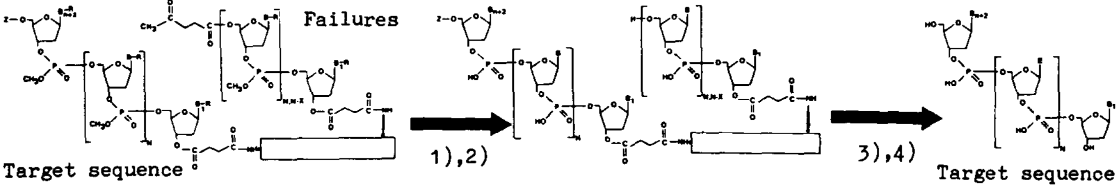
GRAPHICAL ABSTRACTS

Tet.Lett.,27,26,2933 (1986)

SOLID-SUPPORTED SYNTHESIS, DEPROTECTION AND ENZYMATIC PURIFICATION OF OLIGODEOXYNUCLEOTIDES

M.S. Urdea and T. Horn
CHIRON CORP., Emeryville, CA 94608, USA

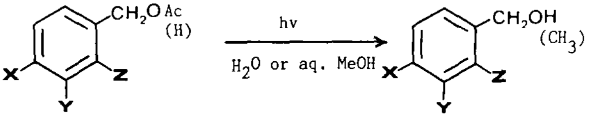
1) Thiophenol 3) Spleen Phosphodiesterase
2) Hydrazine 4) Ammonium Hydroxide



Tet.Lett.,27,26,2937 (1986)

SUBSTITUENT EFFECTS IN THE PHOTOSOLVOLYSIS OF BENZYL DERIVATIVES. GENERAL STRUCTURE-REACTIVITY RELATIONSHIPS.

Peter Wan*, Becky Chak and Carrier Li, Dept. of Chemistry, University of Victoria, Victoria, British Columbia, Canada V8W 2Y2.



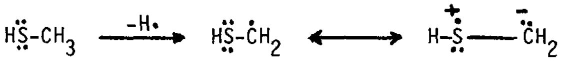
X,Y,Z = CH_3, F, Cl, OCH_3

Tet.Lett.,27,26,2941 (1986)

REEVALUATION OF ORBITAL INTERACTIONS IN SUBSTITUTED RADICALS. TRANSFER OF RADICAL PROPERTIES TO THE SUBSTITUENT ATOM

Daniel J. Pasto, Department of Chemistry, University of Notre Dame Notre Dame, IN 46556

The nonbonded pair orbital on an atom attached to a radical center can be higher in energy than the SOMO of the unsubstituted radical thus transferring dominant radical character to the substituent atom.



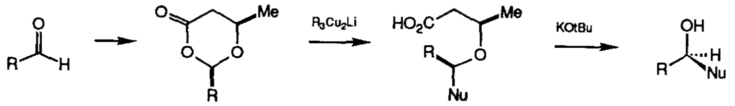
$$H\ddot{\underset{..}{S}}-CH_3 \xrightarrow{-H\cdot} H\ddot{\underset{..}{S}}-\dot{C}H_2 \longleftrightarrow H-\overset{+}{\underset{..}{\dot{S}}}-\overset{-}{\ddot{C}}H_2$$

Tet.Lett.,27,26,2945 (1986)

ON THE PREPARATION OF OPTICALLY ACTIVE SECONDARY ALCOHOLS FROM A 1,3-DIOXAN-4-ONE: SUBSTITUTION WITH ORGANOCOPPER REAGENTS

S.L. Schreiber and J. Reagan, Department of Chemistry, Yale Univeristy, New Haven, CT 06511 USA

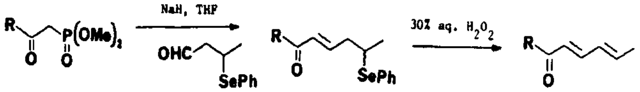
Organocopper reagents react with a chiral nonracemic 1,3-dioxan-4-one to afford substitution products with high diastereoselectivity. After treatment of the educts with potassium t-butoxide, optically active secondary alcohols are obtained.



Tet.Lett.,27,26,2949 (1986)

THE USE OF 3-PHENYLSELENOBUTANAL AS A CROTONALDEHYDE EQUIVALENT IN SYNTHESIS.

Stephen Hanessian*, Paul J. Hodges, Soumya P. Sahoo and Patrick J. Roy.
Department of Chemistry, Université de Montréal, Montréal, Québec, Canada, H3C 3V1.



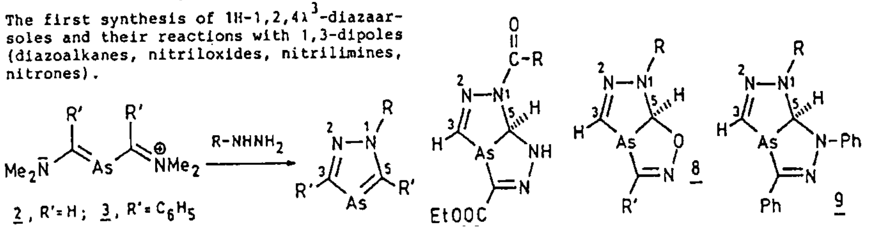
(E,E - ketodienes, high yields).

Tet.Lett.,27,26,2957 (1986)

(3+2)-CYCLOADDITIONEN VON 1,3-DIPOLEN MIT 1H-1,2,4λ³-DIAZAARSOLEN

Gottfried Märkl und Hubert Seitz, Institut für Organische Chemie der Universität Regensburg, Universitätsstraße 31, D-8400 Regensburg

The first synthesis of 1H-1,2,4λ³-diazaarsoles and their reactions with 1,3-dipoles (diazoalkanes, nitriloxides, nitrilimines, nitrones).



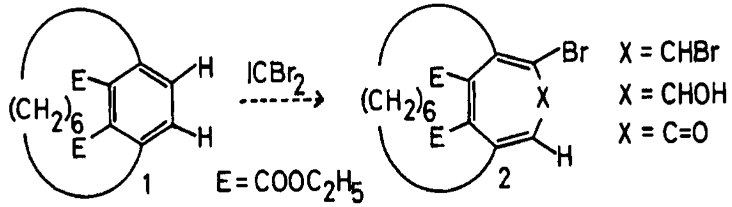
2, R'=H; 3, R'=C₆H₅

Tet.Lett.,27,26,2961 (1986)

DIE ADDITION VON DIBROMCARBEN AN [6]PARACYCLOPHAN-8,9-DICARBONSÄUREDIETHYLESTER

Volker Königstein und Werner Tochtermann*
Institut für Organische Chemie der Universität, Olshausenstraße 40, D-2300 Kiel, FRG

The addition of dibromocarbene to the title compound 1 is described.

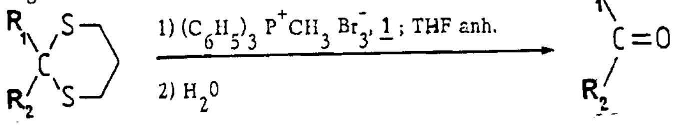


Tet.Lett.,27,26,2965 (1986)

DETHIOACETALISATION DE DITHIANNES-1,3 PAR DES TRIBROMURES DE PHOSPHONIUM.

Henri-Jean Cristau*, Akram Bazbouz, Philippe Morand et Eliane Torreilles*.

Methyltriphenylphosphonium tribromide 1 acts as an efficient mild and selective dethioketalisation reagent.

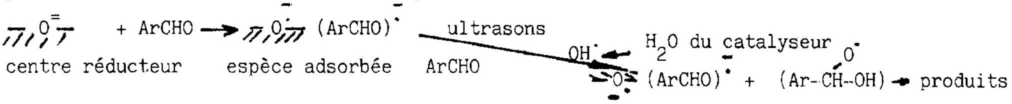


Tet.Lett.,27,26,2967 (1986)

MECANISME DE TRANSFERT MONO ELECTRONIQUE DANS LA REACTION DE CANNIZZARO EN PHASE HETEROGENE SOLIDE-LIQUIDE EN CONDITIONS SONOCHIMIQUES

A.Fuentes et J.V.Sinisterra
Départament de Chimie Organique.Faculté des Sciences.Cordoue.Espagne

La réaction de Cannizzaro en phase hétérogène solide-liquide sous sonication.est catalysée par les centres reducteurs du solide par transfert d'un seul électron.

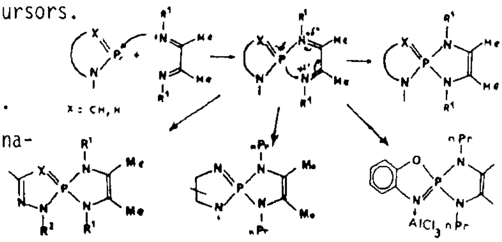


Tet.Lett.,27,26,2971 (1986)

DICOORDINATED PHOSPHORUS COMPOUNDS : reaction of disubstituted 1,4-diaza 1,3-dienes with diazaphospholes, triazaphospholes and some dicoordinated Phosphorus precursors.

O. Diallo, M.T. Boisdon, L. Lopez, C. Malavaud et J. Barrans . UA CNRS 454 Université Paul Sabatier 118 Route de Narbonne 31062 Toulouse Cédex France.

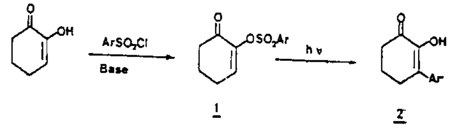
Evidence for electrophilic properties of dicoordinated Phosphorus.



Tet.Lett.,27,26,2975 (1986)

SYNTHESE D'ARYL-3 CYCLOHEXANEDIONES PAR PHOTOLYSE DES ARENESULFONYLOXY-2 CYCLOHEXENE-2 ONES

A.L. Poquet, A. Feigenbaum et J.P. Pete
Laboratoire de Photochimie, Unité Associée au CNRS, UA n° 459, Faculté des Sciences, B.P. 347 51062 Reims Cédex, FRANCE

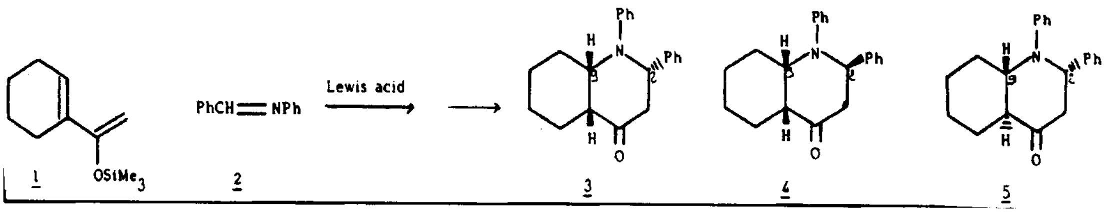


Ar = mesithyl
4-chlorophenyl
4-bromophenyl
4-nitrophenyl
3,4-dimethoxyphenyl
3-pyridyl
2-thienyl

Tet.Lett.,27,26,2981 (1986)

STEREOSELECTIVE SYNTHESIS OF CIS OR TRANS N-PHENYL 2-PHENYL DECAHYDROQUINOLIN-4 ONES BY CATALYZED HETERO-DIELS-ALDER REACTION.

Christine VEYRAT, Lya WARTSKI, Jacqueline SEYDEN-PENNE
Laboratoire des Carbocycles, associé au CNRS, Bât. 420, Université de Paris-Sud
91405 ORSAY CEDEX, France

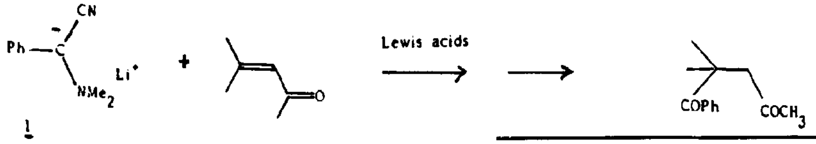


Tet.Lett.,27,26,2985 (1986)

INFLUENCE OF THE LEWIS ACID ON THE NUCLEOPHILIC ADDITION TO β,βDISUBSTITUTED α-ENONES.

M. Zervos and L. Wartski
Laboratoire des Carbocycles, associé au CNRS, Université de Paris-Sud, Bât. 420
91405 ORSAY CEDEX (France)

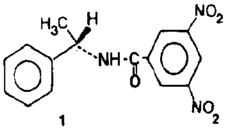
Lewis acids as $BF_3.Et_2O$, $Ti(OiPr)_4$, $ZnCl_2$ allow the Michael addition of lithiated aminonitrile 1 to β,βdisubstituted α-enones leading thus after carbonylunmasking to the corresponding diketones.



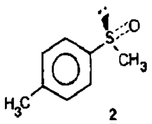
Tet.Lett.,27,26,2989 (1986)

FORMATION OF A CRYSTALLINE COMPLEX BETWEEN A CHIRAL SULFOXIDE AND A CHIRAL AMIDE

P.Charpin††,E.Dunach†,H.B.Kagan†*,F.R.Theobald
Institut de Chimie Moléculaire d'Orsay, Bt 420
Université Paris-Sud, 91405 Orsay, Cedex,France



1



2

1:1 Molecular complex of 1 and 2 : crystal structure, evidence for H-bond S=O...HN .
1 : chiral solvating agent for nmr of sulfoxides.

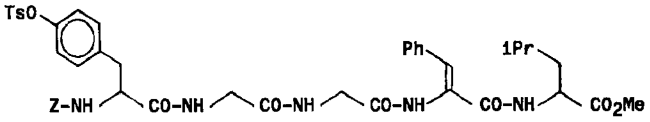
† UA CNRS 255, Laboratoire de Synthèse Asymétrique
†† UA CNRS 331, DPC/SCM, CEN Saclay,91191-Gif/Yvette

Tet.Lett.,27,26,2993 (1986)

SYNTHESIS OF A PROTECTED MONODEHYDRO Leu-ENKEPHALIN AND ITS HYDROGENATION CATALYZED BY CHIRAL RHODIUM COMPLEXES

J.M. Nuzillard, J.C. Poulin and H.B. Kagan*
Unité de Recherche n° 255, associée au CNRS, Laboratoire de Synthèse Asymétrique
Université Paris-Sud, 91405 Orsay (France)

Synthesis of (S,S)-Z-(O)Ts-Tyr-Gly$_2$-ΔPhe-Leu-OMe; its asymmetric hydrogenation give 93% de (S,S,S)-Leu-enkephalin with (Rh dipamp COD)$^+BF_4^-$ as catalyst and 68% de (S,R,S)-Leu-enkephalin when the catalyst is RhCl(-)bppm.

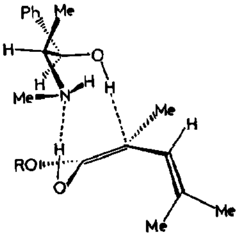


Tet.Lett.,27,26,2997 (1986)

EVALUATION OF THE STERIC INTERACTIONS RESPONSIBLE FOR THE ENANTIOSELECTIVE PHOTODECONJUGATION OF α,β-UNSATURATED ESTERS

R. Mortezaei, O. Piva, F. Henin, J. Muzart, J.P. Pete
Laboratoire de Photochimie, UA CNRS n° 459, Université de Reims Champagne-Ardenne, 51062 Reims Cédex

A model is proposed to explain the configuration and the proportion of the preponderant enantiomer in the enantioselective photodeconjugation of α,β-unsaturated esters. The major interactions in the transition state are developed between the inductor and the β-carbon of the intermediate dienol.

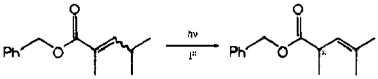


Tet.Lett.,27,26,3001 (1986)

ENANTIOSELECTIVE PHOTODECONJUGATION OF α,β-UNSATURATED ESTERS. EFFECT OF THE NATURE OF THE CHIRAL AGENT

O. Piva, F. Henin, J. Muzart, J.P. Pete
Laboratoire de Photochimie, Unité Associée au CNRS UA n° 459, Université de Reims Champagne-Ardenne, 51062 Reims Cédex

A synergism exists between the effect of the amino and hydroxy groups of chiral amino alcohols (I*) on the enantiomeric excess of the photodeconjugation of α,β-unsaturated esters

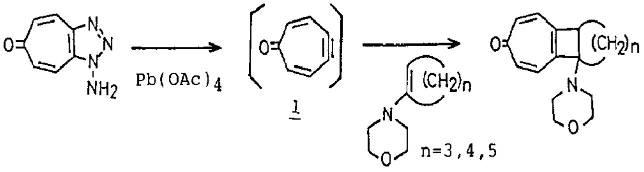


Tet.Lett.,27,26,3005 (1986)

THE REACTIONS OF 4,5-DEHYDROTROPONE WITH MORPHOLINE ENAMINES. [2+2]CYCLOADDITION REACTION OF DEHYDROTROPONE

Tomoo Nakazawa,* Mariko Ashizawa, Fumiko Nishikawa, Mamoru Jinguji, Hideki Yamochi,† and Ichiro Murata†; Department of Chemistry, Medical University of Yamanashi, Tamaho, Nakakoma, Yamanashi 409-38, Japan; †Department of Chemistry, Faculty of Science, Osaka University, Toyonaka, Osaka 560, Japan

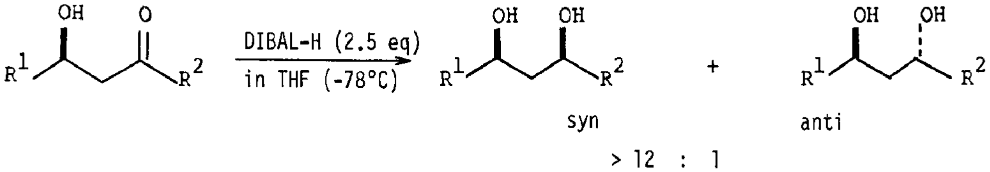
The first examples of [2+2]cycloaddition reactions of 4,5-dehydrotropone (1)



Tet.Lett.,27,26,3009 (1986)

1,3-SYN DIASTEREOSELECTIVE REDUCTION OF β-HYDROXYKETONES TO β-HYDROXYBENZYLIC ALCOHOLS WITH DIISOBUTYLALUMINUM HYDRIDE AND TRIBUTYLTIN HYDRIDE

Syun-ichi Kiyooka,* Hisanori Kuroda, and Yayoi Shimasaki
Department of Chemistry, Kochi University, Akebono-cho 2-5-1, Kochi 780, Japan



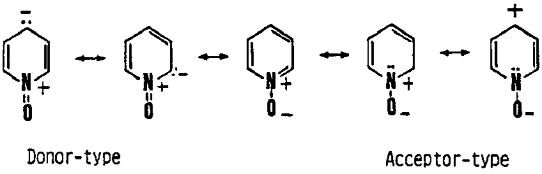
Tet.Lett.,27,26,3013 (1986)

A ^{17}O NMR STUDY. SUBSTITUENT CHEMICAL SHIFTS OF 4-SUBSTITUTED PYRIDINE 1-OXIDES IN DMSO.

M. Sawada,* Y. Takai, S. Kimura,
S. Misumi, Y. Tsuno.
MAC, ISIR, Osaka Univ., Ibaraki, Osaka
567, Japan.

$$^{17}\text{O-NMR SCS} = 53(\sigma^{0} + 0.88\Delta\bar{\sigma}_{R}^{+} + 0.80\Delta\bar{\sigma}_{R}^{-})$$
(ppm)

^{17}O-NMR SCS with 4-Substituents of PYNO

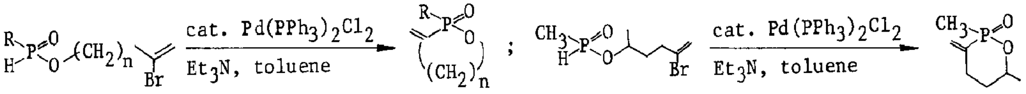


Tet.Lett.,27,26,3017 (1986)

PALLADIUM-CATALYZED SYNTHESIS OF 3-METHYLENE-1-OXA-2-PHOSPHACYCLOALKANE-2-OXIDE DERIVATIVES---THE PHOSPHORUS ANALOGS OF α-METHYLENELACTONES

Yuanyao Xu* and Zhong Li
Shanghai Institute of Organic Chemistry, Academia Sinica, 345 Lingling Lu, Shanghai, China

The title compounds were synthesized via Pd-catalyzed intramolecular formation of C-P bond.



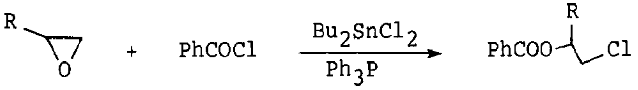
R = CH_3, n-C_4H_9, C_6H_5 ; n = 2 - 4

Tet.Lett.,27,26,3021 (1986)

REGIOSELECTIVE RING CLEAVAGE OF OXIRANES CATALYZED BY ORGANOTIN HALIDE - TRIPHENYLPHOSPHINE COMPLEX

Ikuya Shibata,* Akio Baba and Haruo Matsuda
Department of Applied Chemistry, Faculty of Engineering, Osaka University, Yamada-oka 2-1, Suita, Osaka 565, Japan

Regioselective cleavage of oxiranes with benzoyl chloride catalyzed by Bu_2SnCl_2 - Ph_3P complex.

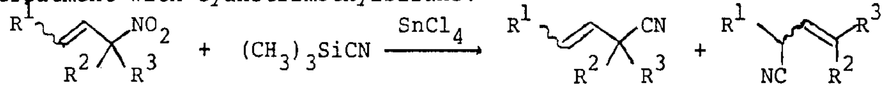


Tet.Lett.,27,26,3025 (1986)

LEWIS ACID CATALYZED SUBSTITUTION OF ALLYLIC NITRO COMPOUNDS WITH CYANOTRIMETHYLSILANE

Hideyoshi Miyake* and Kimiaki Yamamura
Department of Chemistry, College of General Education, Kobe University, Nada, Kobe 657, Japan

The nitro group in allylic nitro compounds is replaced by cyano group on treatment with cyanotrimethylsilane.

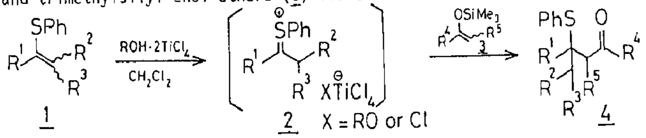


Tet.Lett.,27,26,3029 (1986)

A CROSS-ALDOL TYPE REACTION OF ALKENYL SULFIDE WITH TRIMETHYLSILYL ENOL ETHER.

Takeshi TAKEDA*, Yuichiro KANEKO, and Tooru FUJIWARA
Department of Industrial Chemistry, Faculty of Technology, Tokyo University of Agriculture and Technology, Koganei, Tokyo 184

β-Phenylthio ketones (4) were obtained by the successive treatment of alkenyl sulfides (1) with $TiCl_4$-ROH (R= Me or t-Bu) and trimethylsilyl enol ethers (3) via thionium ion intermediates (2).

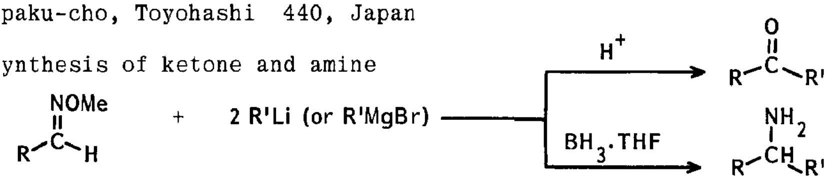


Tet.Lett.,27,26,3033 (1986)

Reaction of Aldehyde O-alkyl Oxime with Organometallic Compounds

Shinichi Itsuno, Koji Miyazaki, and Koichi Ito
School of Materials Science, Toyohashi University of Technology
Tempaku-cho, Toyohashi 440, Japan

A synthesis of ketone and amine

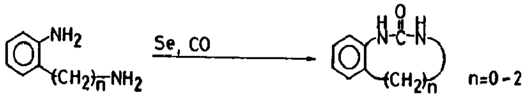


Tet.Lett.,27,26,3037 (1986)

A NEW SYNTHESIS OF CYCLIC UREAS FROM AROMATIC DIAMINES BY SELENIUM-ASSISTED CARBONYLATION WITH CARBON MONOXIDE

Tohru Yoshida, Nobuaki Kambe, Shinji Murai, and Noboru Sonoda*
Department of Applied Chemistry, Osaka University, Suita, Osaka 565, Japan

Aromatic cyclic ureas were synthesized in good yields from aromatic diamines by the reaction with carbon monoxide in the presence of selenium.

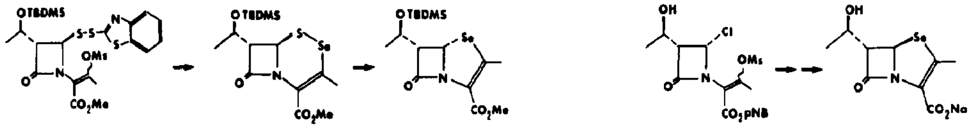


Tet.Lett.,27,26,3041 (1986)

2-SELENACEPHEMS AND 1-DETHIA-1-SELENAPENEMS

M. Alpegiani, A. Bedeschi, E. Perrone, and G. Franceschi
Farmitalia Carlo Erba, Ricerca e Sviluppo Chimico, Via dei Gracchi 35, Milano (Italy)

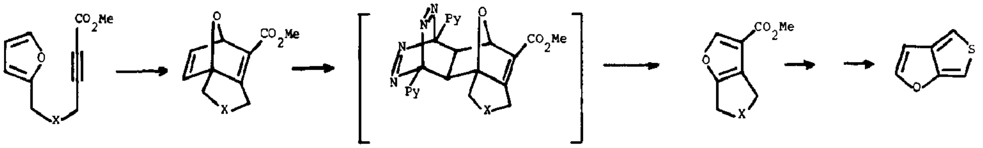
The title compounds, first selena nuclear analogs of β-lactam antibiotics, have been synthesized and compared with their sulphur isosters.



Tet.Lett.,27,26,3045 (1986)

THE SYNTHESIS OF THIENO[3,4-b]FURAN USING A TANDEM INTRAMOLECULAR-REVERSE DIELS-ALDER REACTION APPROACH

John Moursounidis and Dieter Wege*
Department of Organic Chemistry, University of Western Australia, Nedlands, Western Australia 6009.

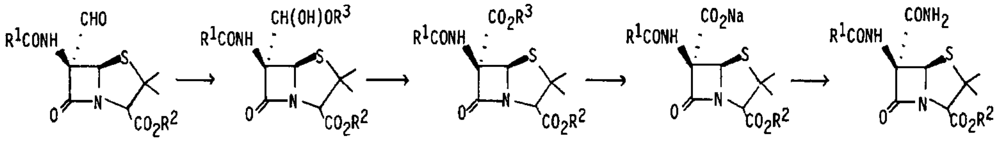


Tet.Lett.,27,26,3049 (1986)

6α-CARBOXY AND 6α-CARBAMOYL PENICILLINS

Angela W. Guest
Beecham Pharmaceuticals, Research Division, Brockham Park,
Betchworth, Surrey, RH3 7AJ, England.

6α-Carboxypenicillins are prepared by a hemiacetal formation-oxidation procedure from the 6α-formyl derivative and elaborated to a 6α-carbamoylpenicillin.

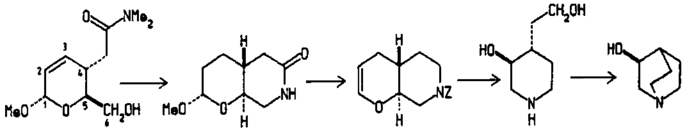


Tet.Lett.,27,26,3053 (1986)

ENANTIOSPECIFIC SYNTHESIS OF S-QUINUCLIDINOL FROM D-GLUCOSE: A STRATEGY FOR THE SYNTHESIS OF CHIRAL QUINUCLIDINES.

George W.J. Fleet,[a] Keith James,[b] and Robert J. Lunn[a]
[a]Dyson Perrins Laboratory, Oxford University, South Parks Road, Oxford OX1 3QY
[b]Pfizer Central Research, Sandwich, Kent CT13 9NJ

A synthesis of S-quinuclidinol is reported in which a two carbon chain extension is introduced at C-4 and the chirality is derived from C-5 OH in glucose.



Tet.Lett.,27,26,3057 (1986)

AN ENANTIOSPECIFIC SYNTHESIS OF S-QUINUCLIDINOL FROM D-GLUCOSE

George W. J. Fleet,[a] Keith James,[b] Robert J. Lunn[a] and Christopher J. Mathews[a]
[a]Dyson Perrins Laboratory, Oxford University, South Parks Road, Oxford OX1 3QY
[b]Pfizer Central Research, Sandwich, Kent CT13 9NJ

A synthesis of S-quinuclidinol is reported in which a two carbon chain extension is introduced at C-3 and the chirality is derived from C-4 OH in glucose.