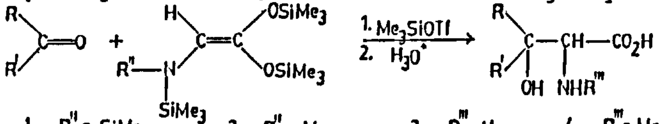
GRAPHICAL ABSTRACTS

Tetrahedron Lett. 27, 3807 (1986)

SYNTHESIS OF α-AMINO-β-HYDROXY ACIDS USING [N,N-BIS(TRIMETHYLSILYL)AMINO]KETENE BIS(TRIMETHYLSILYL) ACETAL OR ITS N-METHYL-N-TRIMETHYLSILYL ANALOG

Torsten Hvidt, Olivier R. Martin, and Walter A. Szarek*
Department of Chemistry, Queen's University, Kingston, Ontario, Canada K7L 3N6

Condensation of 1 or 2 with aldehydes and ketones in the presence of trimethylsilyl triflate provided the corresponding α-amino-β-hydroxy acids in fair to good yields as a mixture of diastereomers.



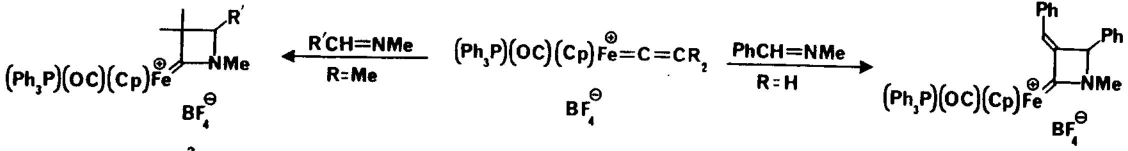
1 R″ = $SiMe_3$ 2 R″ = Me 3 R‴ = H 4 R‴ = Me

Tetrahedron Lett. 27, 3811 (1986)

[2+2] CYCLOADDITION REACTIONS OF CATIONIC IRON VINYLIDENE COMPLEXES

Anthony G.M. Barrett* and Michael A. Sturgess, Department of Chemistry, Northwestern University, Evanston, Illinois 60201

The vinylidene iron (II) tetrafluoroborates 1 reacted with the imines RCH=NMe to produce the azetidinylidene complexes 2 and 3.



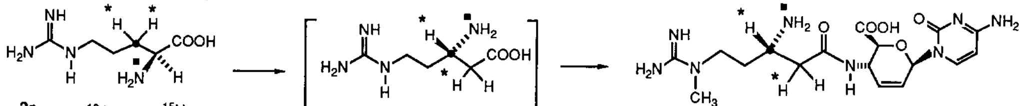
3 1 2

Tetrahedron Lett. 27, 3815 (1986)

STUDIES ON NITROGEN METABOLISM USING ^{13}C NMR SPECTROSCOPY. 5. METABOLISM OF L-α-ARGININE IN THE BIOSYNTHESIS OF BLASTICIDIN S.

P.C.Prabhakaran, Nam-Tae Woo, Peter S. Yorgey and Steven J. Gould*
Department of Chemistry, Oregon State University, Corvallis, OR 97331 USA

Biosynthetic studies using [3-^{13}C,2-^{15}N] arginine, 3a, and [3,3-$^{2}H_2$] arginine, 3b, demonstrated that the L-β-arginine moiety (2) of blasticidin S (1) is formed via an intramolecular migration of nitrogen from C-2 to C-3 and one of the deuteriums from C-3 to C-2, respectively, with retention of all the labels.



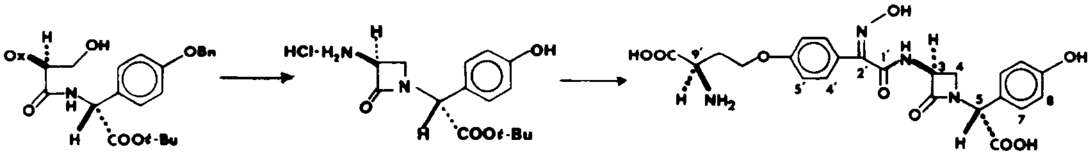
3a, • = ^{13}C, ▪ = ^{15}N
3b, *H = ^{2}H

2 1

Tetrahedron Lett. 27, 3819 (1986)

BIOGENETICALLY-MODELLED TOTAL SYNTHESES OF (-)-NOCARDICIN A AND (-)-NOCARDICIN G

Craig A. Townsend*, Gino M. Salituro, Loan T. Nguyen and Michael J. DiNovi
Department of Chemistry, The Johns Hopkins University, Baltimore, Maryland 21218

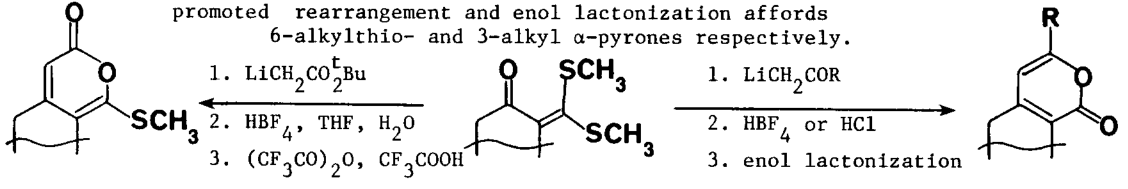


Tetrahedron Lett. 27, 3823 (1986)

SYNTHESIS OF α-PYRONES FROM α-OXO KETENE DITHIOACETALS

R. Karl Dieter* and Jeffrey R. Fishpaugh, Departments of Chemistry, Clemson University, Clemson, SC 29634-1905 and Boston University, Boston, MA 02215.

Reaction of α-oxo ketene dithioacetals with ester and ketone enolates, followed by acid promoted rearrangement and enol lactonization affords 6-alkylthio- and 3-alkyl α-pyrones respectively.

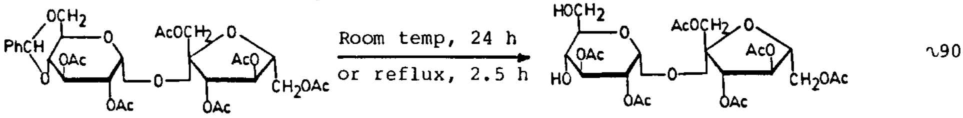


Tetrahedron Lett. 27, 3827 (1986)

A NEW, FACILE METHOD FOR CLEAVAGE OF ACETALS AND DITHIOACETALS IN CARBOHYDRATE DERIVATIVES

Walter A. Szarek, Aleksander Zamojski, Kamal N. Tiwari, and Edward R. Ison
Department of Chemistry, Queen's University, Kingston, Ontario, Canada K7L 3N6

Treatment of carbohydrate acetals and dithioacetals with a dilute solution of iodine in methanol provides a simple, convenient, and high-yielding process for cleavage of the acetal functions. An example is shown below.

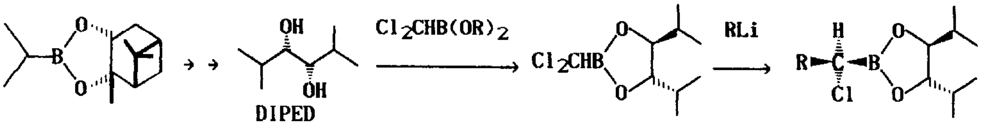


Tetrahedron Lett. 27, 3831 (1986)

(*S,S*)-Diisopropylethanediol ("DIPED"): A New Chiral Director for the α-Chloro Boronic Ester Synthesis

Donald S. Matteson and Ali A. Kandil
Department of Chemistry, Washington State University, Pullman, WA 99164-4630 USA

(*S,S*)-DIPED directs 97% (*R*) in α-chloro boronic ester syntheses.

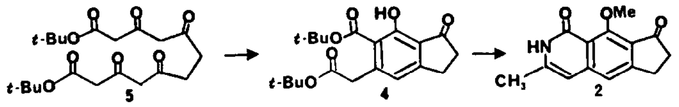


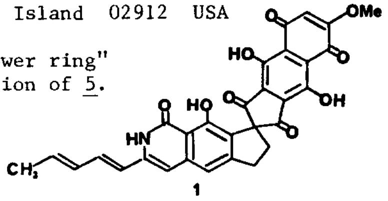
Tetrahedron Lett. 27, 3835 (1986)

FREDERICAMYCIN A SYNTHESIS: A 3-SUBSTITUTED 9-ALKOXY CYCLOPENTA(g)ISOQUINOLINE-1,8(2H)-DIONE.

Kathlyn A. Parker and Gloria A. Breault
Department of Chemistry, Brown University, Providence, Rhode Island 02912 USA

A four-step synthesis of benzpyridone 2, a model for the "lower ring" system of fredericamycin (1), is based on the self-condensation of 5.

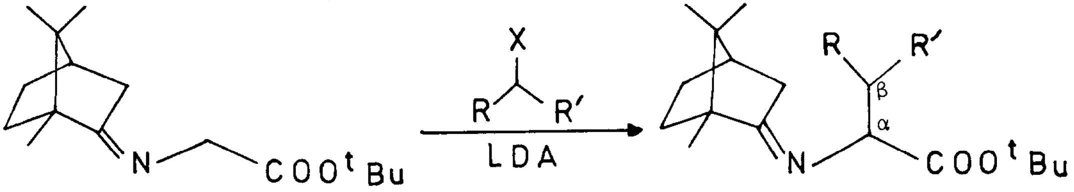




Tetrahedron Lett.27,3839(1986

ALKYLATION STEREOCHEMISTRY OF GLYCINATES DOUBLE CHIRAL INDUCTION WITH SECONDARY HALIDES.

John M. McIntosh* and Randy K. Leavitt, University of Windsor, Windsor, Canada, N9B 3P4



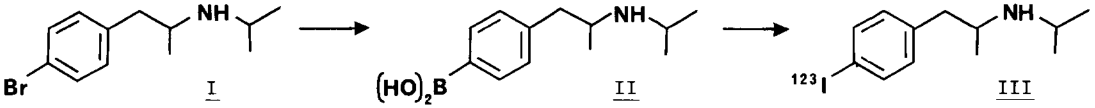
Some secondary allylic or benzylic halides afford only 2 diastereomers (ratio∿9:1).

Tetrahedron Lett.27,3843(1986)

A NEW ROUTE TO IODINE-LABELED N-ISOPROPYL IODOAMPHETAMINE VIA ORGANOBORANES,

George W. Kabalka*, Rajender S. Varma, Yuan-Zhu Gai and Ronald M. Baldwin#; Department of Chemistry and Department of Radiology, University of Tennessee, Knoxville, TN 37996; #Medi+Physics Corp., Emeryville, CA 94608 USA

Ultrasonic agitation provided ready access to arylboronic acid, II, which was converted to amphetamine, III.



Tetrahedron Lett.27,3845(1986)

CHARACTERIZATION OF THE ACTUAL CATALYTIC AGENT IN POTASSIUM FLUORIDE ON ACTIVIATED ALUMINA SYSTEMS

Leonard M. Weinstock , James M. Stevenson ,
Sterling A. Tomellini , Shih-Hsie Pan, Torleif Utne,
Ronald B. Jobson and Donald F. Reinhold
Merck Sharp and Dohme Research Laboratories, P.O. Box 2000, Rahway, N.J. 07065

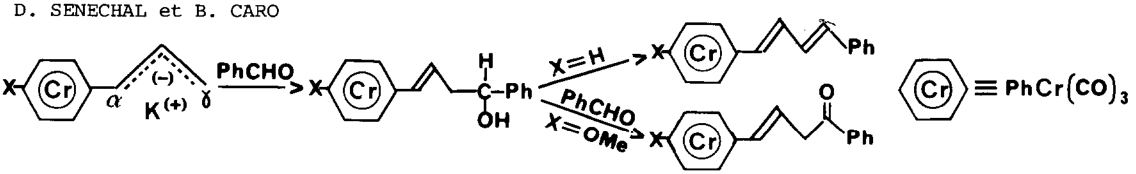
The unusually high basic reactivity of potassium fluoride on activated alumina is due to the reaction of fluoride ion with alumina to produce K_3AlF_6 and KOH.

$$12JF + Al_2O_3 + 3H_2O \longrightarrow 2K_3AlF_6 + 6KOH$$

Tetrahedron Lett.27,3849(1986)

COMPORTEMENT DES ALLYLBENZENES CHROMETRICARBONYLE EN MILIEU BASIQUE

D. GENTRIC, J-Y. LE BIHAN, M-C. SENECHAL-TOCQUER, D. SENECHAL et B. CARO



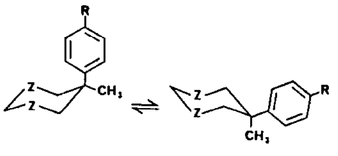
Les anions allyliques issus de l'allybenzène et de deux de ses dérivés naturels, réagissent avec divers composés carbonylés uniquement en position γ . L'estragole chrometricarbonyle (X = OMe), opposé au furfural et au benzaldéhyde donne une forte proportion de cétone, formée "in situ" par oxydation d'Oppenauer.

Tetrahedron Lett.27,3853(1986)

THE CONTRASTING CONFORMATIONAL BEHAVIOUR OF 5-ARYL-5-METHYL-1,3-DIOXANES AND 1-ARYL-1-METHYLCYCLOHEXANES

Michael J. Cook*, Khalida Nasri and Sunil M. Vather
School of Chemical Sciences, University of East Anglia, Norwich, NR4 7TJ, England

The equilibrium X⇄Y is very sensitive to the substituent R when Z =O. This is taken as evidence for an Aryl...O interaction.

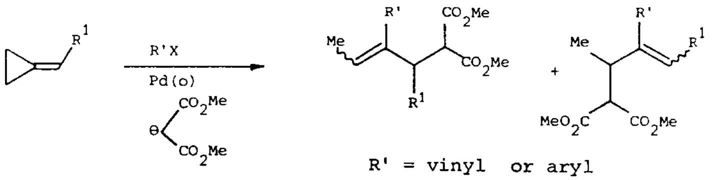


X Y

Tetrahedron Lett.27,3855(1986)

CARBOPALLADATION OF ALKYLIDENE CYCLOPROPANES. OBTENTION OF FUNCTIONNALIZED 1,3-DIENES AND STYRENES.

Geneviève BALME, Guy FOURNET and Jacques GORE.
Université Claude Bernard Lyon I, 69622 Villeurbanne Cédex, France.



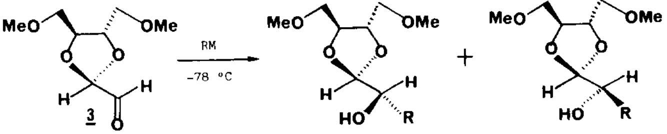
R' = vinyl or aryl

Tetrahedron Lett.27,3859(1986)

ADDITIONS NUCLEOPHILES DIASTEREOSELECTIVES SUR UN MONOACETAL CHIRAL DU GLYOXAL

M.P. HEITZ, F. GELLIBERT et C. MIOSKOWSKI
E.N.S.C.S., 1 rue Blaise Pascal, 67008 STRASBOURG, FRANCE

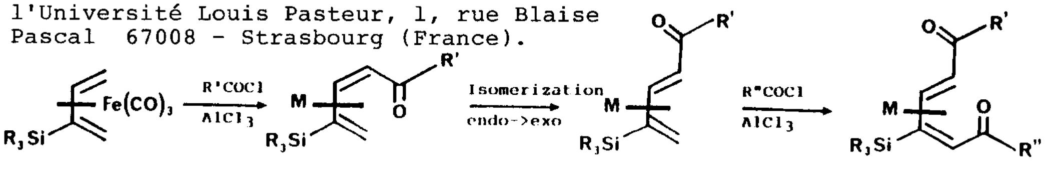
Diastereoselective addition of organometallics to chiral monoacetal of glyoxal 3 was achieved in 60-80 % yield by using alkyl Grignard reagents.



Tetrahedron Lett.27,3861(1986)

FRIEDEL-CRAFTS REACTIONS OF 2-SILYLATED BUTADIENE IRON TRICARBONYL COMPLEXES. AN UNPRECEDENTED 1,4-DIACYLATION ON THE SAME DIENE UNIT.

M. FRANCK-NEUMANN, M. SEDRATI, M. MOKHI
UA CNRS n°466, Institut de Chimie de l'Université Louis Pasteur, 1, rue Blaise Pascal 67008 - Strasbourg (France).

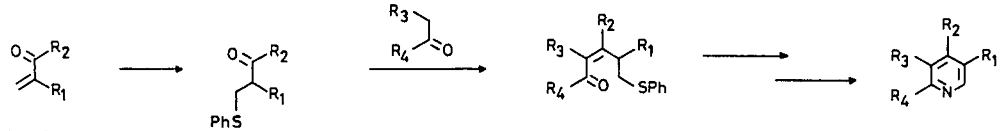


Tetrahedron Lett. 27, 3865 (1986)

A NEW PYRIDINE SYNTHESIS STARTING FROM α, β-UNSATURATED CARBONYL COMPOUNDS.

K. Konno, K. Hashimoto, H. Shirahama and T. Matsumoto
Department of Chemistry, Faculty of Science, Hokkaido University,
Sapporo 060, Japan

A new and mild synthetic method of substituted pyridines from α, β-unsaturated carbonyl compounds is described.

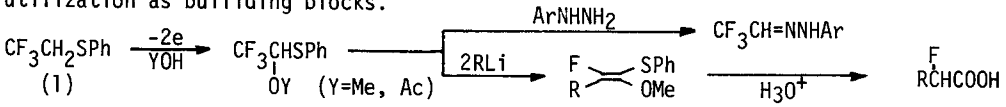


Tetrahedron Lett. 27, 3869 (1986)

ELECTROLYTIC TRANSFORMATION OF FUNCTIONAL GROUPS OF FLUOROORGANIC COMPOUNDS. I. ANODIC METHOXYLATION AND ACETOXYLATION OF TRIFLUOROETHYL SULFIDE

Toshio Fuchigami,* Yuuki Nakagawa, and Tustomu Nonaka Department of Electronic Chemistry, Tokyo Institute of Technology, Nagatsuta, Midori-ku, Yokohama 227, Japan

Anodic methoxylation and acetoxylation of trifluoroethyl sulfide (1) and their synthetic utilization as builiding blocks.

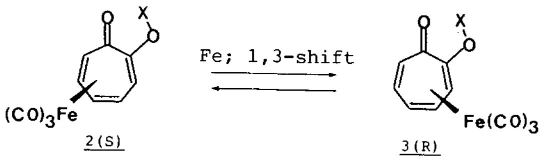


Tetrahedron Lett. 27, 3873 (1986)

HAPTOTROPIC REARRANGEMENT OF TRICARBONYL(2-ACYLOXYTROPONE)IRON

Noboru Morita, Toyonobu Asao, Akio Tajiri,[†] Hideo Sotokawa,[†] and Masahiro Hatano[†]
Department of Chemistry, College of General Education, and [†]Chemical Research Institute of Non-aqueous Solutions, Tohoku University, Sendai 980 Japan

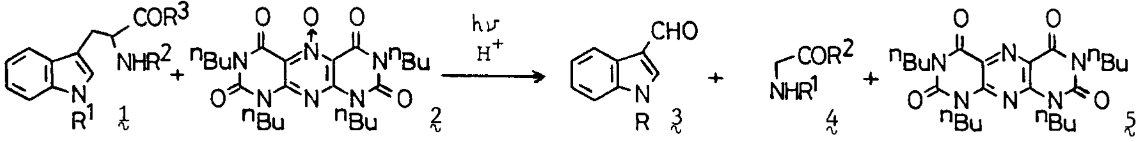
1,3-Haptotropic rearrangement between 2 and 3 was clarified by using their optically active complexes.



Tetrahedron Lett. 27, 3877 (1986)

PHOTOCHEMICAL OXIDATIVE C_α-C_β BOND CLEAVAGE OF TRYPTOPHAN SIDE-CHAIN BY PYRIMIDO[5,4-g]PTERIDINE N-OXIDE

Magoichi Sako, Kaoru Shimada, Kosaku Hirota, and Yoshifumi Maki,
Gifu Pharmaceutical University, 6-1, Mitahora-higashi 5 Chome, Gifu 502, Japan

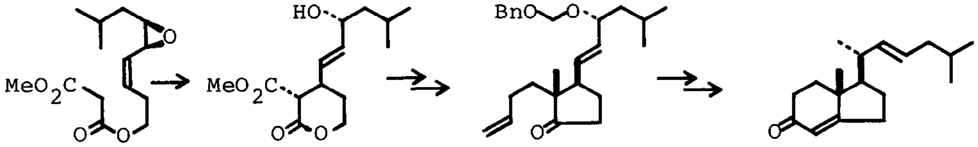


Photolysis of 1 in the presence of 2 resulted in the regioselective cleavage of the side-chain to give 3 and 4.

Tetrahedron Lett. 27, 3881 (1986)

PALLADIUM-CATALYZED STEREOCONTROLLED CYCLIZATION OF 1,3-DIENE MONOEPOXIDE: A ROUTE TO A NEW SYNTHETIC INTERMEDIATE FOR DE-AB-CHOLESTANE DERIVATIVE.

Takashi Takahashi*, Masahiro Miyazawa, Hiroaki Ueno and Jiro Tsuji*
Tokyo Institute of Technology, Meguro, Tokyo 152, JAPAN.

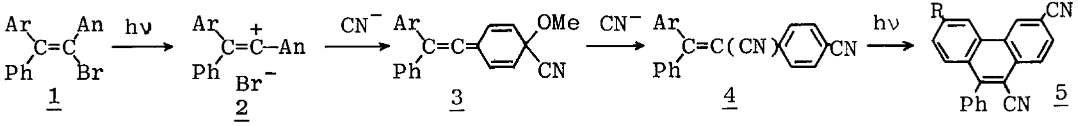


Tetrahedron Lett. 27, 3885 (1986)

ipso SUBSTITUTION BY CYANIDE ANION IN PHOTOLYSIS OF 1-(p-METHOXYPHENYL)VINYL BROMIDES

Tsugio Kitamura,* Mahito Murakami, Shinjiro Kobayashi, and Hiroshi Taniguchi*
Department of Applied Chemistry, Faculty of Engineering, Kyushu Univeristy 36, Hakozaki, Fukuoka 812, Japan

A double cyanation of 1-(p-methoxyphenyl)vinyl bromides 1 via vinyl cations 2;

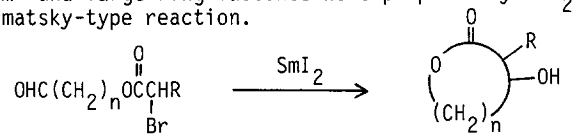


Tetrahedron Lett. 27, 3889 (1986)

PREPARATION OF MEDIUM- AND LARGE-RING LACTONES. SmI_2-INDUCED CYCLIZATION OF ω-(α-BROMOACYLOXY) ALDEHYDES

Takanori Tabuchi, Kisa Kawamura, Junji Inanaga,* and Masaru Yamaguchi
Department of Chemistry, Kyushu University 33, Hakozaki, Higashi-ku, Fukuoka 812, Japan

Medium- and large-ring lactones were prepared by SmI_2-induced intramolecular Reformatsky-type reaction.



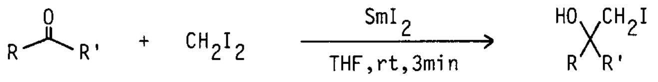
Ring size = 8~14 (76~92%)

Tetrahedron Lett. 27, 3891 (1986)

SmI_2-INDUCED IODOMETHYLATION OF CARBONYL COMPOUNDS

Takanori Tabuchi, Junji Inanaga,* and Masaru Yamaguchi
Department of Chemistry, Kyushu University 33, Hakozaki, Higashi-ku, Fukuoka 812, Japan

Iodomethylation of carbonyl compounds at room temperature.



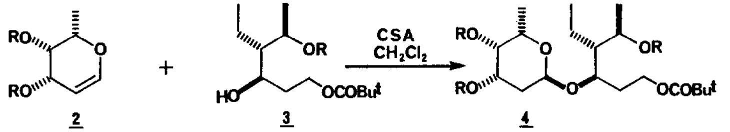
(83-96%)

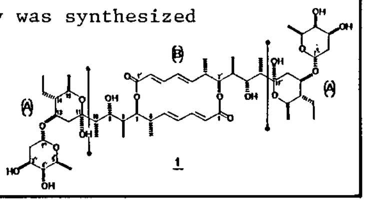
Tetrahedron Lett.27,3895(1986

SYNTHETIC STUDIES ON ANTIBIOTIC MACRODIOLIDE: SYNTHESIS OF THE A-SEGMENT OF ELAIOPHYLIN

Takeshi Wakamatsu,* Hideo Nakamura, and Eiichi Naka
Faculty of Pharmaceutical Sciences, Hokkaido University, Sapporo 060, Japan
Yoshio Ban
Faculty of Pharmaceutical Science, Toho University, Miyama 2-2-1, Funabashi, Chiba 274, Japan

A-Segment(C_{11}-C_{15})(4) of elaiophylin(1) containing L-oliose moiety was synthesized from glucose.

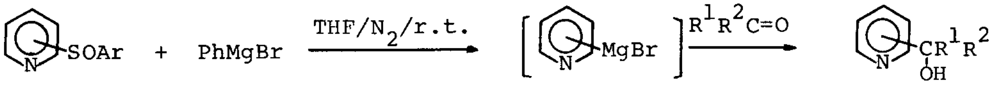




Tetrahedron Lett.27,3899(1986

REACTIONS OF PYRIDYL AND QUINOLYL SULFOXIDES WITH GRIGNARD REAGENT: A CONVENIENT PREPARATION OF PYRIDYL AND QUINOLYL GRIGNARD REAGENTS

Naomichi Furukawa*, Tadao Shibutani, Kazunori Matsumura, and Hisashi Fujihara, Deapartment of Chemistry, The University of Tsukuba, Sakura-mura, Ibaraki 305, Japan. Shigeru Oae, Department of Chemistry, Okayama University of Science, Ridai-cho, Okayama 700, Japan.

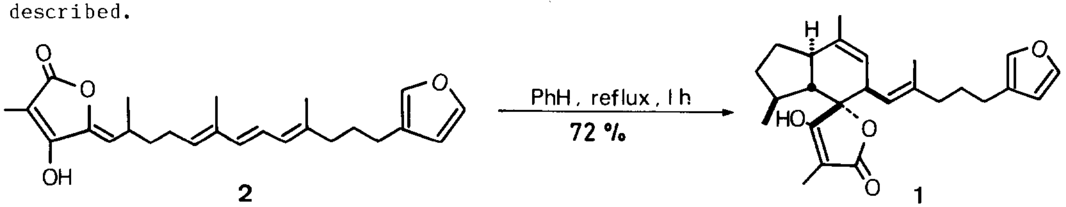


Tetrahedron Lett.27,3903(1986

SYNTHESIS OF (±)-IRCINIANIN, A MARINE SPONGE SESTERTERPENE

Kei Takeda, Masa-aki Sato, and Eiichi Yoshii*
Faculty of Pharmaceutical Sciences, Toyama Medical and Pharmaceutical University
Sugitani 2630, Toyama 930-01, Japan

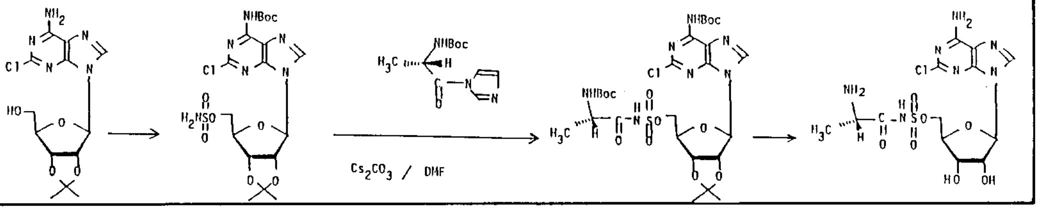
A biogenetic-type synthesis of (±)-ircinianin (1) via intramolecular Diels-Alder reaction of 2 is described.



Tetrahedron Lett.27,3907(1986)

TOTAL SYNTHESIS OF NUCLEOSIDE ANTIBIOTIC, ASCAMYCIN

Makoto Ubukata and Kiyoshi Isono*
Antibiotics Laboratory, RIKEN (The Institute of Physical and Chemical Research),
Wako-shi, Saitama 351-01, Japan



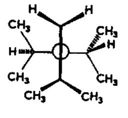
Tetrahedron Lett.27,3909(1986)

ROTATION OF GEMINAL ISOPROPYL GROUPS. DYNAMIC N.M.R. OF DIMETHYL-DIISOPROPYLCYCLOPROPANE

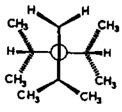
J.E. Anderson and B.R. Bettels

Chemistry Department, University College,
Gower Street, London WC1E 6BT, U.K.

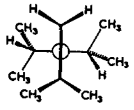
The title compound exists as an equilibrium of two kinds of conformations 2 and 4 (89% and 11% at -155 °), interconverting with a barrier of about 6.5 kcal/mol at -138 °.



2



3



4

Tetrahedron Lett.27,3911(1986)

THIOCARBONYL TO CARBONYL GROUP TRANSFORMATION USING CuCl AND NaOH

N. Narasimhamurthy and A.G. Samuelson*
Department of Inorganic and Physical Chemistry
Indian Institute of Science, Bangalore 560012, India

A wide variety of thio compounds can be very rapidly converted to the corresponding oxo compounds through the formation of a copper complex.

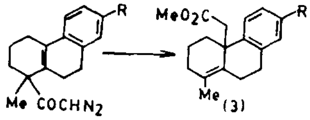
$$>C{=}S \xrightarrow[\text{ii. } OH^-]{\text{i. } Cu^+} >C{=}O$$

Tetrahedron Lett.27,3913(1986)

A NOVEL SYNTHETIC METHOD FOR ANGULARLY FUNCTIONALIZED POLYCYCLIC SYSTEMS BY VINYLOGOUS WOLFF REARRANGEMENT OF β,γ-UNSATURATED DIAZOKETONES

B. Saha, G. Bhattacharjee, and U.R. Ghatak*, Department of Organic Chemistry, Indian Association for the Cultivation of Science, Jadavpur, Calcutta - 700 032, India.

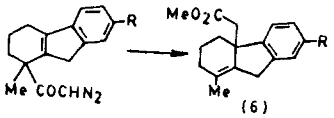
Decompositions of the rigid polycyclic β,γ-unsaturated diazomethyl ketones (1a and b) and (2a and b) promoted by Cu(acac)$_2$, Cu(OTf)$_2$, Ni(acac)$_2$ or silver benzoate-triethylamine in the presence of methanol are shown to give the respective rearranged γ,δ-unsaturated angularly substituted esters (3a and b) and (6a and b) along with other products.



(1) (3)

a: R = H

b: R = OMe



(2) (6)

a: R = H

b: R = OMe

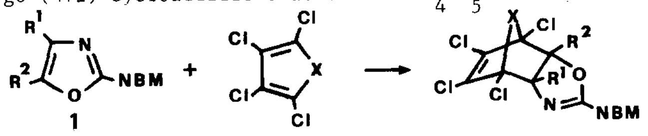
Tetrahedron Lett.27,3915(1986)

1,3-Oxazoles as Dienophiles in Diels-Alder Reactions

A. Dondoni, M. Fogagnolo, A. Mastellari, P. Pedrini, and F. Ugozzoli
Dipt. Chimica, Università, Ferrara and Ist. Strutt. Chimica, Università, Parma (Italy)

1,3-Oxazoles 1 undergo (4+2)-cycloadditions across the C_4-C_5 bond by electron-poor dienes.

NBM = N(Me)CH$_2$Ph



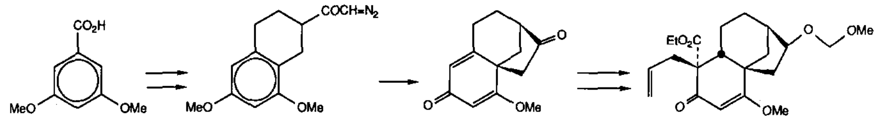
X = CCl$_2$
X = C(OMe)$_2$
X = SO$_2$

Tetrahedron Lett.27,3923(1986)

SYNTHETIC STUDIES ON RABDOSIA DITERPENE LACTONES I : THE PREPARATION OF A KEY TRICYCLIC INTERMEDIATE

Martin J. Kenny, Lewis N. Mander and S. Paul Sethi
Research School of Chemistry, Australian National University, GPO Box 4, Canberra, A.C.T. 2601
Australia.

Compound 6, envisaged as a key intermediate for the synthesis of selected seco-B-ring kaurenoids, was prepared from 3,5-dimethoxybenzoic acid 11.



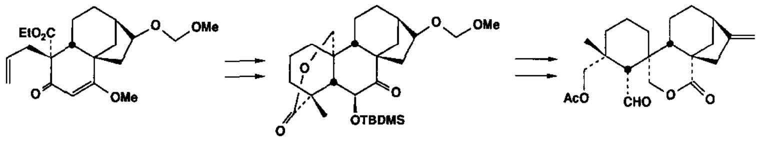
11 16 17 6

Tetrahedron Lett.27,3927(1986)

SYNTHETIC STUDIES ON RABDOSIA LACTONES II : THE SYNTHESIS OF 15-DESOXYEFFUSIN

M.J. Kenny, L.N. Mander and S.P. Sethi
Research School of Chemistry, Australian National University, GPO Box 4, Canberra, A.C.T. 2601,
Australia.

The synthesis of (±)-desoxy effusin 5 from 1 is described.



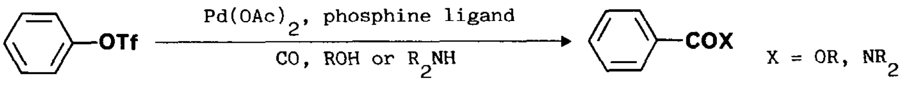
1 12 5

Tetrahedron Lett.27,3931(1986)

PALLADIUM-CATALYZED CARBONYLATION OF ARYL TRIFLATES. SYNTHESIS OF ARENECARBOXYLIC ACID DERIVATIVES FROM PHENOLS

Sandro Cacchi,[a] Pier Giuseppe Ciattini,[b] Enrico Morera,[b] and Giorgio Ortar[b*]
[a]Istituto di Chimica Organica dell' Università, 00161 Roma. [b]Istituto di Chimica Farmaceutica dell' Università, 00185 Roma, Italy

Various aryl triflates were converted into aryl esters or amides in good yields by a palladium-catalyzed reaction with carbon monoxide and alcohols or amines.

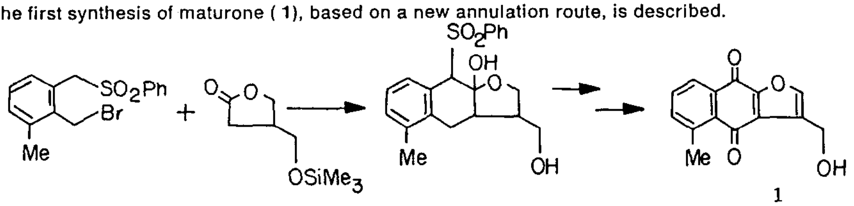


Tetrahedron Lett.27,3935(1986)

SYNTHESIS OF MATURONE

E. Ghera*, R. Maurya and Y. Ben-David Department of Organic Chemistry, The Weizmann Institute of Science, Rehovot, Israel

The first synthesis of maturone (1), based on a new annulation route, is described.



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