-WITTIG REACTION/ELECTROCYCLIC RING CLOSURE

Elisabetta Rossi*, Daniela Calabrese and Francesca Farma
Istituto di Chimica Organica, Facoltà di Farmacia, Viale Abruzzi, 42 - 20131 - Milano - Italy

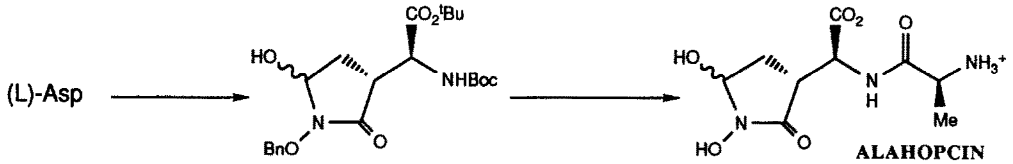
The reaction mechanism was proven by an independent and original synthesis of the 1,3-diazabuta-1,3-diene intermediate



Tetrahedron, **1991**, *47*, 5835

THE STEREOSPECIFIC SYNTHESIS OF ALAHOPCIN

Jack E Baldwin, Robert M Adlington, Christopher R A Godfrey,[a]
David W Gollins, and Christopher J Schofield
The Dyson Perrins Laboratory, University of Oxford, South Parks Road, Oxford, OX1 3QY
[a]ICI Agrochemicals, Jealott's Hill Research Station, Bracknell, Berkshire, RG12 6EY



We report the first total synthesis of the dipeptide antibiotic alahopcin, from (L)-aspartic acid, *via* a previously reported intermediate

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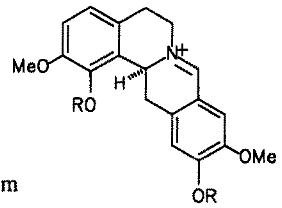
Tetrahedron, **1991**, *47*, 5841

A NOVEL OXIDATION STAGE IN THE CHEMISTRY OF PROTOBERBERINE ALKALOIDS. SYNTHESIS OF 7,8-DEHYDROBERBINES.

Rafael Suau*, M Victoria Silva and María Valpuesta
Departamento de Química Orgánica
Universidad de Málaga, Málaga, SPAIN



Cis B/C fused berbines are partially oxidized by iodine allowing the preparation of the 7,8-dehydroberbines derived from (-)-Caseamine, (-)-Caseadine and (-)-O-Methylcaseadine

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Tetrahedron, **1991**, *47*, 5847

STRUCTURAL STUDIES ON 1-(1-DEOXY-β-D-PSICOFURANOSYL) THYMINE

J Plavec[1], V Buet [2], A Grouiller[2], L. Koole[1] & J Chattopadhyaya[1]*

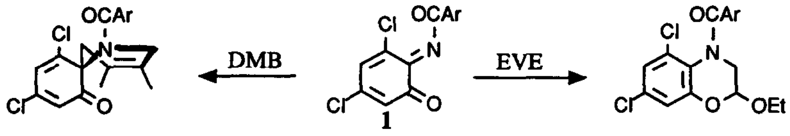
[1]*Department of Bioorganic Chemistry, Box 581, Biomedical Center, University of Uppsala, S-751 23 Uppsala, Sweden*
[2]*Laboratoire de Chimie Organique II, Université Lyon I, ESCIL, 43, Boulevard du 11 Novembre 1918, 69622 Villeurbanne, France*

Conformational analysis of a novel nucleoside analogue, 1-(1-Deoxy-β-D-psicofuranosyl)thymine (**3**), is described basing (i) on the vicinal proton-proton J-coupling constants by 500 MHz ^{1}H-NMR spectroscopy at different sample temperatures, (ii) the data analysis by pseudorotation concept, and (iii) finally an explicit model of the preferred conformation of **3** in solution has been defined through a set of molecular mechanics calculation using Allinger's MM2 force field and molecular modelling.

Tetrahedron, **1991**, *47*, 5857

SOLVENT EFFECT AS THE RESULT OF FRONTIER MOLECULAR ORBITAL INTERACTION.VI. THE DIELS ALDER REACTIONS OF AN N-ACYL-o-QUINONE MONOIMIDE BEHAVING AS DIENE OR DIENOPHILE.

G Desimoni, G Faita, and P P Righetti.
Dipartimento di Chimica Organica dell'Università, V le Taramelli 10, 27100 Pavia, Italy



o-Quinone monoimide 1 behaves as heterodienophile or heterodiene in the Diels-Alder reactions with dimethylbutadiene (DMB) and ethyl vinyl ether (EVE) The solvent effect of these two reactions was investigated

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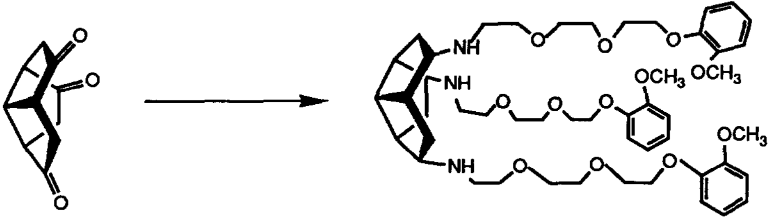
Tetrahedron, **1991**, *47*, 5867

PERHYDROTRIQUINACENIC HOSTS. 1. SYNTHESIS, COMPLEXATION AND TRANSPORT PROPERTIES OF TRIPODANDS OF *C₃* SYMMETRY.

Carmen Almansa, Albert Moyano and Félix Serratosa. Departament de Química Orgànica, Universitat de Barcelona, Facultat de Química, C Martí i Franquès, 1-11, E-08028 Barcelona (Spain)

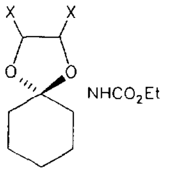
The synthesis, complexation and transport properties of tripodands of C_3 symmetry, derived from tricyclo[5 2 1 $0^{4,10}$]decane-2,5,8-trione through reductive amination, are described.



Tetrahedron, **1991**, *47*, 5877

ASYMMETRIC FORMATION OF C-N BONDS IN CHIRAL ENOL ETHERS

Stefania Fioravanti, M Antonietta Loreto, Lucio Pellacani, Paolo A. Tardella
Dipartimento di Chimica, Università "La Sapienza", Roma, Italy



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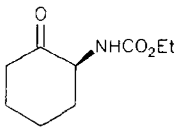

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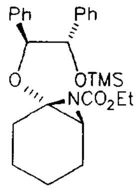


5

3 and/or **4** are the main products of the diastereoselective addition of EtO_2CN (generated at 120 °C or at room temperature from different precursors) to chiral enol ethers

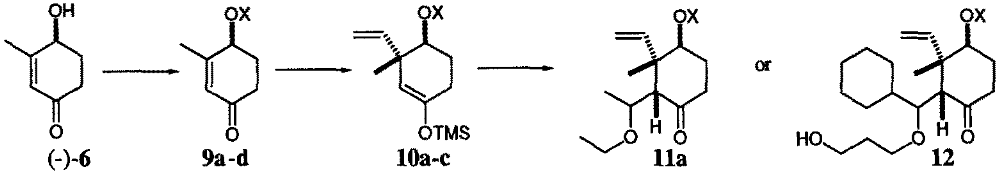
In one case the intermediate aziridine **5** is obtained in high diastereomeric purity

Tetrahedron, **1991**, *47*, 5883

SYNTHESIS OF OPTICALLY ACTIVE CYCLOHEXENOL DERIVATIVES *VIA* ENZYME CATALYZED ESTER HYDROLYSIS OF 4-ACETOXY-3-METHYL-2-CYCLOHEXENON.

Magnus Polla and Torbjorn Frejd*
Org Chem 2, Chemical Center, The Lund Institute of Technology, P O Box 124, S-221 00 Lund, Sweden

The optically active cyclohexenol derivatives **9a-d**, **10a-c**, **11a** and **12** are synthesized from (-)-**6**, which is obtained by PLE catalyzed hydrolysis of the corresponding racemic acetate.

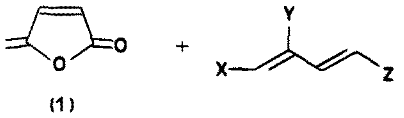


Tetrahedron, **1991**, *47*, 5895

Diels-Alder Reactions of Protoanemonin with Heterosubstituted Dienes. Synthesis of Polyfunctional Oxaspiro 4.5 decanes.

D. Alonso,[a] J. Font,[a] R. M. Ortuño,[a] J. d'Angelo,[b]
A. Guingant,[b] C. Bois.[c]
a: Universitat Autònoma de Barcelona, Bellaterra (Barcelona), Spain;
b: ESPCI, Unité Associée au CNRS, Nº476, Paris, France;
c: Université Pierre et Marie Curie, Paris, France.

Cycloadditons between protoanemonin (1) and several heterosubstituted dienes have been investigated; (1) has shown to be a good dienophile towards electron-rich dienes giving adducts that can be easily transformed into useful synthetic building blocks.



Tetrahedron, **1991**, *47*, 5901

INTRAMOLECULAR S_H2' MACROCYCLISATIONS

Jack E Baldwin, Robert M. Adlington, Mark B. Mitchell and Jeremy Robertson
The Dyson Perrins Laboratory, University of Oxford, South Parks Road, Oxford, OX1 3QY

The synthesis of 10-15 membered α–methylene macrocyclic lactones from functionalised allylstannanes is described. Attempts to synthesise analogous 6-9 membered lactones proved unsuccessful, resulting instead in the production of dilactones and AIBN derived adducts.