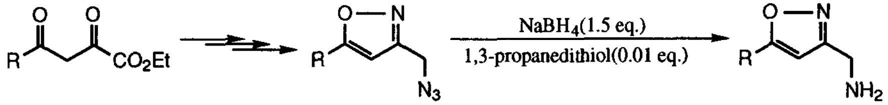
GRAPHICAL ABSTRACTS

Tetrahedron Lett. **1993**, *34*, 7509

Regioselective Syntheses of 3-Aminomethyl-5-substituted Isoxazoles: A Facile and Chemoselective Reduction of Azide to Amine by Sodium Borohydride Using 1,3-Propanedithiol as A Catalyst.

Yazhong Pei* and Barbara O. S. Wickham, Chiron Corporation, 4560 Horton Street, Emeryville, CA 94608

A series of isoxazole azides were reduced selectively to isoxazole amines in quantitative yield by sodium borohydride using 1,3-propanedithiol as a catalyst.

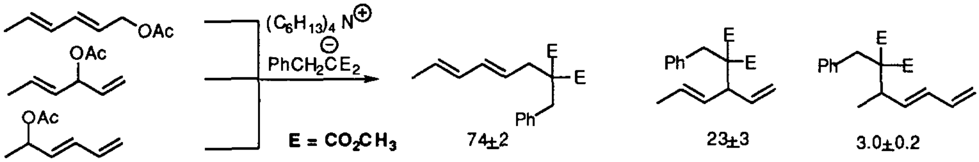


Tetrahedron Lett. **1993**, *34*, 7513

ON THE NATURE OF THE ION PAIR AS A NUCLEOPHILE IN PD CATALYZED ALKYLATIONS WITH DIENYL CARBOXYLATES

BARRY M. TROST AND RICHARD C. BUNT
DEPARTMENT OF CHEMISTRY, STANFORD UNIVERISTY, STANFORD, CA 94305-5080

Tetrahexylammonium malonates provide the same product mixture in reactions of dienyl acetates irrespective of the regioisomeric nature of the starting material but sodium salts do not.

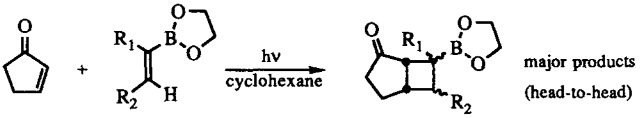


Tetrahedron Lett. **1993**, *34*, 7517

THE USE OF ALKENYLBORONATE ESTERS IN [2+2] ENONE-OLEFIN PHOTOCYCLOADDITIONS.

W. Gary Hollis, Jr., William C. Lappenbusch, Kathryn A. Everberg and Christopher M. Woleben, Department of Chemistry, College of William and Mary, Williamsburg, VA 23185 USA

Participation of alkenylboronate esters in [2+2] enone-olefin photocycloadditions has been demonstrated, with major products resulting from head-to-head addition.

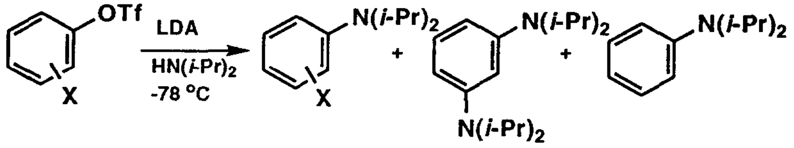


Tetrahedron Lett. **1993**, *34*, 7521

COMPETITION STUDIES ON ARYNE GENERATION FROM HALOPHENYL TRIFLATES

Peter P. Wickham,* Kelly Hardee Reuter, Dilojan Senanayake, Hong Guo, Mark Zalesky, and William J. Scott*
Departments of Chemistry, Coe College, Cedar Rapids, IA 52402 and The University of Iowa, Iowa City, IA 52242

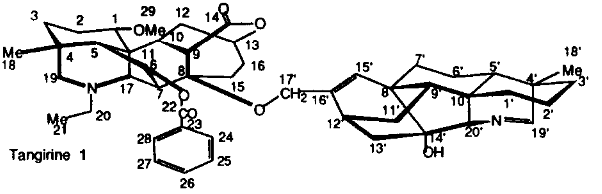
Treatment of halophenyl triflates with LDA in diisopropylamine generates haloanilines via haloarynes.



Tetrahedron Lett. **1993**, *34*, 7525

TANGIRINE, A NOVEL DIMERIC ALKALOID FROM *ACONITUM TANGUTICUM* (MAXIM.) STAPF, W. T. WANG

Balawant S. Joshi[a], Yili Bai[a], Di Hua Chen[b] and S. W. Pelletier[a]
[a]Institute for Natural Products Research & Department of Chemistry, University of Georgia, Athens, GA 30602, U.S.A.; [b]Chinese Academy of Medical Sciences, Beijing, China



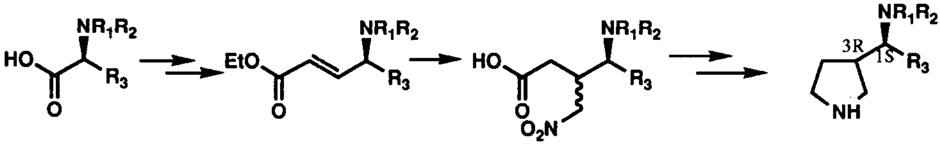
Tangirine 1

A dimeric diterpenoid alkaloid, tangirine (1), has been isolated from *A. tanguticum*. Its structure was elucidated by ^{1}H, ^{13}C, ^{1}H COSY, long range COSY, HETCOR, nOe and HMBC nmr spectral studies.

Tetrahedron Lett. **1993**, *34*, 7529

Stereoselective Michael Additions of Nitromethane Yielding 3R(1S N-Substituted Aminoethyl)Pyrrolidines

Janet S. Plummer*, Lori A. Emery, Michael A. Stier, Mark J. Suto[1]
Parke-Davis Pharmaceutical Research, Department of Medicinal Chemistry
Division of Warner-Lambert Company, Ann Arbor, MI 48105



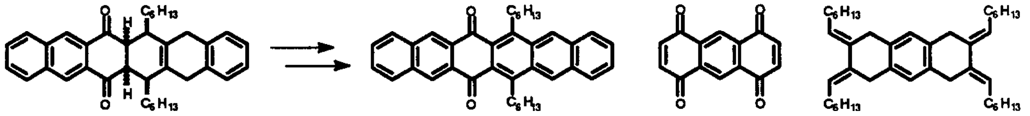
The 1,4 addition of nitromethane to vinylogous esters of N-protected amino acids proceeded with good to excellent yields and with good diastereoselectivity.

Tetrahedron Lett. **1993**, *34*, 7533

LINEARLY FUSED RIBBONS OF CARBOCYCLIC SIX-MEMBERED RINGS VIA DIELS-ALDER CYCLOADDITIONS. 1. MODEL STUDIES AND KEY INTERMEDIATES.

Robert M. Cory,* Cameron L. McPhail and Antonius J. Dikmans, Department of Chemistry, University of Western Ontario, London, Ontario, Canada N6A 5B7.

A synthesis of 7,14-dihexyl-6,15-hexacenedione is accomplished by Diels-Alder addition followed by dehydrogenation, and the double Diels-Alder components (1,4,5,8-anthradiquinone and 2,3,6,7-tetraheptylidene-1,2,3,4,5,6,7,8-octahydroanthracene) for a proposed synthesis of a cyclacene are prepared.

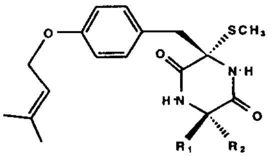


Tetrahedron Lett. **1993**, *34*, 7537

TWO NOVEL DIKETOPIPERAZINES ISOLATED FROM THE FUNGUS *TOLYPOCLADIUM* SP.

Min Chu*, Ronald Mierzwa, Imbi Truumees, Frank Gentile, Mahesh Patel, Vincent Gullo, Tze-Ming Chan and Mohindar S. Puar
Schering-Plough Research Institute,
2015 Galloping Hill Road, Kenilworth, New Jersey 07033 U.S.A.

Two novel diketopiperazines, Sch 54794 and Sch 54796, have been isolated from a fungal fermentation and identified by spectral methods.



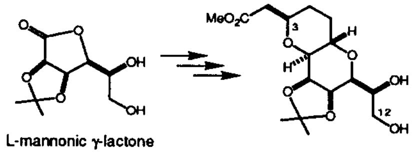
Sch 54794: R_1 = H R_2 = SCH_3
Sch 54796: R_1 = SCH_3 R_2 = H

Tetrahedron Lett. **1993**, *34*, 7541

Synthetic Studies on Halichondrins: A New Practical Synthesis of the C.1-C.12 Segment

James J.-W. Duan and Yoshito Kishi*
Department of Chemistry, Harvard University,
Cambridge, Massachusetts 02138, U.S.A.

A new practical synthesis of the C.1-C.12 halichondrin segment was achieved from L-mannonic γ-lactone, using osmylation, *C*-allylation and Michael reaction as key steps.

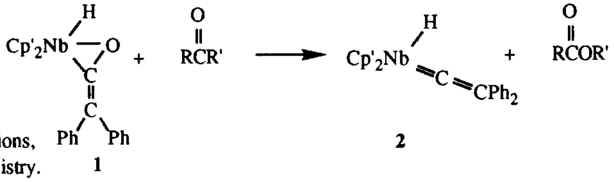


Tetrahedron Lett. **1993**, *34*, 7545

OXYGEN ATOM TRANSFER WITH NIOBOCENE KETENES; BAEYER-VILLIGER CHEMISTRY WITH UNUSUAL REGIOSELECTIVITIES

Maria C. Fermin and Joseph W. Bruno*
Hall-Atwater Laboratories, Wesleyan University
Middletown, CT 06459

Complex **1** has been used as an oxygen atom source in stoichiometric and catalytic Baeyer-Villiger reactions, and it exerts a steric influence on reaction regiochemistry.



Tetrahedron Lett. **1993**, *34*, 7549

A FAMILY OF TRIFLUOROETHOXYCARBENES.

C-S. Ge, E. A. Jefferson, and R. A. Moss, Department of Chemistry, Rutgers, The State University of New Jersey, New Brunswick, New Jersey 08903

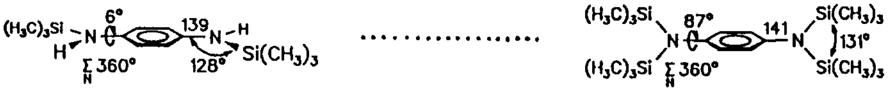
The generation and reactions of 4 novel trifluoroethoxycarbenes (**1-4**) are described.

$CF_3CH_2O\text{-}\ddot{C}\text{-}Cl$ **1** $CF_3CH_2O\text{-}\ddot{C}\text{-}F$ **2** $(CF_3CH_2O)_2C\!:$ **3** $CF_3CH_2O\text{-}\ddot{C}\text{-}OCH_3$ **4**

Tetrahedron Lett. **1993**, *34*, 7553

STERIC OVERCROWDING IN N-TRIMETHYLSILYL-SUBSTITUTED-P-PHENYLENEDIAMINES: THE ORIGIN OF A WURSTER'S BLUE RADICAL ANION

Hans Bock*, Jochen Meuret, Christian Näther and Ulrich Krynitz
Department of Chemistry, University, Marie Curie-Straße 11, 60439 Frankfurt/Main, Germany

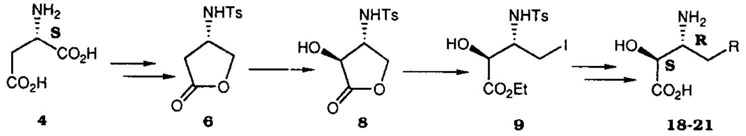


Tetrahedron Lett. **1993**, *34*, 7557

A CONCISE DIASTEREOSPECIFIC SYNTHESIS OF 3-AMINO-2-HYDROXY ACIDS

C.W. Jefford, J.B. Wang, and Z.-H. Lu,
Department of Organic Chemistry, University of Geneva,
1211 Geneva 4, Switzerland

L-Aspartic acid (**4**) was converted to the acids **18-21** *via* the key intermediates **6**, **8** and **9**.



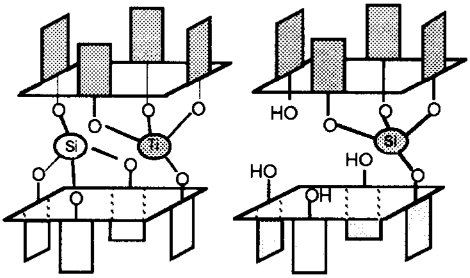
4 **6** **8** **9** **18-21**

Tetrahedron Lett. **1993**, *34*, 7561

Multicavitands II: Synthesis of a Non Centrosymmetric Hollow Molecular Unit (Koiland) Based On Fusion of Two *p-tert*-butylcalix[4]arenes by Both Silicon and Titanium Atoms.

Xavier Delaigue, Mir Wais Hosseini,* Emmanuelle Leize, Sylvie Kieffer and Alain Van Dorsselaer
Institut de Chimie, Université Louis Pasteur, 4, rue Blaise Pascal, F-67000 Strasbourg, France

The synthesis and NMR structural investigation of a divergent direceptor with two different cavities and of its precursor are described

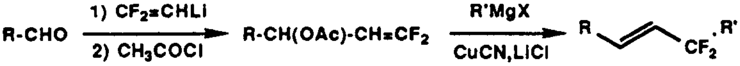


Tetrahedron Lett. **1993**, *34*, 7565

Stereoselective Syntheses of 3,3-difluoro-1-propene Derivatives

Frédérique Tellier[1]* and Raymond Sauvêtre[2]
1-INRA, Laboratoire des Médiateurs Chimiques, Domaine de Brouessy, 78114 Magny-les-Hameaux, France
2-Laboratoire de Chimie des Organoéléments, Université P. et M. Curie, 4 place Jussieu, 75252 Paris Cedex 05, France

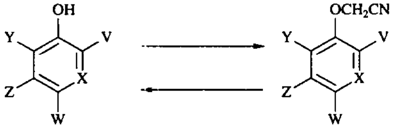
A synthesis of allylic difluorides is described, exemplified by the preparation of the difluoro analogue of a pheromonal component of the oriental fruit moth.



Tetrahedron Lett. **1993**, *34*, 7567

CYANOMETHYL GROUP: A VERSATILE PROTECTING GROUP FOR PHENOLS, PRIMARY AND SECONDARY AMINES, AND CARBAMATES.

Benharab A., Boyé S., Savelon L., Guillaumet G.*, Laboratoire de Chimie Bioorganique et Analytique associé au CNRS, Université d'Orléans, B.P. 6759, 45067 Orléans Cedex 2, France.

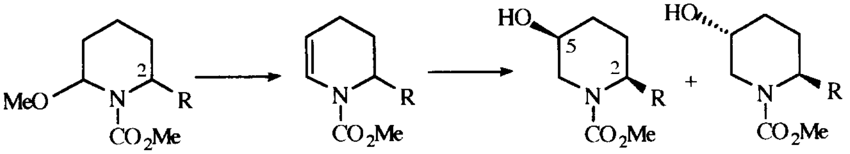


The use of cyanomethyl as a protecting group for phenols, primary and secondary amines, and carbamates is described.

Tetrahedron Lett. **1993**, *34*, 7569

Hydroboration of Enecarbamates and the Synthesis of β-Hydroxypiperidine Alkaloids.

Mark Plehiers and Claude Hootelé*, Organic Chemistry Department, Faculty of Sciences, University of Brussels, B-1050 Brussels



Tetrahedron Lett. **1993**, *34*, 7571

ELECTROCHEMICAL SYNTHESIS OF SYMMETRICAL KETONES FROM ACID CHLORIDES.

Jean-Claude Folest, Edouard Pereira-Martins, Michel Troupel and Jacques Périchon
Laboratoire d'Electrochimie, Catalyse, et Synthèse Organique, (UMR 28), 2 rue H. Dunant, 94320 - Thiais, France

The electrolysis of an acetonitrile solution of an acid chloride is achieved in a cell fitted with a stainless steel or a nickel anode. The ketone is obtained in a yield ranging from moderate to good.

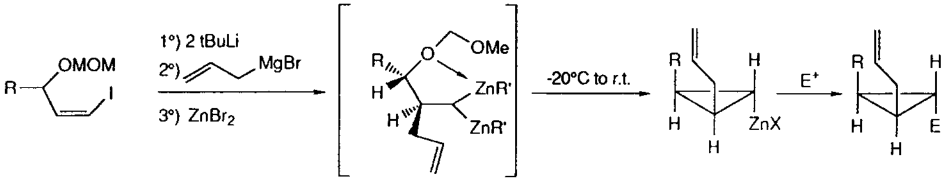
$$2\,\text{R-COCl} + 2\,\text{e} \longrightarrow \text{R-CO-R} + 2\,\text{Cl}^- + \text{CO}$$

R = Ph (72%), R = Ph-CH_2 (80%) R = various aryl groups (30-50%)

Tetrahedron Lett. **1993**, *34*, 7575

Cyclic Stereocontrol via Organobismetallic Reagents. Part VI Stereodefined Substituted Cyclopropyl Zinc Reagents.

Dov Beruben, Ilane Marek* , Jean-F. Normant*
Laboratoire de Chimie des Organoéléments, CNRS UA 473, Université P. et M. Curie, 4 Place Jussieu, F-75252 Paris Cedex 05, France
Nicole Platzer
Laboratoire de Chimie Organique Structurale, CNRS UA 455, Université P. et M. Curie, 8 rue Cuvier, F-75252 Paris Cedex 05, France

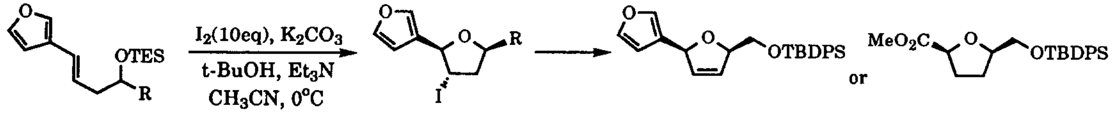


Tetrahedron Lett. **1993**, *34*, 7579

A STEREOCONTROLLED SYNTHESIS OF *SYN*-2,5-DISUBSTITUTED TETRAHYDROFURAN AND DIHYDROFURAN

Sung Ho Kang* and Sung Bae Lee, Department of Chemistry,
Korea Advanced Institute of Science and Technology, Taejon 305-701, Korea

A stereocontrolled synthetic route to *syn*-2,5-disubstituted tetrahydrofuran and dihydrofuran is described.

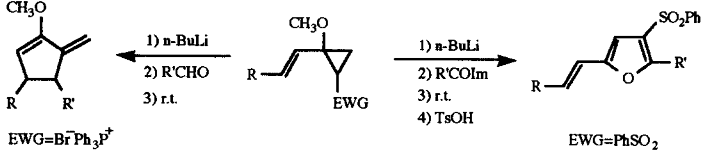


4, 11 - 15 **5s - 10s** **21** **22**

Tetrahedron Lett. **1993**, *34*, 7583

A FACILE PREPARATION OF HIGHLY FUNCTIONALIZED CYCLOPROPANES AND THEIR CONVERSION TO CYCLOPENTANONES AND FURANS

Phil Ho Lee[a]*, Jong Soon Kim[a], Youn Chul Kim[b], and Sunggak Kim[b]*
[a]Department of Chemistry, Kangwon National University, Chuncheon 200-701, Korea
[b]Department of Chemistry, Korea Advanced Institute of Science and Technology, Daejon 305-701, Korea

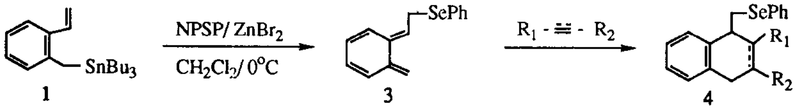


Tetrahedron Lett. **1993**, *34*, 7587

A Novel Method for the Generation of *o*- Quinodimethane by Selenium-Induced Fragmentation of *o* -Vinyl benzyltributylstannane

Soon Hyung Woo
Chemistry Group, Research Institute of Industrial Science and Technology, P.O. Box 135, Pohang 790-630, KOREA

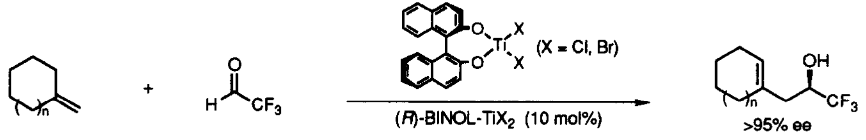
The treatment of *o* - vinyl benzyltributylstannane 1 with N-phenylselenophthalimide(NPSP) in the presence of zinc bromide at 0°C can generate *o* - quinodimethane 3, which can then undergo Diels-Alder reactions.



Tetrahedron Lett. **1993**, *34*, 7591

Asymmetric Catalysis of Ene-type Reaction with Fluoral by Chiral Titanium Complex: A Semi-empirical and Ab-initio Analysis of Ene Reactivity

Koichi Mikami,* Tomoko Yajima, Masahiro Terada, and Tadafumi Uchimaru†
Department of Chemical Technology, Tokyo Institute of Technology, Meguro-ku, Tokyo 152, Japan
†National Institute of Materials and Chemical Research, Agency of Industrial Science and Technology, MITI, Tsukuba, Science City 305, Japan



Tetrahedron Lett. **1993**, *34*, 7595

Synthesis of Unsymmetrical Biaryl Ketones *via* Palladium-Catalyzed Carbonylative Cross-Coupling Reaction of Arylboronic Acids with Iodoarenes

Tatsuo Ishiyama, Hiroe Kizaki, Norio Miyaura, and Akira Suzuki
Department of Applied Chemistry, Faculty of Engineering, Hokkaido University, Sapporo 060, Japan

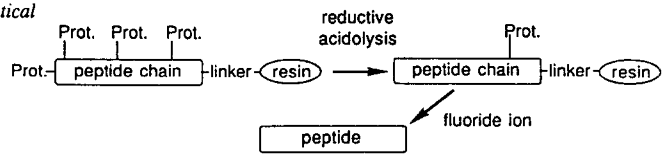
$$\mathrm{Ar\text{-}B(OH)_2} + \mathrm{CO}\ (1\ \mathrm{atm}) + \mathrm{I\text{-}Ar'} \xrightarrow[\text{base}]{\text{Pd-catalyst}} \mathrm{Ar\text{-}CO\text{-}Ar'}$$

Tetrahedron Lett. **1993**, *34*, 7599

A NEW STEPWISE DEPROTECTION METHOD USING REDUCTIVE ACIDOLYSIS FOLLOWED BY FLUORIDE ION IN SOLID PHASE PEPTIDE SYNTHESIS

Yoshiaki Kiso,* Hisatomi Itoh, Shigeki Tanaka, Tooru Kimura and Kenichi Akaji
Department of Medicinal Chemistry, Kyoto Pharmaceutical University, Yamashina-ku, Kyoto 607, Japan

A new stepwise deprotection method has been found to minimize aspartimide formation.

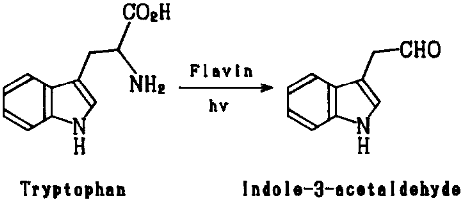


Tetrahedron Lett. **1993**, *34*, 7603

FLAVIN-PHOTOSENSITIZED PRODUCTION OF INDOLE-3-ACETALDEHYDE FROM TRYPTOPHAN.

Tomokazu Koshiba*[a], KotaroYamauchi [b], Haruo Matsuyama[b], Masakazu Miyakado[c], Ichiro Sori[c] and Mitsuhiko Satô[a]. a) Department of Biology, Tokyo Metropolitan University, Hachioji-shi, Tokyo 192-03, Japan; b) Department of Chemistry, Tokyo Metropolitan University, Hachioji-shi, Tokyo 192-03, Japan; c) Sumitomo Chemical Co., Ltd., Takarazuka Research Center, Takatsukasa, Takarazuka, Hyogo 665, Japan

Photochemical reaction of tryptophan with flavin was performed under anaerobic condition to give indole-3-acetaldehyde as a major product.

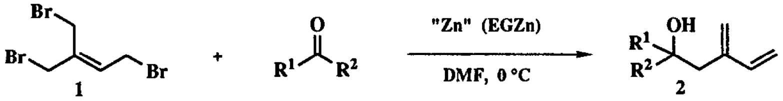


Tetrahedron Lett. **1993**, *34*, 7607

NEW PREPARATION OF REACTIVE ZINC METAL BY ELECTROLYSIS AND ITS USE FOR A FACILE ISOPRENYLATION OF ALDEHYDES AND KETONES

Masao Tokuda,* Nobuo Mimura, Tamae Karasawa, Hirotake Fujita, and Hiroshi Suginome*
Organic Synthesis Division, Faculty of Engineering, Hokkaido University, Sapporo 060, Japan

Reaction of **1** with aldehydes and ketones in the presence of the electrogenerated zinc (EGZn) gave the corresponding isoprenylated carbinols **2** in good yields.

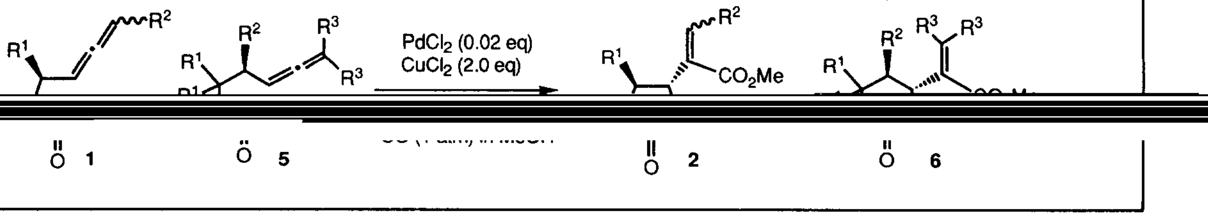


Tetrahedron Lett. **1993**, *34*, 7611

Pd^{2+}-catalyzed Oxidative Aminocarbonylation of *O*-2,3-Butadienyl and *O*-3,4-Pentadienyl *N*-Tosylcarbamates

Masanari Kimura, Naoto Saeki, Shigeru Uchida, Hiroto Harayama, Shuji Tanaka, Keigo Fugami, and Yoshinao Tamaru*
Department of Applied Chemistry, Faculty of Engineering, Nagasaki University, 1-14 Bunkyo, Nagasaki 852, Japan

Pd^{2+}-catalyzed oxidative aminocarbonylation of **1** and **5** stereoselectively provides **2** and **6**, respectively, in high yields.

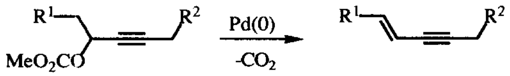


Tetrahedron Lett. **1993**, *34*, 7615

Preparation of Conjugated Enynes by the Palladium-Catalyzed Elimination Reaction of Propargylic Carbonates

T. Mandai,* Y. Tsujiguchi, S. Matsuoka, J. Tsuji, Department of Applied Chemistry, Okayama University of Science, Ridai-cho, Okayama 700, Japan

Propargylic carbonates are cleanly converted to conjugated enynes by palladium-catalyzed elimination reaction under mild and neutral conditions.

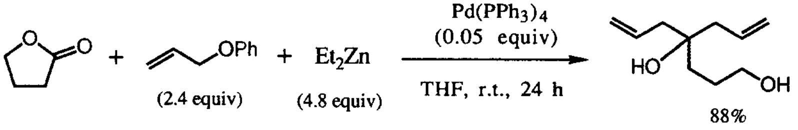


Tetrahedron Lett. **1993**, *34*, 7619

Use of π-Allylpalladium as a Nucleophile via an Alkyl-Allyl Exchange Reaction with Alkylzinc

Kengo Yasui, Youichi Goto, Takafumi Yajima, Yasue Taniseki, Keigo Fugami, Akihiro Tanaka, and Yoshinao Tamaru*
Department of Applied Chemistry, Faculty of Engineering, Nagasaki University,1-14 Bunkyo, Nagasaki 852, Japan

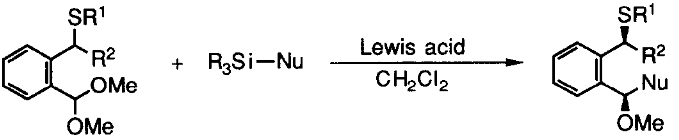
Palladium-catalyzed allylation of carbonyl compounds via alkyl-allyl exchange between π-allylpalladium and diethylzinc proceeds to provide homoallyl alcohols in good yields.



Tetrahedron Lett. **1993**, *34*, 7623

Highly Diastereoselective Aldol Reaction of Benzaldehyde Derivatives Having a Chiral Ortho Substituent with Silylated Carbon Nucleophiles

Yukihiko Hashimoto, Yasushi Sato, Kazuaki Kudo, and Kazuhiko Saigo*
Department of Synthetic Chemistry, Faculty of Engineering, The University of Tokyo, Hongo, Bunkyo-ku, Tokyo 113, Japan



R^1 = Mesityl, R^2 = Me or Et

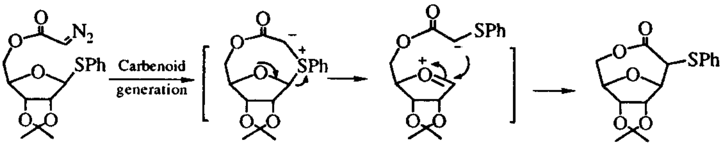
Diastereomer ratio = 89 : 11 to >99 : 1

Tetrahedron Lett. **1993**, *34*, 7627

A NOVEL ROUTE TO A NEW LACTONE INTERMEDIATE FOR C-NUCLEOSIDES VIA AN INTRAMOLECULAR SULFONIUM YLIDE REARRANGEMENT. A FORMAL SYNTHESIS OF (+)-SHOWDOMYCIN

Guncheol Kim*, Sunwha Kang and Soon Nam Kim
Hanhyo Institutes of Technology,San 6, Daeyadong, Siheungshi, Kyunggido, Korea 429-010

Intramolecular carbenoid reaction of phenylthiofuranose afforded a new lactone through sequential rearrangements.



Tetrahedron Lett. **1993**, *34*, 7629

REACTION OF C_{60} WITH DIACYL PEROXIDES CONTAINING PERFLUOROALKYL GROUPS. THE FIRST EXAMPLE OF ELECTRON TRANSFER REACTION *VIA* $C_{60}^{\bullet +}$ IN SOLUTION

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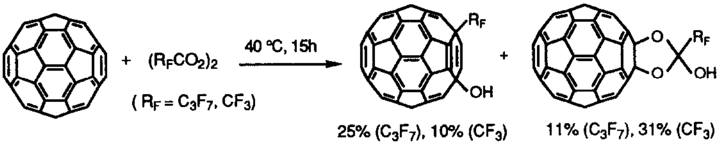
Department of Chemistry, Faculty of Science, Tokyo Metropolitan University, Hachioji, Tokyo 192-03, Japan

$C_{60}(R_FOH)$ was produced *via* the cation radical of C_{60} as intermediate by single-electron transfer from C_{60} to the diacyl peroxide.

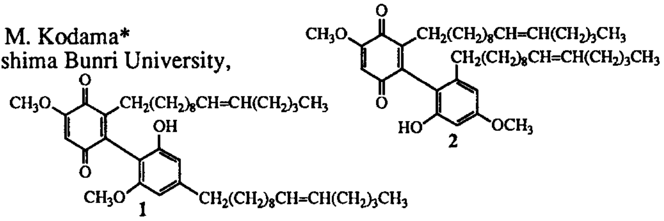


Tetrahedron Lett. **1993**, *34*, 7633

BELAMCANDAQUINONES A AND B, NOVEL DIMERIC 1,4-BENZOQUINONE DERIVATIVES, POSSESSING CYCLOOXYGENASE INHIBITORY ACTIVITY

Y. Fukuyama, Y. Kiriyama, J. Okino, and M. Kodama*
Faculty of Pharmaceutical Sciences, Tokushima Bunri University,
Yamshiro-cho, Tokushima 770, Japan

The structures of belamcandaquinones A (1) and B (2) are described.



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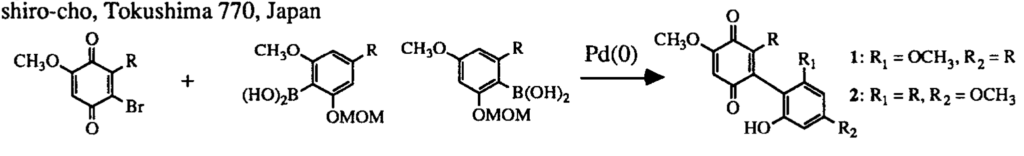
Tetrahedron Lett. **1993**, *34*, 7637

CONCISE SYNTHESIS OF BELAMCANDAQUINONES A AND B BY PALLLADIUM(0) CATALYZED CROSS-COUPLING REACTION OF BROMOQUINONE WITH ARYLBORONIC ACIDS

Y. Fukuyama, * Y. Kiriyama, and M. Kodama
Faculty of Pharmaceutical Sciences, Tokushima Bunri University,
Yamshiro-cho, Tokushima 770, Japan

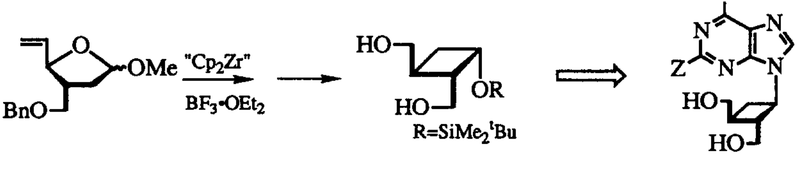
R = $(CH_2)_9CH=CH(CH_2)_3CH_3$



Tetrahedron Lett. **1993**, *34*, 7639

Zirconium-Mediated Ring Contraction: An Efficient Synthesis of Enantiomerically Pure Key Intermediate of Carbocyclic Oxetanocin

H. Ito, T. Taguchi and Y. Hanzawa
Tokyo College of Pharmacy, 1432-1 Horinouchi, Hachioji Tokyo, Japan 192-03



Tetrahedron Lett. **1993**, *34*, 7641

INTRAMOLECULAR CYCLIZATION REACTIONS OF ENONE RADICALS

Chin-Kang Sha,* Chi-Yung Shen, Tsong-Shin Jean, Rei-Torng Chiu, and Wei-Hong Tseng
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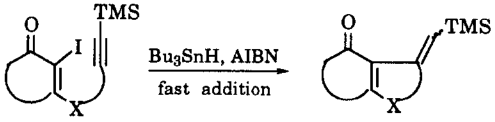
Hsinchu, Taiwan 300, China

Enone radicals, generated from the corresponding iodo enones, or vinylogous esters and amides, undergo intramolecular cyclization to the tethered trimethylsilyl acetylenic side chain to give the carbo- or heterobicyclic enones.



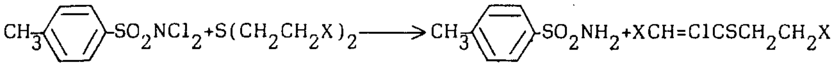
X = CH_2, O, N^tBoc

Tetrahedron Lett. **1993**, *34*, 7645

DEGRADATION OF 2,2'-DIHALODIETHYL SULFIDES(MUSTARDS) BY N,N-DICHLORO-4-METHYLBENZENESULPHONAMIDE IN APROTIC MEDIUM.

D.K.Dubey*,Rabinder Nath, R.C.Malhotra and D.N.Tripathi
Defence R.& D.Establishment, Gwalior-474002 (M.P.) INDIA

Decontamination of mustards by dichloramine-T generates 2-haloethyl 1-chloro-2-halovinyl sulfides(9) as major product.

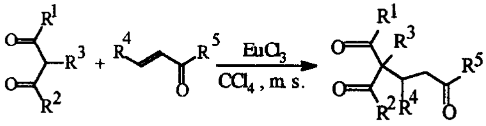


[1] [2] [8] [9]

Tetrahedron Lett. **1993**, *34*, 7649

Lanthanides in Organic Synthesis: Eu^{+3}-Catalyzed Michael Addition of 1,3-Dicarbonyl Compounds.

Francesco Bonadies[a], Alessandra Lattanzi[a] Liliana R. Orelli[b], Silvia Pesci[a], Arrigo Scettri[a].
[a] Centro CNR di Studio per la Chimica delle Sostanze Organiche Naturali, Dipartimento di Chimica, Università "La Sapienza",P.le A. Moro 5, 00185 ROMA, Italy.
[b] Departamento de Quimica Organica, Facultad de Farmacia e Bioquimica, Junin 956, Buenos Aires, Argentina.



1 2 3

EuCl$_3$ proves to be an efficient catalyst for Michael addition of 1,3-dicarbonyl compounds. The employment of Eu^{+3} chiral complex Eu(tfc)$_3$ allows the formation of Michael adducts in enantioselective way.