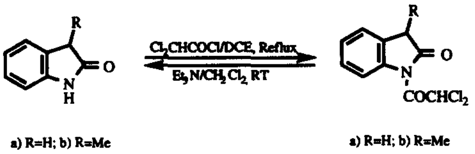
GRAPHICAL ABSTRACTS

Tetrahedron Letters, **1997**, *38*, 7813

A CONVENIENT METHOD OF PROTECTING OXINDOLES

Walajapet G. Rajeswaran and Louis A. Cohen
Laboratory of Bioorganic Chemistry, NIDDK, National Institutes of Health
Bethesda, MD 20892.

A simple method of protecting oxindoles using dichloroacetyl group is described.

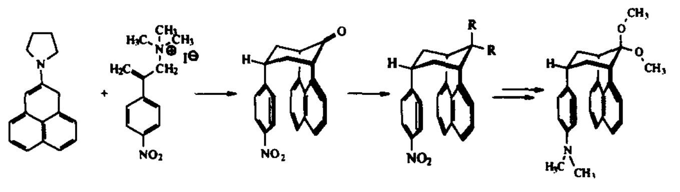


Tetrahedron Letters, **1997**, *38*, 7815

Intramolecular Photoinduced Electron Transfer: A Dimethylaniline Constrained to the Face of a Naphthalene through a Bicyclic Scaffold.

Yaun-Shek Chen, Jeff W. Kampf and Richard G. Lawton*
Department of Chemistry, The University of Michigan, Ann Arbor, Michigan 48109

α, α'-Annelation affords an aromatic bicyclic framework, having a *p*-nitrophenyl group positioned within ~3 Å and face-to-face with a naphthalene ring. Transformation of the nitro group to a dimethylamino gave a molecule well suited to evaluate intramolecular photoinduced electron transfer [PET] between the two aromatic elements.

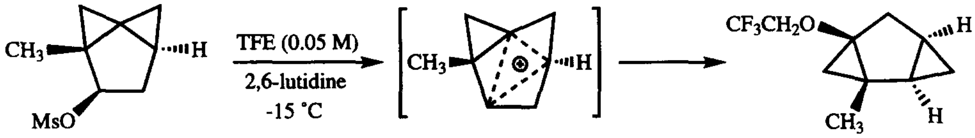


Tetrahedron Letters, **1997**, *38*, 7819

Rearrangement Pathways of the Tricyclo[4.1.0.0^{1,3}]heptyl Skeleton

Gary W. Dombrowski, Paul G. Gassman, Steven R. Kass*
Department of Chemistry, University of Minnesota, Minneapolis, MN 55455

The preparation and solvolysis of *syn* and *anti*-1-methyltricyclo[4.1.0.0^{4,6}]heptan-2-ol derivatives is reported. syn Mesylate **4b** gives the product of a solvent trapped cyclopropyl cation (7) suggesting the intermediacy of a novel trishomocyclopropenyl cation.



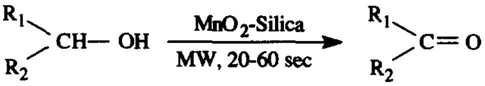
4b **7**

Tetrahedron Letters, **1997**, *38*, 7823

ACTIVE MANGANESE DIOXIDE ON SILICA: OXIDATION OF ALCOHOLS UNDER SOLVENT-FREE CONDITIONS USING MICROWAVES

Rajender S. Varma* Rajesh K. Saini and Rajender Dahiya
Department of Chemistry and Texas Regional Institute for Environmental Studies (TRIES),
Sam Houston State University, Huntsville,Texas 77341-2117, U.S.A.

Alcohols are selectively oxidized in the solid state to carbonyl compounds using silica supported active MnO$_2$ and microwaves.



$$R_1R_2CH{-}OH \xrightarrow[\text{MW, 20-60 sec}]{\text{MnO}_2\text{-Silica}} R_1R_2C{=}O$$

R$_1$ = aryl ; R$_2$ = H, alkyl, aryl

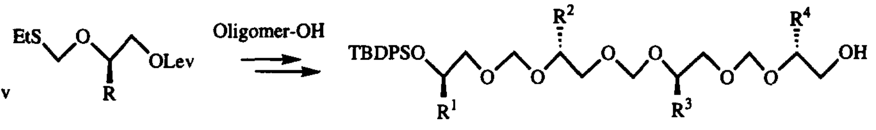
Tetrahedron Letters, **1997**, *38*, 7825

SYNTHESIS OF DIVERSE ETHOXYFORMACETAL OLIGOMERS. TOWARD LIBRARIES OF METAL-COORDINATING UNNATURAL BIOPOLYMERS.

Dennis G. Hall and Peter G. Schultz, Howard Hughes Medical Institute, Department of Chemistry, University of California, Berkeley, CA 94720 USA

A set of four thioformacetal monomers were coupled to hydroxyl acceptors by NIS/TfOH activation. Three model tetramers are described.

1 $R=CH_3$
2 R=Ph
3 $R=CH_2CH_2CO_2CH_3$
4 $MeSCH_2OC(Et)_2CH_2OLev$

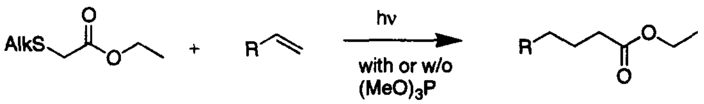


Tetrahedron Letters, **1997**, *38*, 7829

TIN-FREE REDUCTIVE PHOTOCHEMICAL CARBOXYMETHYLATION OF OLEFINS WITH α-ALKYLTHIOACETATES.

Lisa X. Deng and Andrei G. Kutateladze*, Department of Chemistry and Biochemistry, University of Denver, Denver, CO 80208-2436

An efficient and experimentally simple photochemical technique is developed furnishing substituted derivatives of fatty acids in moderate to good yields via the radical carboxymethylation of olefins.

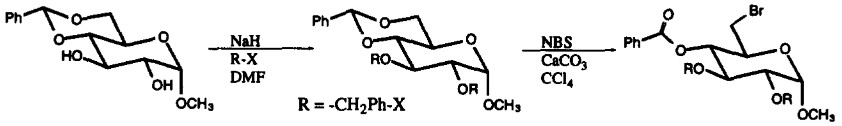


Tetrahedron Letters, **1997**, *38*, 7833

SUBSTITUTED BENZYL ETHERS AS RADICAL STABLE PROTECTING GROUPS.

Louis J. Liotta*, Kendra L. Dombi, Sheryl A. Kelley, Sonia Targontsidis, and Amy M. Morin, Department of Chemistry, Stonehill College, North Easton, Massachusetts 02357 USA

Of sixteen substituents tested, the 2-trifluoromethylbenzyl substituent provided the already versatile benzyl ether protecting group with added stability against radical brominating conditions.



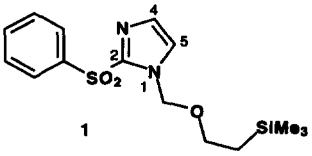
Tetrahedron Letters, **1997**, *38*, 7835

1-[2'-(TRIMETHYLSILYL)ETHOXYMETHYL]-2-PHENYLSULFONYLIMIDAZOLE: A NEW REAGENT FOR THE PREPARATION OF C-4 SUBSTITUTED IMIDAZOLES

James G. Phillips*, Leena Fadnis, and David R. Williams[a]

Gliatech, Inc., 23420 Commerce Park Road, Cleveland, Ohio 44122, U.S.A.
[a]Department of Chemistry, Indiana University, Bloomington, Indiana 47405, U.S.A.

The title compound provides for the efficient C-4 metallation of the imidazole nucleus. Further reactions lead to trisubstituted imidazoles which can be selectively deprotected at the N_1 and C_2 positions under mild conditions to maximize the potential for further elaboration.

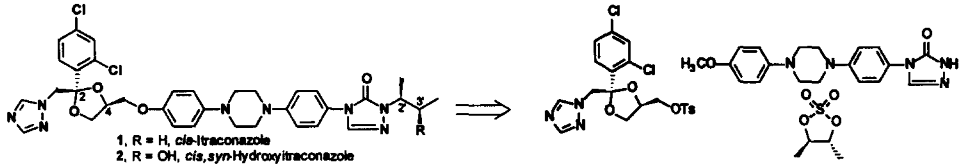


1

Tetrahedron Letters, **1997**, *38*, 7839

Efficient Stereoselective Synthesis of *cis,syn*-Hydroxyitraconazole Isomers

Gerald J. Tanoury,* Chris H. Senanayake,* Robert Hett, Yaping Hong, and Steven A. Wald,
Department of Chemical Research and Development, Sepracor Inc., 33 Locke Drive, Marlborough, MA 01752, USA

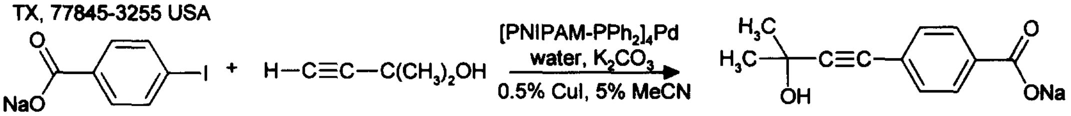


1, R = H, *cis*-Itraconazole
2, R = OH, *cis,syn*-Hydroxyitraconazole

Tetrahedron Letters, **1997**, *38*, 7843

WATER-SOLUBLE POLYMER-BOUND, RECOVERABLE PALLADIUM(0)-PHOSPHINE CATALYSTS.

David E. Bergbreiter* and Yun-Shan Liu, Department of Chemistry, Texas A&M University, College Station TX, 77845-3255 USA



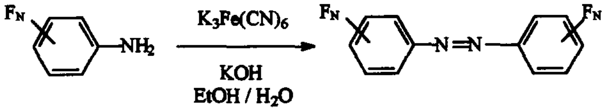
Water-soluble polymer-bound Pd(0) catalysts for allylic substitution or sp-sp^2 coupling reactions are described.

Tetrahedron Letters, **1997**, *38*, 7847

OXIDATION OF FLUOROANILINES TO FLUOROAZOBENZENES WITH POTASSIUM FERRICYANIDE AND KOH

Elisa Leyva*, Elena Monreal, Concepción Medina and Socorro Leyva
Facultad de Ciencias Químicas, Universidad Autónoma de San Luis Potosí, San Luis Potosí, S.L.P., 78210 MÉXICO

The oxidation of several fluoroanilines to fluoroazobenzenes with potassium ferricyanide and KOH.

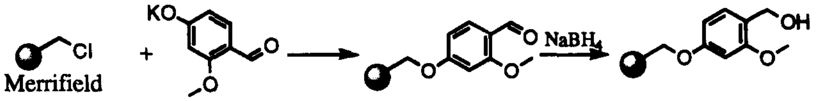


Tetrahedron Letters, **1997**, *38*, 7849

NEW SYNTHESIS OF SASRIN™ RESIN

Alan R. Katritzky* and Dorin Toader,
Center for Heterocyclic Compounds, Department of Chemistry, University of Florida, Gainesville, FL 32611-7200, USA
Karen Watson and John S. Kiely, Trega Biosciences, Inc., 3550 General Atomics Court, San Diego, CA 92121, USA

SASRIN™ resin is synthesized by a two step sequence involving linking 4-hydroxy-2-methoxybenzaldehyde to Merrifield resin, followed by reduction with sodium borohydride.

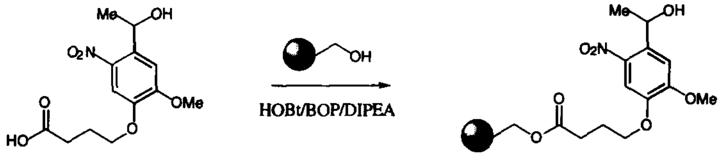


Tetrahedron Letters, **1997**, *38*, 7851

An Improved Synthesis and Selective Coupling of a Hydroxy Based Photolabile Linker for Solid Phase Organic Synthesis.

Darren L. Whitehouse, Sergey N. Savinov, and David J. Austin,* Department of Chemistry, Yale University, 225 Prospect St., New Haven, CT 06520-8107 USA

Synthesis and selective coupling of a hydroxy based photolinker to a hydroxy based solid-phase resin, without the need for protection or on-resin manipulation, is presented.

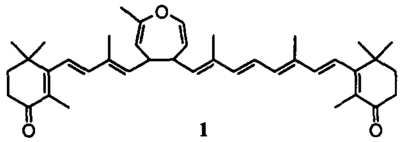


Tetrahedron Letters, **1997**, *38*, 7853

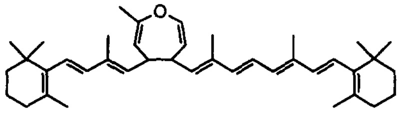
OXIDATION OF CAROTENOIDS - I.
DIHYDROOXEPIN DERIVATIVES AS PRODUCTS OF OXIDATION OF CANTHAXANTHIN AND β,β-CAROTENE

Marcel Zürcher, Urs A. Niggli, Andrea Steck, and Hanspeter Pfander*
Department of Chemistry and Biochemistry, University of Bern, Freiestrasse 3, 3012 Bern, Switzerland

Dihydrooxepin derivatives **1** and **2** were obtained by oxidation of canthaxanthin with *m*-CPBA and of β,β-carotene with molecular oxygen, respectively.



1

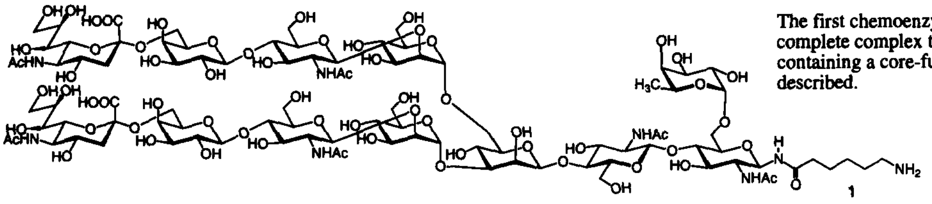


2

Tetrahedron Letters, **1997**, *38*, 7857

SYNTHESIS OF THREE BIANTENNARY N-GLYCANS CONTAINING THE α-1,6 CORE-FUCOSYL MOTIF.

Joachim Seifert, Carlo Unverzagt*, Institut für Organische Chemie und Biochemie, Technische Universität München, Lichtenbergstraße 4, D-85748 Garching, Germany



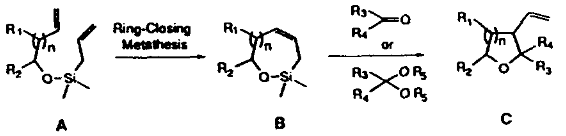
The first chemoenzymatic synthesis of complete complex type *N*-glycans **1** containing a core-fucosyl residue is described.

Tetrahedron Letters, **1997**, *38*, 7861

SYNTHESIS OF OXYGENATED HETEROCYCLES FROM CYCLIC ALLYLSILOXANES USING RING-CLOSING OLEFIN METATHESIS

Christophe Meyer and Janine Cossy
Laboratoire de Chimie Organique, Associé au CNRS, ESPCI, 10 rue Vauquelin, 75231 Paris Cedex 05 - France

Cyclic allylsiloxanes **B** were prepared from allyldimethylsilyl ethers of alkenols **A** by using ring-closing metathesis reaction. The transformation of **B** into substituted tetrahydrofurans and tetrahydropyrans was achieved by using a modified Sakuraï reaction.

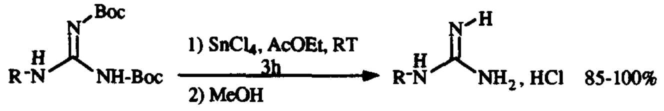


Tetrahedron Letters, **1997**, *38*, 7865

TOTAL DEPROTECTION OF *N,N'*-BIS(*tert*-BUTOXYCARBONYL)GUANIDINES USING $SnCl_4$

Hugues Miel and Sylvain Rault*, Centre d'Etudes et de Recherche sur le Médicament de Normandie
U.F.R. des Sciences Pharmaceutiques, 1, rue Vaubénard 14032 Caen, FRANCE

The total deprotection of *N,N'*-bis-Boc guanidines using $SnCl_4$ proceeds smoothly in ethyl acetate and leads to the easily isolable guanidinium chlorides.

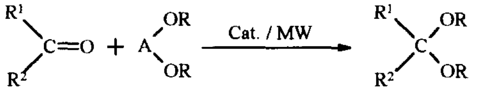


Tetrahedron Letters, **1997**, *38*, 7867

SOLVENT FREE PROTECTION OF CARBONYL GROUP UNDER MICROWAVE IRRADIATION

Bertrand Pério[a], Marie-Joelle Dozias[b], Patrick Jacquault[b] and Jack Hamelin[a]*.
[a] Synthèse et Electrosynthèse Organiques 3, Université Rennes 1, Campus de Beaulieu, 35042 Rennes, France. [b] Prolabo, 54 rue Roger Salengro, 94126 Fontenay sous Bois, France.

Protections of carbonyl groups as acetals or dioxolanes have been achieved under microwave irradiation without solvent. Comparison of the methods has proved the efficiency of the exchange with 2,2-dimethyl-1,3-dioxolane.

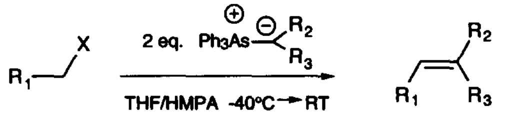


A=	R=
$H(OR)C-$	Me, Et
$-(CH_2)_2-$	H
$(Me)_2C-$	$-(CH_2)_2-$

Tetrahedron Letters, **1997**, *38*, 7871

OLEFINATION OF ACTIVATED HALIDES AND MESYLATES USING ARSONIUM YLIDES.

André Seyer, Lilian Alcaraz and C. Mioskowski*; Université Louis Pasteur, Laboratoire de Synthèse Bioorganique associé au *CNRS-URA* 1386, Faculté de Pharmacie, 74 route du Rhin, BP 24, F-67401 Illkirch, France.
Triphenylarsonium alkylides react with activated primary halides and mesylates to give alkenes in high yields.



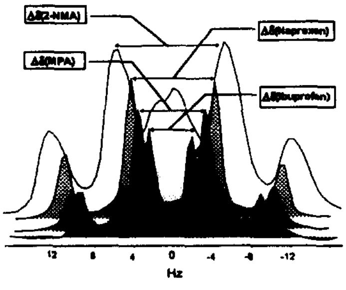
X = Cl, Br, OMes
R_1 = alkenyl, alkynyl, aryl
R_2, R_3 = H, alkyl

ENANTIOMERIC EXCESS DETERMINATION OF SOME CHIRAL SULFOXIDES BY NMR: USE OF (S)-IBUPROFEN ® AND (S)-NAPROXEN ® AS SHIFT REAGENTS.

Tetrahedron Letters, **1997**, *38*, 7875

Laëtitia Fauconnet, Caroline Nugier-Chauvin*, Nicolas Noiret and Henri Patin
Laboratoire de Chimie Organique et des Substances Naturelles, associé au CNRS, Ecole Nationale Supérieure de Chimie de Rennes, Av du Gal Leclerc, 35700 Rennes Beaulieu, France.

The very common drugs (S)-Ibuprofen and (S)-Naproxen were used as NMR shift reagents for the stereochemical analysis of alkylsulfoxides. It was shown that (S)-Naproxen could be worthwhile substituted to (S)-MPA or (S)-2-NMA for the stereochemical analysis of our bio-oxidized thiaoleic acids.

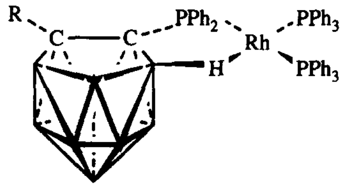


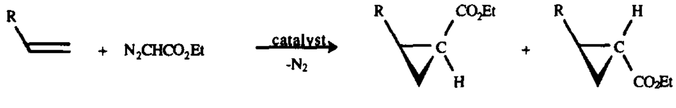
Splitting of the CH_3 signal of 1-butyl-4-but-1-ene thioether with shift reagents

Tetrahedron Letters, **1997**, *38*, 7879

CYCLOPROPANATION REACTIONS CATALYSED BY RHODIUM(I) COMPLEXES WITH NEW ANIONIC CARBORANE PHOSPHINE LIGANDS

A. Demonceau,* F. Simal, and A.F. Noels
University of Liège, Sart-Tilman (B.6a), B-4000 Liège, Belgium
C. Viñas,* R. Nuñez, and F. Teixidor
Institut de Ciència de Materials de Barcelona, 08193 Bellaterra, Spain





Tetrahedron Letters, **1997**, *38*, 7883

HYDROXYMETHYLATION OF ORGANIC HALIDES. EVALUATION OF A CATALYTIC SYSTEM INVOLVING A FLUOROUS TIN HYDRIDE REAGENT FOR RADICAL CARBONYLATION

Ilhyong Ryu,* Tatsuro Niguma, Satoshi Minakata, Mitsuo Komatsu, Sabine Hadida,[†] and Dennis P. Curran*[†]
Department of Applied Chemistry, Faculty of Engineering, Osaka University, Suita, Osaka 565, Japan
[†]Department of Chemistry, University of Pittsburgh, Pittsburgh, Pennsylvania, 15260

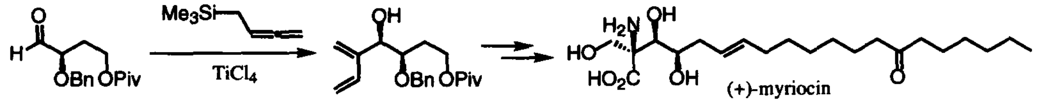
The hydroxymethylation of 2 was achieved using a catalytic amount of 1, CO, and $NaBH_3CN$. Three phase workup was conveniently performed for the separation of 1 and 5.

$$\underset{\mathbf{2}}{RX} + CO + NaBH_3CN \xrightarrow[\text{AIBN}]{\text{cat. }(C_6F_{13}CH_2CH_2)_3SnH\ (\mathbf{1})} \underset{\mathbf{5}}{RCH_2OH}$$

Tetrahedron Letters, **1997**, *38*, 7887

A NOVEL ENANTIOSELECTIVE SYNTHESIS OF (+)-MYRIOCIN BASED ON THE CHEMISTRY OF 1-TRIMETHYLSILYLBUTA-2,3-DIENES

Susumi Hatakeyama,*[a] Masashi Yoshida,[a] Tomoyuki Esumi,[a] Yoshiharu Iwabuchi,[a] Hiroshi Irie,[a] Toshiki Kawamoto,[b] Hidetoshi Yamada,[b] and Mugio Nishizawa[b]
[a]*Faculty of Pharmaceutical Sciences, Nagasaki University, Nagasaki 852, Japan*
[b]*Faculty of Pharmaceutical Sciences, Tokushima Bunri University, Tokushima 777, Japan*

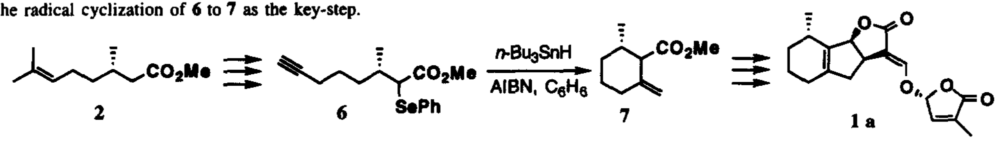


Tetrahedron Letters, **1997**, *38*, 7891

SYNTHESIS OF (3a*R*,8*S*,8b*S*,2'*R*)-(+)-SORGOLACTONE AND ITS STEREOISOMERS, THE GERMINATION STIMULANT FROM *Sorghum bicolor*

Kenji Mori* and Junichi Matsui
Department of Chemistry, Faculty of Science, Science University of Tokyo, Kagurazaka 1-3, Shinjuku-ku, Tokyo 162, Japan.

Methyl (*S*)-citronellate (**2**) was converted to (3a*R*,8*S*,8b*S*,2'*R*)-(+)-sorgolactone (**1a**) by employing the radical cyclization of **6** to **7** as the key-step.

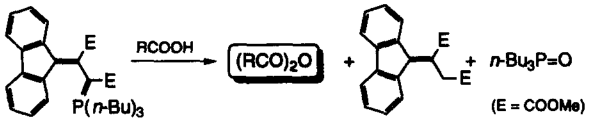


Tetrahedron Letters, **1997**, *38*, 7893

DEHYDRATION INDUCED BY INTRAMOLECULAR REDOX CHARACTER OF A STABLE ALLYLIDENETRIBUTYLPHOSPHORANE.

Yasuhiko Kawamura,* Yoshinori Sato, Tokunaru Horie and Masao Tsukayama
Department of Chemical Science and Technology, Faculty of Engineering, Tokushima University,
Minamijosanjima-cho, Tokushima 770, Japan

An air and moisture stable phosphorus ylide, Dimethyl fluorenylidenetributylphosphoranylidenesuccinate gave a dehydration product such as carboxylic acid anhydride, ester, and amide.

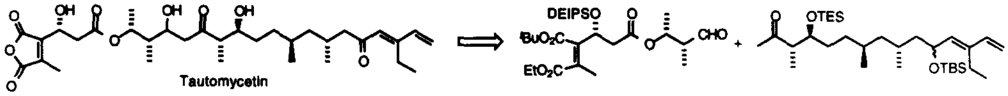


Tetrahedron Letters, **1997**, *38*, 7897

SYNTHETIC STUDY OF TAUTOMYCETIN: SYNTHESIS OF TWO LARGE SUBUNITS.

Hideaki Oikawa,* Yasushi Yoneta, Tohru Ueno, Masato Oikawa, Tomomi Wakayama and Akitami Ichihara*
Department of Bioscience and Chemistry, Faculty of Agriculture, Hokkaido University, Sapporo 060, Japan

Two large subunits for synthesis of tautomycetin have been synthesized.



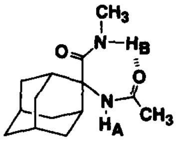
Tetrahedron Letters, **1997**, *38*, 7901

ADAMANTYL AMINO ACID AS γ-TURN INDUCER FOR PEPTIDE

Yasuhisa Kuroda,*† Hiroshi Ueda, Hiroshi Nozawa, and Hisanobu Ogoshi
†Department of Polymer Science, Kyoto Institute of Technology, Sakyo-ku, Matsugasaki, Kyoto 606, Japan
Department of Synthetic Chemistry and Biological Chemistry, Kyoto University, Sakyo-ku, Kyoto 606-01, Japan

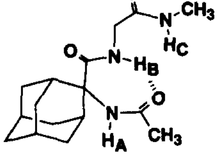
2-Amino-2-carboxyadamantane induced the high population of γ-turn conformation in the room temperature region.

Ada



δ_{HA} : 5.22 ppm
δ_{HB} : 7.22 ppm

AdaGly

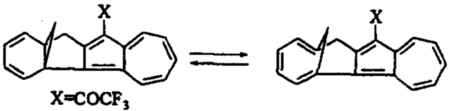


δ_{HA} : 5.83 ppm
δ_{HC} : 6.81 ppm
δ_{HB} : 7.07 ppm

Tetrahedron Letters, **1997**, *38*, 7905

SYNTHESIS AND SPECTROSCOPIC PROPERTIES OF AZULENO-[1,2-*G*]TRICYCLO[4.3.1.0^{1,6}]DECA-5b,7,9-TRIENE DERIVATIVES. A NOVEL CYCLOHEPTATRIENE STRUCTURE BEARING A THREE CARBON BRIDGE AT THE C1-C6 POSITION

Makoto Nitta* Tohru Takayasu
Department of Chemistry, School of Science and Engineering,
Waseda University, Shinjuku-ku, Tokyo 169, Japan



X=COCF$_3$
X=CO$_2$Me

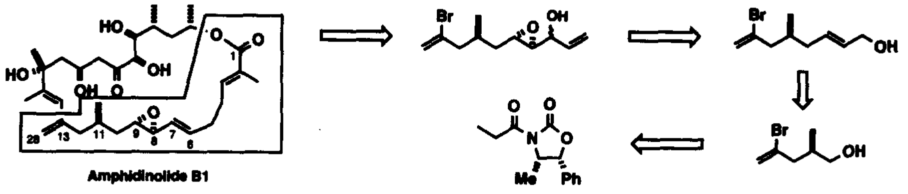
X=CO$_2$Me

The title compounds were synthesized, and ^{1}H and ^{13}C NMR spectroscopic studies revealed that -COCF$_3$ derivative exists in a norcaradiene structure, While the -CO$_2$Me dericative is in equilibrium between norcaradiene and cycloheptatriene.

Tetrahedron Letters, **1997**, *38*, 7909

ENANTIOSELECTIVE SYNTHESIS OF THE C1-C28 PORTION OF THE CYTOTOXIC NATURAL PRODUCT, AMPHIDINOLIDE B1

Duck-Hyung Lee* and Suk-Won Lee
Department of Chemistry, Sogang University, Seoul 121-742, Korea

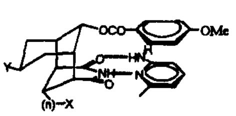


Amphidinolide B1

Tetrahedron Letters, **1997**, *38*, 7911

DESIGN AND SYNTHESIS OF A NEW TRICYCLIC SCAFFOLD FOR MOLECULAR RECOGNITION.

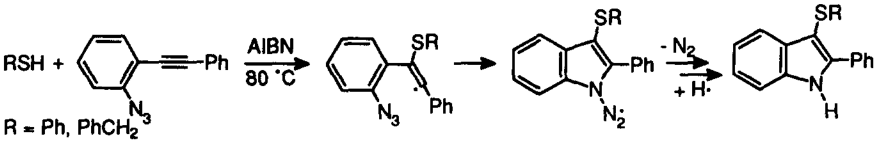
Juana Robles Caycho[a], Fernando García-Tellado[a]*, Pedro de Armas[a]*, José Juan Marrero-Tellado[b].
[a]Instituto de Productos Naturales y Agrobiología, CSIC, Astrofísico Francisco Sánchez 3, 38206 La Laguna, Canary Islands, Spain
[b]Instituto Universitario de Bioorgánica "Antonio González", Universidad de La Laguna, Astrofísico Francisco Sánchez 2, 38206 La Laguna ,Canary Islands, Spain



Tetrahedron Letters, **1997**, *38*, 7913

SULFANYL RADICAL ADDITION TO ALKYNYL AZIDES: AN INSIGHT INTO VINYL RADICAL CYCLIZATION ONTO THE AZIDO FUNCTION.

Pier Carlo Montevecchi,* Maria Luisa Navacchia and Piero Spagnolo, Dipartimento di Chimica Organica "A. Mangini", Università di Bologna, Viale Risorgimento 4, I-40136 Bologna, Italy

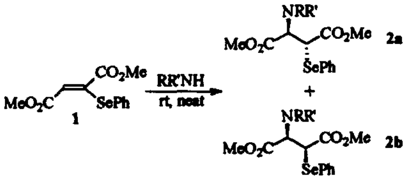


Tetrahedron Letters, **1997**, *38*, 7917

SELENIUM-DIRECTED CONJUGATE ADDITION OF AMINES TO DIMETHYL 2-PHENYLSELENO FUMARATE: REGIO- AND DIASTEREOSELECTIVE SYNTHESIS OF 2-PHENYLSELENO-3-AMINO SUCCINATES.

Marco Bella[a], Franco D'Onofrio[b*], Roberto Margarita[a], Luca Parlanti[a], Giovanni Piancatelli[a*] and Alfonso Mangoni[c].
[b]Centro CNR di Studio per la Chimica delle Sostanze Organiche Naturali [a]Dipartimento di Chimica Università "La Sapienza", P.le Aldo Moro 5, 00185 Roma, Italy and [c]Dipartimento di Chimica delle Sostanze Organiche Naturali, Università di Napoli "Federico II", Via D. Montesano 49, 80131 Naples, Italy.

Syntheses of novel 2,3-disubstituted succinates **2a** and **2b** are simply achieved by direct regioselective amination of Dimethyl 2-Phenylseleno Fumarate 1.

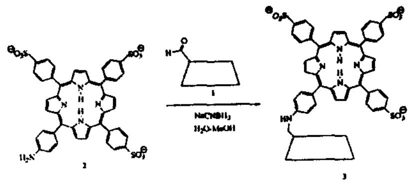


Tetrahedron Letters, **1997**, *38*, 7919

Synthesis and Spectroscopic Properties of a Water-Soluble Porphyrin-Modified β-Cyclodextrin Compound.

Tommaso Carofiglio*, Dip. CIMA, Roberto Fornasier*, Lucia Simonato and Umberto Tonellato, Dip. Chimica Organica, and CMRO-CNR, Giorgio Gennari, Dip. Chimica Fisica, Univ. Padova, Via Marzolo 1, 35100 Padova (Italy), Vittorio Lucchini, Dip. Scienze Ambientali, Univ. Venezia, Dorsoduro 2137, 30123 Venezia (Italy).

Reductive amination of β-cyclodextrin aldehyde with trisulphonatophenylaminoporphyrin in the presence of cyanoborohydride affords the adduct depicted here (23% yield). This compound has been characterized by NMR spectroscopy and mass spectrometry techniques.

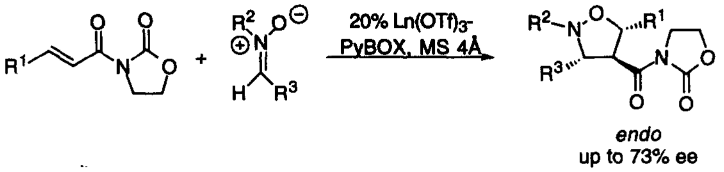


Tetrahedron Letters, **1997**, *38*, 7923

LANTHANIDE-CATALYZED *ENDO*- AND ENANTIOSELECTIVE 1,3-DIPOLAR CYCLOADDITION REACTIONS OF NITRONES WITH ALKENES

Ana I. Sanchez-Blanco, Kurt V. Gothelf and Karl Anker Jørgensen*
Department of Chemistry, Aarhus University, DK-8000 Aarhus C, Denmark

By the application of a new Yb(OTf)$_3$-PyBOX catalyst in the 1,3-dipolar cycloaddition reaction high *endo*-selectivities and ee's of up to 73% were obtained.

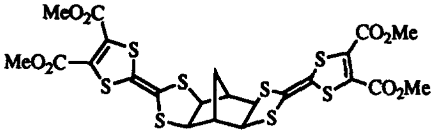


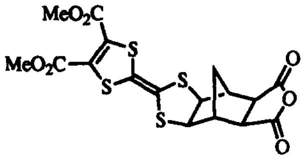
Tetrahedron Letters, **1997**, *38*, 7927

DIRECT ONE POT CONSTRUCTION OF NORBORNANE-FUSED DIHYDROTETRATHIAFULVALENES

R. Alan Aitken,* Lawrence Hill and Philip Lightfoot

School of Chemistry, University of St. Andrews, St. Andrews, Fife KY16 9ST, UK



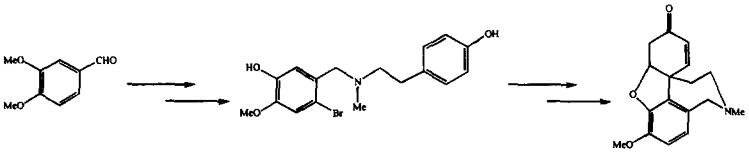


Tetrahedron Letters, **1997**, *38*, 7931

A CONCISE, SCALEABLE SYNTHESIS OF NARWEDINE.

David A. Chaplin*, Neil Fraser and Peter D. Tiffin*. Chiroscience Ltd.,
Cambridge Science Park, Milton Road, Cambridge, CB4 4WE, UK.

A concise, scaleable synthesis of narwedine from 3,4-dimethoxybenzaldehyde is described. The procedure features a simple modification of the Barton phenolic coupling route.

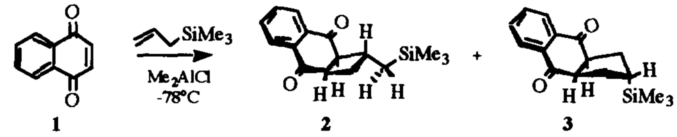


Tetrahedron Letters, **1997**, *38*, 7933

[2+2]- AND [3+2]-CYCLOADDITIONS OF ALLYLSILANE TO QUINONES: DIVERGENCE FROM THE SAKURAI REACTION

William S. Murphy* and Daniel Neville, *Department of Chemistry, University, Cork, Ireland*

Naphthoquinone 1 undergoes cycloaddition with allyltrimethylsilane to yield the [2+2]- cycloadduct 2 and the [3+2]-cycloadduct 3. The former rearranges to the latter when treated with Me_2AlCl.

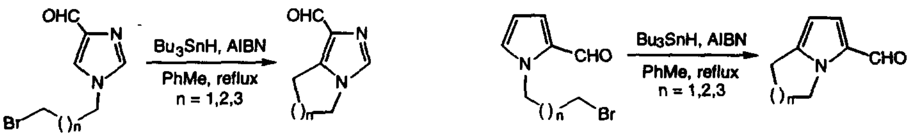


Tetrahedron Letters, **1997**, *38*, 7937

OXIDATIVE RADICAL CYCLISATIONS ONTO IMIDAZOLES AND PYRROLES USING Bu_3SnH

Fawaz Aldabbagh, W. Russell Bowman* and Emma Mann
Department of Chemistry, Loughborough University, Loughborough, Leics. LE11 3TU, GB

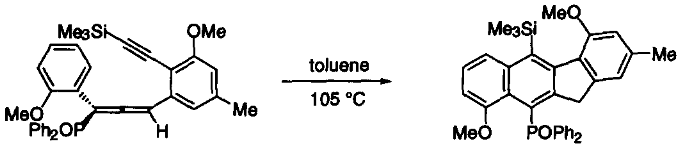
Oxidative radical cyclisation using tributyltin hydride has been used for the synthesis of [1,2-*c*]-fused imidazoles and [1,2-*a*]-fused pyrroles from imidazolecarbaldehydes and acylpyrroles respectively. The intermediate nucleophilic *N*-alkyl radicals cyclise onto imidazole and pyrrole rings followed by oxidative re-aromatisation.



Tetrahedron Letters, **1997**, *38*, 7941

AN APPROACH TO THE SYNTHESIS OF THE BENZO[*b*]FLUORENE CORE OF THE KINAMYCINS BY AN ARYLALKYNE-ALLENE CYCLOADDITION

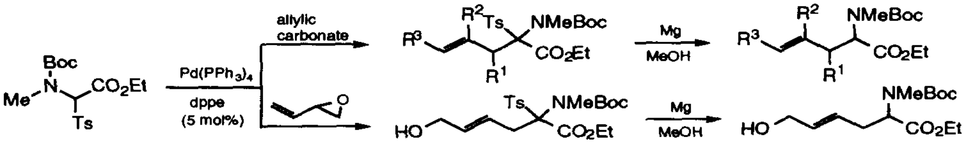
Óscar de Frutos and Antonio M. Echavarren*
Departamento de Química Orgánica, Universidad Autónoma de Madrid
Cantoblanco, 28049 Madrid, Spain.



Tetrahedron Letters, **1997**, *38*, 7943

N-BOC-α-TOSYLSARCOSINE ETHYL ESTER: AN α-AMIDO SULFONE FOR THE REGIO- AND STEREOSELECTIVE SYNTHESIS OF PROTECTED γ,δ-UNSATURATED *N*-METHYL-α-AMINO ACIDS BY PALLADIUM-CATALYZED NUCLEOPHILIC SUBSTITUTION

Diego A. Alonso, Ana Costa and Carmen Nájera
Departamento de Química Orgánica, Facultad de Ciencias, Universidad de Alicante, Apdo. 99, 03080 Alicante, Spain. cnajera@ua.es

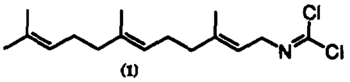


Tetrahedron Letters, **1997**, *38*, 7947

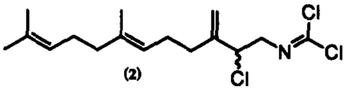
BIOSYNTHESIS OF DICHLOROIMINES IN THE TROPICAL MARINE SPONGE *STYLOTELLA AURANTIUM.*

Jamie S. Simpson, Parul Raniga, and Mary J. Garson*, Department of Chemistry, The University of Queensland, Brisbane QLD 4072, Australia.

The biosynthetic origin of the dichloroimine carbon in the stylotellanes A and B, (1) and (2), is defined by incorporation of sodium [^{14}C] cyanide and sodium [^{14}C] thiocyanate.



(1)



(2)