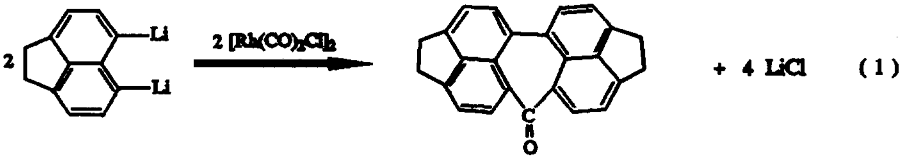
GRAPHICAL ABSTRACTS

A Novel Cyclocarbonylation Reaction: Synthesis of 1,2,8,9-Tetrahydrocyclohepta[1,2,3-*fg*:4,5,6-*f'g'*]diacenaphthylene-5-one.

Tetrahedron, 1994, *50*, 2361

Frank Bottomley,[§] Jinhua Chen[*§], Rongyao Chen,
[§] Department of Chemistry, University of New Brunswick, Bag Service 45222, Fredericton, New Brunswick, Canada, E3B 6E2
Institute of Chemistry, Academia Sinica, Beijing, People's Republic of China, 100080.

1,2,8,9-Tetrahydrocyclohepta[1,2,3-*fg*:4,5,6-*f'g'*]diacenaphthylene-5-one was synthesized by the reaction of 5,6-dilithioacenaphthene with $[Rh(CO)_2Cl]_2$.

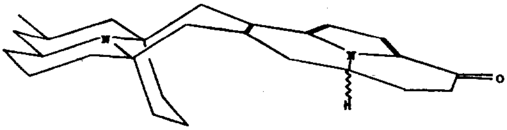


CHILOCORINE: HEPTACYCLIC ALKALOID FROM A COCCINELLID BEETLE

Tetrahedron, 1994, *50*, 2365

Kevin D. McCormick, Athula B. Attygalle, Shang-Cheng Xu, Aleš Svatoš, and Jerrold Meinwald
Baker Laboratory, Department of Chemistry, Cornell University, Ithaca, New York 14853
Marilyn A. Houck
Department of Biological Sciences, Texas Tech University, Box 43131, Lubbock, Texas 79404
Curtis L. Blankespoor and Thomas Eisner
Section of Neurobiology and Behavior, Cornell University, Ithaca, New York 14853

Chilocorine, a novel heptacyclic alkaloid, was isolated from a ladybird beetle, *Chilocorus cacti*. It has a unique structure made up of two tricyclic substructures, 2-methylperhydro-9*b*-azaphenalene and 3,4-dimethyloctahydro-8*b*-azaacenaphthylene.



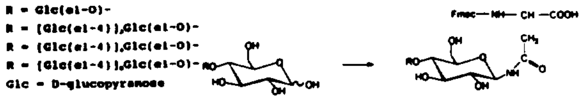
Tetrahedron, 1994, *50*, 2373

SYNTHESIS AND CONFORMATIONAL ANALYSIS OF N-GLYCOPEPTIDES THAT CONTAIN EXTENDED SUGAR CHAINS

Laszlo Urge, Livia Gorbics, Laszlo Otvos, Jr., The Wistar Institute, 3601 Spruce Street, Philadelphia, Pennsylvania 19104 (USA)

David C. Jackson, Department of Microbiology, The University of Melbourne, Parkville 3052, Victoria (Australia)

Krysztof Wroblewski and Graczyna Graczyk, Department of Biochemistry and Biophysics, The University of Pennsylvania, Philadelphia, Pennsylvania 19104 (USA)



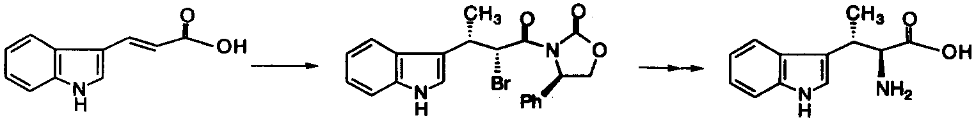
Glycopeptides N(Glc$_n$)CTLIDALLGDPH and N(Glc$_m$)KYVKQNTLKLA (N=2,4,7; m=2,6) have been synthesized on the solid-phase and their conformation analyzed by CD and NMR.

ASYMMETRIC SYNTHESIS OF UNUSUAL AMINO ACIDS: SYNTHESIS OF OPTICALLY PURE ISOMERS OF N-INDOLE-(2-MESITYLENESULFONYL)-β-METHYLTRYPTOPHAN

Tetrahedron, 1994, *50*, 2391

Lakmal W. Boteju, Kirsten Wegner, Xinhua Qian and Victor J. Hruby*,
Department of Chemistry, University of Arizona, Tucson, AZ 85721, USA.

The four isomers of β-methyltryptophan have been synthesized in high optical purity by asymmetric methodology



DENSITY FUNCTIONAL CALCULATIONS ON HETEROCYCLIC COMPOUNDS. PART 1. STUDIES OF PROTONATIONS OF 5- AND 6-MEMBERED NITROGEN HETEROCYCLICS

Tetrahedron, **1994**, *50*, 2405

Péter Mátyus,* Kaoru Fuji, and Kiyoshi Tanaka*
Institute for Chemical Research, Kyoto University, Uji, Kyoto-Fu 611, Japan

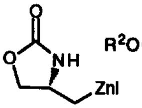
Density functional calculations at different levels of the theory were carried out on azoles, azines and their protonated forms.

Preparation and Reactivity of Chiral β-Amido-Alkylzinc Iodides and Related Configurationally Stable Zinc Organometallics

Tetrahedron, **1994**, *50*, 2415

Rajagopal Duddu, Matthias Eckhardt, Michael Furlong, H. Peter Knoess,
Stefan Berger and Paul Knochel*
Fachbereich Chemie, Philipps-Universität, Hans-Meerwein-Straße, D-35043 Marburg, Germany

The β-amido zinc reagents **2**-**6**, **23**, *exo* and *endo*-29 have been prepared by direct insertion of zinc dust to the corresponding iodides. The configurational stability of **23** and **29** has been studied.



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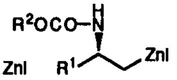
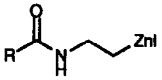
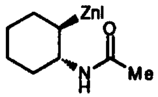


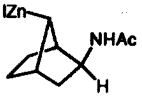
3 : R^1 = i-Pr; R^2 = Et
4 : R^1 = Bn; R^2 = t-Bu



5 : R = Me
6 : R = Ph



23



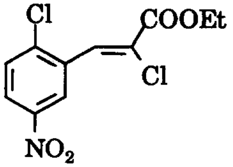
29

Eine neue Methode zur Darstellung α-chlorsubstituierter Zimtsäureester

Tetrahedron, **1994**, *50*, 2433

Ernst Buschmann, Bernd Schäfer*
BASF AG, Hauptlaboratorium, Carl-Bosch-Straße, 67056 Ludwigshafen

α-Chlorocinnamates can be easily prepared by the reaction of glycidic esters with in situ prepared chloromethyleneiminium salts.

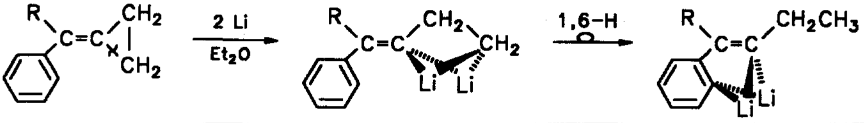


REGIOSELECTIVE CARBON-CARBON σ-BOND SCISSION FOLLOWED BY A 1,6-PROTON SHIFT UPON THE REDUCTIVE METALATION OF BENZYLIDENECYCLOPROPANE DERIVATIVES WITH LITHIUM METAL

Tetrahedron, **1994**, *50*, 2439

Adalbert Maercker* and Volker E.E. Daub
Institut für Organische Chemie der Universität Siegen, D-57068 Siegen (Germany)

Only the cyclopropane σ-bond *cis* to the phenyl ring is cleaved:

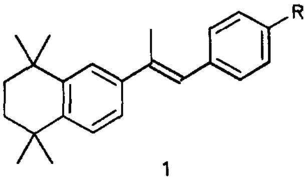


Synthesis of Pentacyclic Retinoids

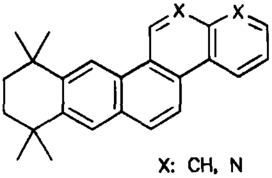
Tetrahedron, **1994**, *50*, 2459

W. Hanefeld*, M. Jung; Institut für Pharmazeutische Chemie, Philipps-Universität, D-35032 Marburg/Lahn, Germany

We describe the synthesis of pentacyclic congeners of the retinoid temarotene (1) including the first palladium-catalyzed coupling of a stannylated pyridine with an aromatic triflate.



1



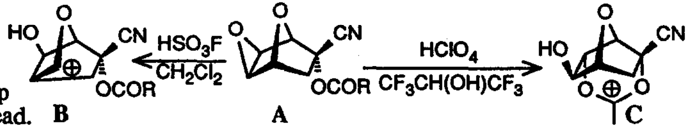
X: CH, N

Unexpected Selectivity Between Pinacolic Rearrangement and Intramolecular Displacement in the Acid-promoted Epoxide Ring Opening of 6-*exo*-Cyano-3,8-dioxabicyclo[3.2.1.0^{2,4}]oct-6-*endo*-yl Esters.

Tetrahedron, 1994, *50*, 2469

Susy Allemann, Pierre Vogel*, Section de Chimie de l'Université de Lausanne, 2, rue de la Barre, CH 1005 Lausanne, Switzerland.

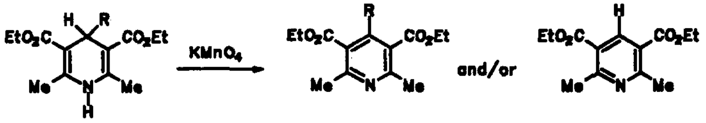
While the treatment of A with HSO$_3$F/ CH$_2$Cl$_2$ gives products of pinacolic rearrangement A + H$^+$ → B, in HClO$_4$/ CF$_3$CH(OH)CF$_3$ products of carboxy group participation A + H$^+$ → C are formed instead.



Potassium Permanganate, a Versatile Reagent for the Aromatization of Hantzsch 1,4-Dihydropyridines

Tetrahedron, 1994, *50*, 2479

Jean-Jacques Vanden Eynde,* Rita D'Orazio, and Yves Van Haverbeke
University of Mons-Hainaut, Organic Chemistry Laboratory, B-7000 Mons (Belgium)



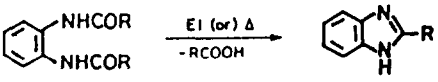
The structure of the final products depends on the nature of the 4-substituent and on the experimental conditions.

MASS SPECTROMETER AS A PROBE IN THE SYNTHESIS OF 2-SUBSTITUTED BENZIMIDAZOLES

Tetrahedron, 1994, *50*, 2485

Devalla V Ramana* and Ethirajulu Kantharaj
Department of Chemistry, Indian Institute of Technology,
Madras - 600 036, India.

Based on the fragmentation processes observed in the El study of N,N'-diacyl-1,2-benzenediamines(1), the pyrolsis of these compounds are successfully performed to obtain 2-substituted benzimidazoles (2) in excellent yields.



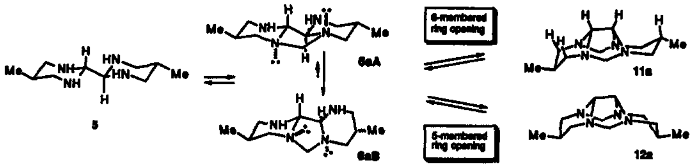
1 2

SYNTHESIS AND STEREOCHEMICAL ASSIGNMENT OF 2,5-*trans*-2',5'-*trans*-5,5'-DIMETHYLPERHYDRO-2,2'-BIPYRIMIDINE AND HETEROCYCLES DERIVED FROM ITS CONDENSATION WITH FORMALDEHYDE

Tetrahedron, **1994**, *50*, 2497

Michael Kassiou and Roger W Read*
School of Chemistry, University of New South Wales, P O Box 1, Kensington, NSW 2033, Australia

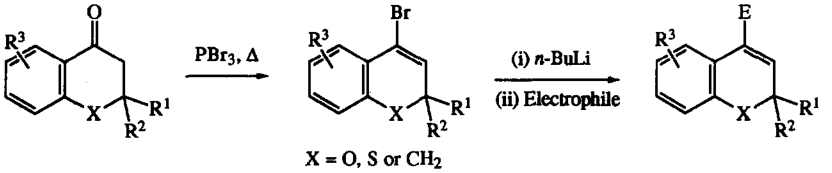
Compound 5 with HCHO gives tricycle 6 or a mixture of tetracycles 11 and 12. Assignment of structures 6aB and 11a from molecular mechanics calculations, and mechanistic implications are discussed.



Tetrahedron, **1994**, *50*, 2507

Synthesis and Reactivity of Some 4-Bromo- 2*H*-Chromenes and 2*H*-Thiochromenes.

Christopher D. Gabbutt, David J. Hartley, John D. Hepworth, B. Mark Heron, Magan Kanjia and M. Moshfiqur Rahman.
Department of Chemistry, University of Central Lancashire, Preston PR1 2HE, England.

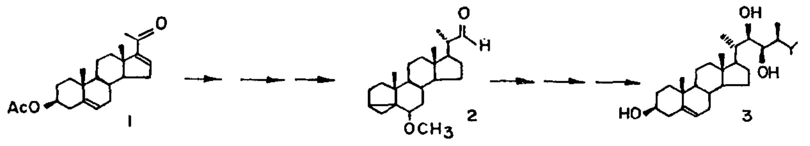


STEREOSELECTIVE SYNTHESIS OF (22R ,23R,24S)-3 β - HYDROXY-5-ENE-22,23-DIHYDROXY-24-METHYL CHOLESTANE: A BRASSINOLIDE INTERMEDIATE FROM 16-DEHYDROPREGNENOLONE ACETATE

Tetrahedron, **1994**, *50*, 2523

B.G.Hazra*, P.L.Joshi, B.B.Bahule, N.P.Argade, V.S.Pore and M.D.Chordia
Division of Organic Chemistry(Syn), National Chemical Laboratory, Pune-411 008, INDIA.

The synthesis of aldehyde 2 from 16-Dehydropregnenolone Acetate and its conversion to the triol 3, an important intermediate for a total synthesis of Brassinolide is reported.

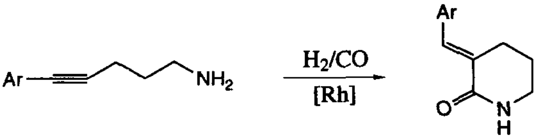


SYNTHESIS OF SUBSTITUTED α-METHYLENE LACTAMS BY RHODIUM CATALYSED CARBONYLATION OF ACETYLENIC AMINES

Tetrahedron, **1994**, *50*, 2533

Eva M. Campi[a], J. Michael Chong[b], W. Roy Jackson*[a], and Marcel Van Der Schoot[a]
[a]Department of Chemistry, Monash University, Clayton, Victoria 3168, Australia
[b]Department of Chemistry, University of Waterloo, Waterloo, Ontario, Canada, N2L 3G1

α-Methylene-2-piperidinones can be isolated in moderate yields by rhodium-catalysed reactions of γ-aminoalkynes with H_2/CO



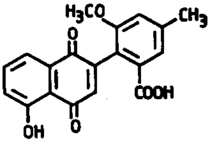
Tetrahedron, **1994**, *50*, 2543

A NEW CONVERGENT SYNTHESIS OF WS-5995-B, AN ANTICOCCIDIAL ANTIBIOTIC FROM *STREPTOMYCES AURANTICOLOR*

Rama Devi A, Iyengar D S* & Pardhasaradhi M

Organic Division II, Indian Institute of Chemical Technology
Hyderabad 500 007, India.

A new synthesis of WS-5995-B is reported via the coupling reaction between 3-bromo-5,6,7,8-tetrahydrojuglone and 3-methoxy-5-methyl anthranilic acid.

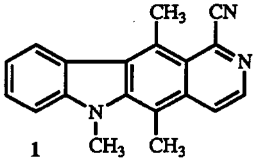


WS-5995-B

Tetrahedron, **1994**, *50*, 2551

RING D MODIFICATION OF ELLIPTICINE. PART 1. NEW ELLIPTICINE DERIVATIVES FROM 1-CYANO-6-METHYLELLIPTICINE.

Adrian T. Boogaard, Upendra K. Pandit and Gerrit-Jan Koomen; Laboratory of Organic Chemistry, University of Amsterdam, Nieuwe Achtergracht 129, 1018 WS Amsterdam, The Netherlands.



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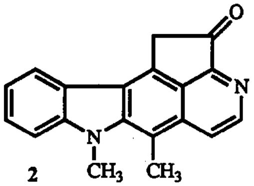


2

The cyanogroup of 1 is converted to -CHO, -COCH$_3$ and -CONH$_2$. Deprotonation of 1 in the presence of Pd-catalyst leads to 2.

Tetrahedron, **1994**, *50*, 2561

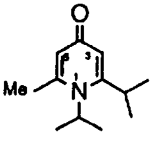
Conformational Studies By Dynamic NMR. Part 51[1]

Gear Effect In Substituted Pyridones.

G.Bartoli,*[a] M.Bosco,[b] L.Lunazzi,*[b] D.Macciantelli.[c]

a) Dip.di Scienze Chimiche, Università, Via S.Agostino 1, I-62032 Camerino, (Mc), Italy
b) Dip.Chim.Organica "A.Mangini", Università, Viale Risorgimento 4, I-40136, Bologna, Italy
c) I.Co.C.E.A. C.N.R, Via P. Gobetti 101, I-40129 Bologna, Italy

N-isopropyl pyridones such as 3 give rise to pairs of NMR detectable conformers owing to the restricted rotation experienced by the N-isopropyl moiety interacting with the neighbouring groups ("gear effect").



3

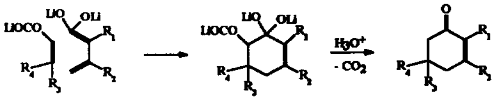
Tetrahedron, **1994**, *50*, 2571

DIENEDIOLATES OF UNSATURATED CARBOXYLIC ACIDS IN SYNTHESIS. SYNTHESIS OF CYCLOHEXENONES AND POLY-CYCLIC KETONES BY TANDEM MICHAEL-DIECKMANN DECARBOXYLATIVE ANNULATION OF UNSATURATED CARBOXYLIC ACIDS.

María J.Aurell, Pablo Gaviña, and Ramon Mestres*

Departament de Química Orgànica, Facultat de Química, Universitat de València, Burjassot, València, Spain

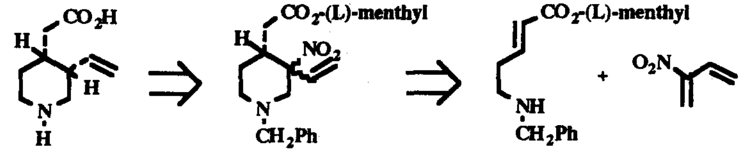
Substituted 2-cyclohexenones and hexaxydronaphthalenones and hexahydroindenones are prepared by addition of lithium dienediolates of acyclic and alicyclic unsaturated carboxylic acids to the lithium salts of the same or other unsaturated carboxylic acids.



ENANTIOSELECTIVE SYNTHESIS OF (-)-MEROQUINENE THROUGH TANDEM MICHAEL REACTION METHODOLOGY.

Tetrahedron, **1994**, *50*, 2583

A. Barco[a], S. Benetti[a], C. De Risi[b], G.P. Pollini[b], R. Romagnoli[a], G. Spalluto[b] and V. Zanirato[b].
[a]*Dipartimento di Chimica, Via L. Borsari 46, I-44100-Ferrara;*
[b]*Dipartimento di Scienze Farmaceutiche,, Via Fossato di Mortara 19, I-44100-Ferrara.*



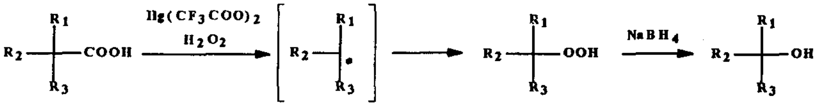
(-)-Meroquinene

OXIDATIVE DECARBOXILATION BY HYDROGEN PEROXIDE AND A MERCURY (II) SALT: A SIMPLE ROUTE TO *NOR*-DERIVATIVES OF ACETYLURSOLIC, ACETYLOLEANOLIC AND DEHYDROABIETIC ACIDS.

Tetrahedron, **1994**, *50*, 2591

Alexey V. Tkachev*; Alexey Yu. Denisov; Novosibirsk Institute of Organic Chemistry, Novosibirsk 630090, Russia.

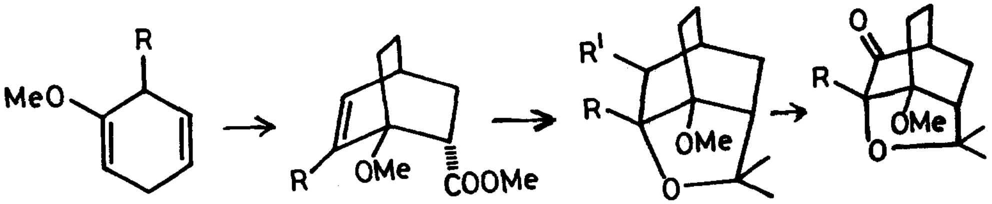
Treatment of carboxylic acids with hydrogen peroxide in the presence of a mercury (II) salts results in oxidative decarboxylation and is an effective method for transformation of the carboxylic acids into the corresponding *nor*-derivatives, hydroperoxides and alcohols. Oxidative decarboxylation of acetylursolic, acetyloleanolic and dehydroabietic acids is described.



SYNTHESIS BASED ON CYCLOHEXADIENES PART 10: SYNTHESIS OF 5,5-DIMETHYL-7-METHOXY-4-OXA-TRICYCLO[4.3.1.0^{3,7}]DECAN-2-ONES,

Tetrahedron, **1994**, *50*, 2599

S. Raghavan and G. S. R. Subba Rao, Department of Organic Chemistry, Indian Institute of Science, Bangalore -560 012, India



Tetrahedron, **1994**, *50*, 2617

CRITERIA FOR THE ECONOMIC LARGE SCALE SOLID-PHASE SYNTHESIS OF OLIGONUCLEOTIDES

F. Xavier Montserrat, Anna Grandas, Ramon Eritja and Enrique Pedroso
Departament de Química Orgànica, Facultat de Química, Universitat de Barcelona, Martí i Franquès 1, 08028 Barcelona, Spain

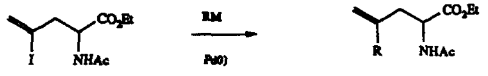
The experimental conditions, in particular those related to the phosphoramidite coupling, that are necessary in order to reduce the cost of large-scale solid-phase oligonucleotide synthesis by the phosphite triester approach have been studied using highly loaded polystyrene resins (up to 340 μmol/g).

Tetrahedron, **1994**, *50*, 2623

ELABORATION OF THE SIDE CHAIN OF α-AMINO ACIDS CONTAINING A VINYL IODIDE BY PALLADIUM-CATALYSED COUPLING

Geoffrey T. Crisp* and Peter T. Glink
Department of Chemistry, University of Adelaide, Adelaide, South Australia, Australia 5005

The palladium-catalysed couplings of a γ-iodoallylglycine derivative and an *E*-δ-iodoallylglycine derivative with various organometallic nucleophiles are described.



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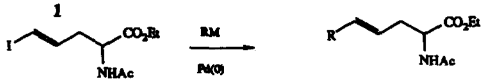

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