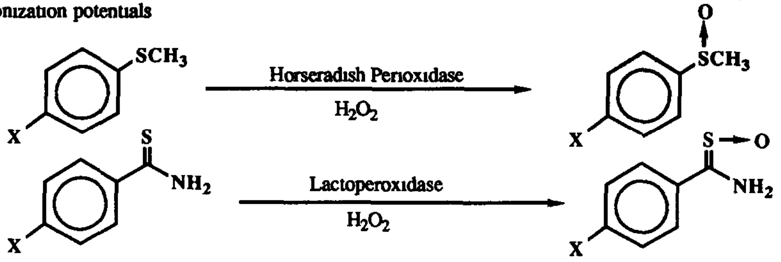
Tetrahedron, **1991**, *47*, 7525

APPLICATION OF SEMIEMPIRICAL MOLECULAR ORBITAL TECHNIQUES TO THE STUDY OF PEROXIDASE-MEDIATED OXIDATION OF PHENOLS, ANILINES, SULFIDES AND THIOBENZAMIDES

M Brewster, D Doerge, M Huang, J Kaminski, E Pop and N Bodor Pharmatec, Inc , Alachua, FL 32615, Ctr Drug Discovery, Univ of Florida, Gainesville, FL, Department of Envir Biochem , Univ of Hawaii, Honolulu, HI and Schering-Plough Research., Bloomfield, NJ

Reaction rates for a variety of enzymatically mediated oxidations were obtained and were found to be highly correlated with semi-empirical (AM1) ionization potentials

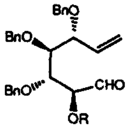


Tetrahedron, **1991**, *47*, 7537

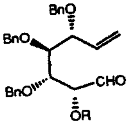
DIASTEREOSELECTIVITY IN THE INTRAMOLECULAR NITRONE, OXIME, AND NITRILE OXIDE CYCLOADDITION REACTIONS. SYNTHESIS OF AMINO INOSITOL DERIVATIVES AS α-GLUCOSIDASE INHIBITORS

Norton P. Peet, Edward W. Huber, and Robert A. Farr*
Merrell Dow Research Institute, 2110 East Galbraith Road, Cincinnati, OH 45215

The diastereoselectivity in the intramolecular 1,3-dipolar cycloaddition reactions of 4 and 5 (R=Bn, 4-MeOBn) was examined.



4

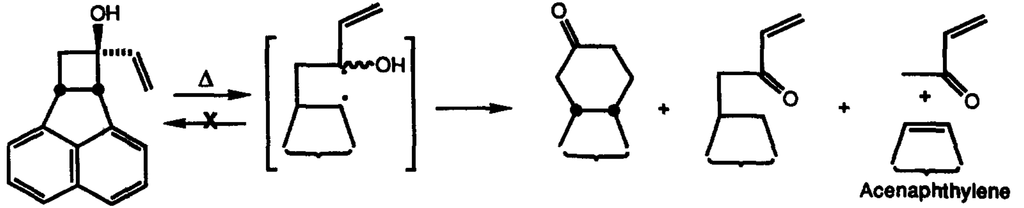


5

Tetrahedron, **1991**, *47*, 7551

THERMAL REACTIONS OF A 2-ARYL-1-VINYLCYCLOBUTANOL

Ken S. Rehder and William Reusch*, Department of Chemistry,
Michigan State University, East Lansing, Michigan 48824-1322



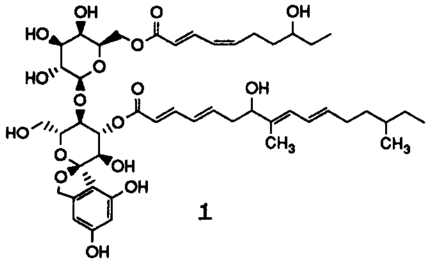
An oxy-Cope rearrangement leading to a bridged acenaphthene ring system was not found Similar results were observed with the exo-epimer, but the exo-phenyl analog did not react

Tetrahedron, **1991**, *47*, 7563

Structure Elucidation of L-687,781, A New β-1,3-D-Glucan Synthesis Inhibitor

Frank VanMiddlesworth*, Claude Dufresne, Jack Smith, and Kenneth E Wilson
Merck, Sharp & Dohme Research Laboratories, P O Box 2000, Rahway, N J 07065, U S A

A new β-1,3 glucan synthesis inhibitor, L-687,781 is produced by the cultivation of *Dictyochaeta simplex* ATCC 20960 Through NMR, mass spectroscopy, and degradation studies the structure of L-687,781 was determined to be 1

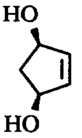


1

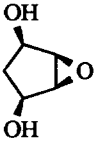
Tetrahedron, **1991**, *47*, 7569

LIPASE-CATALYZED TRANSESTERIFICATION OF meso-CYCLOPENTANE DIOLS

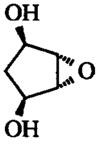
Fritz Theil*[a], Hans Schick[a], Gabriele Winter[b], and Gunter Reck[b], [a]Central Institute of Organic Chemistry,
[b]Analytical Center of the Central Institute of Physical Chemistry, Berlin-Adlershof, FRG



1a



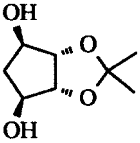
2a



3a

4a

5a



6a

The lipase-catalyzed acetylation of the *meso*-diols **1a** - **6a** with lipases of different origin is described

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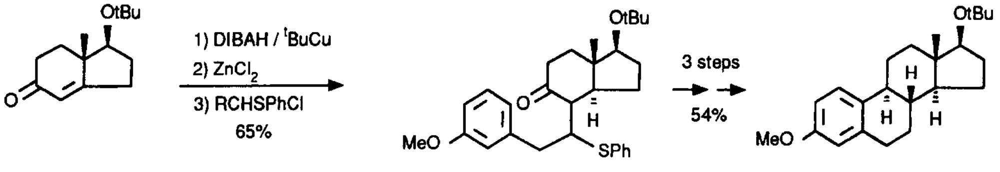
Tetrahedron, **1991**, *47*, 7583

ZINC(II)-CHLORIDE INDUCED THIOALKYLATION OF ALUMINIUM ENOLATES; ENANTIOSELECTIVE SYNTHESIS OF ESTRADIOL-3-METHYL-17-tert-BUTYL DIETHER

Ulrich Groth*, Thomas Kohler, and Thomas Taapken
Institut für Organische Chemie der Universitat Gottingen, Tammannstr 2, D-3400 Gottingen



R = $CH_2(m\text{-}OCH_3)C_6H_4$

Tetrahedron, **1991**, *47*, 7593

THE STRUCTURE OF BARBITURIC ACID AND ITS 5,5-DIETHYL DERIVATIVE AS REVEALED BY ^{15}N NUCLEAR MAGNETIC RESONANCE TECHNIQUES

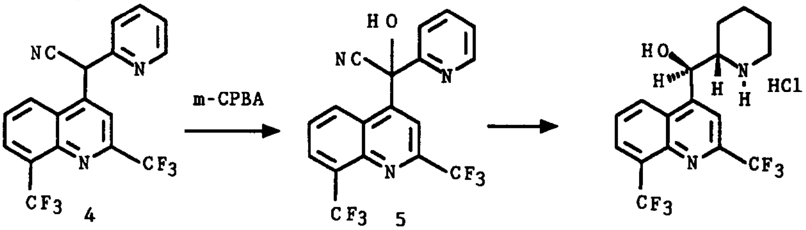
H.-D. Franken[a], H. Rüterjans[a,*], and F. Muller[b]; [a]Johann Wolfgang Goethe-Universitat Frankfurt (FRG), and [b]SANDOZ AGRO Ltd., Basel (Switzerland)

The structures of barbituric acid and veronal were deduced from the dependences on pH, solvent. and temperature of the ^{15}N chemical shifts, the pH dependence of the proton exchange reactions, and ^{13}C-^{1}H, ^{13}C-^{13}C, ^{13}C-^{15}N, and ^{15}N-^{1}H coupling constants.

Tetrahedron, **1991**, *47*, 7609

A STRAIGHTFORWARD AND HIGH YIELDING SYNTHESIS OF MEFLOQUINE

Solange Adam, F Hoffmann-La Roche AG CH-4002 Basel



Mefloquine 1

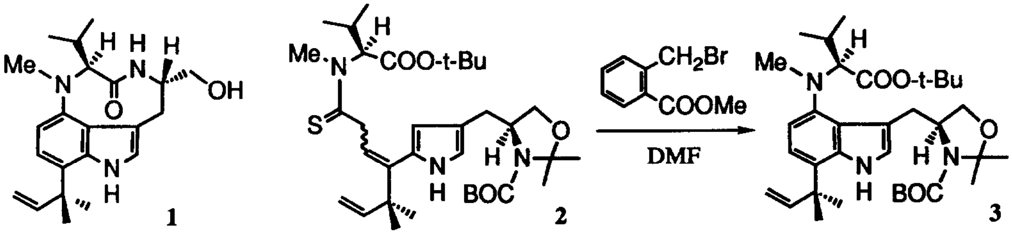
This new route to 1 is due to the unexpected outcome of the oxydation of 4 with m-CPBA leading to the cyanhydrine key-step 5

Tetrahedron, **1991**, *47*, 7615

THE SECOND GENERATION SYNTHESIS OF A TUMOR PROMOTER PENDOLMYCIN

Kazuaki Okabe and Mitsutaka Natsume
Research Foundation Itsuu Laboratory
2-28-10 Tamagawa, Setagaya-ku, Tokyo 158, Japan

The titled alkaloid 1 was stereospecifically synthesized using the thioamide indole cyclization reaction 2 → 3 as a key step

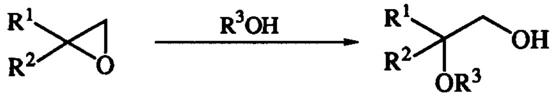


Tetrahedron, **1991**, *47*, 7625

OXIRANE RING-OPENING WITH ALCOHOL CATALYZED BY ORGANOTIN PHOSPHATE CONDENSATES. COMPLETE INVERSION AT TERTIARY AND BENZYLIC CENTERS

Junzo Otera,* Yoshihisa Niibo, and Hitosi Nozaki
Department of Applied Chemistry, Okayama University of Science, Ridai-cho, Okayama 700, Japan

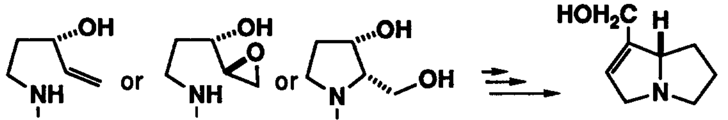
Oxirane ring-opening by alcohol proceeds with complete inversion of tertiary and benzylic carbon centers under the catalysis by organotin phosphate condensates



Tetrahedron, **1991**, *47*, 7635

AN ASYMMETRIC TOTAL SYNTHESIS OF (-)-SUPINIDINE

Hiroki Takahata,* Yasunori Banba, and Takefumi Momose*
Faculty of Pharmaceutical Sciences, Toyama Medical & Pharmaceutical University,
2630 Sugitani, Toyama 930-01, Japan

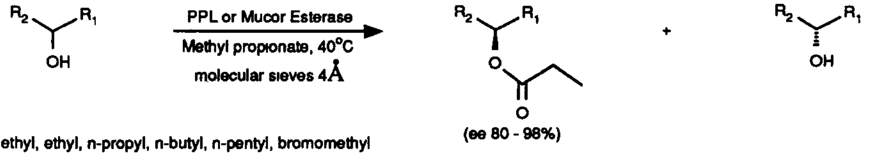


(-)-supinidine

Tetrahedron, **1991**, *47*, 7645

RESOLUTION OF SECONDARY ALCOHOLS BY ENZYME-CATALYZED TRANSESTERIFICATION IN ALKYL CARBOXYLATES AS THE SOLVENT

A J M Janssen, A J H Klunder and B Zwanenburg*
Department of Organic Chemistry, NSR Center for Molecular
Structure, Design and Synthesis, University of Nijmegen
Toernooiveld, 6525 ED NIJMEGEN, The Netherlands



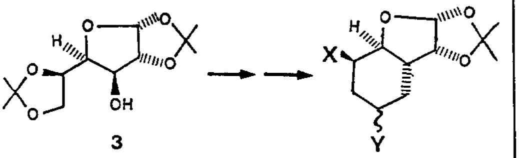
R_1 = methyl, ethyl, n-propyl, n-butyl, n-pentyl, bromomethyl
R_2 = e g n-hexyl, cyclohexyl, phenyl, benzyl, 2-naphtyl, norborn-5-en-2-yl or adamantyl
including bicyclic alcohols, such as 1-indanol and 1-tetralol

Tetrahedron, **1991**, *47*, 7663

CARBOCYCLES FROM CARBOHYDRATRES: SYNTHESIS OF SOME POLYFUNCTIONALIZED CYCLOHEXANE DERIVATIVES. PREPARATION OF USEFUL CHIRAL BUILDING BLOCKS.

José Marco-Contelles* and Angeles Martínez-Grau
Instituto de Química Orgánica General (CSIC)
Juan de la Cierva 3, 28006-Madrid, Spain

Starting from diacetone glucose **3** the synthesis of the annulated furanoses **1** and **2** *via* free radical cyclization strategy is described.



3

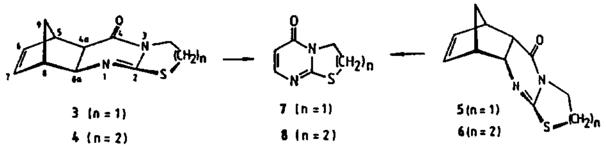
1 X, Y = H
2 X = OH
Y = CH_2COOCH_3

Tetrahedron, **1991**, *47*, 7673

SYNTHESIS OF PYRIMIDO[2,1-*b*]THIAZIN-6-ONE BY RETRO DIELS-ALDER REACTION

F Fülöp, I Huber, Á Szabó, G Bernáth*, P Sohár*, Institute of Pharmaceutical Chemistry, Albert Szent-Györgyi Medical University, H-6701 Szeged, POB 121, (Hungary), *Spectroscopic Department, EGIS Pharmaceuticals, H-1475 Budapest, POB 100, (Hungary)

From norbornene *diexo*- and *diendo*-*β*-amino acids with chloroalkyl isothiocyanates, compounds **3-6** were synthesized which, by retrodiene decomposition, furnished **7** and **8**



3 (n = 1)
4 (n = 2)

7 (n = 1)
8 (n = 2)

5 (n = 1)
6 (n = 2)

Tetrahedron, **1991**, *47*, 7677

CONFORMATION AND CONFIGURATIONAL ASSIGNMENT OF CIS AND TRANS 3,4-DIMETHYL-6-*t*-BUTYL-5,6-DIHYDRO-2*H*-THIOPYRAN-S-OXIDES AND S-METHYL CATIONS

Giovanna Barbarella(£), Alessandro Bongini($), Bianca F Bonini(&), Massimo Zambianchi(£) and Paolo Zani(&)

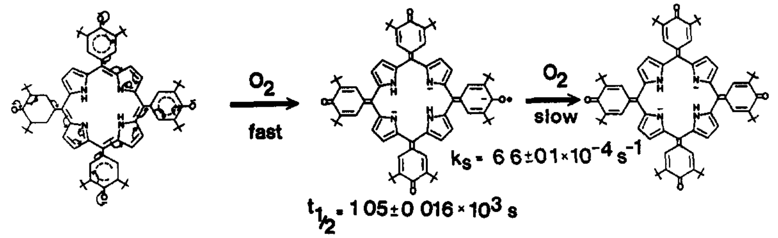
(£) Istituto dei Composti del Carbonio Contenenti Eteroatomi e loro Applicazioni, Consiglio Nazionale Ricerche, Via della Chimica 8, 40064 Ozzano E , Bologna, Italy, ($) Dipartimento di Chimica, Universita', Via Selmi 2, 40127 Bologna, Italy , (&) Dipartimento di Chimica Organica, Universita', Viale Risorgimento 4, 40100 Bologna, Italy

The conformation of the cis and trans 3,4-dimethyl-6-t-butyl-5,6-dihydro-2H-thiopyran-S-oxides and S-methyl cations is the half chair and a previously reported configurational assignment of the S-oxides should be reversed

Tetrahedron, **1991**, *47*, 7683

FACILE AERIAL OXIDATION OF A PORPHYRIN. PART 8. DECAY OF RADICAL FORMED DURING THE AERIAL OXIDATION OF MESO-TETRAKIS-(3,5-DI-t-BUTYL-4-HYDROXYPHENYL)PORPHYRIN.

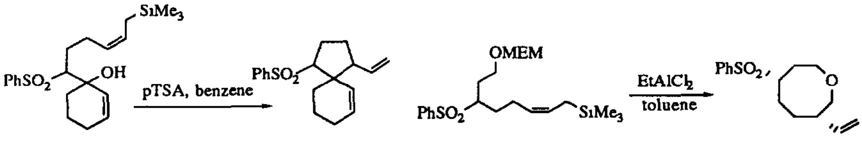
Lionel R. Milgrom*[a] and William D. Flitter[b]
[a]Molecular Probes Unit, Department of Chemistry, and [b]Department of Biochemistry, Brunel University, Uxbridge, Middlesex, UB8 3PH.



Tetrahedron, **1991**, *47*, 7689

Cyclisation Chemistry of Some Functionalised Allylsilanes

Reena Chakraborty and Nigel S Simpkins,* Department of Chemistry
University of Nottingham, University Park, Nottingham, NG7 2RD, UK



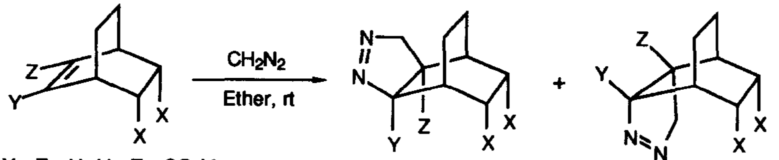
(4) (8) (10) (12) 53%

The cyclisation of some novel allylsilanes was examined, resulting in the stereoselective synthesis of one spiropentannulated product (8) and two medium ring ether sulphones, e g (12)

Tetrahedron, **1991**, *47*, 7699

DIASTEREOFACIAL SELECTIVITY IN 1,3-DIPOLAR CYCLOADDITIONS. REACTIONS OF DIAZOMETHANE WITH ENDO,CIS-5,6-DISUBSTITUTED BICYCLO[2.2.2]OCT-2-ENES.

Marina Burdisso and Remo Gandolfi
Dipartimento di Chimica Organica, Universita' di Pavia, V le Taramelli 10, 27100 Pavia, Italy



Y = Z = H , Y = Z = CO_2Me ,
Y = CO_2Me, Z = H
X = OH, OAc, OMs, CO_2Me

Anti
≥90%

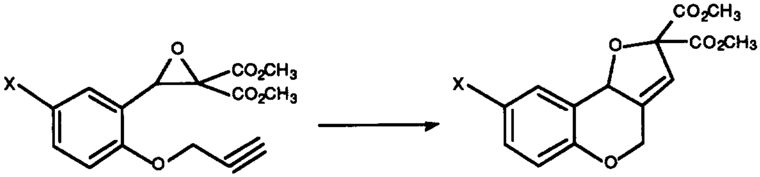
Syn
≤10%

Tetrahedron, **1991**, *47*, 7713

SYNTHESIS OF 2*H* ,4*H* , 9b*H*-*FURO* [3,2-*c*][1]BENZOPYRANS BY A NEW INTRAMOLECULAR CYCLOADDITION OF A CARBONYL YLIDE TO AN ACETYLENE

Bernaus, C , Font, J , de March, P *
Unitat de Química Orgànica Universitat Autònoma de Barcelona 08193 Bellaterra (Barcelona) Spain

Thermal treatment of oxiranes **1** and **4** affords furo[3,2-*c*]benzopyrans **5** and **6**



1, X=H **4**, X=Cl **5**, X=H **6**, X=Cl

Tetrahedron, **1991**, *47*, 7719

STUDY ON KETEN-ALKENE CYCLOADDITIONS AND CYCLOREVERSION OF CYCLOBUTANONES.

Abdulrahman H. Al-Husaini*, Mohammed Muqtar, and Sk. Asrof Ali.
Chemistry Dept., King Fahd University of Petroleum & Minerals, Dhahran 31261, Saudi Arabia.

A study of the addition reactions of tert-butylcyanoketene with some alkenes and cycloreversion of several cyclobutanones has been carried out.