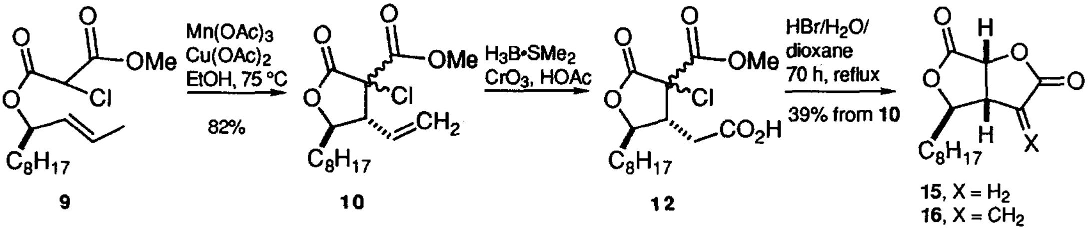
GRAPHICAL ABSTRACTS

Tetrahedron, **1993**, *49*, 9447

Oxidative Free-Radical Cyclization of Allylic α-Chloromalonates. Synthesis of (±)-Avenaciolide

Barry B. Snider and Bridget A. McCarthy, Department of Chemistry
Brandeis University, Waltham, MA 02254-9110, USA

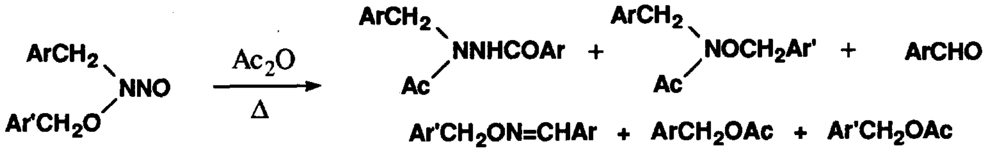


Tetrahedron, **1993**, *49*, 9453

N-NITROSOHYDROXYLAMINES III. REACTION OF N,O-DIBENZYL-N-NITROSOHYDROXYLAMINES WITH ACETIC ANHYDRIDE

Kunio Kano† and Jean-Pierre Anselme*
Department of Chemistry, University of Massachusetts at Boston, Harbor Campus, Boston, MA 02125, USA

The formation of 1-acetyl-2-aroylbenzylhydrazines from the reaction of N,O-dibenzyl-N-nitrosohydroxylamines with acetic anhydride appears to proceed *via* initial radical cleavage of the N-N bond.

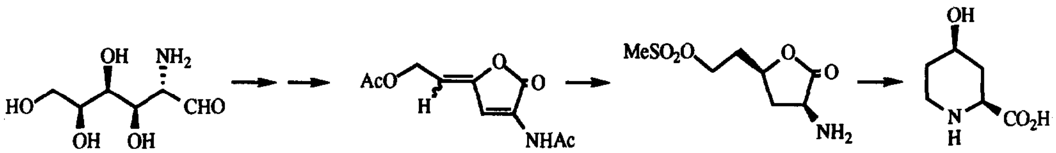


Tetrahedron, **1993**, *49*, 9459

DIASTEREOSELECTIVE SYNTHESIS OF *CIS*-4-HYDROXYPIPECOLIC ACID FROM D-GLUCOSAMINE.

Alejandro P. Nin, Oscar Varela* and Rosa M. de Lederkremer.

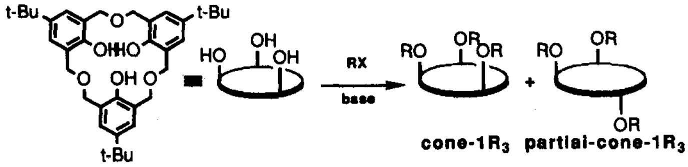
Departamento de Química Orgánica. Facultad de Ciencias Exactas y Naturales. Universidad de Buenos Aires. Ciudad Universitaria. Pabellón II, 1428, Buenos Aires (Argentina).



Tetrahedron, **1993**, *49*, 9465

Conformational Isomerism in and Binding Properties to Alkali-Metals and an Ammonium Salt of *O*-Alkylated Homotrioxacalix[3]arenes.

Koji Araki, Kousuke Inada, Hideyuki Otsuka, and Seiji Shinkai*
Department of Organic Synthesis, Faculty of Engineering, Kyushu University, Fukuoka 812, Japan

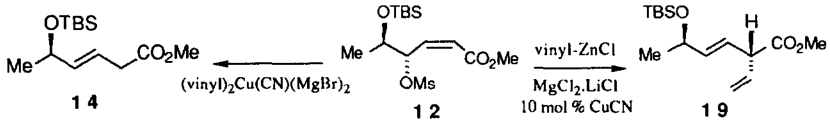


Tetrahedron, **1993**, *49*, 9479

REMARKABLE DIFFERENCE IN REACTIVITY OF ORDINARY VINYLCOPPER REAGENTS AND VINYLZINC HALIDE CONTAINING A COPPER SALT TOWARDS γ-MESYLOXY-α,β-ENOATES. SYNTHESIS OF HOMOCHIRAL 1,4-DIENES

Toshiro Ibuka,* Kazuo Nakai, Hiromu Habashita, Kiyoshi Bessho, and Nobutaka Fujii. Faculty of Pharmaceutical Sciences, Kyoto University, Kyoto 606, Japan
Yukiyasu Chounan and Yoshinori Yamamoto.* Department of Chemistry, Tohoku University, Sendai 980, Japan

Whereas reaction of the γ-mesyloxy-α,β-enoate **12** with ordinary organocopper reagents yielded only the reduction product **14** with an (*E*)-double bond at the β,γ-position, treatment of the same substrate with "higher order" zinc cuprate or vinylzinc halide by the addition of a catalytic amount of CuCN yielded the homochiral 1,4-diene **19**. In some cases, S_N2 products were also isolated as the minor products.

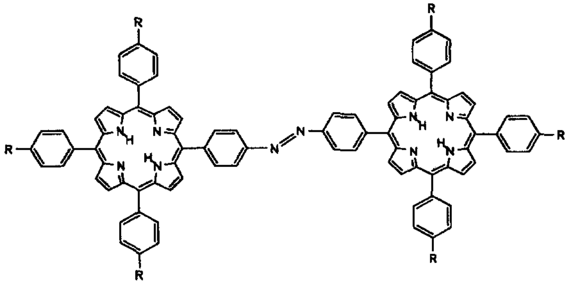


Tetrahedron, **1993**, *49*, 9489

SYNTHESIS AND SPECTROSCOPIC INVESTIGATION OF DIRECTLY AZOBENZENE BRIDGED DIPORPHYRINS

Hermann K. Hombrecher* and Kerstin Lüdtke
Institut für Chemie der Medizinischen Universität zu Lübeck, Ratzeburger Allee 160, D-23538 Lübeck, Germany.

The synthesis of azobenzene bridged diporphyrins is described

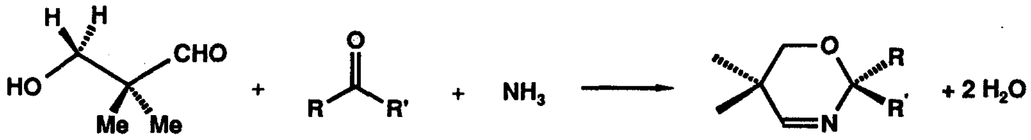


Tetrahedron, **1993**, *49*, 9495

A NEW 5,6-DIHYDRO-2*H*-1,3-OXAZINE SYNTHESIS VIA ASINGER-TYPE CONDENSATION

Alexander Dömling and Ivar K. Ugi*
Organisch-Chemisches Institut I der Technischen Universität München, Lichtenbergstr. 4, 85747 Garching, Germany

A new one-pot synthesis of the title compound is described in several examples.

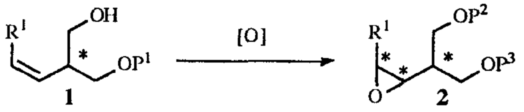


Tetrahedron, **1993**, *49*, 9501

STEREODIVERGENT SYNTHESIS OF *CIS* EPOXIDES DERIVED FROM ASYMMETRIZED 2-ALKENYL-1,3-PROPANEDIOLS

Giuseppe Guanti,* Luca Banfi, Valeria Merlo, Enrica Narisano, and Sergio Thea
Istituto di Chimica Organica dell'Università & C. N. R., Centro di Studio per la Chimica dei Composti Cicloalifatici ed Aromatici, Corso Europa 26, I-16132 Genova (Italy)

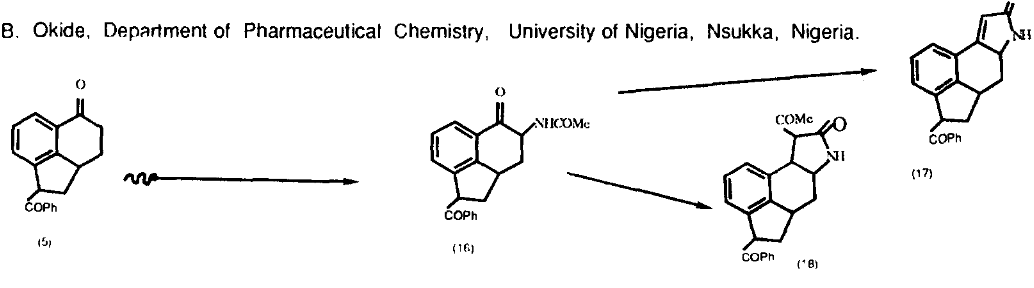
Cis epoxides **2** of any desired absolute configuration can be achieved through a stereospecific epoxidation of monoprotected homochiral homoallylic diols **1**, in turn obtained in an enantiodivergent manner *via* a chemoenzymatic procedure.



Tetrahedron, **1993**, *49*, 9517

EXPERIMENTS TOWARDS THE TOTAL SYNTHESIS OF FIVE-MEMBERED D-RING ERGOT ALKALOID ANALOGUES.

George B. Okide, Department of Pharmaceutical Chemistry, University of Nigeria, Nsukka, Nigeria.

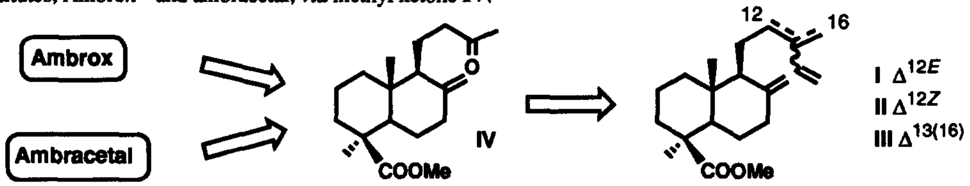


Tetrahedron, **1993**, *49*, 9525

AMBER-TYPE ODORANTS FROM COMMUNIC ACIDS

Alejandro F. Barrero,* Joaquín Altarejos, Enrique J. Alvarez-Manzaneda,
José M. Ramos and Sofía Salido
Departamento de Química Orgánica, Facultad de Ciencias, Universidad de Granada, 18071 Granada (Spain)

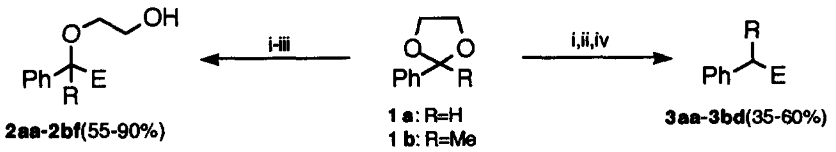
A mixture of the methyl esters of the three communic acids (I, II, III) has been used to prepare the ambergris substitutes, Ambrox® and ambracetal, *via* methyl ketone IV.



Tetrahedron, **1993**, *49*, 9535

REDUCTIVE OPENING OF 2-PHENYL-1,3-DIOXOLANES BY A NAPHTHALENE-CATALYSED LITHIATION: SYNTHETIC APPLICATIONS

J. F. Gil, D. J. Ramón and M. Yus*
Departamento de Química Orgánica, Facultad de Ciencias, Universidad de Alicante, Apdo. 99, 03080 Alicante, Spain



2aa-2bf(55-90%)

1 a: R=H
1 b: R=Me

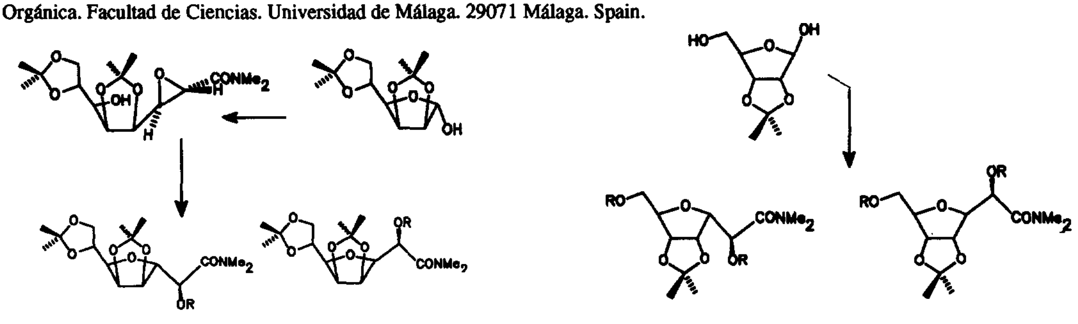
3aa-3bd(35-60%)

[*Reagents*: i, Li powder-$C_{10}H_8$ cat. (4 mol %); ii, $E^+=H_2O$, D_2O, Me_2CO, Et_2CO, $\overline{(CH_2)_4CO}$, $\overline{(CH_2)_5CO}$, $\overline{(CH_2)_7CO}$, -40°C; iii, H_2O, -40°C; iv, -40 to 20°C and then H_2O]

Tetrahedron, **1993**, *49*, 9547

REACTION OF MONOSACCHARIDE DERIVATIVES WITH STABILIZED SULFUR YLIDES. A HIGHLY STEREOSELECTIVE SYNTHESIS FOR C-GLYCOFURANOSIDES

María Valpuesta, Patricia Durante and Fidel J. López-Herrera. Departamento de Bioquímica, Biología Molecular y Química Orgánica. Facultad de Ciencias. Universidad de Málaga. 29071 Málaga. Spain.

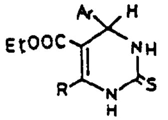


Tetrahedron, **1993**, *49*, 9561

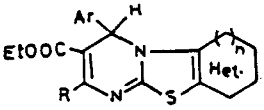
A CONVENIENT SYNTHESIS OF THIAZOLOPYRIMIDINES, THIAZOLODIPYRIMIDINES AND HETEROCYCLOTHIAZOLOPYRIMIDINES

Sherif M. Sherif, Mohamed M. Youssef, Khaled M. Mobarak and Abdel-Samei M. Abdel-Fattah[*]
Chemistry Department, Faculty of Science, University of Cairo, Giza, A.R.Egypt

A variety of polyfunctionally substituted thiazolopyrimidines, thiazolodipyrimidines and heterocyclothiazolopyrimidines have been synthesized via the reaction of the pyrimidine-2-thione derivatives 1 with some bifunctional reagents.



1



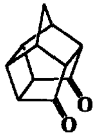
n = 0; 1

Tetrahedron, **1993**, *49*, 9573

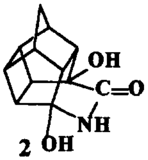
SYNTHESIS OF 8,11-DIHYDROXY[5.4.0.0^{2,6}.0^{3,10}.0^{5,9}]UNDECANE-8,11-LACTAM

F.J.C. Martins, A.M. Viljoen, H.G. Kruger and J.A. Joubert, Department of Chemistry, Potchefstroom University for CHE, Potchefstroom 2520, South Africa.

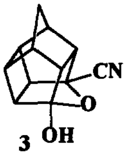
Treatment of 1 with aqueous sodium cyanide produced 2. The reaction proceeds via the intermediate 3. Structures of 2 and 4 are elucidated from ^{1}H and ^{13}C studies.



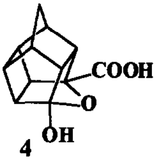
1



2



3



4

Tetrahedron, **1993**, *49*, 9581

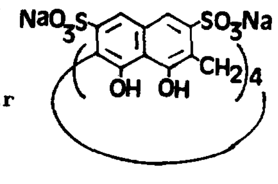
CONTRIBUTION OF GUEST-HOST CH-π INTERACTION TO THE STABILITY OF COMPLEXES FORMED FROM CYCLOTETRACHROMOTROPYLENE AS HOST AND ALCOHOLS AND SUGARS AS GUESTS IN WATER

Bo-Long Poh[‡] and Chi Ming Tan
School of Chemical Sciences, Universiti Sains Malaysia,
11800 Minden, Penang, Malaysia.

$$H + G \overset{K}{\rightleftharpoons} HG$$

G = Alcohol, sugar

H =



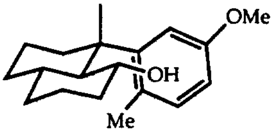
Tetrahedron, **1993**, *49*, 9593

ASYMMETRIC SYNTHESES WITH A NEW OPTICALLY ACTIVE PERHYDRONAPHTHALENE BASED CHIRAL AUXILIARY

David P.G. Hamon, Jeffrey W. Holman and Ralph A. Massy-Westropp

Department of Organic Chemistry, University of Adelaide,
GPO Box 498, Adelaide, SA, 50001, Australia

Esters of the conformationally restricted chiral auxiliary undergo highly diastereoselective reactions.

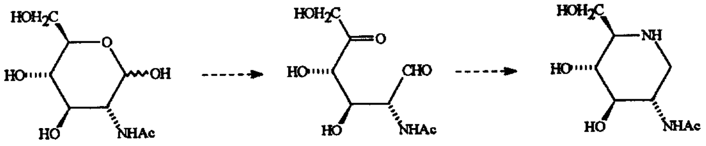


Tetrahedron, **1993**, *49*, 9605

2-ACETAMIDO-1,2-DIDEOXYNOJIRIMYCIN: AN IMPROVED SYNTHESIS

Richard H. Furneaux,* Graeme J. Gainsford, Gregory P. Lynch and Selwyn C. Yorke
Industrial Research Limited, PO Box 31-310, Lower Hutt, New Zealand.

The title compound was synthesised *via* a double reductive amination of a keto aldehyde readily obtainable from *N*-acetyl-D-glucosamine.

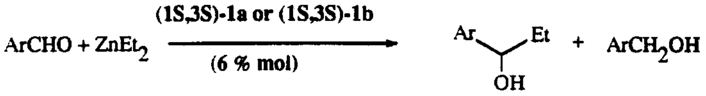


Tetrahedron, **1993**, *49*, 9613

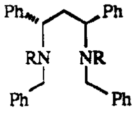
ADDITION OF DIETHYLZINC TO ARYL ALDEHYDES CATALYZED BY (1S,3S)-N,N¹-BIS[BENZYL]-1,3-DIPHENYL-1,3-PROPANEDIAMINE AND ITS DILITHIUM SALT: A MECHANISTIC RATIONALE INVESTIGATION

Dario Pini, Alberto Mastantuono, Gloria Uccello-Barretta, Anna Iuliano and Piero Salvadori
Centro CNR, Dipartimento di Chimica e Chimica Industriale, Università di Pisa, Via Risorgimento 35, 56126 Pisa, Italy.

The addition of $ZnEt_2$ to aryl aldehydes using, as chiral ligands, (1S,3S)-**1a** and (1S,3S)-**1b** in catalytic amount, has been investigated. From ^1H NMR and UV-CD data, experimental evidences about the structure of some reaction intermediates have been gained. A reasonable catalytic cycle is also proposed.



Ar = Ph,2-Naph, $oMeC_6H_4$, $pMeC_6H_4$, $oMeOC_6H_4$, $pMeOC_6H_4$, $pCF_3C_6H_4$



1

a : R = H

b : R = Li