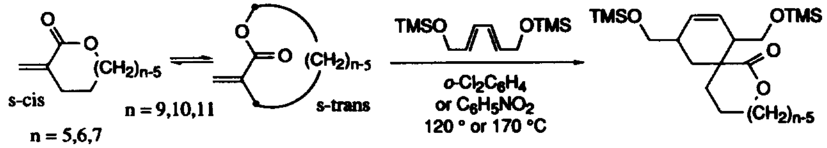
GRAPHICAL ABSTRACTS

Tetrahedron, **1994**, *50*, 10839

DIELS-ALDER REACTION OF α-SUBSTITUTED ACRYLATES AND α-(METHYLENE)LACTONES: CONFORMATION OF DIENOPHILE AND ENDO/EXO SELECTIVITY

Kei Takeda,* Ikuhiro Imaoka, and Eiichi Yoshii*
Faculty of Pharmaceutical Sciences, Toyama Medical and Pharmaceutical University, 2630 Sugitani, Toyama 930-01, Japan



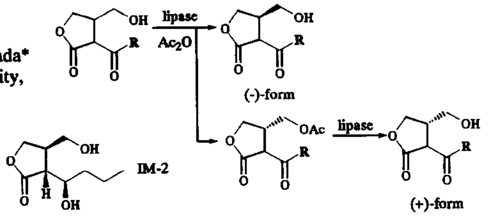
	endo/exo
n = 5-7	13:87 to 32:68
n = 9-11	37:63 to 57:43

Tetrahedron, **1994**, *50*, 10849

Enzymatic Resolution of 2-Acyl-3-hydroxymethyl-4-butanolide and Preparation of Optically Active IM-2, the Autoregulator from *Streptomyces* sp. FRI-5

Kimihiro Mizuno, Shohei Sakuda, Takuya Nihira, and Yasuhiro Yamada*
Department of Biotechnology, Faculty of Engineering, Osaka University, Yamada-oka 2-1, Suita-shi, Osaka 565, Japan

Racemic 2-acyl-3-hydroxymethyl-4-butanolide were resolved with lipases. The absolute configuration of IM-2 was deduced to be (2R, 3R, 6R).

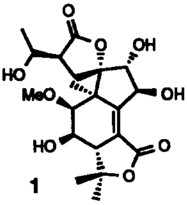


Tetrahedron, **1994**, *50*, 10859

Novel Picrotoxane Norditerpene Lactones from *Picrodendron baccatum*

Masako Nagahisa, Kazuo Koike, Mio Narita and Taichi Ohmoto*, School of Pharmaceutical Sciences, Toho University, Miyama, Funabashi, Chiba 274, Japan.

Three novel picrotoxane terpenoids, picrodendrins U (1), V (2) and W(3), have been isolated from*Picrodendron baccatum*. Their structures were determined by spectral, X-ray analysis and CD spectrum.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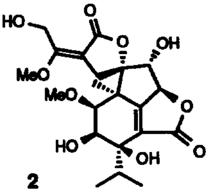
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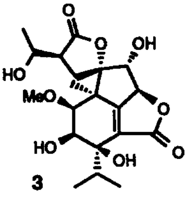
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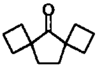
Tetrahedron, **1994**, *50*, 10867

SYNTHESIS AND REARRANGEMENT OF DISPIRO[3.1.3.2]-, DISPIRO[3.0.3.3]- AND DISPIRO[3.0.4.2]UNDECANES - NEW ENTRIES TO [3.3.3]PROPELLANES

Lutz Fitjer*, Andreas Kanschik and Marita Majewski

Institut für Organische Chemie der Universität Göttingen, Tammannstraße 2, D-37077 Göttingen, Germany

Dispiroundecanes **1-3** and **5-7** have been synthesized and rearranged to [3.3.3]propellanes **4** and **8**, respectively. Some consequences concerning the synthesis of naturally occurring triquinanes are discussed.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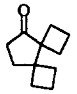
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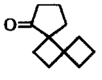
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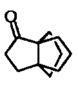
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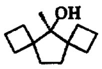
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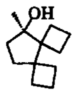
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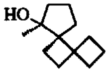
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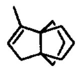
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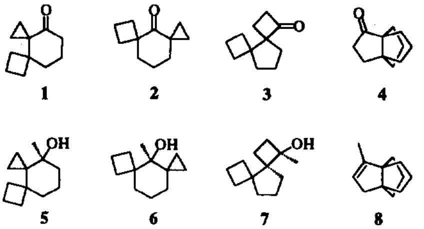
SYNTHESIS AND REARRANGEMENT OF DISPIRO[2.0.3.4]-, DISPIRO[3.0.3.3]- AND DISPIRO[2.1.3.3]UNDECANES - PREFERRED C_4-C_5 OVER C_3-C_4 AND C_4-C_3 OVER C_5-C_6 REARRANGEMENTS

Tetrahedron, **1994**, *50*, 10879

Lutz Fitjer*[a], Beate Rissom[a], Andreas Kanschik[a] and Ernst Egert*[b]

Institut für Organische Chemie der Universität Göttingen[a],
Tammannstraße 2, D-37077 Göttingen, Germany

Institut für Anorganische Chemie der Universität Göttingen[b],
Tammannstraße 4, D-37077 Göttingen, Germany



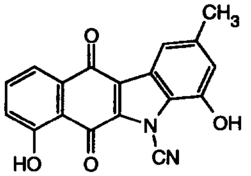
Dispiroundecanes 1-3 and 5-7 have been synthesized, and 2 and 5 rearranged to [3.3.3]propellanes 4 and 8, respectively. With 6 and 7, an initial C_4-C_5 ring enlargement and C_4-C_3 ring contraction, respectively, prevents a formation of 8.

INDOLOQUINONES, PART 3. PALLADIUM-PROMOTED SYNTHESIS OF HYDROXY-SUBSTITUTED 5-CYANO-5*H*-BENZO[*b*]CARBAZOLE-6,11-DIONES

Tetrahedron, **1994**, *50*, 10893

Hans-Joachim Knölker and *Noeleen O' Sullivan*; Institut für Organische Chemie,
Universität Karlsruhe, Richard-Willstätter-Allee, 76131 Karlsruhe, Germany

The synthesis of hydroxy-substituted 5-cyano-5*H*-benzo[*b*]carbazole-6,11-diones has been achieved by the following four-step sequence: addition of an arylamine to a naphthoquinone, palladium(II)-promoted oxidative cyclization, *N*-cyanation with cyanogen bromide, and chemoselective ether cleavage using pyridine hydrochloride.

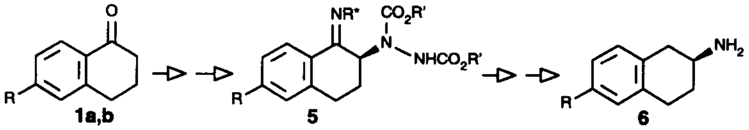


ASYMMETRIC SYNTHESIS OF ß-AMINOTETRALINS BY ELECTROPHILIC AMINATION

Tetrahedron, **1994**, *50*, 10909

Peter Gmeiner* and Bernd Bollinger; Pharmazeutisches Institut der Universität, An der Immenburg 4, 53121 Bonn, Germany

An asymmetric synthesis of **6** starting from **1a,b** is reported when chiral amino ethers were used as auxiliaries. The protected hydrazino imines **5**, readily obtained via electrophilic amination served as the key intermediates.

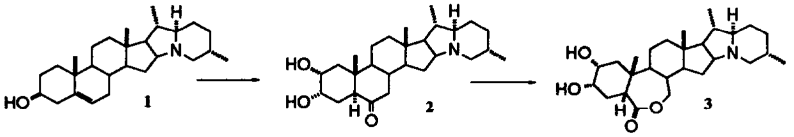


Partial Synthesis of Nitrogenous Brassinosteroid Analogues with Solanidane Skeleton

Tetrahedron, **1994**, *50*, 10923

Le thi Quyen, Günter Adam, and Klaus Schreiber
Institute of Plant Biochemistry, Weinberg 3, D-06120 Halle/Saale, Germany

The nitrogenous brassinosteroid analogues 2α,3α-dihydroxy-5α,22α*H*,25ß*H*-solanidan-6-one (**2**) and 2α,3α-dihydroxy-6,7-seco-5α,22α*H*,25ß*H*-solanidano-6,7-lactone (**3**) have been synthesized from the *Solanum* steroid alkaloid solanidine (**1**).



Tetrahedron, **1994**, *50*, 10933

KINETICS AND MECHANISM OF OXIDATION OF SOME SUBSTITUTED TRANS-CINNAMIC ACIDS BY PYRIDINIUM CHLOROCHROMATE — A NON-LINEAR HAMMETT PLOT

Rajagopalan T.Sabapathy Mohan, Mannathasamy Gopalakrishnan and Mahalingam Sekar
Department of Chemistry, Annamalai University,Annamalainagar - 608 002 (INDIA)

The order with respect to [PCC] and [oxalic acid] in one each. The order in [H^+] and [Substrate] is fraction Both electron-releasing and withdrawing substituents facilitate the Oxidation rate.

$$C_6H_5\text{-}CH{=}CH\text{-}CO_2H + 2C_6H_5NHCrO_3Cl + (CO_2H)_2 \xrightarrow{H^+} C_6H_5CHO + OHCCO_2H + 2CO_2 + 2\,C_6H_5NHCl + H_2O + Cr_2O_3$$

Tetrahedron, **1994**, *50*, 10945

KINETICS AND MECHANISM OF Os(VIII)-CATALYSED OXIDATION OF SOME SUBSTITUTED TRANS-CINNAMIC ACIDS BY CHLORAMINE-T IN ALKALINE MEDIUM — A NON-LINEAR HAMMETT PLOT

Rajagopalan T.Sabapathy Mohan, Mannathasamy Gopalakrishnan and Mahalingam Sekar
Department of Chemistry, Annamalai University,Annamalainagar-608 002 (INDIA)

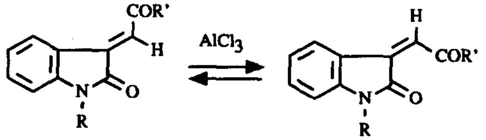
The reaction is first order in [CAT] and [OsO_4] and inverse first order in [OH^-]. A plot of logk verses σ gives a 'V' shaped curve.

$$C_6H_5\text{-}CH{=}CH\text{-}CO_2H + 2CH_3C_6H_5\text{-}SO_2\text{-}NCl^-Na^+ + 2H_2O \xrightarrow[Os(VIII)]{OH} C_6H_5CHO + OHCCO_2H + 2CH_3C_6H_5\text{-}SO_2NH_2 + 2NaCl$$

Tetrahedron, **1994**, *50*, 10955

AN EASY LEWIS ACID-MEDIATED ISOMERIZATION FROM (*E*)- TO (Z)-OXOINDOLIN-3-YLIDENE KETONES.

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



(*E*)-1,4,5 (Z)-1,4,5

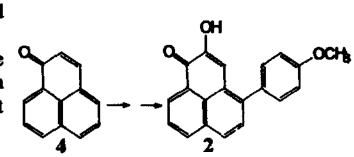
(*E*)-2-oxoindolin-3-ylidene ketones can be easily isomerized to their (Z)-isomers by $AlCl_3$ at r.t. in CH_2Cl_2. The behaviour of the unsaturated dicarbonyl framework as a bidentate ligand can be the key-step of the isomerization.

Tetrahedron, **1994**, *50*, 10963

PHENALENONE-TYPE PHYTOALEXINS FROM *MUSA ACUMINATA*. SYNTHESIS OF 4-PHENYL-PHENALENONES

J. G. Luis[a], W. Q. Fletcher[b], F. Echeverri[b], T. A. Grillo[a].
[a]C.P.N.O. "Antonio González", Instituto de Bio-Orgánica, Universidad de La Laguna, Carretera de La Esperanza 2, La Laguna, 38206, Tenerife, Canary Islands, Spain; [b]Universidad de Antioquia,Medellín, Colombia.

The structure of two new phenalenone-type phytoalexins from *Musa acuminata*, elicited by the fungus Fusarium oxysporum, were established.The synthesis of these compounds, unknown until now either as natural or synthetic substances was acomplished by a simple and direct route which constitutes the first synthetic approach to 2-hydroxy-4-phenyl-phenalen-1-ones.



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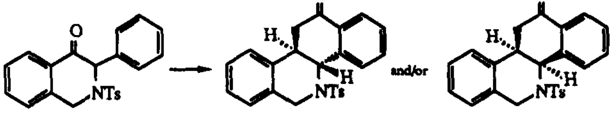
Tetrahedron, **1994**, *50*, 10971

Preparation of a 3-Phenyl-4(3H)-isoquinolinone and its Transformation in 12(11H)-Benzo[*c*]phenanthridinone Derivatives. Crystal Structure Determinations.

Ana M. González-Cameno,[1] Dolores Badía,[1] Esther Domínguez, [1] M.Karmele Urtiaga, [2] M. Isabel Arriortua,[2] and Xavier Solans[3]
[1]Dpt. Química Orgánica and [2]Dpt.Mineralogía-Petrología, Facultad de Ciencias, Universidad del País Vasco, P.O.Box 644-48080 Bilbao. Spain.[3]Dpt. Cristalografía, Mineralogía y Depósitos Minerales, Universidad de Barcelona, Martí i Franqués s/n, 08028 Barcelona. Spain

A procedure for the preparation of 12(11H)-benzo[c]phenanthridinone derivatives involving the initial formation of 3-phenyl-4(3H)-isoquinolinone is described. The structures of these compounds are established by X-ray diffraction analyses

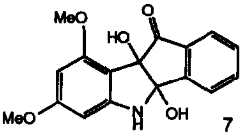


Tetrahedron, **1994**, *50*, 10983

Reactions of Ninhydrin with Activated Anilines: Formation of Indole Derivatives

David St.C. Black[a]*, Michael C. Bowyer, Glenn C. Condie, Donald C. Craig and Naresh Kumar
[a]*School of Chemistry, University of New South Wales, Sydney, 2052, Australia.*

In benzene, ninhydrin undergoes electrophilic substitution at C2 of 3,5-dimethoxyaniline leading to the indeno[1,2-b]indole (7): the corresponding reaction in water undergoes electrophilic substitution at C4 to give compound (11).



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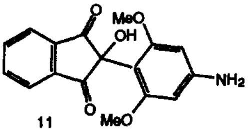

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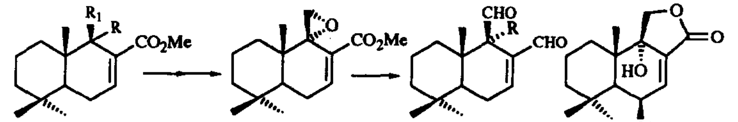
Tetrahedron, **1994**, *50*, 10995

CHEMISTRY OF ZAMORANIC ACID. PART V. HOMOCHIRAL SEMISYNTHESES OF ACTIVE DRIMANES: PERENIPORIN B, POLYGODIAL AND WARBURGANAL.

Julio G. Urones*, Isidro S. Marcos, Belén Gómez Pérez, David Díez, Anna M. Lithgow, Patricio M. Gómez, Pilar Basabe and N. M. Garrido. Dpto. Química Orgánica, Pza. de los Caídos 1-5, 37008, Salamanca, Spain



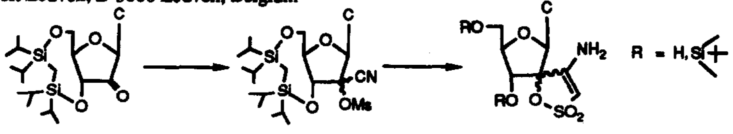
1 R=H, R_1=-(CH$_2$)$_2$-C(Me)=CH-CH$_2$OH   22
6 R,R_1=CH$_2$
2 R=H
3 R=OH
4

The key intermediate for the preparation of pereniporin B **4**, polygodial **2** and warburganal **3** is the epoxide **22** that was obtained from diene **6** by chemoselective epoxidation. The latter was prepared from zamoranic acid methyl ester **1**.

Tetrahedron, **1994**, *50*, 11013

SYNTHESIS OF [1-[3',5'-BIS-*O*-(*t*-BUTYLDIMETHYLSILYL) -β-D-ARABINO- AND β-D-RIBOFURANOSYL]CYTOSINE]-2'-SPIRO-5"-(4"-AMINO-1",2"-OXATHIOLE-2",2"-DIOXIDE). ANALOGUES OF THE HIGHLY SPECIFIC ANTI-HIV-1 AGENT TSAO-T.

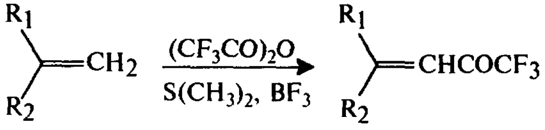
Sonsoles Velázquez, María-Luisa Jimeno, Jan Balzarini and María-José Camarasa
Instituto de Química Médica (C.S.I.C.), Juan de la Cierva 3, 28006-Madrid, Spain and Rega Institute for Medical Research, Katholieke Universiteit Leuven, B-3000 Leuven, Belgium



Tetrahedron, **1994**, *50*, 11023

PERFLUOROACYLATION OF ALKENES

V.G.Nenajdenko[†], I.D. Gridnev[‡], E.S.Balenkova[†]
[†]Department of Chemistry, Moscow State University, Moscow 119899, Russia
[‡]N. D. Zelinsky Institute of Organic Chemistry, Moscow, Russia

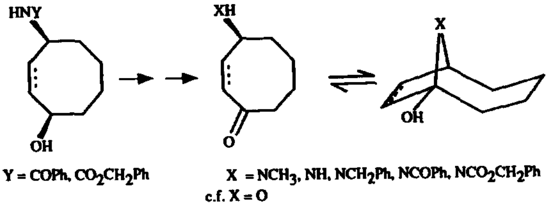


Tetrahedron, **1994**, *50*, 11039

SYNTHESIS AND TAUTOMERISM OF 9-AZABICYCLO-[4.2.1]NONAN-1-OLS (NORHOMOTROPAN-1-OLS), N-ALKYL AND 7,8-DEHYDRO- DERIVATIVES, AND OXABICYCLIC ANALOGUES

Craig R. Smith, David E. Justice and John R. Malpass,*
Department of Chemistry, University of Leicester,
Leicester LE1 7RH, U.K.

Routes to the title compounds are described and the ratios of monocyclic and bicyclic tautomers are determined using NMR spectroscopy



Tetrahedron, **1994**, *50*, 11057

Chiral Acetals in Organic Synthesis: Regioselective Synthesis of 2- and 3-Hydroxy Acetals from 2,3-Olefinic Acetals. Reinvestigation and Further Applications.

Yashwant D. Vankar, M.Venkatram Reddy and Narayan C. Chaudhuri
Department of Chemistry, Indian Institute of Technology, Kanpur-208016, India

Reactions of chiral and achiral 2,3-olefinic acetals have been described.