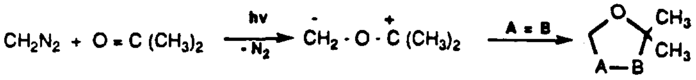
Tetrahedron Lett. 28,1723(1987)

CARBONYL YLIDE FORMATION IN THE REACTION OF METHYLENE WITH ACETONE

Nicholas J. Turro* and Yuan Cha
Department of Chemistry, Columbia University, New York, New York 10027

Photolysis of diazomethane in acetone yields a carbonyl ylide as an intermediate that is trapped in cycloaddition reactions with dipolarophiles.

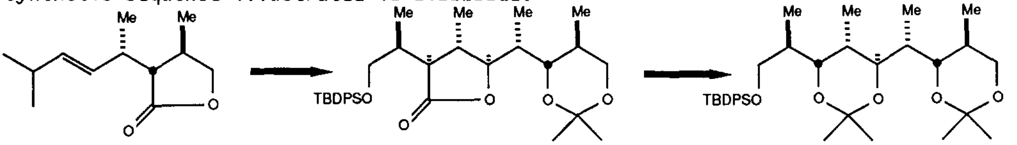


Tetrahedron Lett. 28,1725(1987)

3-METHYL-γ-BUTYROLACTONE AS A SOURCE OF 2-METHYL-3-HYDROXYKETONES AND 2-METHYL-1,3-DIOLS: A SYNTHESIS OF THE C_{19}-C_{27} FRAGMENT OF RIFAMYCIN S BY LINEAR ITERATION,

Frederick E. Ziegler* and Alyssa Kneisley, Department of Chemistry, Yale University, New Haven, CT 06511 USA

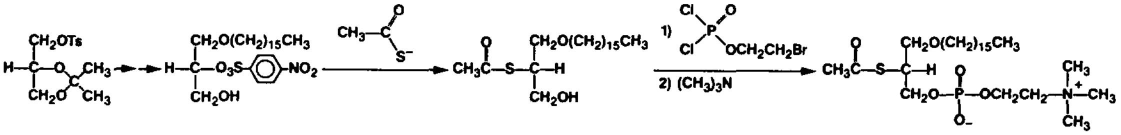
The synthetic sequence illustrated is discussed.



Tetrahedron Lett. 28,1729(1987)

STEREOSPECIFIC SYNTHESIS OF PAF ANALOGUES

Suresh K. Bhatia and Joseph Hajdu*
Department of Chemistry, California State University, Northridge, Northridge, CA 91330 USA



Tetrahedron Lett. 28,1733(1987)

THE ISOLATION AND CHARACTERIZATION OF COPPER METHYLENE VIA MATRIX ISOLATION SPECTROSCOPY

Sou-Chan Chang, Zakya H. Kafafi, Robert H. Hauge, John L. Margrave,* and W. E. Billups*
The Department of Chemistry and the Rice Quantum Institute
Rice University, P.O. Box 1892, Houston, Texas 77251

Copper methylene ($CuCH_2$) and N_2CuCH_2 have been isolated and characterized by FTIR matrix isolation spectroscopy.

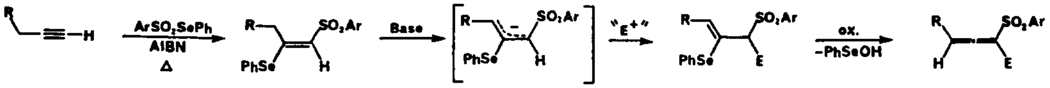
$$CH_2N_2 + Cu \xrightarrow[11K]{Ar} CuCH_2 , N_2CuCH_2$$

Tetrahedron Lett.28,1737(1987)

A GENERAL SYNTHESIS OF ALLENIC SULFONES FROM ACETYLENES USING SELENOSULFONATION

Thomas G. Back*, M. Vijaya Krishna and K.R. Muralidharan
Department of Chemistry, University of Calgary, Calgary, Alberta, Canada, T2N 1N4

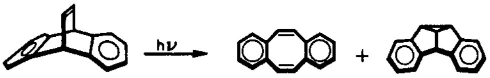
Terminal acetylenes were converted to 1- and 3-substituted allenic sulfones via selenosulfonation, deprotonation, alkylation and selenoxide elimination.



Tetrahedron Lett.28,1741(1987)

TRIPLET ENERGY SENSITIZATION OF A CRYSTALLINE PHASE PHOTOREARRANGEMENT. Miguel Garcia-Garibay, John R. Scheffer,* James Trotter* and Fred Wireko, Department of Chemistry, University of British Columbia, Vancouver, Canada, V6T 1Y6.

Direct irradiation of crystals of dibenzobarrelene (1) leads mainly to (2), the singlet product, whereas photolysis of solid solutions of (1) with various crystalline triplet energy sensitizers leads exclusively to dibenzosemibullvalene (3), the triplet photoproduct.



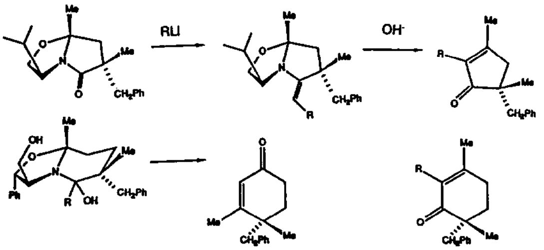
1 2 3

Tetrahedron Lett.28,1745(1987)

AN EFFICIENT ASYMMETRIC SYNTHESIS OF TRISUBSTITUTED CYCLOHEXENONES AND TRISUBSTITUTED CYCLOPENTENONES FROM CHIRAL 2,2-DIALKYL 1,4- and 1,5-DIKETONES

A. I. Meyers*and Bruce A. Lefker
Department of Chemistry, Colorado State University, Fort Collins, CO 80523 USA

Chiral bicyclic lactams are elaborated by addition of RLi to the carbonyl furnishing, after hydrolysis, any of the three cycloalkenones in high ee's.

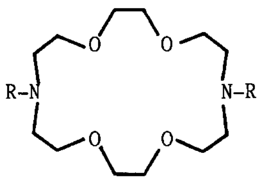


Tetrahedron Lett.28,1749(1987)

ONE AND TWO-ARMED LARIAT ETHER PEPTIDE DERIVATIVES: SYNTHESES AND CATION BINDING PROPERTIES

Banita D. White, Kristin A. Arnold and George W. Gokel*
Department of Chemistry, University of Miami, Coral Gables, Florida 33124 USA

Azacrowns of the form shown at the right have been prepared and their cation binding affinities assessed and compared.



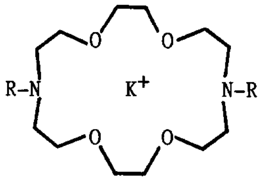
R = CH_2-CO-NH-CHR'-CO-OCH_3

Tetrahedron Lett. 28,1753 (1987)

MOLECULAR STRUCTURES OF 4,13-DIAZA-18-CROWN-6 DERIVATIVES HAVING GLYCYL-GLYCINE SIDEARMS: TWO POTASSIUM IODIDE COMPLEXES

Banita D. White, Frank R. Fronczek, Richard D. Gandour, and George W. Gokel*
Departments of Chemistry, University of Miami, Coral Gables, FL 33124 and Louisiana State University, Baton Rouge, LA 70803-1804 USA

Solid state structures are presented for two crystalline K^+ complexes of N,N'-bis(methyl glycidylglycidino)-4,13-diaza-18-crown-6.



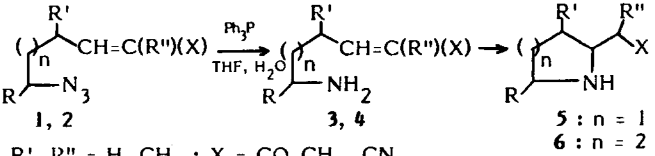
R = CH_2-CO-NH-CH_2-CO-OCH_3

Tetrahedron Lett. 28,1757 (1987)

Intramolecular cyclization of ω-primary amino electrophilic olefins to functionalized pyrrolidines and piperidines.

N. Knouzi [a], M. Vaultier [a], L. Toupet [b] and R. Carrié [a]
a : G.R.P.S., Université de Rennes I, U.A. 704, Avenue du Général Leclerc, 35042 Rennes, France.
b : D.P.C., U.A. 804, Avenue du Général Leclerc, Université de Rennes I, 35042 Rennes, France.

The intramolecular cyclization of the chemoselectivity generated primary amines **3** and **4** leads to functionnalized pyrrolidines **5** and piperidines **6** under very mild conditions.



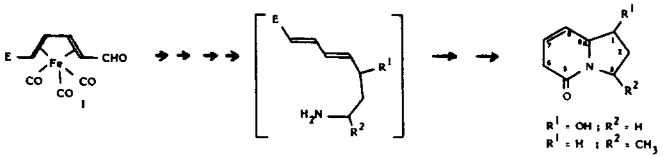
R, R', R'' = H, CH_3 ; X = CO_2CH_3, CN

Tetrahedron Lett. 28,1761 (1987)

A NEW INDOLIZIDINE SYNTHESIS

S. Boulaajaj, T. Le Gall, M. Vaultier, R. Grée, L. Toupet and R. Carrie
GRPS, Université de Rennes, U.A. 704, Avenue du Général Leclerc, 35042 Rennes Cédex, France.
DPS, Université de Rennes, U.A. 804, Avenue du Général Leclerc, 35042 Rennes Cédex, France.

The intramolecular 1,6 Michael type addition of a primary amine is the key step for a new indolizidine synthesis.



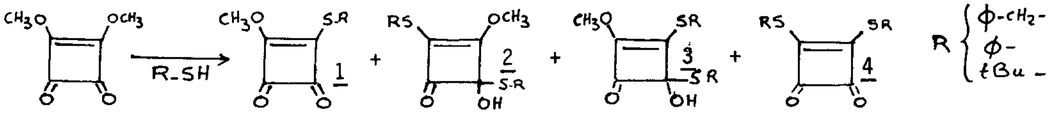
E = CO_2CH_3

Tetrahedron Lett. 28,1765 (1987)

On the reactivity of dimethyl sqaarate versus thiols.

J-L.Kraus.Laboratoire de chimie biomoléculaire.
Faculté des Sciences de Luminy.13288.Marseille Cedex 9.France.

Thiols reacted with dimethyl squarate according to a 1,4 or 1,2 addition process leading to new 3-cyclobutenone derivatives of general formula 1,2,3 and 4 , depending on the chemical structure of the thiol.

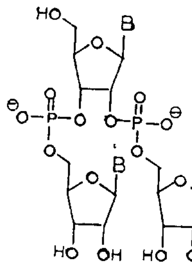


Tetrahedron Lett. 28, 1769 (1987)

A New Method for the Synthesis of Branched Ribonucleotides

J.-L. FOURREY, J. VARENNE, C. FONTAINE, E. GUITTET and YAN Z.W.
Institut de Chimie des Substances Naturelles C.N.R.S.
91190 - Gif sur Yvette, France

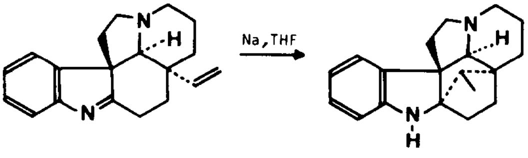
A synthesis of branched ribonucleotides is described



Tetrahedron Lett. 28, 1773 (1987)

A BIOMIMETIC ENTRY IN THE HEXACYCLIC TUBOXENIN RING SYSTEM METHYLENE-INDOLINES, INDOLENINES AND INDOLENINIUMS, XXII

Georgette HUGEL and Jean LEVY
Laboratoire de Transformations et Synthèse,
UA/CNRS N°492, Faculté de Pharmacie
51 rue Cognacq-Jay, 51096 REIMS CEDEX, FRANCE
Janine COSSY
Laboratoire de Photochimie, UA/CNRS N°459
Faculté des Sciences, Moulin de la Housse
51062 REIMS CEDEX, FRANCE



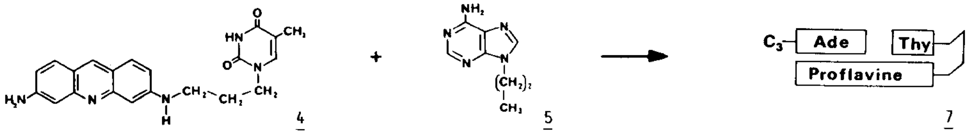
TUBOXENINE

Tetrahedron Lett. 28, 1777 (1987)

ADENINE-THYMINE PAIRING IN WATER INDUCED BY AN INTERCALATING AGENT

Jean F. CONSTANT, Jacques FAHY and Jean LHOMME*, Université de LILLE I
59655 VILLENEUVE D'ASCQ Cédex, France.
J. Edgar ANDERSON, University College, LONDON, WC1F 6BT, UK.

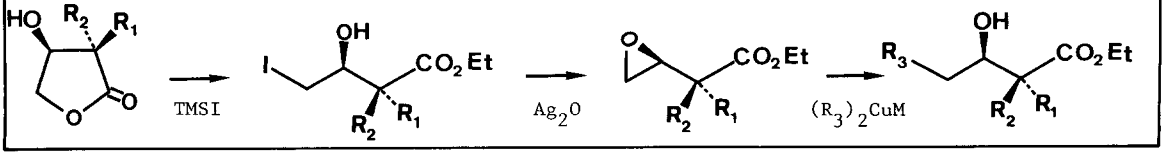
In model compound 4, thymine folds face-to-face with proflavine in water, and induces complementary intermolecular complexation with the adenine derivative 5 (as in 7).



Tetrahedron Lett. 28, 1781 (1987)

PREPARATION OF NEW CHIRAL SYNTHONS: THE β,γ-EPOXYESTERS; APPLICATION TO THE SYNTHESIS OF ENANTIOMERICALLY PURE β-HYDROXYESTERS

Marc Larchevêque and Serge Henrot
ER 12 du CNRS, Laboratoire de Chimie, Ecole Normale Supérieure
24 rue Lhomond, 75231, Paris Cedex 05, France.

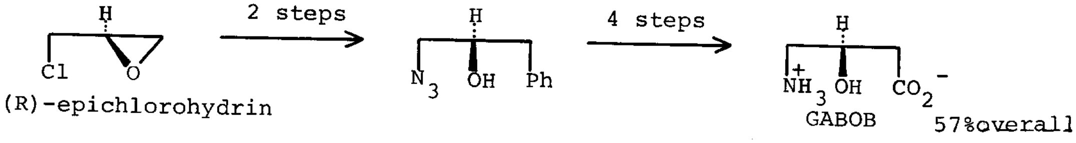


Tetrahedron Lett. 28,1783(1987)

PRACTICAL SYNTHESIS OF (R)-γ-AMINO-β-HYDROXYBUTANOIC ACID (GABOB) FROM (R)-EPICHLOROHYDRIN

Seiichi Takano,* Masashi Yanase, Yoshinori Sekiguchi, and Kunio Ogasawara
Pharmaceutical Institute, Tohoku University, Aobayama, Sendai 980, Japan

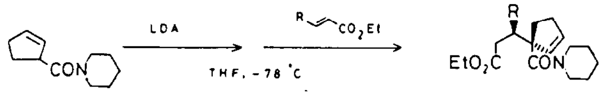
Efficient Conversion of (R)-epichlorohydrin into (R)-GABOB.

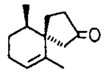


Tetrahedron Lett. 28,1785(1987)

A STEREOSELECTIVE CONSTRUCTION OF THE ADJACENT TERTIARY AND QUATERNARY CARBONS BY THE MICHAEL ADDITION

Masahiko Yamaguchi,* Michiyuki Hamada, Hisataka Nakashima, and Toru Minami
Department of Industrial Chemistry, Kyushu Institute of Technology

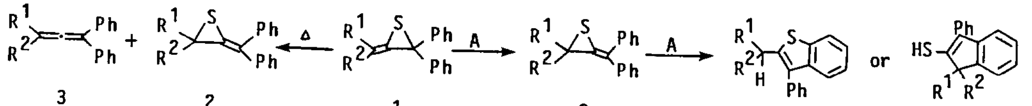




Tetrahedron Lett. 28,1787(1987)

ISOMERIZATION AND DESULFURIZATION OF ALLENE EPISULFIDES

Wataru Ando*, Akihiko Itami, Toshiya Furuhata and Norihiro Tokitoh
Department of Chemistry, University of Tsukuba, Sakura, Ibaraki 305, Japan



3　2　1　2　4a　4b

$R^1=R^2=$ t-Bu

A = acid catalysts

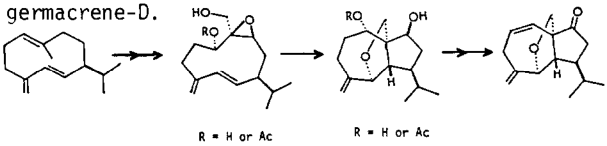
a: $R^1=R^2=$t-Bu b: $R^1=$t-Bu,$R^2=$H

Tetrahedron Lett. 28,1791(1987)

BIOMIMETIC REACTION OF GERMACRENE-D EPOXIDES IN CONNECTION WITH PERIPLANONE A

Yoshikazu Shizuri, Shu Yamaguchi, Yukimasa Terada, and Shosuke Yamamura*
Department of Chemistry, Faculty of Science and Technology, Keio University, Hiyoshi, Yokohama, Japan

Synthesis of tricyclic compound from germacrene-D.

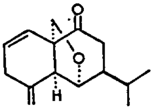


Tetrahedron Lett. 28, 1795 (1987)

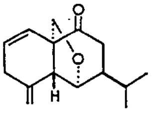
WHAT IS THE CORRECT STRUCTURE FOR PERIPLANONE A

Yoshikazu Shizuri, Shu Yamaguchi, Yukimasa Terada, and Shosuke Yamamura*
Department of Chemistry, Faculty of Science and Technology, Keio University, Hiyoshi, Yokohama, Japan

Stereostructures of periplanone A (I) and its rearrangement product (III).



I



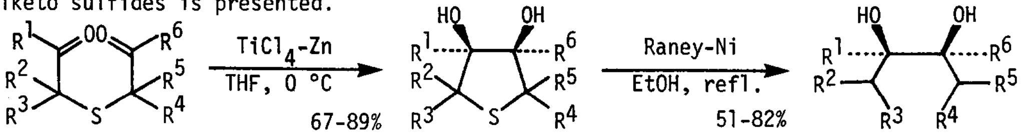
III

Tetrahedron Lett. 28, 1799 (1987)

STEREOSELECTIVE SYNTHESIS OF erythro- AND threo-1,2-DIOLS FROM DIKETO SULFIDES VIA cis-3,4-DIHYDROXYTHIOLANES

Juzo Nakayama,* Shoji Yamaoka, and Masamatsu Hoshino
Department of Chemistry, Faculty of Science, Saitama University,
Urawa, Saitama 338, Japan

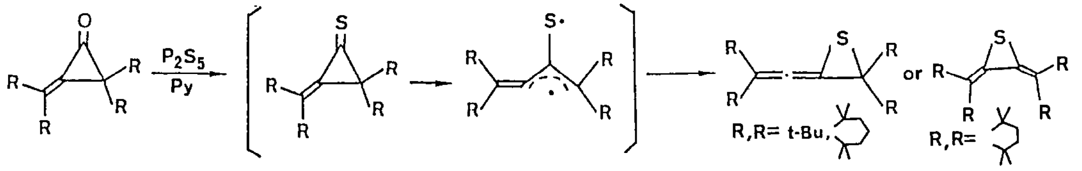
A new stereoselective synthesis of erythro- and threo-1,2-diols from easily accessible diketo sulfides is presented.



Tetrahedron Lett. 28, 1803 (1987)

A NOVEL FORMATION OF 1,2,3-BUTATRIENE EPISULFIDES BY THIONATION OF METHYLENECYCLOPROPANONES

Wataru Ando*, Hiroshi Hayakawa, and Norihiro Tokitoh
Department of Chemistry, University of Tsukuba, Sakura-mura, Niihari-gun, Ibaraki 305, Japan

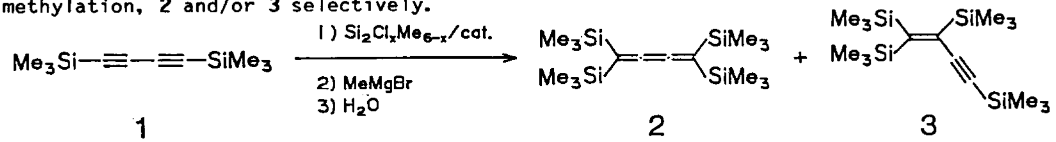


Tetrahedron Lett. 28, 1807 (1987)

PALLADIUM CATALYZED DOUBLE SILYLATION OF BIS(TRIMETHYLSILYL)BUTADIYNE BY MEANS OF DISILANES

*Tetsuo Kusumoto and Tamejiro Hiyama**
Sagami Chemical Research Center, 4-4-1 Nishiohnuma, Sagamihara, Kanagawa 229, Japan

Reaction of 1 with $Si_2Cl_xMe_{6-x}$ in the presence of a palladium catalyst gives, after methylation, 2 and/or 3 selectively.



1

2

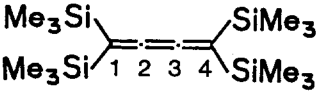
3

Tetrahedron Lett.28,1811(1987)

REDUCTION AND OXIDATION OF CARBON-CARBON DOUBLE BONDS OF 1,1,4,4-TETRAKIS(TRIMETHYLSILYL)BUTATRIENES

*Tetsuo Kusumoto and Tamejiro Hiyama**
Sagami Chemical Research Center, 4-4-1 Nishiohnuma,
Sagamihara, Kanagawa 229, Japan

Hydrogenation, hydrosilylation and oxidation of the title butatriene was found to take place at C(1)=C(2) double bond exclusively.

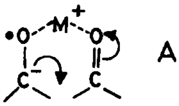


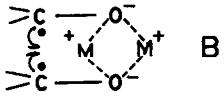
Tetrahedron Lett.28,1813(1987)

ENANTIOSELECTIVITY IN CAMPHOR PINACOLISATION

Suresh K. Pradhan and Krishanlal R. Thakker
University Department of Chemical Technology, Matunga Road, Bombay-400 019, and
Andrew T. McPhail, Department of Chemistry,Duke University,Durham,North Carolina 27706,U.S.A.

A single pinacol obtained in Li/THF reaction of (+) camphor has been shown by X-ray analysis to have an **endo:endo** C-C linkage. (±) can theoretically give four racemates and two **meso** pinacols. Using Li/THF the **endo:endo** racemate is the only pinacol produced indicating that reaction is confined to (+) with (+) and (-) with (-) to the exclusion of (+) with (-).Pinacolisation using Li/NH_3 is also **enantioselective.** But here **exo:endo** or **endo:endo** product is obtained dependent on the concentration of Li.Tentative mechanisms A and B are proposed for the former and latter respectively.



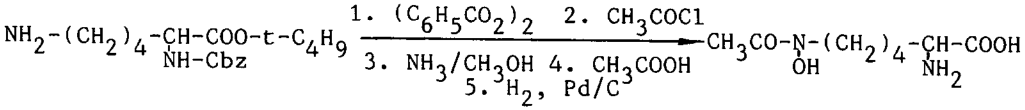


Tetrahedron Lett.28,1817(1987)

OXIDATION OF AMINO ACID. PART V.

A NOVEL SYNTHESIS OF N^6-ACETYL-N^6-HYDROXYLYSINE FROM LYSINE.

Maria J. Milewska, A. Chimiak
Dept. of Organic Chemistry, Technical University, 80-952 Gdańsk, POLAND



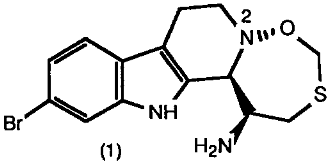
$$NH_2-(CH_2)_4-\underset{NH-Cbz}{CH}-COO-t-C_4H_9 \xrightarrow[\substack{3.\ NH_3/CH_3OH\ \ 4.\ CH_3COOH \\ 5.\ H_2,\ Pd/C}]{1.\ (C_6H_5CO_2)_2\ \ 2.\ CH_3COCl} CH_3CO-\underset{OH}{N}-(CH_2)_4-\underset{NH_2}{CH}-COOH$$

Tetrahedron Lett.28,1825(1987)

THE STEREOCHEMISTRY OF EUDISTOMINS C,K,E,F AND L

John W Blunt[1], Robin J Lake[1], Murray H G Munro[1] and Tatsushi Toyokuni[2]
[1]Department of Chemistry, University of Canterbury, Christchurch, New Zealand
[2]School of Chemical Sciences, University of Illinois, Urbana, IL, USA

Nmr studies on Eudistomin K (1) and some of its derivatives have shown that the stereochemistry of the N-O bond is 2α, not 2β as previously suggested.



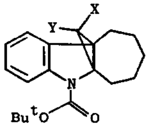
(1)

Tetrahedron Lett. 28,1827(1987)

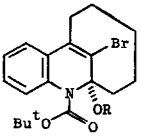
RING-EXPANSION OF A DIHALOGENOCARBENE ADDUCT OF A CYCLOHEPTENE DERIVATIVE AND THE CORRESPONDING RETRO-REACTION

Dashyant Dhanak, Reiko Kuroda, and Colin B. Reese*
Department of Chemistry, King's College London, Strand, London WC2R 2LS, England

Compound (9a) is obtained when (8a) is treated with silver(I) perchlorate in the presence of 2,4,6-collidine in tetrahydrofuran solution; when (9a) is treated with excesses both of methanesulphonyl chloride and triethylamine in dichloromethane solution, (8c) is obtained in 41% yield.



(8) a; X = Y = Br
c; X = Br, Y = Cl



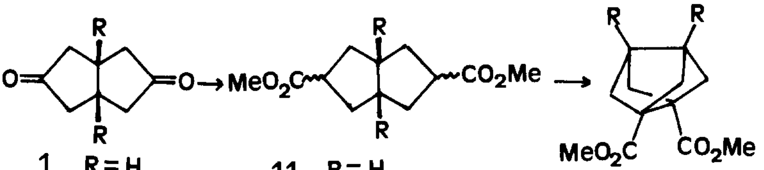
(9) a; R = H

Tetrahedron Lett. 28,1831(1987)

A NEW SYNTHETIC ENTRY INTO THE TRICYCLO[3.3.0.$0^{3,7}$]OCTANE SKELETON

P. Camps*, C. Iglesias, R. Lozano, M.A. Miranda, and M.J. Rodríguez
Departamento Química Orgánica, Universitat València, Av. Blasco Ibañez 13, 46010-Valencia, Spain

A short synthesis of the tricyclic diesters 13 and 14, from diketones 1 and 2, respectively, is described. The key-step implies the iodine oxidation of the bis-lithium-enolate derivatives from diesters 11 and 12.



1 R=H
2 R=Me

11 R=H
12 R=Me

13 R=H
14 R=Me
