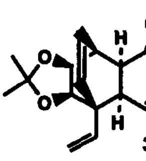
GRAPHICAL ABSTRACTS

Tetrahedron Lett. 1993, *34*, 2557

NEW DIELS-ALDER DIMERS OF (1S,2R)-*CIS*-1,2-ISOPROPYLIDENE-DIOXY-3-ETHENYLCYCLOHEXA-3,5-DIENE.

Tomas Hudlicky,* and Christie H. Boros,
Department of Chemistry, Virginia Polytechnic Institute and State University, Blacksburg, VA 24061-0212 USA

The acetonide of the cis-diol metabolite, 2,3-dihydroxy-1-ethenylcyclohexa-4,6-diene, produced from the oxidation of styreme by *Pseudomonas putida* strain 39D underwent stereoselective intermolecular Diels-Alder dimerizations to form three different types of regioisomeric polycyclic compounds.



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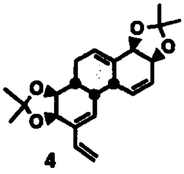

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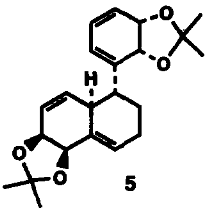

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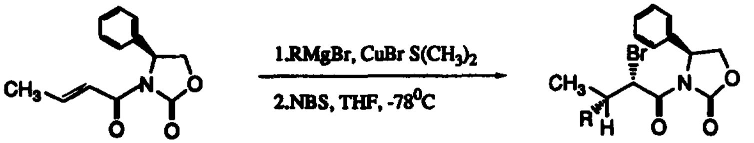
Tetrahedron Lett. 1993, *34*, 2561

DIASTEREOSPECIFIC TANDEM MICHAEL-LIKE ADDITION/ ELECTROPHILIC BROMINATION: A ONE-POT TANDEM ASYMMETRIC SYNTHESIS OF PRECURSORS OF UNUSUAL AMINO ACIDS.

Guigen Li, Mark A. Jarosinski and Victor J. Hruby*, Department of Chemistry, University of Arizona, Tucson, AZ 85721, USA

A systematic series of key intermediates of β-methyltyrosine and β-methylphenylalanine have been enantioselectively synthesized.



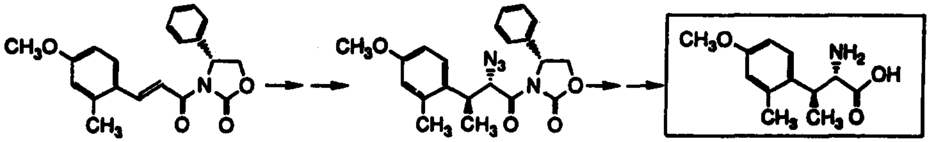
(5 examples)

Tetrahedron Lett. 1993, *34*, 2565

ASYMMETRIC SYNTHESIS OF UNUSUAL AMINO ACIDS: AN ENANTIOSELECTIVE SYNTHESIS OF THE FOUR ISOMERS OF D-AND L-*O*-METHYL-2', β-DIMETHYLTYROSINE.

Guigen Li, K.C. Russell, Mark A. Jarosinski and V. J. Hruby*, Department of Chemistry, University of Arizona, Tucson, AZ 85721, USA

The four individual isomers of D- and L-O-methyl-2', β-dimethyltyrosine have been synthesized in high optical purity.

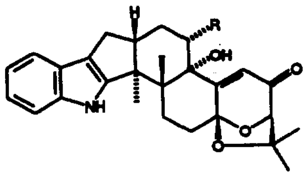


Tetrahedron Lett. 1993, *34*, 2569

NEW PASPALININE DERIVATIVES WITH ANTIINSECTAN ACTIVITY FROM THE SCLEROTIA OF *ASPERGILLUS NOMIUS*

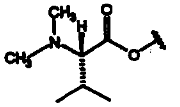
Gail M. Staub, Katherine B. Gloer, and James B. Gloer*,1, Department of Chemistry, University of Iowa, Iowa City, Iowa, 52242. Donald T. Wicklow and Patrick F. Dowd, Agricultural Research Service, National Center for Agricultural Utilization Research, USDA, Peoria, IL, 61604.

Abstract: Compounds 3 and 4 were isolated from the sclerotia of *Aspergillus nomius*, and identified by analysis of 2D NMR data. Both compounds cause *ca.* 90% reduction in weight gain in dietary assays against the corn earworm *Helicoverpa zea* at 100 ppm.



3 R = OH

4 R =

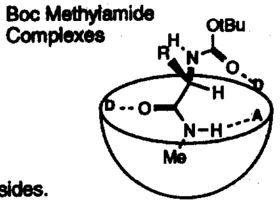


Tetrahedron Lett. **1993**, *34*, 2573

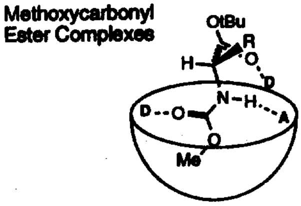
Highly Selective Binding of Diverse Neutral Donor/Acceptor Substrates by a C_3 Macrotricyclic Receptor

Ruiping Liu and W. Clark Still
Department of Chemistry, Columbia University
New York, NY 10027

Binding properties of a bowl-shaped, donor (D)- and acceptor (A)-equipped receptor are described. We find highly stereoselective binding for two different binding modes with peptide derivatives and for a variety of glycosides.



Boc Methylamide Complexes



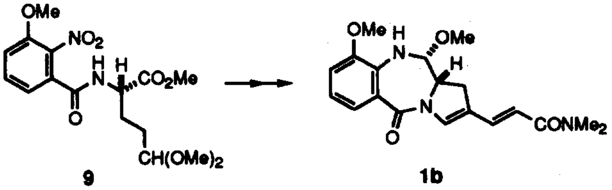
Methoxycarbonyl Ester Complexes

Tetrahedron Lett. **1993**, *34*, 2577

Total Synthesis of (+)-Porothramycin B

Tohru Fukuyama,* Gang Liu, Steven D. Linton, Shao-Cheng Lin, and Hiroshi Nishino
Department of Chemistry, Rice University
P.O. Box 1892, Houston, Texas 77251

The first total synthesis of (+)-porothramycin B (**1b**) has been achieved via intermediate **9** using L-glutamic acid as the starting material.



9 **1b**

Tetrahedron Lett. **1993**, *34*, 2581

A VERSATILE SYNTHESIS OF ß-AMINO ACIDS USING THE NICHOLAS REACTION. I. APPLICATION TO ß-LACTAMS OF THE CARBAPENEM CLASS.

Peter A. Jacobi* and Wanjun Zheng
Hall-Atwater Laboratories, Wesleyan University
Middletown, Connecticut 06459-0180

The Nicholas reaction has been employed in the synthesis of a variety of homochiral ß-amino acid derivatives **23**, which are excellent precursors for ß-lactams of the carbapenem class.

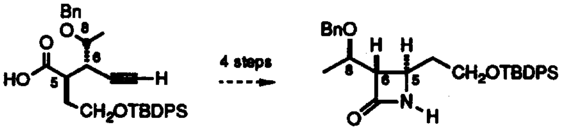
20 **23**

Tetrahedron Lett. **1993**, *34*, 2585

A VERSATILE SYNTHESIS OF ß-AMINO ACIDS USING THE NICHOLAS REACTION. II. FORMAL TOTAL SYNTHESIS OF THIENAMYCIN.

Peter A. Jacobi* and Wanjun Zheng
Hall-Atwater Laboratories, Wesleyan University
Middletown, Connecticut 06459-0180

The Nicholas reaction has been employed in the synthesis of the homochiral acetylenic acid **26**, which was converted in four steps to the known thienamycin precursor **30**.



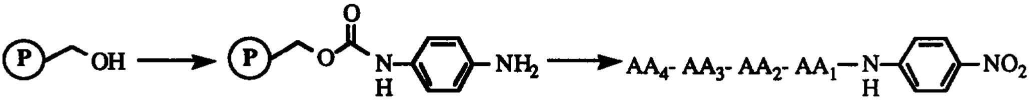
26 **30**

SOLID PHASE SYNTHESIS OF PEPTIDE *para* -NITROANILIDES

Tetrahedron Lett. **1993**, *34*, 2589

Daniel J. Burdick, Martin E. Struble and John P. Burnier
Department of Bioorganic Chemistry, Genentech Inc.
460 Pt. San Bruno Blvd, South San Francisco, CA 94080

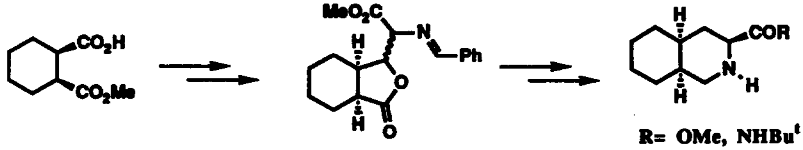
A facile synthesis of peptide *para* -nitroanilides was developed using a novel urethane linked *para* -aminoanilide resin and solid phase peptide synthesis.



Towards the Synthesis of HIV-Protease Inhibitors. Synthesis of Optically Pure 3-Carboxyl-decahydroisoquinolines

Tetrahedron Lett. **1993**, *34*, 2593

Ioannis N. Houpis, Audrey Molina, Robert A. Reamer, Joseph E. Lynch, R.P. Volante and Paul J. Reider
Merck Research Laboratories, Process Research Department, P.O. Box 2000, Rahway, N.J. 07065.

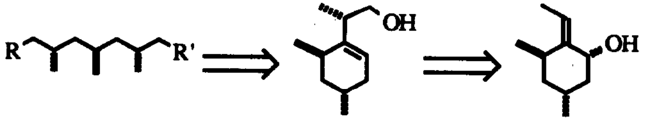


R= OMe, NHBu^t

Tetrahedron Lett. **1993**, *34*, 2597

A [2,3]-WITTIG REARRANGEMENT THAT REQUIRES SEVERE DEFORMATION FROM A STABLE 6-MEMBERED RING CHAIR STRUCTURE AND ITS APPLICATION TO SYNTHESIZE 1,3-*ANTI*-3,5-*ANTI*-1,3,5-TRIMETHYLATED CARBON CHAIN COMPOUNDS

Zhengqing You[a] and Masato Koreeda[b]
[a]1550 Chew Street, Allentown, PA 18102
[b]Department of Chemistry, Univ of Michigan,
Ann Arbor, MI 48109



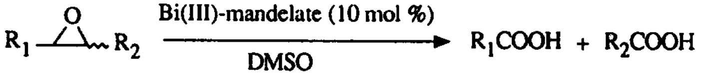
A [2,3]-Wittig rearrangement was accomplished overcoming severe six-membered ring deformation barrier and utilized as a key step in a highly stereoselective synthesis of the title compounds.

Bi(III)-mandelate/DMSO : A New Oxidizing System for the Catalyzed C-C Cleavage of Epoxides

Tetrahedron Lett. **1993**, *34*, 2601

Thomas ZEVACO, Elisabet DUÑACH and Michèle POSTEL*, *Laboratoire de Chimie Moléculaire, associé au CNRS, Université de Nice-Sophia Antipolis, Parc Valrose, 06108 Nice Cedex 2, France.*

Bi(III)-mandelate was found to be an effective catalyst for the oxidative C-C bond cleavage of epoxides and their transformation into carboxylic acids in anhydrous DMSO medium.



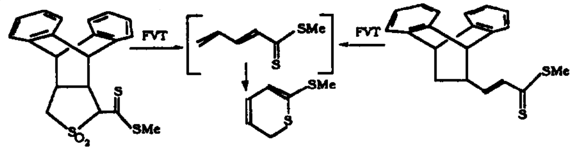
8 examples, 10-65%

Tetrahedron Lett. **1993**, *34*, 2605

Generation by Flash Vacuum Thermolysis and Cyclization of Methyl Penta-2,4-dienedithioate

Yannick Vallée*, Mohamed Khalid and Jean-Louis Ripoll
Laboratoire de Chimie des Composés Thio-organiques, URA CNRS 480, ISMRA, 14050 Caen, France

Methyl penta-2,4-dienedithioate was generated by flash vacuum thermolysis. It underwent a pericyclic reaction to 6-methylthio-(2H)-thiopyran.

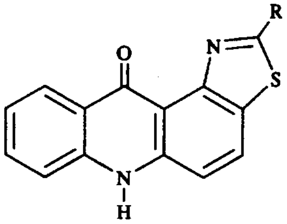


Tetrahedron Lett. **1993**, *34*, 2609

ON THE PROBLEM OF THE CYCLISATION OF BENZOTHIAZOLYL-ANTHRANILIC ACIDS INTO THIAZOLO-ACRIDINONES. THE CASE OF THIAZOLO[4,5-*a*]ACRIDINES

Sandrine Morel, Jean-Pierre Galy,* José Elguero and Jacques Barbe
Unité de recherche associée au CNRS, Faculté des Sciences de Saint-Jérôme, Case 552, Université d'Aix-Marseille III, Avenue Escadrille Normandie-Niemen, 13397 Marseille Cédex 13, France

Cyclisation of *N*-(2-R-benzothiazol-6-yl)anthranilic acids by either PPA or sulfuric acid led exclusively to 'bent' thiazolo[4,5-*a*]acridines. The compounds were characterized by ^1H and ^{13}C NMR spectroscopy.

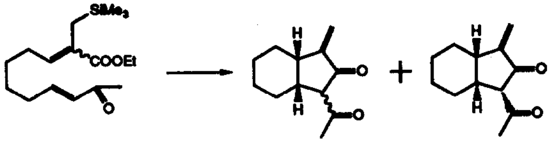


Tetrahedron Lett. **1993**, *34*, 2613

INTRAMOLECULAR CYCLIZATION OF β-(ALKOXY-CARBONYL)ALLYLSILANE WITH CONJUGATED KETONE. A NEW ENTRY TO BICYCLO[4.3.0]NONANE.

Chiaki Kuroda,* Yuki Ohnishi, and James Y. Satoh, Department of Chemistry, Rikkyo University, Nishi-Ikebukuro, Toshima-ku, Tokyo 171, Japan

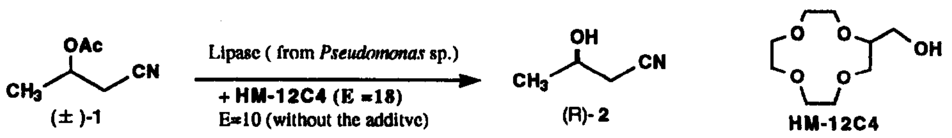
Bicyclo[4.3.0]nonane carbon framework was synthesized from acyclic compound by using intramolecular cyclization between β-(alkoxycarbonyl)allylsilane with α,β-unsaturated ketone.



Tetrahedron Lett. **1993**, *34*, 2617

Enhanced Reaction Rate and Enantioselectivity in Lipase-Catalyzed Hydrolysis by Addition of a Crown Ether.

Toshiyuki ITOH[a]*, Yuji HIYAMA[a], Akio BETCHAKU[a], and Hiroshi TSUKUBE[b]* a. Department of Chemistry, Faculty of Education, Okayama University b. Department of Chemistry, College of Liberal Arts & Science, Okayama University, Okayama 700, JAPAN

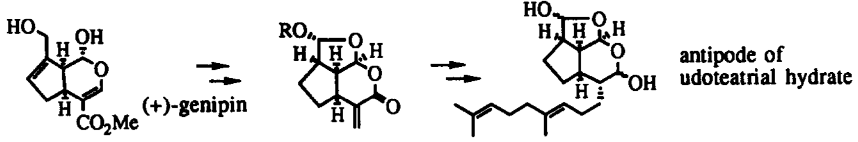


(±)-1
(R)-2
HM-12C4

Tetrahedron Lett. **1993**, *34*, 2621

SYNTHESIS OF THE ANTIPODE OF UDOTEATRIAL HYDRATE USING (+)-GENIPIN AS A CHIRAL BUILDING BLOCK: DETERMINATION OF THE ABSOLUTE CONFIGURATION OF UDOTEATRIAL HYDRATE

Yuting Ge, Shoichi Kondo, Yoshihiko Odagaki, Shigeo Katsumura, Kazuhiko Nakatani, and Sachihiko Isoe*
Institute of Organic Chemistry, Faculty of Science, Osaka City University, Sugimoto 3-3-138, Sumiyoshi, Osaka 558, Japan.
Minase Research Institute, ONO Pharmaceutical Co., LTD., Mishima, Osaka 618, Japan.



Tetrahedron Lett. **1993**, *34*, 2625

CLAY-MEDIATED *MESO*-TETRAARYLPORPHYRIN SYNTHESIS

Makoto Onaka,* Tomotaka Shinoda, Yusuke Izumi,* Ernest Nolen†

Department of Applied Chemistry, Faculty of Engineering, Nagoya University, Chikusa, Nagoya 464, Japan;
†Department of Chemistry, Colgate University, Hamilton, New York 13346-1398, U. S. A.

meso-Tetraarylporphyrin formations in clay nanospaces were investigated.

$$\text{ArCHO} + \text{Pyrrole} \xrightarrow[\text{CH}_2\text{Cl}_2]{\textbf{K10}} \xrightarrow{\text{Oxidant}} \textit{meso}\text{-Tetraarylporphyrin}$$

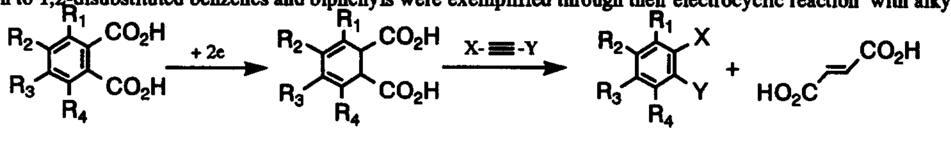
Tetrahedron Lett. **1993**, *34*, 2629

SYNTHESIS OF 1,2-DISUBSTITUTED BENZENES AND BIPHENYLS FROM PHTHALIC ACIDS THROUGH ELECTROREDUCTION FOLLOWED BY ELECTROCYCLIC REACTIONS WITH ALKYNES

Toshinobu Ohno, Masato Ozaki, Atsuro Inagaki, Tsuneaki Hirashima and Ikuzo Nishiguchi**

Osaka Municipal Technical Research Institute, 1-6-50, Morinomiya, Joto-Ku, Osaka 536, Japan

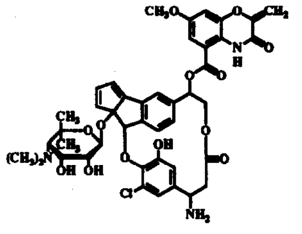
Various substituted 1,2-dihydrophthalic acids were synthesized by electroreduction in execllent yields and the efficient transformation to 1,2-disubstituted benzenes and biphenyls were exemplified through their electrocyclic reaction with alkynes.



Tetrahedron Lett. **1993**, *34*, 2633

STRUCTURE OF AN AROMATIZATION PRODUCT OF C-1027 CHROMOPHORE

Yoshinori Minami,* Ken-ichiro Yoshida, Ryotaro Azuma, Mayuko Saeki, and Toshio Otani, *Tokushima Research Center, Taiho Pharmaceutical Co., Ltd., Kawauchi-cho, Tokushima 771-01, Japan*



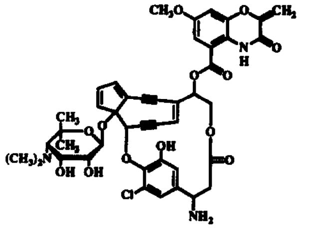
The structure of an aromatization product of C-1027 chromophore was determined by means of chemical degradation and detailed 2D-NMR studies.

Tetrahedron Lett. 1993, 34, 2637

STRUCTURE AND CYCLOAROMATIZATION OF A NOVEL ENEDIYNE, C-1027 CHROMOPHORE.

Ken-ichiro Yoshida,* Yoshinori Minami, Ryotaro Azuma, Mayuko Saeki, and Toshio Otani, *Tokushima Research Center, Taiho Pharmaceutical Co., Ltd., Kawauchi-cho, Tokushima 771-01, Japan*

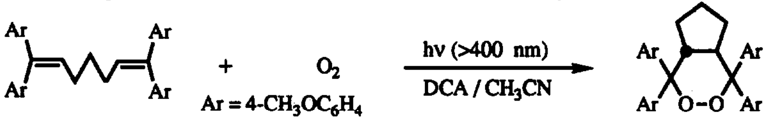
The structure and the cycloaromatization mechanism of a novel enediyne, C-1027 chromophore, were elucidated.



Tetrahedron Lett. 1993, 34, 2641

Photooxygenation of 1,ω-Bis(diarylethenyl)alkanes via Photoinduced Electron Transfer: Formation of Bicyclic Peroxides

Toshiyuki Tamai,[b] Kazuhiko Mizuno,[a] Isao Hashida,[b] Yoshio Otsuji[a]
[a]Department of Applied Chemistry, College of Engineering, University of Osaka Prefecture, Sakai, Osaka 593, Japan
[b]Osaka Municipal Technical Research Institute, 1-6-50, Morinomiya, Joto-ku, Osaka 536, Japan



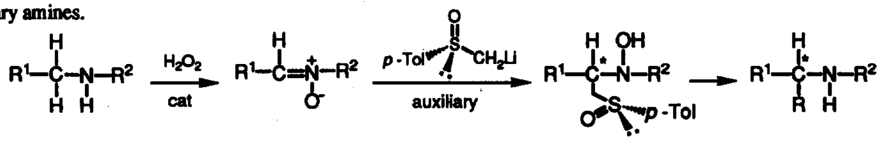
$Ar = 4\text{-}CH_3OC_6H_4$

Tetrahedron Lett. 1993, 34, 2645

The Reaction of Nitrones with (*R*)-(+)-Methyl *p*-Tolyl Sulfoxide Anion; Asymmetric Synthesis of Optically Active Secondary Amines

Shun-Ichi Murahashi,* Jun Sun, and Tomoyasu Tsuda
Department of Chemistry, Faculty of Engineering Science, Osaka University, Machikaneyama, Toyonaka, Osaka 560, Japan

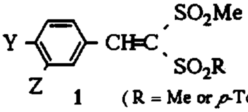
The reaction of nitrones with optically active α-sulfinyl carbanions is useful for asymmetric induction at the α-position of secondary amines.



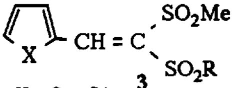
Tetrahedron Lett. 1993, 34, 2649

High Electron-Acceptability of a 2,2-Bis(alkyl- or arylsulfonyl)ethenyl Group

Katsuyuki Ogura,* Shinjiro Takahashi, Yugen Kawamoto, Masashi Suzuki, and Makoto Fujita, *Department of Applied Chemistry, Faculty of Engineering, Chiba University, 1-33 Yayocho, Inageku, Chiba 263, Japan*
Yasushi Suzuki and Yoshio Sugiyama, *Advanced Material and Technology Research Laboratories, Nippon Steel Corporation, 1618 Ida, Nakahara-ku, Kawasaki 211, Japan*



1 (R = Me or *p*-Tol



X = O or S) 3

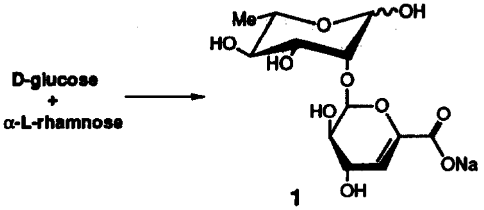
High electron-acceptability of a 2,2-bis(alkyl- or arylsulfonyl)ethenyl group was shown from its chemical and physical properties. The molecular polarizability (β value) and second harmonic generation (SHG) efficiency of 1 and 3 were also reported.

Tetrahedron Lett. **1993**, *34*, 2653

Synthesis and Absolute Configuration of Lepidimoide, a High Potent Allelopathic Substance from Mucilage of Germinated Cress Seeds

S. Kosemura and S. Yamamura*
Dept of Chem, Faculty of Science and Technology, Keio University,
Hiyoshi, Yokohama 223, Japan
H. Kakuta, J. Mizutani and K. Hasegawa
Mizutani Plant Ecochemicals Project, Eniwa RPB Center Building,
Megumino Kita 3-1-1, Eniwa, Hokkaido 061-13, Japan

Lepidimoide (1), 1,2-cis-linked disaccharide, was synthesized from D-glucose and α-L-rhamnose for determination of the absolute configuration.

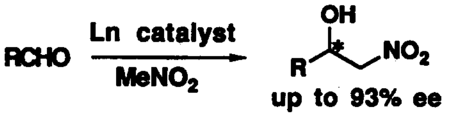


Tetrahedron Lett. **1993**, *34*, 2657

Effects of Rare Earth Metals on the Catalytic Asymmetric Nitroaldol Reaction

Hiroaki Sasai, Takeyuki Suzuki, Noriie Itoh, Shigeru Arai, and Masakatsu Shibasaki*
Faculty of Pharmaceutical Sciences, University of Tokyo, Hongo, Bunkyo-ku, Tokyo 113, Japan

The optical purities of nitroaldols obtained using various rare earth (*R*)-binaphthoxide complexes as an asymmetric catalyst have been found to be highly dependent on the size of rare earth metals.

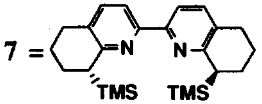


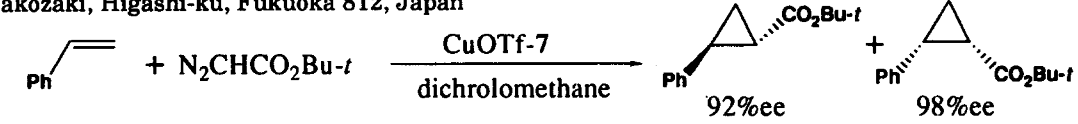
Ln = Y, La, Pr, Nd, Sm, Eu, Gd, Tb, Yb

Tetrahedron Lett. **1993**, *34*, 2661

CATALYTIC ASYMMETRIC CYCLOPROPANATION USING COPPER COMPLEX OF OPTICALLY ACTIVE BIPYRIDINE AS A CATALYST

Katsuji Ito and Tsutomu Katsuki*
Department of Chemistry, Faculty of Science, Kyushu University 33,
Hakozaki, Higashi-ku, Fukuoka 812, Japan

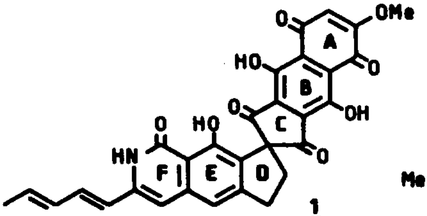




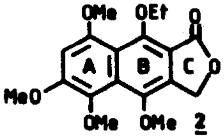
Tetrahedron Lett. **1993**, *34*, 2665

SYNTHESIS OF (±) FREDERICAMYCIN A

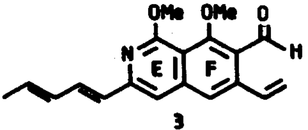
A V Rama Rao*, Ashok K Singh, Batchu Venkateswara Rao and Komandla Malla Reddy
Indian Institute of Chemical Technology, Hyderabad 500 007, India



1



2



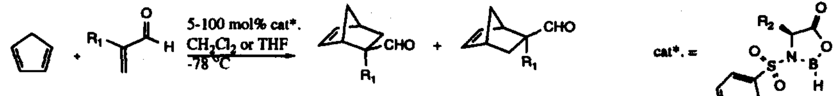
3

Tetrahedron Lett. **1993**, *34*, 2669

ASYMMETRIC DIELS-ALDER REACTIONS CATALYZED BY CHIRAL OXAZABOROLIDINES. EFFECT OF THE POSITION OF AN ELECTRON-DONOR FUNCTIONALITY IN THE α-SIDE CHAIN SUBSTITUENT ON THE ENANTIOSELECTIVITY.

Jean-Paul G. Seerden, Hans W. Scheeren*, Department of Organic Chemistry, NSR Center for Molecular Structure, Design and Synthesis, University of Nijmegen, Toernooiveld, 6525 ED Nijmegen, The Netherlands.

Enantioselectivity of the reaction of methacrolein or 2-bromoacrolein with cyclopentadiene catalyzed by chiral oxazaborolidines is dependent on the position of an electron-donor functionality in α-side chain substituent R_2.



R_1=Me,Br

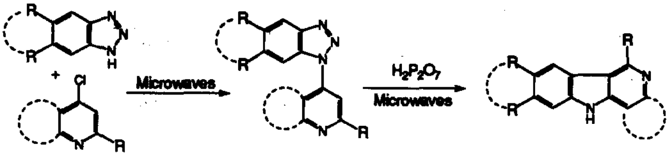
R_2 = Me, *i*-Bu, Ph, $PhCH_2$, $PhCH_2CH_2$, $PhCH_2OCH_2$, *cyclo*-HexylCH_2OCH_2, 4-MeO-$PhCH_2$, 4-$PhCH_2O$-$PhCH_2$

Tetrahedron Lett. **1993**, *34*, 2673

ONE-POT GRAEBE-ULLMANN SYNTHESIS OF γ-CARBOLINES UNDER MICROWAVE IRRADIATION

A. Molina, J. J. Vaquero, J. L. Garcia-Navio and J. Alvarez-Builla
Departamento de Química Orgánica. Universidad de Alcalá. 28871 Alcalá de Henares. Madrid.

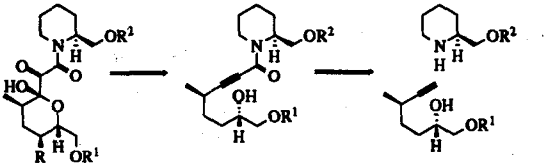
Microwave irradiation has been used to carry out the Graebe-Ullmann synthesis of γ-carbolines in open vessels.



Tetrahedron Lett. **1993**, *34*, 2677

FACILE SYNTHESIS OF THE "TRICARBONYL" SUBUNIT IN THE IMMUNOSUPPRESSANT RAPAMYCIN

Gerald Pattenden,* Mark Tankard and Peter C. Cherry†
Department of Chemistry, The University, Nottingham, NG7 2RD †Glaxo Group Research Ltd., Greenford, Middlesex UB6 0HE

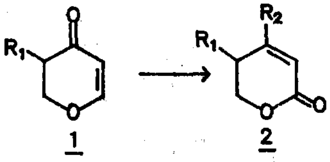


Tetrahedron Lett. **1993**, *34*, 2681

ALKYLATIVE CARBONYL TRANSPOSITION OF DIHYDRO-γ-PYRONES TO DIHYDRO-α-PYRONES

A. Nangia* and P. Bheema Rao
School of Chemistry, University of Hyderabad
Hyderabad 500 134, INDIA

Synthesis of dihydro-γ-pyrones (1) and their transformation to unsaturated δ-lactones (2).

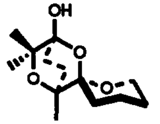


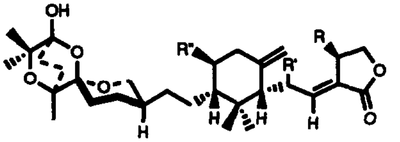
DIASTEREOSELECTIVE SYNTHESIS OF THE SAPONACEOLIDE TRICYCLIC SPIROKETAL SUBSTRUCTURE

Tetrahedron Lett. **1993**, *34*, 2685

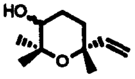
Giovanni Vidari, Maurizio Franzini, Luigi Garlaschelli and Antonietta Maronati
Dipartimento di Chimica Organica, Universita' di Pavia - Via Taramelli, 10 - 27100 Pavia (Italy)

The model trioxa-tricyclic spiroketal substructure 1 of saponaceolides (2) was prepared from geraniol following a biomimetic approach. We also synthesized *cis*- and *trans*- tetrahydropyran linalool oxides 3.


1



2



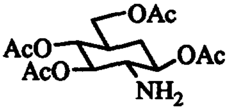
3

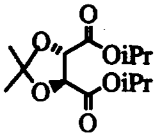
Rapid Crystallisation Using Ultrasonic Irradiation - Sonocrystallisation

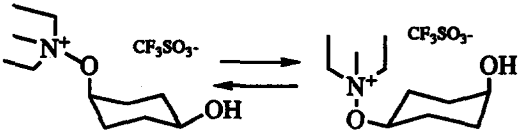
Tetrahedron Lett. **1993**, *34*, 2689

D. R. Kelly, S. Harrison, S. Jones, A. Masood and J. J. G. Morgan
School of Chemistry and Applied Chemistry, University of Wales, Cardiff, P. O. Box 912, Cardiff CF1 3TB, UK

Ultrasonic irradiation induces rapid crystallisation of materials which normally only crystallise with difficulty.





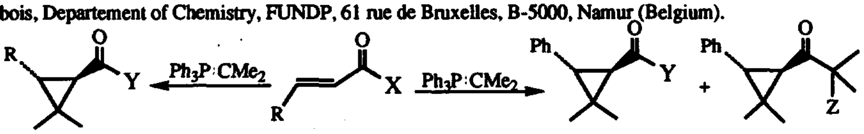


ON THE REACTIVITY OF I-PROPYLIDENE TRIPHENYLPHOSPHORANE WITH SOME α,β-UNSATURATED ESTERS, -AMIDES AND ACYL CHLORIDES.

Tetrahedron Lett. **1993**, *34*, 2691

Alain Krief * and Philippe Dubois, Departement of Chemistry, FUNDP, 61 rue de Bruxelles, B-5000, Namur (Belgium).

Isopropylidenetriphenyl phosphorane allows the cyclo propanation of α,β-unsaturated esters, -ketones, -amides and -acid chlorides. Concommitant reaction on the carbonyl groupof methyl cinnamates and cinnamoyl chlorides leading to cyclopropyl ketones has been also observed.



R= Pr	X= OMe	X= OMe	R= Ph	Y= OMe	Y= H
Ph	O-i-Pr	O-i-Pr		-	-
Ph	i-Pr	i-Pr		-	-
Pr, Ph	NMe$_2$	NMe$_2$		-	-
		Cl		i-Pr	+PPh$_3$

STEREOSELECTIVE SYNTHESES OF CYCLOPROPANE DERIVATIVES FROM γ-ALKOXY-α,β-UNSATURATED CARBONYL COMPOUNDS AND ISOPROPYLIDENE TRANSFER REAGENTS

Tetrahedron Lett. **1993**, *34*, 2695

Alain Krief *, Philippe Lecomte
Departement of Chemistry, Facultés Universitaires Notre-Dame de la Paix, 61 rue de Bruxelles, B-5000, Namur (Belgium).

Asymmetric induction of isopropylidene diphenylsulfurane, -triphenylphosphorane and 2-lithio-2-propyl N-tosyl isopropyl sulfoximine towards Z- and E-γ-alkoxy-α,β-unsaturated t-butyl esters, N,N-dimethyl amides and t-butyl ketones derived from D-glyceraldehyde is disclosed. A great difference of reactivity was found between the different reagents. The former selectively reacts by the Re-face of Z/E-carbonyl compounds and stereospecifically produces the cis/trans-cyclopropane carboxylates respectively. The two later react by the Re-face of Z-carbonyl compounds and by the Si-face of its stereoisomer leading in both cases to the /trans-cyclopropane carboxylate.