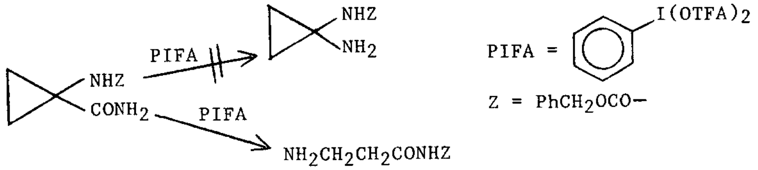
GRAPHICAL ABSTRACTS

Tetrahedron Lett.27,5435(1986

THE REACTION OF [I,I-BIS(TRIFLUOROACETOXY)IODO]BENZENE WITH N-(BENZYLOXYCARBONYL)-1-AMINOCYCLOPROPANE 1-CARBOXAMIDE

Masahiro Tamura, John Jacyno and Charles H. Stammer*
Department of Chemistry, School of Chemical Sciences, University of GA., Athens, GA. 30

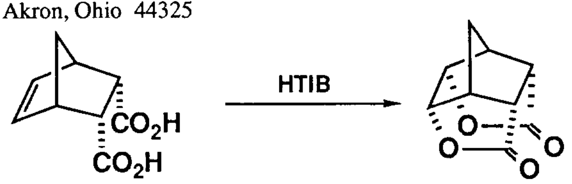


Tetrahedron Lett.27,5437(1986

BISLACTONIZATIONS OF OLEFINIC DIACIDS WITH [HYDROXY(TOSYLOXY)IODO]BENZENE

Mayur Shah, Michael J. Taschner*, Gerald F. Koser*, Nancy Rach, Thomas Jenkins, Patrick Cyr, and David Powers
Department of Chemistry, The University of Akron, Akron, Ohio 44325

The reactions of [hydroxy(tosyloxy)iodo]benzene with a series of olefinic diacids to produce bislactones are reported. The products are the result of a stereospecific cis-addition of the two carboxylic acid functions to the double bond.



Tetrahedron Lett.27,5441(1986)

A HIGHLY CONVERGENT PREPARATION OF PHOSPHONYLOXYACYLAMINO ACIDS

John K. Thottathil* and Michael K. Y. Wong
Squibb Chemical Division, P.O. Box 4000, Princeton , N. J. 08540

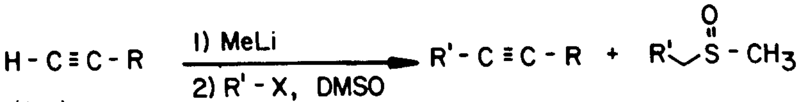
A one pot three component coupling for the preparation of phosphonyloxyacylamino acids ACE inhibitors

Tetrahedron Lett.27,5445(1986)

ALKYLATION OF STABILIZED ACETYLIDES IN DMSO. PREPARATION OF α,β-ACETYLENIC ALCOHOL AND ACETALS

J. Michael Chong* and Susanna Wong
Guelph-Waterloo Centre for Graduate Work in Chemistry, University of Waterloo, Waterloo ON
Canada N2L 3G1

Terminal acetylenes with stabilizing groups may be deprotonated and alkylated in DMSO in good yields.



$$H-C\equiv C-R \xrightarrow[\text{2) } R'-X,\ \text{DMSO}]{\text{1) MeLi}} R'-C\equiv C-R + R'CH_2-\overset{O}{\overset{\|}{S}}-CH_3$$

$R=CH_2OTHP$, Ph, $CH(OEt)_2$

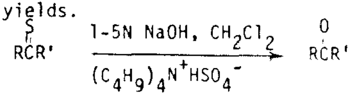
Tetrahedron Lett. 27, 5449 (1986)

AN EXCEPTIONALLY MILD, PHASE TRANSFER CATALYZED METHOD FOR THE CONVERSION OF THIOCARBONYL COMPOUNDS TO CARBONYLS

Howard Alper*[a], Caroline Kwiatkowska[a], Jean-Francois Petrignani[b], and Fazle Sibtain[a]
[a] Department of Chemistry, University of Ottawa, Ottawa, Ontario K1N 9B4 Canada
[b] I.P.S.O.I., Univ. d'Aix Marseille III, rue H. Poincasé, 13397 Marseille Cédex, France

Treatment of thiocarbonyl compounds with sodium hydroxide, methylene chloride, and tetrabutylammonium hydrogen sulfate affords carbonyls in good yields.

R = alkyl, aryl, amino
R' = alkyl, aryl, thioalkyl, amino

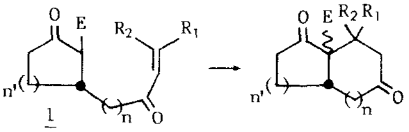


$$R\overset{S}{\overset{\|}{C}}R' \xrightarrow[(C_4H_9)_4N^+HSO_4^-]{1\text{-}5N\ NaOH,\ CH_2Cl_2} R\overset{O}{\overset{\|}{C}}R'$$

Tetrahedron Lett. 27, 5451 (1986)

INTRAMOLECULAR MICHAEL ADDITION OF CYCLIC β-KETOESTER ON CONJUGATED OLEFINIC KETONE, A STEREOELECTRONICALLY CONTROLLED PROCESS

Gilles Berthiaume, Jean-François Lavallée, and Pierre Deslongchamps.
Département de chimie, Faculté des Sciences, Université de Sherbrooke, Sherbrooke, QC, Canada J1K 2R1



The base-catalyzed ring-closure of 1 (E = $COOCH_3$, n' = 1-2, n = 0-3, and $R_1 = R_2$ = H and/or CH_3) is reported and the results can be explained on the basis of steric and stereoelectronic effects at the transition state level.

Tetrahedron Lett. 27, 5455 (1986)

INTRAMOLECULAR MICHAEL ADDITION OF CYCLIC β-KETOESTER ON CONJUGATED ACETYLENIC KETONE

J.-F. Lavallée, G. Berthiaume, P. Deslongchamps, and F. Grein (University of New Brunswick).
Department of Chemistry, Université de Sherbrooke, Sherbrooke, QC, Canada J1K 2R1

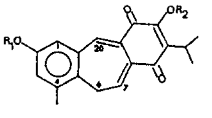
The base-catalyzed ring-closure of β-ketoester-ynone 1 (E=$COOCH_3$, n' = 1, 2, n = 0-3) is reported. Unexpectedly, the formation of five and six-membered enone takes place with ease and in good yield.

Tetrahedron Lett. 27, 5459 (1986)

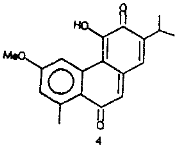
NEW HIGHLY OXIDIZED DITERPENE QUINONES FROM SALVIA FRUTICULOSA (LABIATAE).

Rodríguez-Hahn L., Esquivel B., Sánchez C., Cárdenas J., Estebanez L., Soriano-García M., Toscano A. and T.P. Ramamoorthy.
Instituto de Química. Univ. Nac. Autónoma de México. Coyoacan 04510, México D.F.

The diterpenoid constituents of Salvia fruticulosa (Labiatae)



1a $R_1=R_2=H$
1b $R_1=Me, R_2=H$



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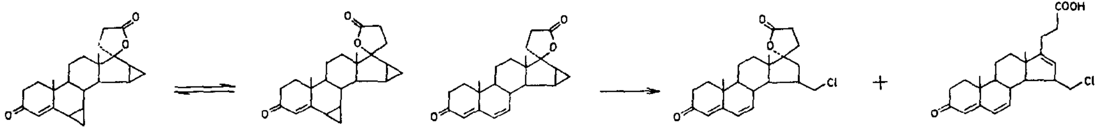
Tetrahedron Lett. 27,5463(1986)

ACID CATALIZED REARRANGEMENTS OF 15β,16β-METHYLENE-17α-PREGNENE-21,17-CARBOLACTONE DERIVATIVES

Klaus Nickisch*, Dieter Bittler, Henry Laurent and Rudolf Wiechert
Research Laboratories of Schering AG Berlin and Bergkamen, D-1000 Berlin 65

The different acid catalyzed rearrangements of 15,16-substituted 17α-pregnene-21,17-carbolactone derivatives are described.

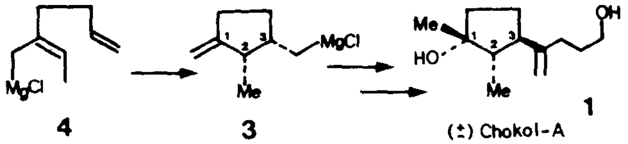


Tetrahedron Lett. 27,5467(1986)

TOTAL SYNTHESIS OF (±)CHOKOL-A VIA AN INTRAMOLECULAR TYPE-I-MAGNESIUM ENE REACTION

Wolfgang Oppolzer* and Allan F. Cunningham

A synthesis of (±)-chokol-A (1) via the Mg-ene reaction 4 → 3.

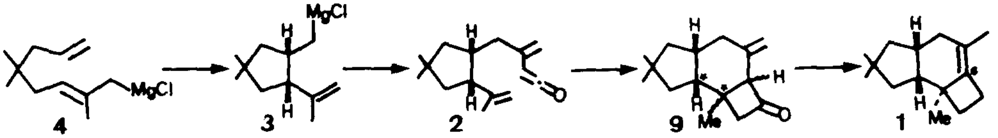


Tetrahedron Lett. 27,5471(1986)

SYNTHESIS OF (±)-6-PROTOILLUDENE AND (±)-3-EPI-6-PROTOILLUDENE BY INTRAMOLECULAR MAGNESIUM-ENE-AND KETENE/ALKENE ADDITION REACTIONS

Wolfgang Oppolzer* and Akio Nakao
Département de Chimie Organique, Université de Genève, CH-1211 Genève, Switzerland

Synthesis of (±)-6-protoilludene (1) *via* Mg-ene reaction 4→3 and ketene-addition 2→9.

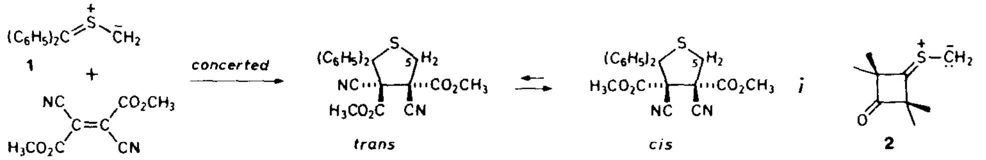


Tetrahedron Lett. 27,5475(1986)

FURTHER CONTRIBUTIONS TO THE STEREOSPECIFICITY OF 1,3-DIPOLAR CYCLOADDITIONS OF THIOCARBONYL YLIDES

Rolf Huisgen,* Elke Langhals, and Heinrich Nöth*
Institut für Organische und Anorganische Chemie der Universität München, FRG

In contrast to 2, 1 adds stereospecifically to dimethyl dicyanofumarate; X-ray analysis of cis-adduct. The additions of 2 to fumaro- and maleonitrile are stereospecific (≥99.95%).

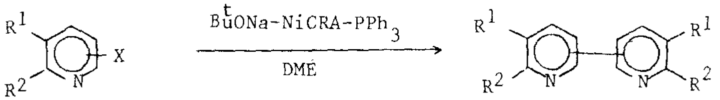


Tetrahedron Lett.27,5483(1986

ACTIVATION OF REDUCING AGENTS. SODIUM HYDRIDE CONTAINING COMPLEX REDUCING AGENTS 23. SYMMETRICAL COUPLING OF NITROGEN-CONTAINING HETEROCYCLIC HALIDES

R. Vanderesse, M. Lourak, Y. Fort and P. Caubère*
Laboratoire de Chimie Organique I, Associé au CNRS, Université de Nancy I, BP 239
54506 Vandoeuvre-les-Nancy (France)

NiCRA-bpy is shown to be one of the most efficient Ni containing reagents for the homocoupling of heteroaromatic halides and in particular chlorides.



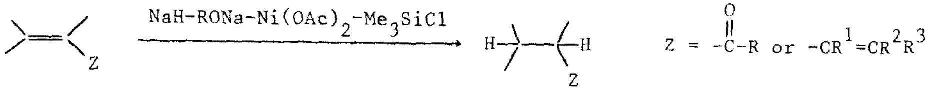
X = Br, Cl

Tetrahedron Lett.27,5487(1986)

ACTIVATION OF REDUCING AGENTS. SODIUM HYDRIDE CONTAINING COMPLEX REDUCING AGENTS 24. BENEFICIAL EFFECT OF Me_3SiCl ON THE REDUCING PROPERTIES OF NiCRA

Y. Fort, R. Vanderesse, and P. Caubère*
Laboratoire de Chimie Organique I, Associé au CNRS, Université de Nancy I, BP 239
54506 Vandoeuvre-les-Nancy (France)

Selective reduction of polyunsaturated hydrocarbons or unsaturated ketones are easily performed with NiCRASi (nickel containing CRA, activated by Me_3SiCl).



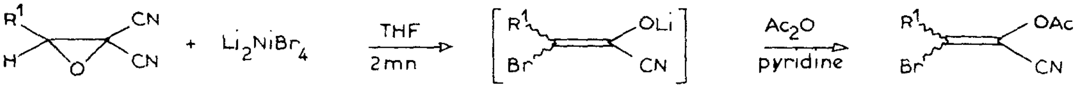
$Z = -\overset{O}{\overset{\|}{C}}-R$ or $-CR^1=CR^2R^3$

Tetrahedron Lett.27,5491(1986)

SYNTHESE DES ACETOXY-2 BROMO-3 PROPENE-2 NITRILES SUBSTITUES A PARTIR DES GEM DICYANO EPOXYDES

Layachi Khamliche et Albert Robert *
Groupe de Chimie Structurale, Unité associée au C.N.R.S. n° 704, Université de Rennes I, Campus de Beaulieu, 35042 RENNES CEDEX. FRANCE.

New 2-acetoxy 3-bromo 2-propene nitriles are easily prepared from α,α-dicyanoepoxides.

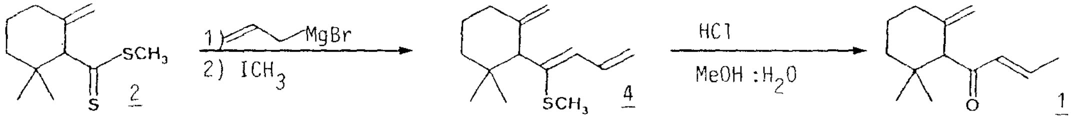


Tetrahedron Lett.27,5495 (1986)

NOUVELLE APPLICATION DE LA REACTION DES ORGANOMAGNESIENS SUR LES DITHIOESTERS : SYNTHESE DE LA GAMMA-DAMASCONE

P. GOSSELIN, Laboratoire de Synthèse Organique, UA CNRS 482, Faculté des Sciences, BP 535, F-72017 Le Mans Cedex

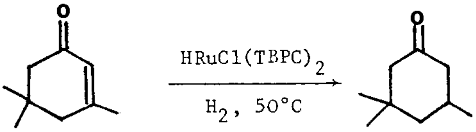
A new synthetic route to γ-damascone 1 starting from methyl-γ-dithiocyclogeranate 2 is described. Addition of HMPT is found necessary to perform the reaction of allylmagnesium bromide with dithioester 2. A new, very mild hydrolysis method is developped in order to transform the resulting vinylsulfide 4 into 1.



Tetrahedron Lett. 27,5497(1986)

CATALYTIC ASYMMETRIC HYDROGENATION OF α,β-UNSATURATED KETONES USING CHIRAL RUTHENIUM HYDRIDE COMPLEXES.

V. Masonneau, P. Le Maux and G. Simonneaux*
Laboratoire de Chimie des Organométalliques associé au CNRS,
Université de Rennes I, Campus de Beaulieu, 35042 Rennes, France.



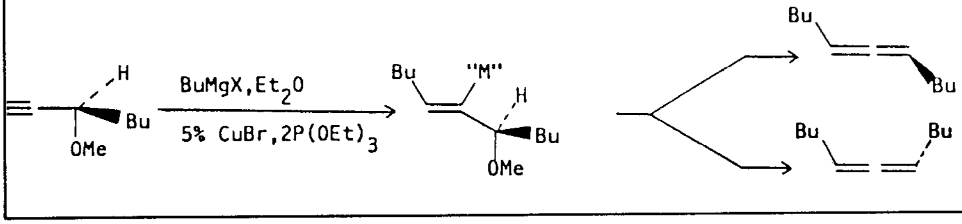
(R) (e.e. 62 %)

TPBC : trans-1,2 bis(diphenylphosphinomethyl)cyclobutane.

Tetrahedron Lett. 27,5499(1986)

ARE ALLENES FORMED FROM PROPARGYLIC ETHERS THROUGH A SYN OR ANTI DISPLACEMENT ?

I. Marek, P. Mangeney, A. Alexakis*, J.F. Normant
Université P. et M. Curie, tour 44-45, 4 place Jussieu F-75252 PARIS Cédex 05



anti X = I
opt.yield : 90%

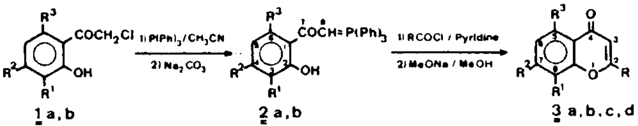
syn X = Cl
opt.yield : 60%

Tetrahedron Lett. 27,5503(1986)

SYNTHESIS OF TRIHYDROXYPHENACYLIDENETRIPHENYLPHOSPHORANES NEW PRECURSORS OF FLAVONOIDS : 5,7- AND 7,8-DIHYDROXY FLAVONES

Y. Le Floc'h* and M. Lefeuvre
E.N.S.C.R.
Av. Gal Leclerc - 35700 RENNES France

Some dihydroxychromones 3 are prepared from 2 new ylids 2, by acylation of 2, intramolecular olefination and saponification of the two remaining esters groups.



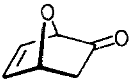
a : $R^1 = H$; $R^2 = R^3 = OH$
b : $R^1 = R^2 = OH$; $R^3 = H$
c : $R^1 = H$; $R^2 = R^3 = OCOR$
d : $R^1 = R^2 = OCOR$; $R^3 = H$

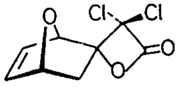
Tetrahedron Lett. 27,5505(1986)

CHEMO- AND STEREOSELECTIVE FUNCTIONALIZATION OF 7-OXABICYCLO[2.2.1]HEPT-5-EN-2-ONE WITH DICHLOROKETENE.

O. Arjona, R. Fernández de la Pradilla, S. Pérez, J. Plumet,* P.-A. Carrupt and P. Vogel,
Facultad de Química, Universidad Complutense, E-28040 Madrid, Spain, and Institut de chimie organique de l'Université, CH-1005 Lausanne, Switzerland.

Dichloroketene does not add onto the C(5)-C(6) double bond of enone 2, but exclusively onto the exo face of the carbonyl group giving lactone 5 which was transformed into diol 8.


2



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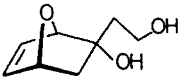

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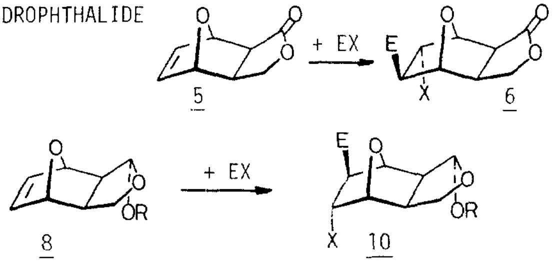
Tetrahedron Lett.27,5507(1986)

LONG-RANGE SUBSTITUENT EFFECTS. THE REGIOSELECTIVE ELECTROPHILIC ADDITIONS OF EXO-3,6-EPOXYTETRAHYDROPHTHALIDE AND ITS DERIVATIVES.

Tarcisio Ferrari and Pierre Vogel*
Institut de chimie organique de l'Université
CH 1005 Lausanne, Switzerland.

Electrophilic additions of 7-oxanorbornene derivative 5 gave 6 as major adducts, whereas acetal 8 gave 10 (major).

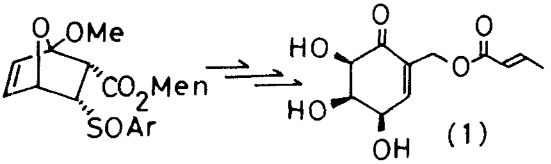


Tetrahedron Lett.27,5509(1986)

ENANTIOSELECTIVE TOTAL SYNTHESIS OF GLYOXALASE I INHIBITOR USING ASYMMETRIC DIELS-ALDER REACTION OF A NEW CHIRAL DIENOPHILE, $(S)_S$-3-(3-TRIFLUOROMETHYLPYRID-2-YLSULFINYL)ACRYLATE.

H. Takayama, K. Hayashi, and T. Koizumi*
Faculty of Pharmaceutical Sciences,
Toyama Med. & Pharm. Univ., Sugitani,
Toyama 930-01, Japan

First enantioselective total synthesis of glyoxalase I inhibitor (1) was achieved by the asymmetric Diels-Alder reaction.

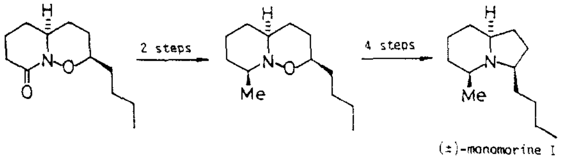


Tetrahedron Lett.27,5513(1986)

A STEREOSELECTIVE SYNTHESIS OF THE ANT TRAIL PHEROMONE (±)-MONOMORINE I

Hideo Iida, Yohya Watanabe, and Chihiro Kibayashi*
Tokyo College of Pharmacy, Horinouchi,
Hachioji, Tokyo 192-03, Japan

A stereoselective synthesis of the ant trail pheromone monomorine I in racemic form utilizing the bicyclic 1,2-oxazine intermediate.



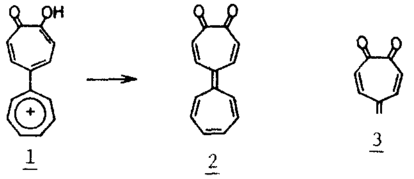
Tetrahedron Lett.27,5515(1986)

HEPTAFULVALENE-3,4-DIONE, A NOVEL p-TROPOQUINONE METHIDE-TYPE COMPOUND

Kazuko Takahashi,* Norio Namekata, and Kahei Takase

Department of Chemistry, Faculty of Science,
Tohoku University, Sendai 980, Japan

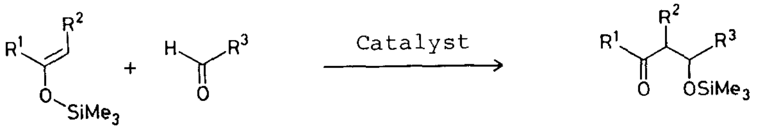
The title compound 2 has been synthesized from 1 by deprotonation and physico-chemical properties of 2 have been clarified, providing valuable informations to characterize p-tropoquinone methide 3.



Tetrahedron Lett. 27,5517(1986)

THE FIRST EXAMPLE OF ALDOL REACTIONS BETWEEN TRIMETHYLSILYL ENOL ETHERS AND ALDEHYDES BY THE AID OF RHODIUM COMPLEX

Susumu Sato, Isamu Matsuda,* and Yusuke Izumi
Department of Synthetic Chemistly, Faculty of Engineering, Nagoya University,
Chikusa, Nagoya 464, JAPAN



Catalyst : $[(COD)Rh(DPPB)]^{+}X^{-}$ ($X = PF_6$ or ClO_4) or $Rh_4(CO)_{12}$

Tetrahedron Lett. 27,5521(1986)

CARBAMATES : A METHOD OF SYNTHESIS AND SOME SYNTHETIC APPLICATIONS

Pavel Kočovský
Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Sciences
16610 Prague 6, Czechoslovakia

Alcohols are converted into unsubstituted carbamates by treatment with trichloroacetyl isocyanate (TAI, a) followed by hydrolysis on Al_2O_3 (b). This mild procedure tolerates various labile functional groups. The carbamate moiety can function as a control element in epoxidation and in epoxide opening.

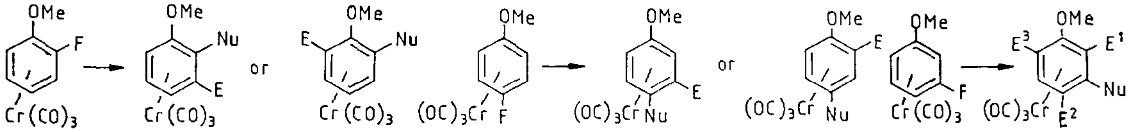
$$\text{R-OH} \xrightarrow{a} \text{R-O-CO-NH-COCCl}_3 \xrightarrow{b} \text{R-O-CONH}_2$$

Tetrahedron Lett. 27,5525(1986)

FLUORINE DIRECTED LITHIATION IN TRICARBONYLARENECHROMIUM(0) COMPLEXES: THE REGIOSPECIFIC SYNTHESIS OF POLYSUBSTITUTED ARENES.

John P. Gilday and David A. Widdowson*
Chemistry Department, Imperial College, London SW7 2AY

Summary: Lithiation/electrophilic quenching of the isomeric tricarbonylfluoroanisole chromium(0) complexes in combination with nucleophilic displacement of the fluorine by amine and thiolate allows the totally regiocontrolled synthesis of a range of 1,2,3-, 1,2,4-, and 1,2,3,4,5-polysubstituted arenes.

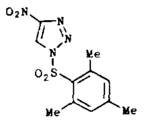


Tetrahedron Lett. 27,5529(1986)

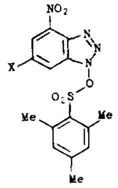
HIGHLY REACTIVE CONDENSING AGENTS FOR THE SYNTHESIS OF OLIGONUCLEOTIDES BY THE PHOSPHOTRIESTER APPROACH

Kevin G. Devine and Colin B. Reese*
Department of Chemistry, King's College London, Strand, London WC2R 2LS, England.

The preparation of three new condensing agents [(5), (6a) and (6b)] that are, respectively, ca. 1.3, ca. 4 and at least 10 times more reactive than 1-(mesitylene-2-sulphonyl)-3-nitro-1,2,4-triazole (MSNT), is described.



(5)



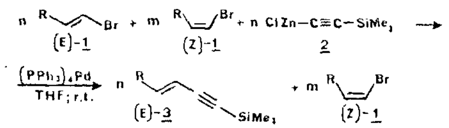
(6) a; X = CF_3
b; X = NO_2

Tetrahedron Lett. 27, 5533 (1986)

DIASTEREOSELECTIVE SYNTHESIS OF (E)-1-TRIMETHYLSILYL-3-EN-1-YNES BY PALLADIUM-CATALYZED CROSS-COUPLING REACTION BETWEEN TRIMETHYLSILYLETHYNYLZINC CHLORIDE AND STEREOISOMERIC MIXTURES OF 1-BROMO-1-ALKENES

Bianca Patrizia Andreini, Adriano Carpita, and Renzo Rossi. Dipartimento di Chimica e Chimica Industriale - Università di Pisa - via Risorgimento 35 - 56100 PISA - ITALY.

(E)-1-Trimethylsilyl-3-en-1-ynes have been diastereoselectively synthesized starting from stereoisomeric mixtures of 1-bromo-1-alkenes. The procedure has been employed to prepare (2E,6E)-1-acetoxy-2,6-decadien-4-yne, a naturally-occurring acetylenic compound.



Tetrahedron Lett. 27, 5535 (1986)

NOYAINE, THE FIRST C-RING SECOCULARINE ALKALOID

J.M.Boente, L.Castedo, D.Domínguez and A.Rodríguez de Lera
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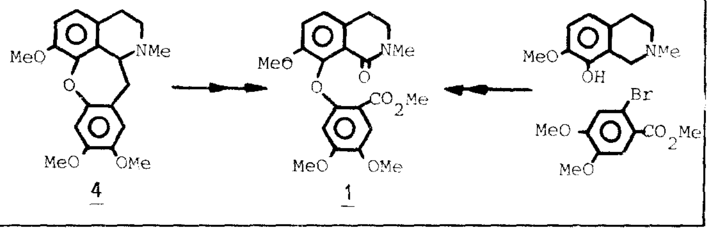
Santiago de Compostela, Spain

Noyaine (1) was isolated from Corydalis claviculata (L.) DC. and its structure deduced from spectroscopic data and confirmed by synthesis from cularine (4) and also by total synthesis.



Tetrahedron Lett. 27, 5539 (1986)

PARTIAL SYNTHESIS OF GLIOTOXIN G, AN EPITETRATHIODIOXOPIPERAZINE

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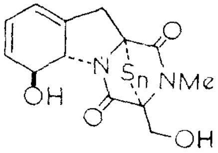
Glasgow G12 8QQ

Gliotoxin (1a) reacts with sulphur in carbon disulphide containing a catalytic amount of thiolate to give the trisulphide (1b) and gliotoxin G (1c), a new, minor metabolite of Aspergillus fumigatus.



(1a), n = 2; (1b), n = 3; (1c), n = 4.

Tetrahedron Lett. 27, 5541 (1986)

PALLADIUM-CATALYZED TRIETHYLAMMONIUM FORMATE REDUCTION OF ARYL TRIFLATES. A SELECTIVE METHOD FOR THE DEOXYGENATION OF PHENOLS

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Phenols can be selectively deoxygenated by reduction of the corresponding aryl triflates with triethylammonium formate in the presence of a homogeneous palladium(0) catalyst.