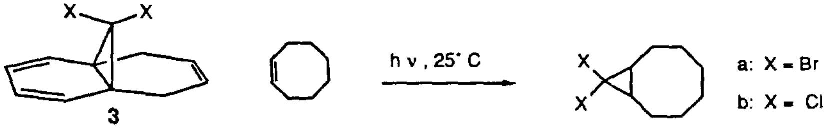
GRAPHICAL ABSTRACTS

Tetrahedron Lett.27,5907(1986)

A PHOTOCHEMICAL SOURCE OF DIBROMO- AND DICHLOROCARBENE

J. F. Hartwig and M. Jones, Jr., Department of Chemistry,
Princeton University, Princeton, NJ 08544 USA
R. A. Moss and W. Ławrynowicz, Department of Chemistry, Rutgers University, New Brunswick, NJ

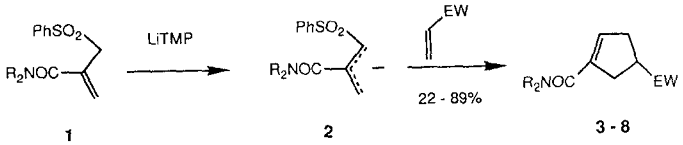
Photolysis of triene 3a or 3b yields dibromo- and dichlorocarbene which can be transferred to olefins in good yield.



Tetrahedron Lett.27,5911(1986)

AN ANIONIC 3+2 CYCLIZATION-ELIMINATION ROUTE TO CYCLOPENTENES

Peter Beak* and Douglas A. Burg
Department of Chemistry, University of Illinois, Urbana, IL 61801-3731 USA

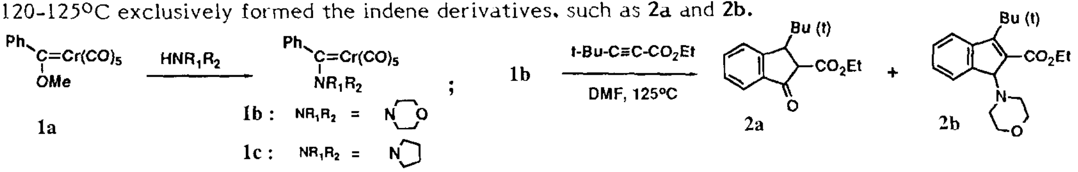


Tetrahedron Lett.27,5915(1986)

SYNTHESIS OF INDENES FROM ALKYNES AND PHENYL AMINO CHROMIUM CARBENE COMPLEXES.

A. Yamashita
Research Laboratories, The Upjohn Company, Kalamazoo, Michigan 49001

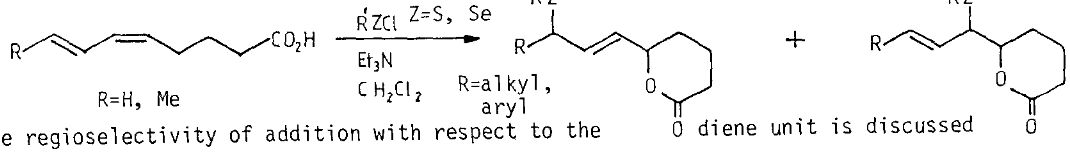
Reaction of phenyl morpholino or pyrrolidino chromium carbene complexes (1b, 1c) with alkynes in DMF at 120-125°C exclusively formed the indene derivatives, such as 2a and 2b.



Tetrahedron Lett.27,5919(1986)

SELENO- AND SULPHENO-LACTONISATION REACTIONS OF 5,7-DIENOIC ACIDS

M.R. Huckstep and R.J.K. Taylor, School of Chemical Sciences, University of East Anglia, Norwich, NR4 7TJ. M.P.L. Caton, May & Baker Ltd., Dagenham, Essex, RM10 7XS.



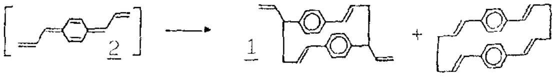
The regioselectivity of addition with respect to the diene unit is discussed

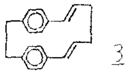
Tetrahedron Lett. 27,5923(1986)

4,14-DIVINYL-(E,E)-[4.4]PARACYCLOPHANE-1,11-DIENE. AN UNUSUAL PRODUCT FROM A 1,10-HOFMANN ELIMINATION

Daniel T. Glatzhofer and Daniel T. Longone
Department of Chemistry, The University of Michigan, Ann Arbor, MI 48109 USA

Isolation and characterization of title compound 1 from the cyclodimerization of quinodimethane species 2. The UV spectrum of 1 is compared in terms of electronic and structural features with those of compounds 3 and 4.

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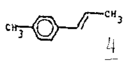


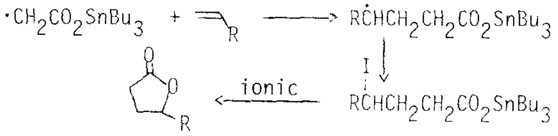
4

Tetrahedron Lett. 27,5927(1986)

MECHANISM OF THE ADDITION OF TRIBUTYLTIN IODOACETATE TO ALKENES

M. Degueil-Castaing[a], B. De Jeso[a], G. A. Kraus[b]*, K. Landgrebe[b], B. Maillard[a]*
[a]Laboratoire de Chimie Organique du Silicium et de l'Etain, associe au CNRS, UA 35, Universite de Bordeaus I, F-33405, Talence Cedex, FRANCE
[b]Department of Chemistry, Iowa State University, Ames, Iowa, 50011, USA

The mechanism is a two step process: homolytic addition to form a gamma-iodo stannyl ester followed a fast ionic cyclization.

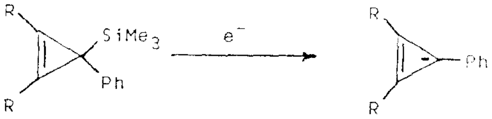


Tetrahedron Lett. 27,5931(1986)

TRIPHENYLCYCLOPROPENIDE ANION IN THE GAS PHASE

John E. Bartmess,* John Kester, Weston T. Borden*,
and Hans Günther Köser; Departments of Chemistry, Indiana University,
Bloomington IN 47405; and Univ. of Washington, Seattle WA 98195

The gas phase acidity of triphenylcyclopropene is measured by ICR spectrometry. Dimethylphenylcyclopropenide anion rearranges under acid catalysis.



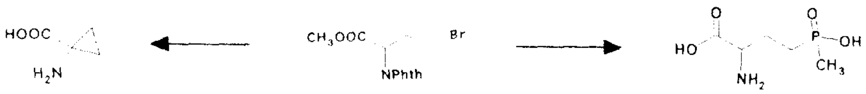
R = Ph, Me

Tetrahedron Lett. 27,5935(1986)

FACILE SYNTHESIS OF D,L-PHOSPHINOTHRICIN FROM METHYL 4-BROMO-2-PHTHALIMIDOBUTYRATE

E. W. Logusch
Monsanto Agricultural Company, 800 N. Lindbergh Blvd., St. Louis, MO 63167 USA

D,L-phosphinothricin, ACC and related compounds are readily prepared from title bromide 6.



ACC, 12

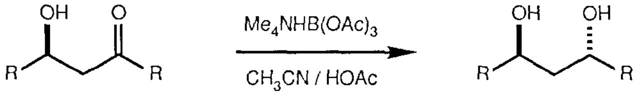
6

PHOSPHINOTHRICIN, 1

Tetrahedron Lett. 27, 5939 (1986)

DIRECTED REDUCTIONS OF 3-HYDROXY KETONES EMPLOYING ME$_4$NHB(OAC)$_4$.

David A. Evans,* and Kevin T. Chapman, Department of Chemistry, Harvard University, Cambridge, Mass. 02138 USA



Diastereoselection 20-50 : 1

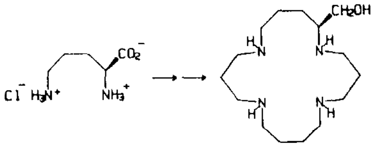
The selective reduction of a range of 3-hydroxy ketones with triacetoxyborohydride is described. In all cases the principal product is the anti 1,3-diol. Mechanistic observations support the contention that the reduction is directed via the hydroxyl group.

Tetrahedron Lett. 27, 5943 (1986)

SYNTHESIS OF AN OPTICALLY ACTIVE SPERMINE MACROCYCLE, (S)-6-(HYDROXYMETHYL)-1,5,10,14-TETRAAZACYCLOOCTADECANE, AND ITS COMPLEXATION TO ATP

James F. Marecek and Cynthia J. Burrows*
Department of Chemistry, State University of New York at Stony Brook, Stony Brook, NY 11794

The title compound was prepared in high yield from L-ornithine via a Richman-Atkins type macrocyclization. NMR binding studies indicate formation of a 1:1 complex with ATP.

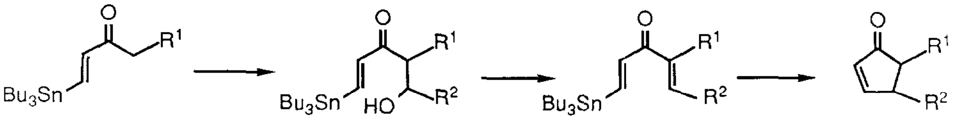


Tetrahedron Lett. 27, 5947 (1986)

TIN-DIRECTED NAZAROV CYCLIZATIONS: A VERSATILE ROUTE TO CYCLOPENTENOIDS

Michael R. Peel and Carl R. Johnson*
Department Of Chemistry, Wayne State University, Detroit, MI 48202 USA

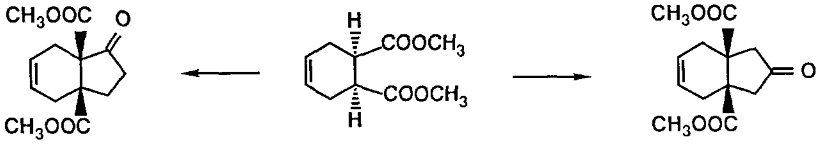
The preparation of 1-(tri-butylstannyl)-1,4-pentadien-3-ones and their efficient Nazarov cyclization to cyclopentenones, including a PGA analogue, are described.



Tetrahedron Lett. 27, 5951 (1986)

USEFUL NEW ANNULATION REACTIONS OF VICINAL DICARBOXYLIC ESTERS

E. J. Corey, Wei-guo Su, and Ioannis N. Houpis
Department of Chemistry, Harvard University, Cambridge, Massachusetts, 02138

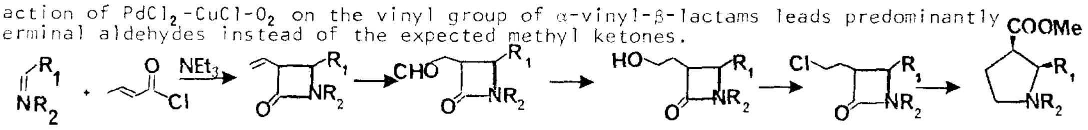


Tetrahedron Lett.27,5955(1986)

A NOVEL CHEMICAL TRANSFORMATION OF 3-VINYL-4-SUBSTITUTED-2-AZETIDINONES

Ajay K. Bose, Lalitha Krishnan, Dilip R. Wagle and
Maghar S. Manhas
Department of Chemistry and Chemical Engineering, Stevens Institute of Technology,Hoboken,N.J. 07030, USA.

The action of $PdCl_2$-CuCl-O_2 on the vinyl group of α-vinyl-β-lactams leads predominantly to terminal aldehydes instead of the expected methyl ketones.

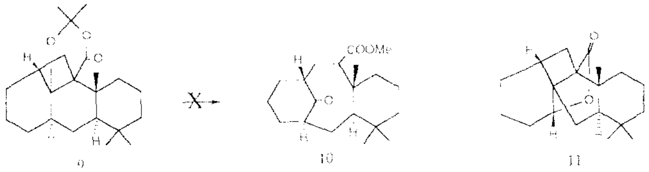


Tetrahedron Lett.27,5959(1986)

STUDIES DIRECTED TOWARDS THE SYNTHESIS OF TAXANE DITERPENES: A REMARKABLE REARRANGEMENT

Jeffrey D. Winkler*, John P. Hey, and Stephen D. Darling
Department of Chemistry, The University of Chicago, Chicago, Illinois 60637

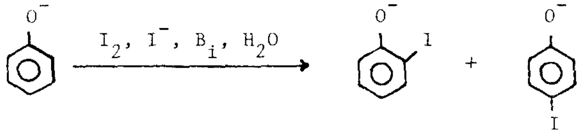
Fragmentation of the intramolecular dioxolenone photoadduct 9 leads not to 10, the desired taxane skeleton, but instead to 11.



Tetrahedron Lett.27,5963(1986)

ON THE PRODUCT DISTRIBUTION IN THE IODINATION OF PHENOL.

Rita H. de Rossi* and Alicia V. Veglia
Dpto. de Química Orgánica, Facultad C. Químicas, U.N.C., Instituto de Investigaciones en Fisicoquímica de Córdoba (INFIQC), Suc. 16, C. C.61, 5016-CORDOBA/ARGENTINA.



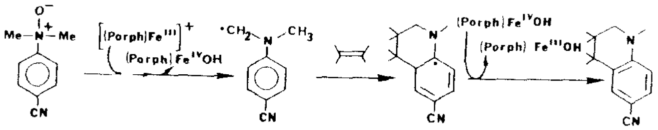
The o/p ratio increases at low pH and low buffer concentration.

Tetrahedron Lett.27,5967(1986)

METALLOPORPHYRIN-MEDIATED RADICAL CYCLOADDITIONS OF p-CYANO-N,N-DIMETHYLANILINE

C. Michael Dicken, Fu-Lung Lu and Thomas C. Bruice*
Department of Chemistry, University of California, Santa Barbara, CA 93106 USA

Iron(III)C_2cap-porphyrin serves as a catalyst for the synthesis of disubstituted N-methyltetrahydroquinolines from alkenes and p-cyano-N,N-dimethylaniline-N-oxide.

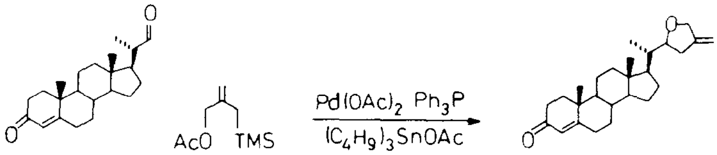


Tetrahedron Lett. 27,5971(1986)

A TWO CATALYST SYSTEM FOR CYCLOADDITION OF A TRIMETHYLENEMETHANE FRAGMENT TO ALDEHYDES

Barry M. Trost* and Steven A. King
Department of Chemistry, University of Wisconsin, Madison, WI 53706 **USA**

A convenient general approach to methylenetetrahydrofurans using palladium(0) and trialkyltin acetate as co-catalysts.

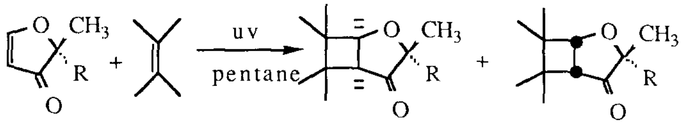


Tetrahedron Lett. 27,5975(1986)

FACE SELECTIVITY IN THE [2+2] PHOTOANNELATION OF CHIRAL 3(2H)-FURANONES WITH ALKENES

S. W. Baldwin* and T J. Mazzuckelli
Department of Chemistry, Duke University, Durham, NC 27706

The photochemical addition of a series of 3(2H)-furanones (R=CH$_3$, C$_2$H$_5$, iC$_3$H$_7$, tC$_4$H$_9$) to several alkenes show face selectivities as high as 25:1 - 50:1.

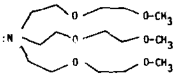


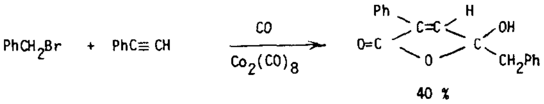
Tetrahedron Lett. 27,5979(1986)

SOLID-LIQUID PHASE TRANSFER AND COBALT CATALYZED SYNTHESIS OF BUT-2-ENOLIDE

Henri Arzoumanian, Jean-François Petrignani
CNRS U.A. 126, Faculté Sciences Saint Jérôme
Université Aix-Marseille III, 13013 Marseille France

A synthesis using tris dioxa-3,6-heptylamine as the phase transfer catalyst (TDA).





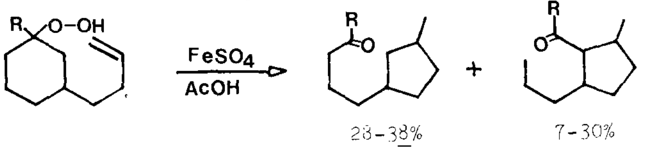
Conditions : Solid NaOH/TDA, toluene, 60° C, 1 Atm., 24 h

Tetrahedron Lett. 27,5981(1986)

FREE RADICAL CARBOCiCLIC RING RECONSTRUCTION

Živorad Čeković* and Radomir Saičić
Department of Chemistry, University of Belgrade, P.O. Box 550, 11001 Belgrade, Yugoslavia

Alkenyl radical generated by β-fragmentation of tertiary cyclohexyloxy radicals undergo to the intramolecular cyclization eith a new carbocyclic ring formation.



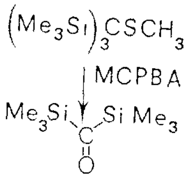
R = Me, Et, Ph

Tetrahedron Lett.27,5985(1986)

SILA PUMMERER REARRANGEMENT IN HIGHLY STERICALLY HINDERED ORGANOSILICON COMPOUNDS:A NEW ROUTE TO BIS(TRIMETHYLSILYL) KETONE

A.Ricci,A.Degl'Innocenti,M.Ancillotti,Centro di Studio sulla Chimica e la Struttura dei Composti Eterocicli c/o Dipartimento di Chimica Organica Ugo Schiff,Via G.Capponi 9,50100,FIRENZE,ITALY
G.Seconi,P.Dembech,Istituto CNR dei Composti del Carbonio Contenenti Eteroatomi ,40064,Ozzano-Emilia,BOLOGNA,ITALY.

The oxidation of the tris(trimethylsilyl)methylthio-methane,leads in very mild conditions to the formation of the bis(trimethylsily)ketone.



Tetrahedron Lett.27,5989(1986)

THE FORMATION OF CATION-RADICALS BY THE ACTION OF ClO_2 ON p-SUBSTITUTED STYRENES AND OTHER ALKENES

Ehud Choshen, Rudi Elits and Chaim Rav-Acha*
The Environmental Health Laboratory
The Hebrew University Medical School, POB 1172, Jerusalem 91010, Israel

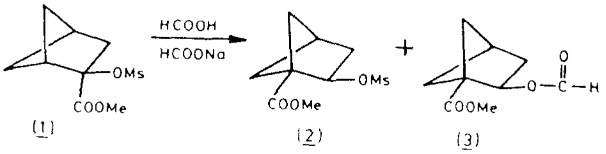
The Hammett plot for the reaction of ClO_2 with p-substituted styrenes, the solvent effect, and the order of reactivity of several alkenes towards ClO_2, indicate that the alkene-ClO_2 reaction proceeds via the formation of cation-radicals.

Tetrahedron Lett.27,5993(1986)

SOLVOLYTIC REARRANGEMENTS OF BICYCLO[2.1.1]HEX-2-YL MESYLATES

Ernest W. Della*, Gordon M. Elsey, and George Skouroumounis
School of Physical Sciences, Flinders University, Bedford Park, S.Australia.

Solvolysis of 2-carbomethoxybicyclo-[2.1.1]hex-2-yl mesylate in formic acid proceeds rapidly with C1-C5 alkyl migration to give a primary product in which the leaving group is retained.



(1) (2) (3)

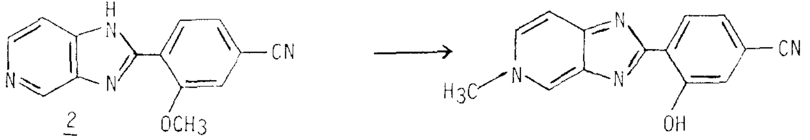
(2) : (3)
= 95 : 5

Tetrahedron Lett.27,5997(1986)

AN ADVENTITIOUS SYNTHESIS OF A 5-METHYLIMIDAZO[4,5-c] PYRIDINE DERIVATIVE

Paul Barraclough,[a] Ramachandran Iyer,[a] John C. Lindon[b] and Janet M. Williams[b].
[a] Department of Medicinal Chemistry, [b] Department of Physical Chemistry,
The Wellcome Research Laboratories, Langley Court,
Beckenham, Kent. BR3 3BS.

At 210° in the melt 2 undergoes an O→N methyl migration.



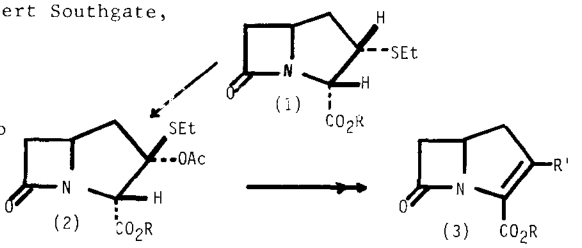
2

Tetrahedron Lett. 27,6001(1986)

SYNTHESIS OF THE 3-ACETOXY-7-OXO-1-AZABICYCLO[3.2.0] HEPT-2-ENE-2-CARBOXYLATE SYSTEM.

John H. Bateson,* Stephen C.M. Fell, and Robert Southgate,
Beecham Pharmaceuticals, Research Division,
Brockham Park, Betchworth, Surrey, RH3 7AJ

Olivanic Acid analogues were synthesised **via** iodobenzene diacetate acetoxylation of (1) to 3-acetoxy-3-ethylthio derivatives (2). Such systems proved to be precursors both of (3; R=H) and of (3; R=OAc).

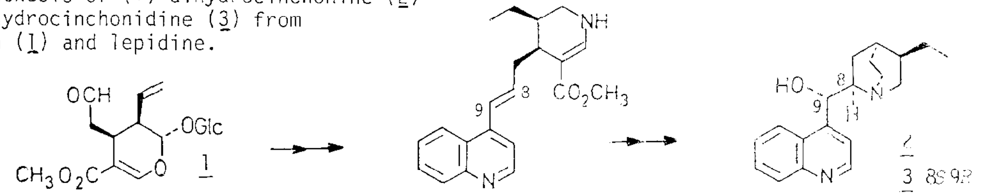


Tetrahedron Lett. 27,6005(1986)

STEREOSPECIFIC SYNTHESIS OF ERYTHRO CINCHONA ALKALOIDS FROM SECOLOGANIN

Richard T. Brown* and Dale Curless
Department of Chemistry, The University, Manchester M13 9PL, U.K.

A short synthesis of (+)-dihydrocinchonine (2) and (-)-dihydrocinchonidine (3) from secologanin (1) and lepidine.

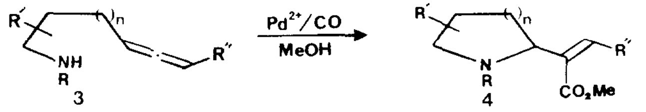


Tetrahedron Lett. 27,6009(1986)

PALLADIUM(II)-MEDIATED ROUTES TO FUNCTIONALISED HETEROCYCLES

David Lathbury, Peter Vernon and Timothy Gallagher*
School of Chemistry, Bath University, Bath, Avon, BA2 7AY

A series of allenic amines/amides 3 have been prepared and shown to undergo a palladium(II) -catalysed cyclisation, in the presence of carbon monoxide and methanol, to give α-(heterocyclic) acrylates 4.



Tetrahedron Lett. 27,6013(1986)

NEW DEVELOPMENTS IN PALLADIUM CATALYSED CROSS-COUPLING: THE COUPLING OF ALKYL IODIDES WITH ALKYL GRIGNARD REAGENTS

Paul L. Castle and David A. Widdowson*
Department of Chemistry, Imperial College, London, SW7 2AY

Alkyl iodide-alkyl magnesium halide cross-coupling was accomplished via the use of a dppf. $PdCl_2$/DIBAL catalyst.

$$R{-}I + R'{-}M \xrightarrow{cat.} R{-}R' \qquad R,R' = \text{primary, secondary alkyl}, \quad M = MgX$$