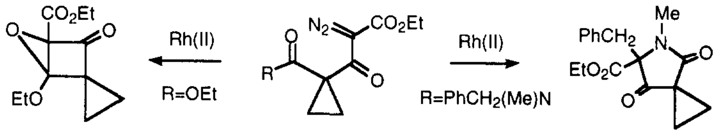
GRAPHICAL ABSTRACTS

Tetrahedron Letters, **1997**, *38*, 3319

CYCLIZATION OF RHODIUM CARBENOIDS USING ESTER AND AMIDO CARBONYL GROUPS

Erin A. Curtis, Kimberly J. Worsencroft, and Albert Padwa*
Department of Chemistry, Emory University, Atlanta, GA 30322

Carbonyl ylide dipoles derived from α-diazoacetyl esters cyclized to give bicyclic epoxides. The rhodium(II)-catalyzed reaction of the related α-diazoketo amide system resulted in cyclization to give both carbonyl ylides and ammonium ylides which further rearranged *via* a [1,2]-benzyl shift.

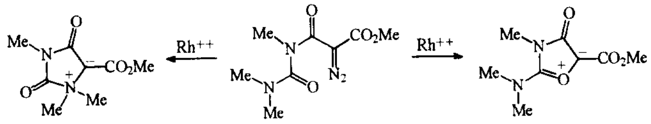


Tetrahedron Letters, **1997**, *38*, 3323

Ammonium Ylide Versus Carbonyl Ylide Formation in the Rhodium(II)-Catalyzed Decomposition of Diazoacetylureas. Generation and X-Ray Structure of a Stable Five-Membered N-Acyl Ammonium Ylide.

C. Oliver Kappe, Institute of Organic Chemistry, Karl-Franzens-University Graz, Heinrichstrasse 28, A-8010 Graz, Austria.

The Rh(II)-catalyzed decomposition of diazoacetylureas produces ammonium ylides or carbonyl ylides depending on the conformational flexibility of the carbenoid intermediates.

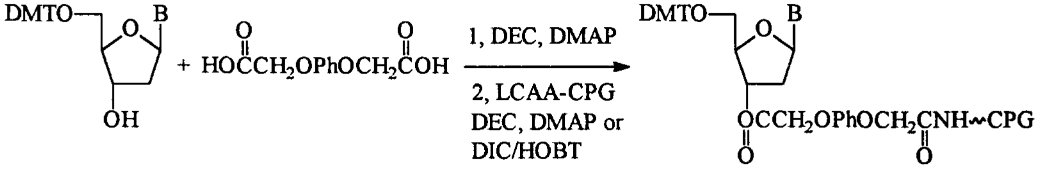


Tetrahedron Letters, **1997**, *38*, 3327

HYDROQUINONE-O,O'-DIACETIC ACID AS A MORE LABILE REPLACEMENT FOR SUCCINIC ACID LINKERS IN SOLID-PHASE OLIGONUCLEOTIDE SYNTHESIS.

Richard T. Pon* and Shuyuan Yu, The University of Calgary, Dept. of Medical Biochemistry, Calgary, AB, Canada, T2N 4N1.

A hydroquinone-O,O'-diacetyl linker allows fast cleavage of oligonucleotides from solid-phase supports without requiring changes to synthesis or deprotection procedures.

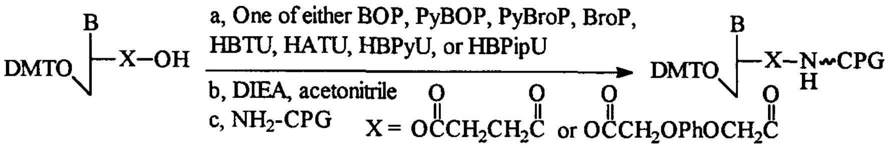


Tetrahedron Letters, **1997**, *38*, 3331

RAPID AUTOMATED DERIVATIZATION OF SOLID-PHASE SUPPORTS FOR OLIGONUCLEOTIDE SYNTHESIS USING URONIUM OR PHOSPHONIUM COUPLING REAGENTS.

Richard T. Pon* and Shuyuan Yu, The University of Calgary, Dept. of Medical Biochemistry, Calgary, AB, Canada, T2N 4N1.

Nucleosides with 3'-succinyl or hydroquinone diacetyl linkers can be quickly coupled to CPG or polystyrene supports in either manual batch or automated *in situ* reactions.

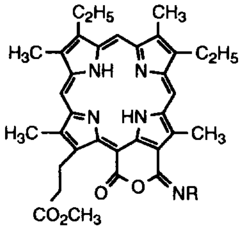


Tetrahedron Letters, **1997**, *38*, 3335

Syntheses of Emeraldin and Purpurin-18 Analogs as Target-Specific Photosensitizers for Photodynamic Therapy

A. N. Kozyrev, G. Zheng, E. Lazarou, T. J. Dougherty,
K. M. Smith, and R. K. Pandey.* Chemistry Division, Department
of Radiation Biology, Division of Radiation Medicine, Roswell Park
Cancer Institute, Buffalo, NY 14263, and Department of Chemistry,
University of California, Davis, CA 95616.

Syntheses and unique spectroscopic properties of some N-substituted emeraldins (such as **6**) and some purpurin-18 analogs are discussed.



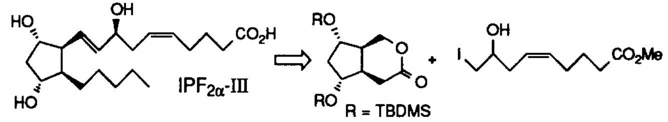
6. R = $-(CH_2)_5CH_3$

Tetrahedron Letters, **1997**, *38*, 3339

FIRST TOTAL SYNTHESIS OF ISOPROSTANE IPF$_{2\alpha}$-III.

**Mustafa Adiyaman[a], Hongwei Li[b], John A. Lawson[b], Seong-Woo Hwang[a],
Subhash P. Khanapure[a], Garret A. FitzGerald[b] and Joshua Rokach[a]***
[a]Claude Pepper Institute and Department of Chemistry, Florida Institute of Technology, 150 W. University Blvd., Melbourne, FL 32901, USA, and [b] The Center for Experimental Therapeutics, University of Pennsylvania, Philadelphia, PA 19104, USA.

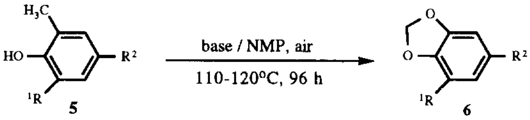
The first total synthesis of IPF$_{2\alpha}$-III is described using a *syn-anti-syn* lactone prepared from D-glucose and a novel iodohydrin synthon.



Tetrahedron Letters, **1997**, *38*, 3343

A Novel Base-Promoted Oxidative Rearrangement Of 2-Methyl-4-Substituted Phenols To 1,2-(Methylenedioxy)-4-Substituted Benzenes. Gee-Hong Kuo* and Michael A. Eissenstat, Department of Medicinal Chemistry, Sanofi Pharmaceuticals, Inc. 9 Great Valley Parkway, Malvern, PA 19355

Several 2-methyl-4-substituted phenols **5** were oxidatively rearranged to 1,2-(methylenedioxy)-4-substituted benzenes **6** in the presence of base and air. A mechanism was proposed.



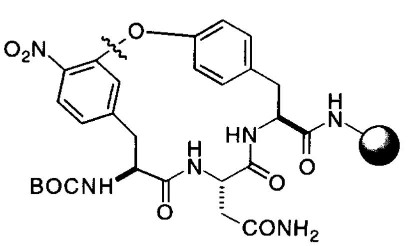
5 **6**

Tetrahedron Letters, **1997**, *38*, 3345

Rapid and Efficient Solid Phase Syntheses of Cyclic Peptides with Endocyclic Biaryl Ether Bonds

Kevin Burgess[a]* Dongyeol Lim,[a] Michele Bois-Choussy,[b] and Jieping Zhu[b]*
[a] Department of Chemistry, Texas A & M University, College Station, TX 77843 USA. [b] Institut de Chimie des Substances Naturelles, CNRS, 91198 Gif-sur-Yvette, France.

Solid phase syntheses of OF 4949 derivatives and simple compounds related to the vancomycin series via the disconnection shown.

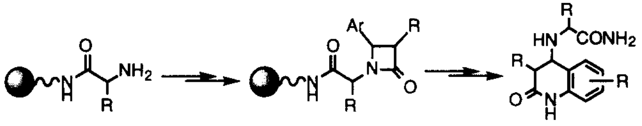


Tetrahedron Letters, **1997**, *38*, 3349

SYNTHESIS OF 4-AMINO-3,4-DIHYDRO-2(*1H*)-QUINOLINONES *VIA* β-LACTAM INTERMEDIATES ON THE SOLID-PHASE

Yazhong Pei*, Richard A. Houghten and John S. Kiely, Department of Exploratory Chemistry, Torrey Pines Institute for Molecular Studies and Houghten Pharmaceuticals, Inc., 3550 General Atomics Court, San Diego, CA 92121

The synthesis of 3,4-dihydro-2(*1H*)-quinolinones has been accomplished through the rearrangement of β-lactam intermediates on the solid-phase. A library of 4,140 dihydroquinolinones has been produced using this synthetic process.

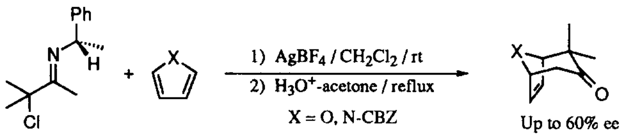


Tetrahedron Letters, **1997**, *38*, 3353

Asymmetric [4+3] Cycloadditions From Chiral α-Chloro Imines

Andrew S. Kende* and He Huang
Department of Chemistry, University of Rochester, Rochester, NY 14627, USA

The first examples of chiral 2-aminoallyl cation-mediated title reactions are presented.

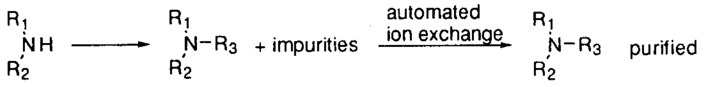


Tetrahedron Letters, **1997**, *38*, 3357

Rapid Purification of Small Molecule Libraries by Ion Exchange Chromatography

Miles G. Siegel,* Patric J. Hahn, Bruce A. Dressman, James E. Fritz, Jocelyn R. Grunwell, and Stephen W. Kaldor
Lilly Research Laboratories, A Division of Eli Lilly and Company, Lilly Corporate Center, Indianapolis, IN 46285

Ion exchange chromatography is employed for the purification of reactions yielding alkylated and acylated amines. This purification method can be readily automated to purify libraries of amine-containing compounds.



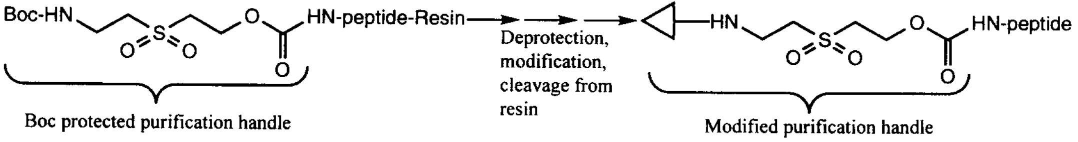
$$\underset{R_2}{\overset{R_1}{N}}H \longrightarrow \underset{R_2}{\overset{R_1}{N}}{-}R_3 + \text{impurities} \xrightarrow{\substack{\text{automated}\\ \text{ion exchange}}} \underset{R_2}{\overset{R_1}{N}}{-}R_3 \ \text{purified}$$

Tetrahedron Letters, **1997**, *38*, 3361

SYNTHESIS OF A VERSATILE PURIFICATION HANDLE FOR USE WITH BOC CHEMISTRY SOLID PHASE PEPTIDE SYNTHESIS

L.E. Canne,* R.L. Winston, S.B.H. Kent. The Scripps Research Institute, 10666 North Torrey Pines Rd., La Jolla, CA 92037.

The synthesis of a versatile handle for the purification of synthetic peptides is described. Removal of the Boc group affords a free amine which can be modified with a variety of functionalities for reaction with a complimentary group on solid support.

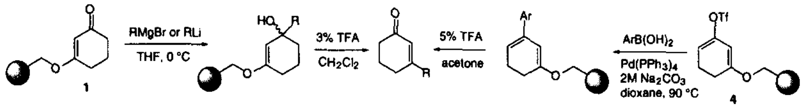


Tetrahedron Letters, **1997**, *38*, 3365

TWO METHODS FOR THE PREPARATION OF 2-CYCLOHEXENONES FROM RESIN-BOUND 1,3-CYCLOHEXANEDIONE.

Mark E. Fraley* and Robert S. Rubino, Department of Medicinal Chemistry, Merck Research Laboratories, West Point, Pennsylvania 19486

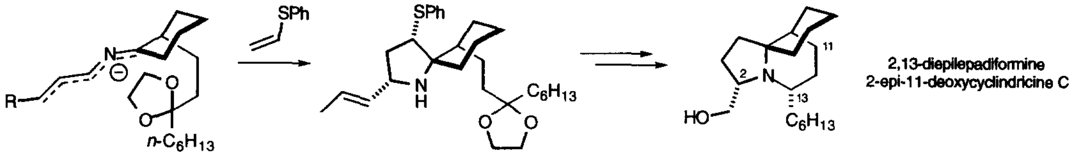
Grignard addition reactions of vinylogous ester resin **1** or Suzuki cross-coupling reactions of vinyl triflate resin **4** followed by mild hydrolysis of product resins provides 2-cyclohexenones in high purity (>95%).



Tetrahedron Letters, **1997**, *38*, 3369

SYNTHETIC STUDIES ON THE PERHYDRO[2,1-*j*]QUINOLINE MARINE ALKALOIDS LEPADIFORMINE AND CYLINDRICINE C USING A 2-AZAPENTADIENYL ANION CYCLOADDITION. SYNTHESIS OF 2,13-DIEPILEPADIFORMINE (OR 2-EPI-11-DEOXYCYLINDRICINE C)

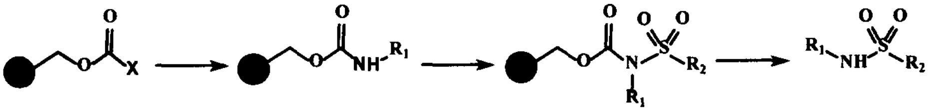
William H. Pearson*, Nancy S. Barta, and Jeff W. Kampf
Department of Chemistry, The University of Michigan, Ann Arbor, Michigan, USA 48109-1055



Tetrahedron Letters, **1997**, *38*, 3373

Solid Phase Synthesis of Sulfonamides Using a Carbamate Linker

B. Raju* and Timothy P. Kogan, Department of Chemistry & Biophysics
Texas Biotechnology Corporation, 7000 Fannin, Houston TX 77030, U.S.A.



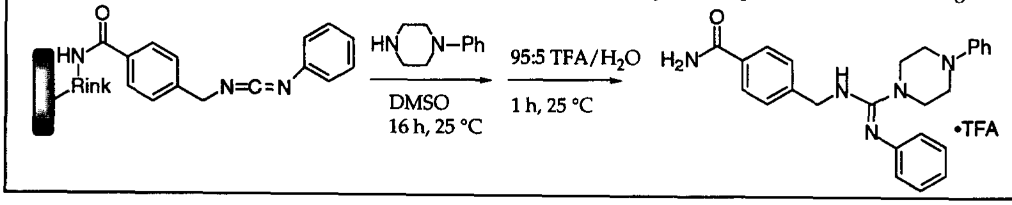
A method for the synthesis of sulfonamides on a solid support by immobilizing amines through the nitrogen atom using a carbamate linkage is described.

Tetrahedron Letters, **1997**, *38*, 3377

Solid-Phase Synthesis of Trisubstituted Guanidines.

David H. Drewry,* Samuel W. Gerritz and James A. Linn
Glaxo Wellcome, Inc., 5 Moore Dr., Research Triangle Park, NC 27709

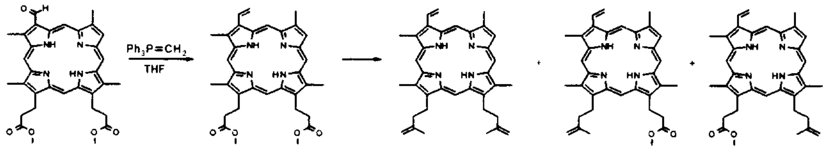
Reaction of unsymmetrical solid-supported carbodiimides (generated via the aza-Wittig coupling of a solid-supported iminophosphorane with an isothiocyanate) with primary or secondary amines provides trisubstituted guanidines.



Tetrahedron Letters, **1997**, *38*, 3381

AN UNEXPECTED WITTIG REACTION OF DIMETHYL 3,3'-(3-FORMYL-2,7,12,18-TETRA-METHYL-21H, 23H-PORPHYRIN-13,17-DIYL)-DIPROPIONATE

Pasi K. Malinen, Andrei Y. Tauber and Paavo H. Hynninen*, Department of Chemistry, P.O. Box 55, FIN-00014 University of Helsinki, Finland; Franz-Peter Montforts, Institut für Organische Chemie, FB2, Universität Bremen, Leobener Str. NW2, D-28359 Bremen, Germany



Tetrahedron Letters, **1997**, *38*, 3383

A NEW ELECTROCHEMICAL METHOD OF PREPARATION OF UNSYMMETRICAL DISULFIDES

Quang Tho Do[1], Driss Elothmani[1], Georges Le Guillanton[1]* and Jacques Simonet[2]
[1]Université Catholique de l'Ouest, BP 808, 49008 ANGERS Cédex (France)
[2]Université de Rennes 1, 35042 RENNES Cédex (France)

The stable sulfenium cation R^1S^+, electrogenerated by oxidation of $R^1S\text{-}SR^1$, can react with a thiol or another symmetrical disulfide to yield unsymmetrical disulfides

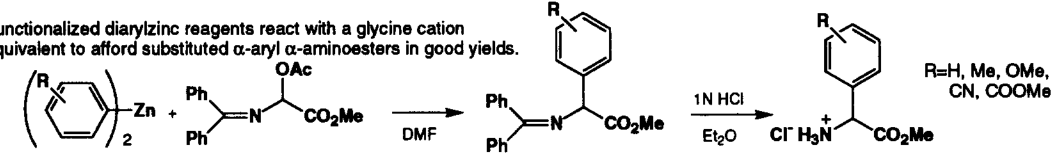
$$\begin{tikzcd} R^1S^+ \arrow[rr, bend left, "+\ R^2SH"] \arrow[rr, bend right, "+\ R^2\text{-}S\text{-}S\text{-}R^2"'] & & R^1\text{-}S\text{-}S\text{-}R^2 \end{tikzcd}$$

Tetrahedron Letters, **1997**, *38*, 3385

EFFICIENT SYNTHESIS OF FUNCTIONALIZED α-ARYL α-AMINOESTERS VIA REACTION OF POLYFUNCTIONAL DIARYLZINCS WITH A GLYCINE CATION EQUIVALENT

Frédéric Lamaty,* René Lazaro and Jean Martinez
Laboratoire des Aminoacides, Peptides et Protéines, CNRS-Universités Montpellier I & II, Place E. Bataillon, 34095 Montpellier Cedex 05, France.

Functionalized diarylzinc reagents react with a glycine cation equivalent to afford substituted α-aryl α-aminoesters in good yields.



Tetrahedron Letters, **1997**, *38*, 3387

CATALYTIC DECOMPOSITION OF ALKYL CHLOROFORMATES BY HEXABUTYLGUANIDINIUM CHLORIDE.

Frédérique Foulon, Bernard Fixari*, Dominique Picq and Pierre Le Perchec, Laboratoire CNRS des Matériaux Organiques à Propriétés Spécifiques, BP 24, 69390 Vernaison, France

Hexabutylguanidinium chloride (0.5 molar %) efficiently decomposes alkyl chloroformates into chlorides via a S_N2 mechanism.

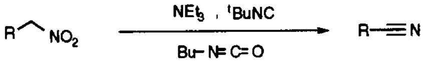
$$(Bu_2N)_3C^+\ Cl^- + ROCOCl \xrightarrow{100°C} RCl + CO_2 + (Bu_2N)_3C^+\ Cl^-$$

Tetrahedron Letters, **1997**, *38*, 3391

A New Conversion of Primary Nitro Compounds into Nitriles

Laurent El Kaim*, Ariane Gacon. Laboratoire Reacteurs et Processus,
Ecole Nationale Supérieure de Techniques avancées, 32 Bd Victor,75015 Paris, France.

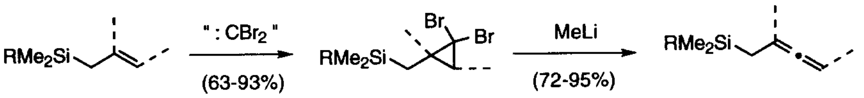
Primary nitro compounds are smoothly converted into nitriles by a new multicomponent reaction involving isocyanides.



Tetrahedron Letters, **1997**, *38*, 3395

A GENERAL SYNTHESIS OF β-SILYLALLENES FROM ALLYLSILANES

Mokhtar Lahrech,[a] Salih Hacini,[a] Jean-Luc Parrain[b]*, Maurice Santelli[b]*
a) Laboratoire de Synthèse Organique, Université d'Oran Es-Senia, Oran, Algérie; b) Laboratoire de Synthèse Organique associé au CNRS, Faculté des Sciences de Saint Jérôme, Avenue Escadrille Normandie-Niemen, 13397 Marseille Cedex 20, France

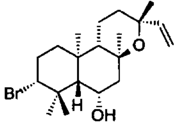


Tetrahedron Letters, **1997**, *38*, 3399

(-)-PANICULATOL, A NEW *ENT*-LABDANE BROMO-DITERPENE FROM *LAURENCIA PANICULATA*.

Arnaud Briand & Jean-Michel Kornprobst* Institut ISOMer, Groupe SMAB, Faculté de Pharmacie, Université de Nantes, France - Hala S. Al-Easa & Abdel Fattah M. Rizk, Department of Chemistry, Faculty of Science, University of Qatar, Doha, Qatar - L. Toupet, CMPO, Université de Rennes, France

This new bromoditerpene has been isolated from a marine red alga from Qatar coasts, Arabian Gulf. The complete structure has been determined by spectroscopic methods and X-ray crystallography.

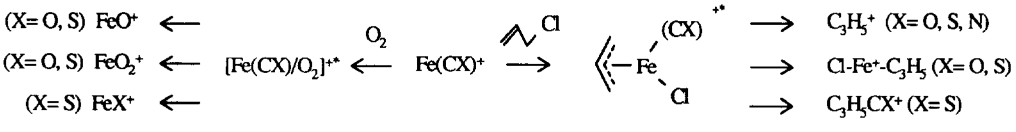


Tetrahedron Letters, **1997**, *38*, 3401

INFLUENCE OF THE LIGAND ON THE GAS-PHASE REACTIVITY OF IRON COMPLEXES $Fe(CX)^+$ ($X = O, N, S, F_2, Cl_2$).

Laure Capron*, Hélène Mestdagh, Christian Rolando,
Ecole Normale Supérieure, Département de Chimie, associé au CNRS, 24, rue Lhomond, 75231 PARIS Cedex 05, FRANCE

Gas-phase ion-molecule reactions of $Fe(CX)^+$ complexes (X= O, S, N, Cl_2, CF_2) with oxygen and allyl chloride in a MS/MS/MS instrument :

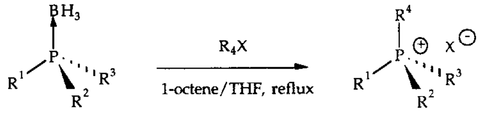


Tetrahedron Letters, **1997**, *38*, 3405

A PRATICAL SYNTHESIS OF CHIRAL AND ACHIRAL PHOSPHONIUM SALTS FROM PHOSPHINE BORANE COMPLEXES.

Jacques UZIEL, Nadège RIEGEL, Benoît AKA, Pierre FIGUIERE and Sylvain JUGE*
Equipe « Réactivités Spécifiques » EA 1389-Université de Cergy-Pontoise - 5 mail Gay-Lussac 95031 Cergy-Pontoise Cedex - FRANCE

Phosphines protected by a borane group can be transformed in "one pot" to quaternary phosphonium salts. The method is applied to the synthesis of various alkyl, aryl, cyclic, fonctionnalized, chiral and achiral phosphonium salts with 50-92%.



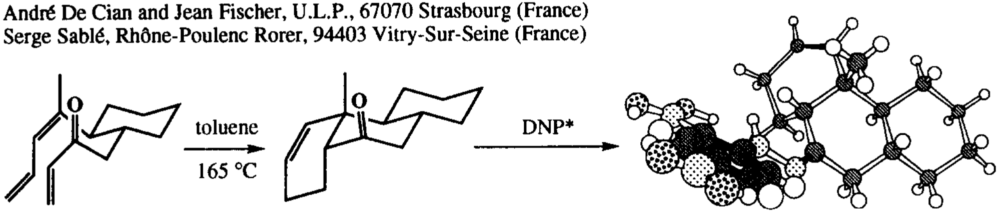
R_1, R_2, R_3, R_4 : alkyl, aryl

Yield : 50-92%

Tetrahedron Letters, **1997**, *38*, 3409

A C-B-A-D APPROACH TO BRASSINOSTEROIDS; GENERATION OF THE *CIS-ANTI-TRANS* A-B-C RING SYSTEM

Thomas Zoller and Daniel Uguen*, E.C.P.M., 67008 Strasbourg (France)
André De Cian and Jean Fischer, U.L.P., 67070 Strasbourg (France)
Serge Sablé, Rhône-Poulenc Rorer, 94403 Vitry-Sur-Seine (France)



* dinitrophenylhydrazine

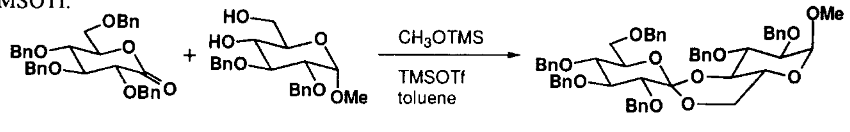
structure determined by X-ray analysis

Tetrahedron Letters, **1997**, *38*, 3413

A FACILE AND IMPROVED PREPARATION OF GLYCOSYLIDENE ACETALS OF MONOSACCHARIDES

Hiro Ohtake, Takamasa Iimori, and Shiro Ikegami*
Faculty of Pharmaceutical Sciences, Teikyo University, Sagamiko, Kanagawa 199-01, Japan

Glycosidic spiro-orthoesters were prepared directly from sugar lactones and diols in the presence of TMSOMe and a catalytic amount of TMSOTf.

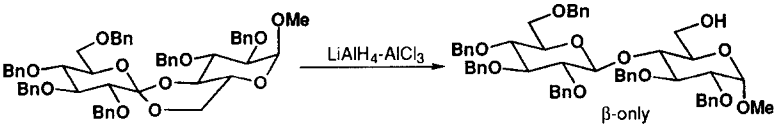


Tetrahedron Letters, **1997**, *38*, 3415

A HIGHLY STEREOSELECTIVE β-(1→4)-GLYCOSIDIC BOND FORMATION BY REDUCTIVE CLEAVAGE OF CYCLIC ORTHOESTERS

Takamasa Iimori, Hiro Ohtake, and Shiro Ikegami*
Faculty of Pharmaceutical Sciences, Teikyo University, Sagamiko, Kanagawa 199-01, Japan

Glucosyl-, galactosyl-, and mannosyl-β-(1→4)-glycosides were stereoselectively synthesized by reductive cleavage of glycosidic spiro-orthoesters.

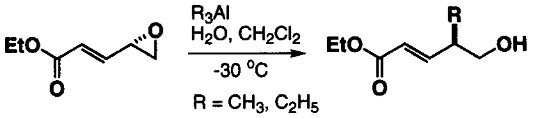


Tetrahedron Letters, **1997**, *38*, 3419

STEREOSPECIFIC INTERNAL ALKYLATION OF TERMINAL γ,δ-EPOXY ACRYLATES

Masahiro Miyazawa, Naoki Ishibashi, Satoshi Ohnuma, and Masaaki Miyashita*
Division of Chemistry, Graduate School of Science, Hokkaido University, Hokkaido 060, Japan

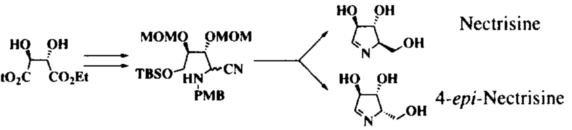
The alkylation of terminal γ,δ-epoxy acrylates with trialkylaluminum in the presence of water proceeded regio- and stereo-specifically at the γ position, i. e., internally, with inversion of configuration.



Tetrahedron Letters, **1997**, *38*, 3423

NOVEL SYNTHESIS OF NECTRISINE AND 4-*EPI*-NECTRISINE

Yong Jip Kim and Takeshi Kitahara*
Department of Applied Biological Chemistry, Graduate School of Agricultural Life Sciences, The University of Tokyo, 1-1-1 Yayoi, Bunkyo-ku, Tokyo 113, Japan



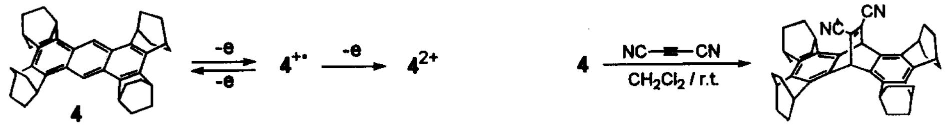
Nectrisine, a potent glycosidase inhibitor, and 4-*epi*-Nectrisine were synthesized from D-(–)-diethyl tartrate through corresponding lactams.

Tetrahedron Letters, **1997**, *38*, 3427

SYNTHESIS AND ELECTRONIC PROPERTIES OF ANTHRACENE FULLY ANNELATED WITH BICYCLO[2.2.2]OCTENE FRAMEWORKS

Akira Matsuura, Tohru Nishinaga, and Koichi Komatsu*
Institute for Chemical Research, Kyoto University, Uji, Kyoto-fu 611, Japan

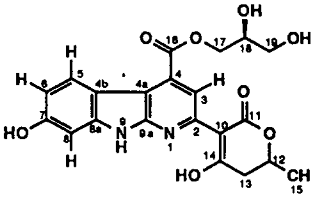
Anthracene 4 surrounded by rigid σ-frameworks was newly synthesized and its redox behavior was investigated.



Tetrahedron Letters, **1997**, *38*, 3431

STRUCTURE OF MESCENGRICIN, A NOVEL NEURONAL CELL PROTECTING SUBSTANCE PRODUCED BY *STREPTOMYCES GRISEOFLAVUS*.

Jung-Sik Kim, Kazuo Shin-ya, Kazuo Furihata,† Yoichi Hayakawa and Haruo Seto*, Institute of Molecular and Cellular Biosciences,†Department of Applied Biological Chemistry, The University of Tokyo, Bunkyo-ku, Tokyo 113, Japan.



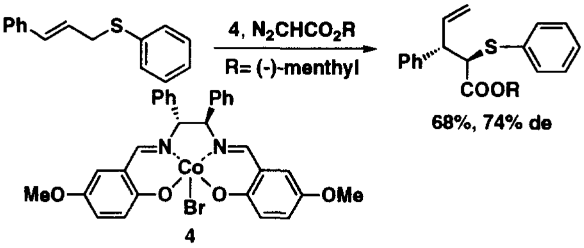
Mescengriseol was isolated from *Streptomyces griseoflavus* 2853-SVS4 as a neuronal cell protecting substance. It possesses an α-carboline structure substituted by glycerol-ester and dihydropyrone residues.

Tetrahedron Letters, **1997**, *38*, 3435

Co(III)-SALEN CATALYZED CARBENOID REACTION: STEREOSELECTIVE [2,3]SIGMATROPIC REARRANGEMENT OF S-YLIDE DERIVED FROM ALLYL ARYL SULFIDES

Tsutomu Fukuda and Tsutomu Katsuki*
Department of Chemistry, Faculty of Science, Kyushu University 33, Higashi-ku, Fukuoka 812-81, Japan

Allyl aryl sulfides and diazoacetic acid esters react in the presence of optically active Co(III)-salen complex 4 with good enantioselectivity, to give the [2,3]sigmatropic rearrangement products, 2-arylthio-3-aryl-4-pentenoic acid esters, via the corresponding S-ylides.

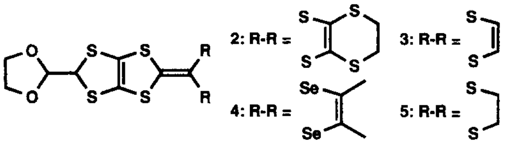


Tetrahedron Letters, **1997**, *38*, 3439

A REARRANGEMENT APPROACH TO THE SYNTHESIS OF NEW ELECTRON DONORS: TTF AND DSDTF DERIVATIVES WITH A 1,3-DIOXOLANE RING

Jun-ichi Yamada,* Miho Hamasaki, Oh Jinih, Satoru Tanaka, Kenji Hagiya and Hiroyuki Anzai
Department of Material Science, Faculty of Science, Himeji Institute of Technology, 1479-1 Kanaji, Kamigori-cho, Ako-gun, Hyogo 678-12, Japan

The synthesis and the electrochemical properties of 2-5 were investigated. Among them, the molecular structure of 2 was determined by X-ray diffraction, and its TCNQ complex exhibited metallic conducting behavior on a compressed pellet.

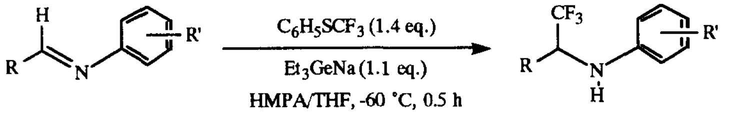


Tetrahedron Letters, **1997**, *38*, 3443

NOVEL AND EFFECTIVE SYNTHESIS OF TRIFLUOROMETHYLATED AMINES BY USE OF AN $Et_3GeNa/C_6H_5SCF_3$ COMBINATION.

Yasuo Yokoyama and Kunio Mochida, Department of Chemistry, Faculty of Science, Gakushuin University, 1-5-1 Mejiro, Toshima-ku, Tokyo 171, Japan

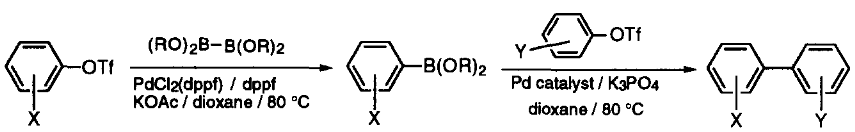
Efficient synthesis of trifluoromethylated amine derivatives using an $Et_3GeNa/C_6H_5SCF_3$ combination is described. This reaction proceeded smoothly to give the desired compound in excellent yield.



Tetrahedron Letters, **1997**, *38*, 3447

SYNTHESIS OF ARYLBORONATES VIA THE PALLADIUM(0)-CATALYZED CROSS-COUPLING REACTION OF TETRA-(ALKOXO)DIBORONS WITH ARYL TRIFLATES

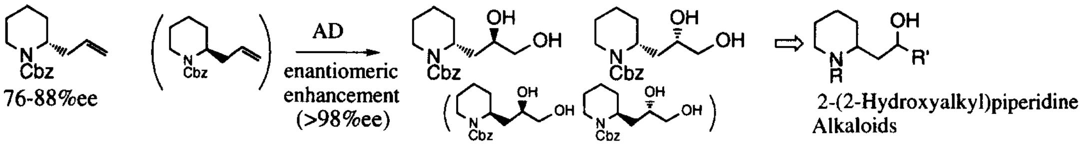
Tatsuo Ishiyama, Yoshiya Itoh, Takahiro Kitano, and Norio Miyaura*
Division of Molecular Chemistry, Faculty of Engineering, Hokkaido University, Sapporo 060, Japan



Tetrahedron Letters, **1997**, *38*, 3451

A GENERAL ENTRY TO 2-(2-HYDROXYALKYL)PIPERIDINES VIA ITERATIVE ASYMMETRIC DIHYDROXYLATION TO CAUSE ENANTIOMERIC ENHANCEMENT.

Hiroki Takahata,* Minoru Kubota, and Takefumi Momose*
Faculty of Pharmaceutical Sciences, Toyama Medical & Pharmaceutical University, Toyama 930-01, Japan

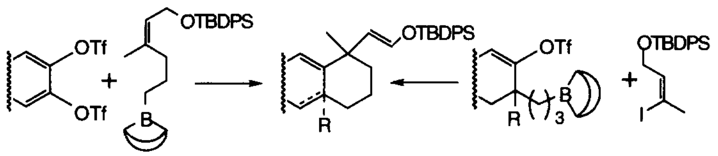


Tetrahedron Letters, **1997**, *38*, 3455

TANDEM SUZUKI CROSS-COUPLING-HECK REACTIONS

Akihiko Kojima, Shinobu Honzawa, Christopher D.J. Boden, and Masakatsu Shibasaki* *Faculty of Pharmaceutical Sciences, University of Tokyo, Hongo, Bunkyo-ku, Tokyo 113, Japan*

Tandem Suzuki cross-coupling-Heck reactions were realized in satisfactory yields by using triphenylarsine as a ligand or co-ligand.

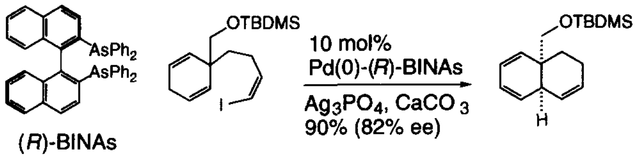


Tetrahedron Letters, **1997**, *38*, 3459

SYNTHESIS AND EVALUATION OF A NEW CHIRAL ARSINE LIGAND; 2,2'-BIS(DIPHENYLARSINO)-1,1'-BINAPHTHYL (BINAs)

Akihiko Kojima, Christopher D.J. Boden, and Masakatsu Shibasaki* *Faculty of Pharmaceutical Sciences, University of Tokyo, Hongo, Bunkyo-ku, Tokyo 113, Japan*

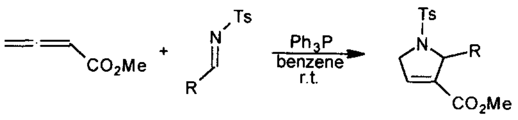
Chiral BINAs was synthesized and found to be an effective ligand for an alkenyl iodide-using intramolecular asymmetric Heck reaction.



Tetrahedron Letters, **1997**, *38*, 3461

PHOSPHINE-CATALYZED [3+2] CYCLOADDITION REACTION OF METHYL 2,3-BUTADIENOATE AND *N*-TOSYLIMINES. A NOVEL APPROACH TO NITROGEN HETEROCYCLES.

Zhenrong Xu and Xiyan Lu*, Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences, 354 Fenglin Lu, Shanghai 200032, China

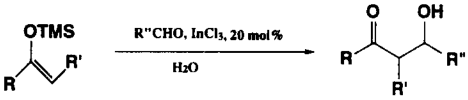


Tetrahedron Letters, **1997**, *38*, 3465

INDIUM TRICHLORIDE CATALYZED MUKAIYAMA-ALDOL REACTION IN WATER: SOLUBILITY, AGGREGATION AND INTERNAL PRESSURE EFFECT.

Teck-Peng Loh,* Jian Pei, Kevin Siong-Ve Koh, Guo-Qiang Cao and Xu-Ran Li.
Department of Chemistry, National University of Singapore, 10 Kent Ridge Crescent, Singapore 119260

Studies on the effects of water and the binding characteristic of InCl3 in the Mukaiyama-aldol reaction with an in-depth mechanistic probe on the probable internal pressure and aggregation effects therein.

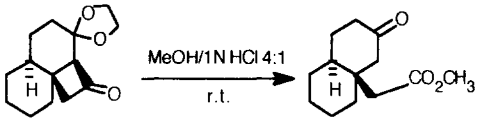


Tetrahedron Letters, **1997**, *38*, 3469

UNPRECEDENTED GROB-TYPE FRAGMENTATION OF 5-DIOXOLAN-BICYCLO[4.2.0]OCTAN-2-ONES INTO 3-(METHOXYCARBONYLMETHYL)CYCLOHEXANONES.

Marzia De Giacomo, Rinaldo Marini Bettolo, Rita Scarpelli, Dipartimento di Chimica e Centro di Studio del C.N.R. per la Chimica delle Sostanze Organiche Naturali, Università "La Sapienza", P.le A. Moro, 5, I-00185 Roma (Italy)

The unprecedented Grob-type fragmentation of 5-dioxolan-bicyclo[4.2.0]-octan-2-one **1a** into 3-(methoxycarbonylmethyl)cyclohexanone **2a** is described. This fragmentation, in combination with the allene photoannelation used to produce **1a**, might constitute an indirect way for achieving conjugate addition of methyl acetate. The same outcome was recorded when this reaction was applied to more complex analogues.

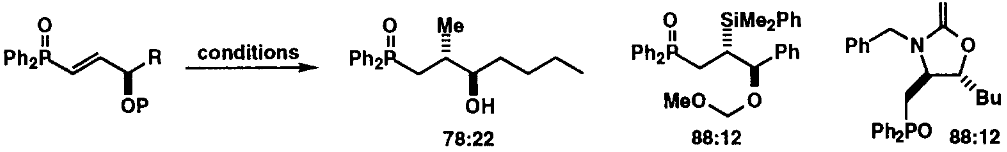


1a **2a**

Tetrahedron Letters, **1997**, *38*, 3471

DIASTEREOSELECTIVE REACTIONS OF OPTICALLY ACTIVE γ-SUBSTITUTED VINYL PHOSPHINE OXIDES

Jonathan Clayden, Adam Nelson and Stuart Warren
University Chemical Laboratory, Lensfield Road, Cambridge, CB2 1EW England

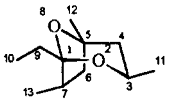


Tetrahedron Letters, **1997**, *38*, 3475

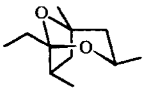
ABSOLUTE CONFIGURATION OF SORDIDIN AND 7-EPISORDIDIN EMITTED BY THE BANANA WEEVIL, *COSMOPOLITES SORDIDUS*

Mary T. Fletcher†, Christopher J. Moore‡ and William Kitching†*

†Department of Chemistry, The University of Queensland, Brisbane, 4072, Australia.
‡Department of Primary Industries, Yeerongpilly, Queensland, 4105, Australia.



(1*S*,3*R*,5*R*,7*S*)-1
Sordidin



(1*S*,3*R*,5*R*,7*R*)-2
Episordidin

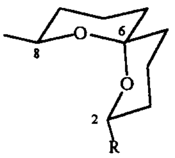
Tetrahedron Letters, **1997**, *38*, 3477

A SUITE OF ODD AND EVEN CARBON-NUMBERED SPIROACETALS IN *BACTROCERA LATIFRONS*. SYNTHESIS AND STEREOCHEMISTRY.

Hesheng Zhang†, Mary T. Fletcher†, James W. Avery‡, and William Kitching†*

†Department of Chemistry, The University of Queensland, Brisbane, 4072 Australia.
‡Insect Chemical Ecology Laboratory, USDA-ARS Beltsville, MD 20705-2350, U.S.A.

Female abdominal tips from the title fruit fly species provide spiroacetals **1** - **4** which are shown by synthesis and enantioselective gas chromatography to possess the (2*S*, 6*R*, 8*S*) stereochemistry.



1 $R = CH_3$
2 $R = C_2H_5$
3 $R = {}^nC_3H_7$
4 $R = {}^nC_4H_9$

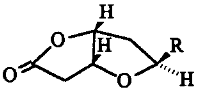
Tetrahedron Letters, **1997**, *38*, 3479

SYNTHESIS AND ABSOLUTE STEREOCHEMISTRY OF HAGEN'S-GLAND LACTONES IN SOME PARASITIC WASPS (HYMENOPTERA:BRACONIDAE)

Gregory C. Paddon-Jones†, Christopher J. Moore‡, Douglas J. Brecknell†, Wilfried A. König^Δ and William Kitching†*

†Department of Chemistry, The University of Queensland, Brisbane, 4072, Australia.
‡Department of Primary Industries, Yeerongpilly, Queensland, 4105, Australia.
^ΔInstitut für Organische Chemie der Universität, D 20146, Hamburg, Germany.

Novel bicyclic lactones from parasitic wasps.



Tetrahedron Letters, **1997**, *38*, 3483

A Convenient Synthesis of 1-(S)-[1'-(S)-(*t*-Butyloxycarbonylamino) -2'-phenylethyl]oxirane. A Useful Building Block in the Synthesis of HIV Protease Inhibitors. Jonas Brånalt,[1] Ingemar Kvarnström,[1] Björn Classon,[2] Bertil Samuelsson,[2,†*] Ulrika Nillroth,[3] U. Helena Danielson,[3] Anders Karlén[4] and Anders Hallberg[4]. [1]*Department of Chemistry, Linköping University, S-581 83 Linköping, Sweden.* [2]*Department of Organic Chemistry, Arrhenius Laboratory, Stockholm University, S-106 91 Stockholm, Sweden.* [3]*Department of Biochemistry, Uppsala University, BMC, Box 576, S-751 23 Uppsala, Sweden.* [4]*Department of Organic Pharmaceutical Chemistry, Uppsala University, BMC, S-751 23 Uppsala, Sweden* †*Additional address: Astra Hässle AB, S-431 83 Mölndal, Sweden.*