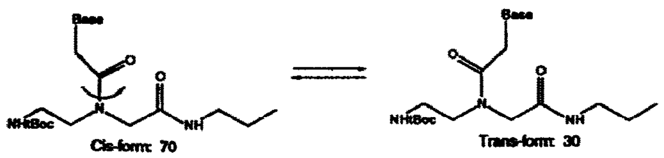
GRAPHICAL ABSTRACTS

Tetrahedron Letters, **1994**, *35*, 5105

Molecular Dynamics and NMR Studies of Single-Stranded PNAs.

Shiow-Meei Chen*, Venkatraman Mohan, John S. Kiely,
Michael C. Griffith and Richard H. Griffey, ISIS Pharmaceuticals, 2280 Faraday Avenue, Carlsbad, CA 92008 USA

Single-stranded mono-, di- and octa-residue PNAs have been synthesized and studied via molecular dynamics and NMR. Conformational rotamers around the tertiary-amide bond are found and will be discussed.

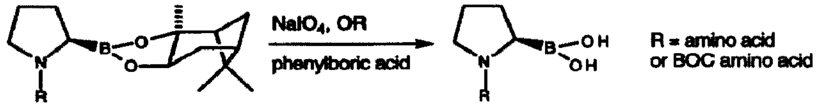


Tetrahedron Letters, **1994**, *35*, 5109

TWO EFFICIENT METHODS FOR THE CLEAVAGE OF PINANEDIOL BORONATE ESTERS YIELDING THE FREE BORONIC ACIDS.

Simon J. Coutts*, Julian Adams, Dale Krolikowski, Roger J. Snow, Department of Medicinal Chemistry, Boehringer Ingelheim Pharmaceuticals Inc., 900 Ridgebury Road, P.O. Box 368, Ridgefield CT 06877-0368 USA

Treatment of pinanediol boronate esters with either phenylboric acid or sodium metaperiodate smoothly affords the boronic acid.

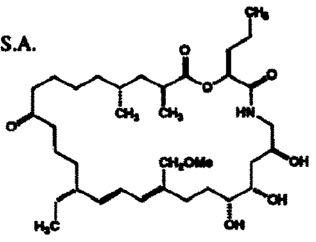


Tetrahedron Letters, **1994**, *35*, 5113

TOTAL SYNTHESIS OF MYXOVIRESCIN A_1

David R. Williams* and Jie Li
Department of Chemistry, Indiana University, Bloomington, Indiana 47405, U.S.A.

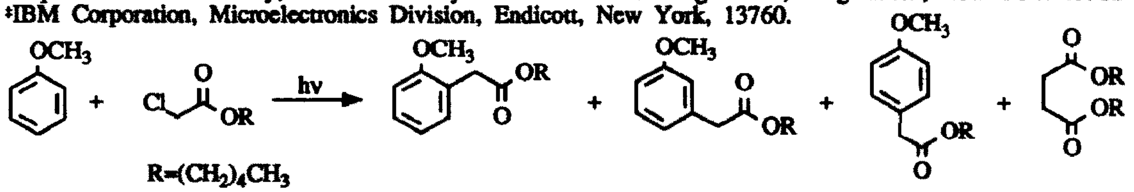
Total synthesis of Myxovirescin A_1, a twenty-eight membered antibiotic, is achieved via macrolactamization of its acyclic amino acid precursor.



Tetrahedron Letters, **1994**, *35*, 5117

EFFECT OF CYCLODEXTRIN ON INTERMOLECULAR PHOTOALKOXYCARBONYLMETHYLATION OF ANISOLE

Nageshwer Rao Bantu,*‡ René Kupfer,† and Udo H. Brinker.*†
†Department of Chemistry, State University of New York at Binghamton, Binghamton, New York 13902-6000.
‡IBM Corporation, Microelectronics Division, Endicott, New York, 13760.

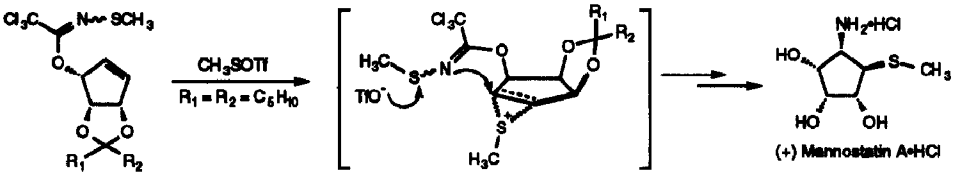


$R = (CH_2)_4CH_3$

Tetrahedron Letters, **1994**, *35*, 5121

Methanesulfenyl Triflate Promoted Iminosulfenylation of an Allylic Trichloroacetimidate. An Efficient and Stereospecific Total Synthesis of (+) Mannostatin A.

C. Li and P. L. Fuchs*
Department of Chemistry, Purdue University, West Lafayette, IN 47907



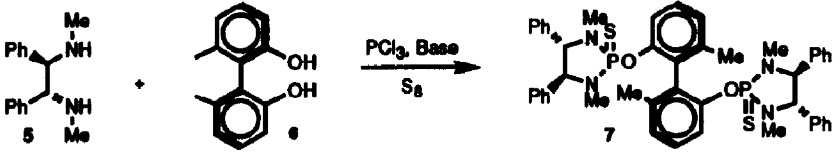
(+) Mannostatin A•HCl

Tetrahedron Letters, **1994**, *35*, 5125

Determination of Enantiomeric Purity of Hydroxy Biaryls Using ^1H and ^{31}P-NMR on Their Diazaphospholidine Derivatives

A. Alexakis,* J. C. Frutos, and P. Mangeney, Laboratoire de Chimie des Organo-Elements, CNRS UA 473
Universitie P. et M. Curie, 4 Place Jussieu, F75252 Paris, Cedex 05 France
A. I. Meyers* and Henk Moorlag, Department of Chemistry, Colorado State University, Fort Collins, Colorado 80523 USA

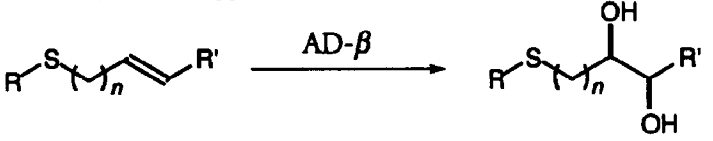
Diastereomeric ratios of chiral biaryls, 6, were readily assessed by a one-step conversion to 7 in a NMR tube.



Tetrahedron Letters, **1994**, *35*, 5129

ASYMMETRIC DIHYDROXYLATION OF OLEFINS CONTAINING SULFUR: CHEMOSELECTIVE OXIDATION OF C–C DOUBLE BONDS IN THE PRESENCE OF SULFIDES, 1,3-DITHIANES, AND DISULFIDES.

Patrick J. Walsh, Pui Tong Ho, S. Bruce King and K. Barry Sharpless,* Department of Chemistry, The Scripps Research Institute, La Jolla, CA 92037 USA



68-87%
61-98% ee

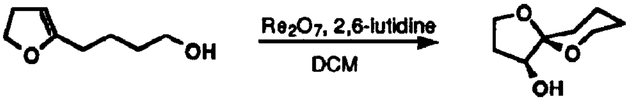
R = Ph, Bn
R' = H, Ph, Et, Pr
n = 1,2

Tetrahedron Letters, **1994**, *35*, 5133

THE OXIDATIVE SPIROCYCLIZATION OF 2-(ω-(OH)-ALKYL) CYCLIC ENOL ETHERS BY RHENIUM (VII)- OXIDE.

Rustum S. Boyce and Robert M. Kennedy
Department of Chemistry, Columbia University, New York, NY 10027

2-(ω-(OH)-alkyl)cyclic enol ethers react with rhenium(VII)-oxide to provide spiroketal alcohols resulting from an intramolecular *syn* oxidation of the enol ether double bond.

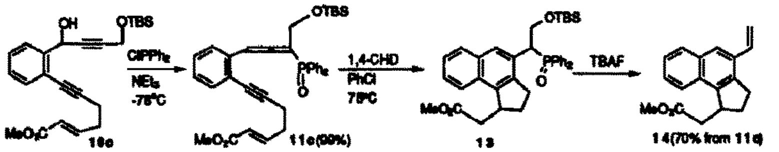


Tetrahedron Letters, **1994**, *35*, 5137

TANDEM ENEYNE ALLENE-RADICAL CYCLIZATION VIA [2,3] SIGMATROPIC SHIFTS

Janet Wisniewski Grissom* and Brian J. Slattery
Department of Chemistry, University of Utah,
Salt Lake City, Utah, 84112

Eneyne allenes generated from [2,3] sigmatropic shifts will undergo tandem eneyne allene-radical cyclizations.

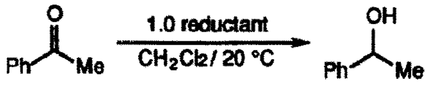


Tetrahedron Letters, **1994**, *35*, 5141

Metal Alkoxide Catalysis of Catecholborane and Borane Reductions. Mechanistic Studies.

Craig W. Lindsley and Marcello DiMare*
Department of Chemistry, University of California, Santa Barbara, CA 93106

Transition metal alkoxides like $Ti(OiPr)_4$ are found to catalyze catecholborane and $BH_3{\cdot}THF$ reductions of ketones. The Lewis basic character of the alkoxides appears responsible for the acceleration.



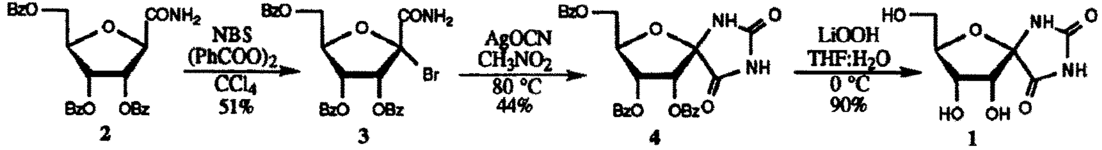
	reaction time	
reductant	uncatalyzed	0.1 $Ti(O\,i\,Pr)_4$
catecholborane	24 h	30 min
$BH_3{\cdot}THF$	30 min	<1 min

Tetrahedron Letters, **1994**, *35*, 5145

STEREOSELECTIVE BROMINATION OF β-RIBOFURANOSYL AMIDE. ENANTIOSELECTIVE SYNTHESIS OF (+)-HYDANTOCIDIN

Philip M. Harrington* and Michael E. Jung*, American Cyanamid Company, Agricultural Research Division, Princeton, New Jersey 08543 and Department of Chemistry and Biochemistry, University of California, Los Angeles, California 90024

The potent herbicidal natural product hydantocidin, **1**, is synthesizd by a stereoselective bromination of the amide **2** to give only the α-bromo β-amide **3** and subsequent spirocyclization with silver cyanate to form the hydantoin **4** which was converted to **1** in high yield.

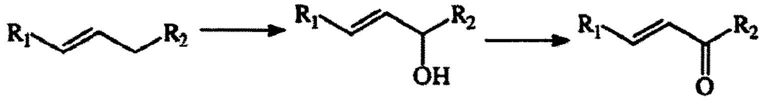


Tetrahedron Letters, **1994**, *35*, 5149

NOVEL ALLYLIC OXIDATION REAGENTS

Derek H. R. Barton* and Tie-Lin Wang
Department of Chemistry, Texas A&M University, College Station, Texas 77843

Pentafluorobenzeneseleninic acid and 2-(N-oxido)pyridineseleninic anhydride were prepared and used efficiently in the oxidation of alcohols and in the allylic oxidation of alkenes.

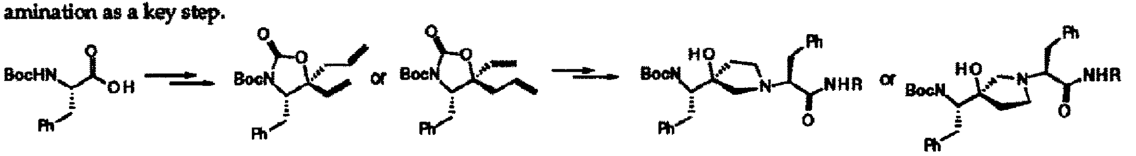


Tetrahedron Letters, **1994**, *35*, 5153

A CONVERGENT SYNTHESIS OF NOVEL CONFORMATIONALLY RESTRICTED HIV-1 PROTEASE INHIBITORS

B. Moon Kim*, James P. Guare, Colleen M. Hanifin, Deborah J. Arford-Bickerstaff, Joseph P. Vacca and Richard G. Ball†, Merck Research Laboratories, Department of Medicinal Chemistry, West Point, Pennsylvania 19486 and †Department of Biophysical Chemistry, P.O. Box 2000, Rahway, New Jersey 07065

Conformationally restricted HIV-1 protease inhibitors containing a 3-hydroxypyrrolidine or 3- or 4-hydroxypiperidine ring system were synthesized stereoselectively from an amino acid derivative through a convergent double reductive amination as a key step.

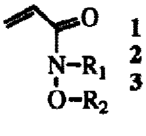


Tetrahedron Letters, **1994**, *35*, 5157

Convenient Method for the Preparation of Some Polyhydroxamic Acids: Michael Addition of Amines to Acrylohydroxamic Acid Derivatives

Nirmal M. Koshti,[a] Hollie K. Jacobs,[a] Patrick A. Martin,[a] Paul H. Smith,[b] and Aravamudan S. Gopalan*[a]
[a]Department of Chemistry and Biochemistry, New Mexico State University, Las Cruces, NM 88003-8001.
[b]CST-3, MS-C346, Los Alamos National Laboratory, Los Alamos, NM 87545.

Reagents 1, 2, and 3 are readily prepared and undergo Michael addition with amines to give the corresponding adducts in good yields. Removal of the protecting group from these adducts provides a convenient method for the preparation of primary and secondary hydroxamic acids.

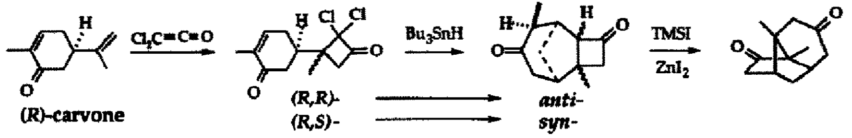


1 $R_1 = H$; $R_2 = CH_2Ph$
2 $R_1 = CH_3$; $R_2 = Si(t\text{-}Bu)(Ph)_2$
3 $R_1 = CH_3$; $R_2 = Si(t\text{-}Bu)(Me)_2$

Tetrahedron Letters, **1994**, *35*, 5161

STEREOSPECIFIC ANNULATION AND SEQUENTIAL RING-OPENING OF (*R*)-CARVONE: FORMATION OF A NOVEL TRICYCLIC DIONE

Wei Zhang and Paul Dowd,* Department of Chemistry, University of Pittsburgh, Pittsburgh, PA 15260, USA

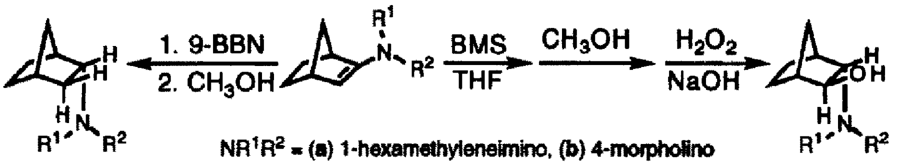


Free radical annulation of the dichlorocyclobutanones derived from (*R*)-carvone is stereospecific. Subsequent TMSI-ZnI_2 ring-opening leads to the formation of a new tricyclic dione.

Tetrahedron Letters, **1994**, *35*, 5165

Boranes in Synthesis. 4. Hydroboration of Enamines Derived from 2-Norbornanone. Synthesis of *endo*-3-(Dialkylamino)-*exo*-2-norbornanols and *endo*-2-(Dialkylamino)norbornanes.

Christian T. Goralski*§, Dennis L. Hasha‡, Lawrence W. Nicholson‡, and Bakthan Singaram*†, §*Pharmaceuticals Process Research and* ‡*Analytical Sciences, Core R&D, The Dow Chemical Company, Midland, Michigan 48674 and* †*Department of Chemistry and Biochemistry, University of California, Santa Cruz, Santa Cruz, CA 95064.*



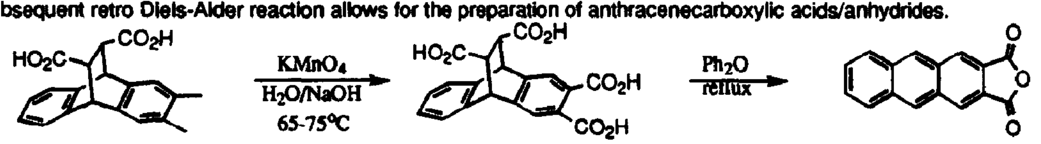
NR^1R^2 = (a) 1-hexamethyleneimino, (b) 4-morpholino

Tetrahedron Letters, **1994**, *35*, 5169

OXIDATION OF ALIPHATIC SIDE CHAINS IN ANTHRACENE DIELS-ALDER ADDUCTS.

Frankie A. McCormick and Donald J. Marquardt*, Department of Chemistry, Tulane University, New Orleans, LA 70118 USA.

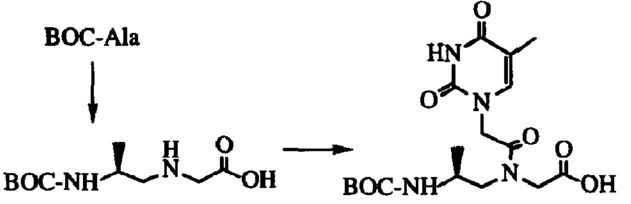
The oxidation of methyl and primary alkyl side chains in athracene/fumaric acid Diels-Alder adducts is described. Subsequent retro Diels-Alder reaction allows for the preparation of anthracenecarboxylic acids/anhydrides.



Tetrahedron Letters, **1994**, *35*, 5173

A CONVENIENT SYNTHESIS OF CHIRAL PEPTIDE NUCLEIC ACID (PNA) MONOMERS

Larisa Kosynkina, Wei Wang & T. Chyau Liang, Dept. Biochem. & Molecular Biol., U. Texas Med. School, Houston, TX 77225

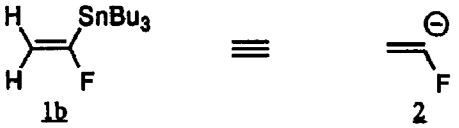


PNA monomers containing amino-acid side chains are prepared in a stereospecific manner starting with BOC-protected amino acids.

Tetrahedron Letters, **1994**, *35*, 5177

THE SYNTHESIS OF (1-FLUOROVINYL)TRIBUTYLTIN: A SYNTHETIC EQUIVALENT FOR THE 1-FLUOROETHENE ANION.

Donald P. Matthews, Philip P. Waid, Jeffrey S. Sabol* and James R. McCarthy*†
Marion Merrell Dow Research Institute, 2110 East Galbraith Rd., Cincinnati, OH 45215
†Neurocrine Biosciences, Inc., 3050 Science Park Rd., San Diego, CA 92121



1b **2**

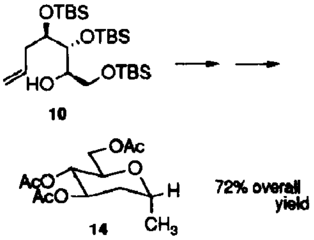
The synthesis of **1b** is reported and its utility as synthetic equivalent **2** through palladium-catalyzed couplings is demonstrated.

Tetrahedron Letters, **1994**, *35*, 5181

STEREOCHEMICAL CONTROL IN THE OXYMERCURATION OF 5-ALKEN-1-OLS

Marcus A. Tius* and Jakob Busch-Petersen
Department of Chemistry, University of Hawaii, 2545 The Mall,
Honolulu, Hawaii 96822, U.S.A.

The axial preference for the intramolecular oxymercuration of 5-alken-1-ols is observed in the absence of a heteroatom-mediated directing effect, and reflects a kinetic preference. The conformational preferences in the case of 2-deoxyglucose can be manipulated through the choice of alcohol protecting groups.



Tetrahedron Letters, **1994**, *35*, 5185

SmI_2 Catalyzed $S_{RN}1$ Reactions of Haloarenes with Acetophenone Enolate Ions in DMSO

Mónica A Nazareno, and Roberto A Rossi*
Departamento de Química Orgánica, Fac de Ciencias Químicas. Universidad Nacional de Córdoba 5016 Córdoba. Argentina

$$\mathrm{ArX} + {}^{-}\mathrm{CH_2COPh} \xrightarrow[\mathrm{DMSO}]{\mathrm{SmI_2}} \mathrm{ArCH_2COPh} \quad (50\text{-}95\ \%)$$

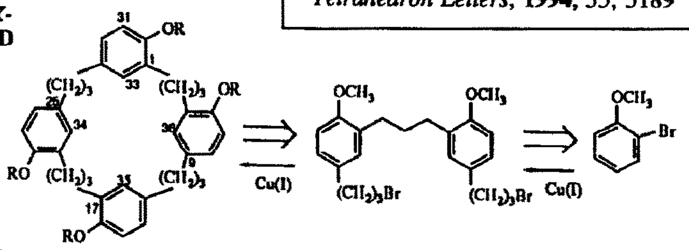
ArX = PhI. 2-Halopyridines (Cl, Br), 2-Chloroquinoline, 1-Halonaphthalenes (Cl, Br)

Tetrahedron Letters, **1994**, *35*, 5189

SYNTHESIS OF 6,16,22,32-TETRAHYDROXY-[3.3.3.3]METACYCLOPHANE WITH THE AID OF A NEW COPPER CATALYST.

Dennis H. Burns,* Jeffrey D. Miller,
Department of Chemistry, Wichita State University, Wichita, Kansas 67260

Metacyclophane **2** has been prepared in 4 steps starting from 2-bromoanisole with the aid of a new copper catalyst prepared by mixing CuBr-SMe2 with LiSPh and LiBr in THF.



2: **a** R=CH_3, **b** R=H

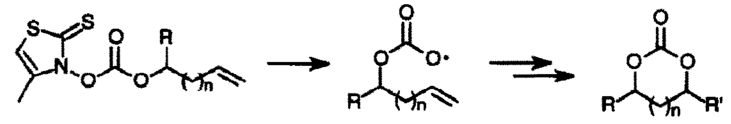
6

Tetrahedron Letters, **1994**, *35*, 5193

DIASTEREOSELECTIVE 1,2- AND 1,3-DIOL FORMATION VIA OXYGEN-CENTERED RADICAL CYCLIZATIONS.

Martin Newcomb* and Bhavani Dhanabalasingam, Department of Chemistry, Wayne State University, Detroit, MI, 48202-3489, USA

Allylic and homoallylic alkoxycarbonyloxyl radicals from TTOC precursors (shown) give 1,2- and 1,3-diol carbonates, respectively.

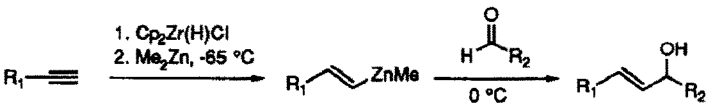


n = 0, 1

Tetrahedron Letters, **1994**, *35*, 5197

PREPARATION OF ALLYLIC ALCOHOLS BY ALKENE TRANSFER FROM ZIRCONIUM TO ZINC

Peter Wipf* and Wenjing Xu
Department of Chemistry
University of Pittsburgh
Pittsburgh, Pennsylvania 15260, U.S.A.



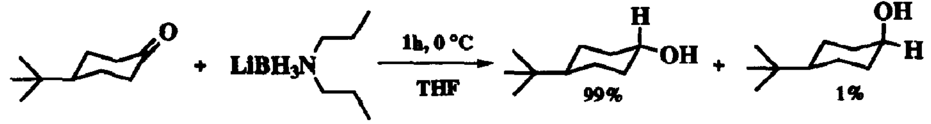
Alkenylzirconocenes are prepared by hydrozirconation of alkynes. Transmetalation to mixed alkenylalkylzinc reagents occurs rapidly upon addition of one equivalent of dialkylzinc. After addition of aromatic or aliphatic aldehydes, the corresponding allylic alcohols are isolated in 54-94% yield. Ester functionalities are tolerated and C,C-bond formation with α-substituted aldehydes occurs with *syn*-selectivity.

Tetrahedron Letters, **1994**, *35*, 5201

Aminoborohydrides. 5. Reduction of Alkylcyclohexanones to the Corresponding Alcohols with Unique Steric Selectivity

John Harrison, Joseph C. Fuller, Christian T. Goralski‡, Bakthan Singaram*, Department of Chemistry and Biochemistry, University of California Santa Cruz, Santa Cruz, CA 95064 and The Dow Chemical Company, Pharmaceuticals Process Research, Midland, MI 48674‡

Lithium aminoborohydrides selectively reduce 4-*tert*-butylcyclohexanone to the corresponding equatorial alcohol.

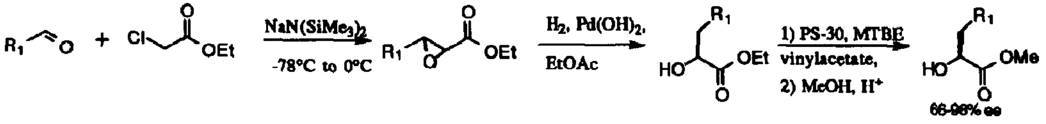


Tetrahedron Letters, **1994**, *35*, 5205

AN EFFICIENT SYNTHESIS OF ENANTIOMERICALLY ENRICHED ARYLLACTIC ESTERS.

Bruce A. Lefker,* William A. Hada, Patrick J. McGarry, Pfizer Central Research, Eastern Point Road, Groton, CT 06340

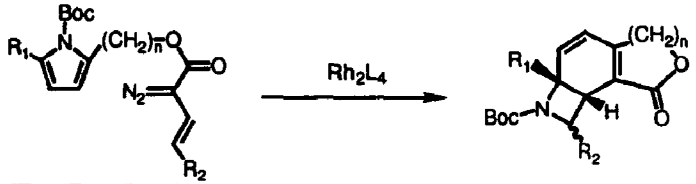
Darzens condensation of arylaldehydes with ethyl chloroacetate, followed by hydrogenation, and resolution with Lipase PS-30 led to enantiomerically enriched aryllactic esters.



Tetrahedron Letters, **1994**, *35*, 5209

RHODIUM(II) CATALYZED INTRAMOLECULAR REACTIONS BETWEEN VINYLDIAZOMETHANES AND PYRROLES. NOVEL SYNTHESIS OF FUSED 7-AZABICYCLO[4.2.0]OCTADIENES

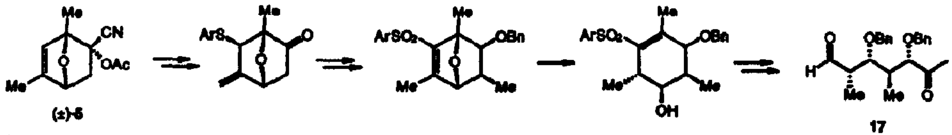
Huw M. L. Davies* and Julius J. Matasi, Department of Chemistry, Wake Forest University, Box 7486, Winston-Salem, North Carolina 27109



Tetrahedron Letters, **1994**, *35*, 5213

POLYPROPIONATE FRAGMENTS WITH FOUR CONTIGUOUS CHIRAL CENTRES FROM ACETONE

Maciej Bialecki and Pierre Vogel,* Section de Chimie de l'Université de Lausanne, rue de la Barre 2, CH 1005 Lausanne, Switzerland



(±)-5

17

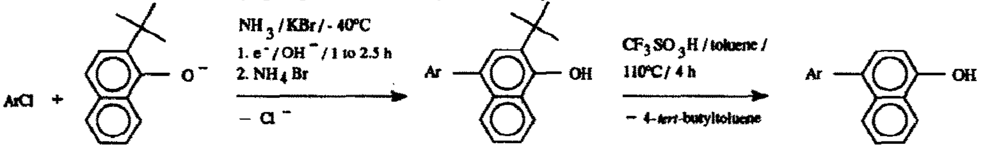
The Diels-Alder adduct 5 was converted into the polypropionate fragment 17 with high stereoselectivity.

Tetrahedron Letters, **1994**, *35*, 5217

Regioselective $S_{RN}1$ Reactions with 2-*tert*-Butyl-1-naphthol.

C. Combellas, C. Suba, A. Thiébault
Laboratoire de Chimie et Electrochimie des Matériaux Moléculaires
ESPCI, 10, rue Vauquelin, 75231 Paris Cedex 05, France

4-aryl-2-*tert*-butyl-1-naphthols are obtained regioselectively from 2-*tert*-butyl-1-napthoxide by an electro-induced $S_{RN}1$ reaction in liquid ammonia. The *tert*-butyl group is eliminated by a *trans*-alkylation reaction.

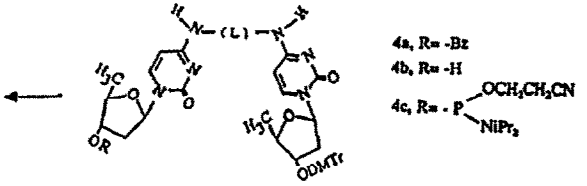


Tetrahedron Letters, **1994**, *35*, 5221

5'-5' TETHERED OLIGONUCLEOTIDES VIA NUCLEIC BASES: A POTENTIAL NEW SET OF COMPOUNDS FOR ALTERNATE STRAND TRIPLE-HELIX FORMATION.

Ulysse Asseline and Nguyen Thanh Thuong
Centre de Biophysique Moléculaire, 1 A Avenue de la Recherche Scientifique- 45071 Orléans Cedex 2.

Symmetrical and asymmetrical 5'-5' linked oligonucleotides ⟵

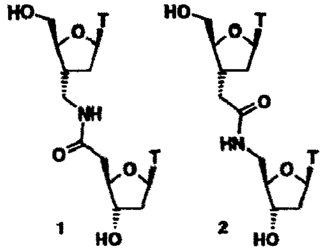


Tetrahedron Letters, **1994**, *35*, 5225

COMPARISON OF TWO AMIDES AS BACKBONE REPLACEMENT OF THE PHOSPHODIESTER LINKAGE IN OLIGODEOXYNUCLEOTIDES

Jacques Lebreton, Adrian Waldner, Valérie Fritsch, Romain M. Wolf, Alain De Mesmaeker*
Central Research Laboratories, Ciba-Geigy Ltd., CH-4002 Basel, Switzerland

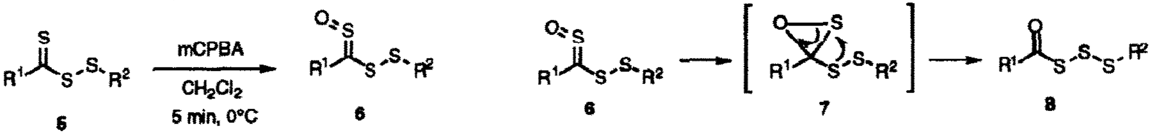
The two isomeric amide modifications 1 and 2 show similar effects on the melting temperature of RNA/DNA duplexes, when they replace the natural phosphodiester linkage in the DNA strand. The synthesis of the amide dimer 1 is presented.



Tetrahedron Letters, **1994**, *35*, 5229

SYNTHESIS OF SULFINES BY OXIDATION OF TRITHIOPERESTERS AND THEIR REARRANGEMENT INTO ACYLTRISULFIDES

Catherine Leriverend and Patrick Metzner*
Laboratoire des Composés Thio-organiques *(Associé au CNRS)*, ISMRA et Université, 6 boulevard du Maréchal Juin, 14050 Caen, France.



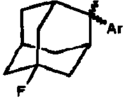
The chemoselective oxidation of the thiocarbonyl of trithioperesters 5 to a sulfine moiety was achieved with mCPBA to yield the first examples of trithioperester sulfines 6. At room temperature these compounds undergo a novel rearrangement into acyl trisulfides 8, via a postulated oxathiirane 7.

Tetrahedron Letters, **1994**, *35*, 5231

Solvolysis of (*E*)- and (*Z*)-2-Aryl-2-chloro-5-fluoroadamantanes. Evidence for a Competition between Sigma-participation and Pi-resonance

K.-T. Liu, L.-W. Chen and S.-M. Lee: Department of Chemistry, National Taiwan University, Taiepi, Taiwan 107; Graduate Institute of Chemistry National Central University, Chung-Li, Taiwan 320, Republic of China

Solvolysis of 1-3 indicated a competition between sigma-participation and pi-resonance in the transition state and cast a doubt about the efficiency of the tool of borohydride trapping.



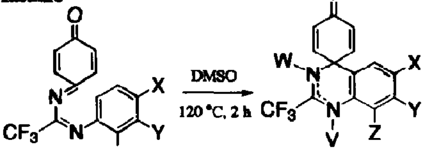
1. Ar = 4-$CF_3C_6H_4$
2. Ar = C_6H_5
3. Ar = 4-$CH_3C_6H_4$

Tetrahedron Letters, **1994**, *35*, 5235

THERMAL ELECTROCYCLIC SPIROCYCLIZATION OF *p*-BENZOQUINONE IMINES: A NOVEL SYNTHETIC ROUTE TO TRIFLUOROMETHYLATED SPIRODIAZACARBOCYCLES

Masafumi Kobayashi,[a] Kenji Uneyama,*[,a] Noritaka Hamada,[b] and Setsuo Kashino*[,b]
[a] Department of Applied Chemistry, Faculty of Engineering, Okayama University, Okayama, 700, Japan.
[b] Department of Chemistry, Faculty of Science, Okayama University, Okayama, 700, Japan.

Electrochemically prepared p-benzoquinone imine derivatives **2** were thermally cyclized to spirodienones **3** and **4** in good yields.



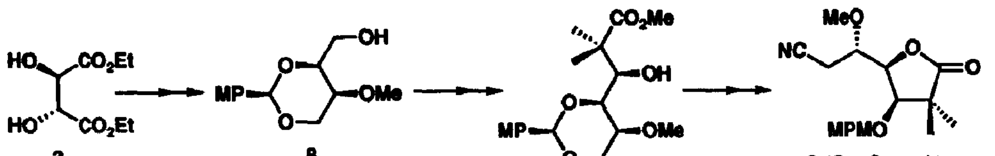
2

3 (W=H, V=lone pair electron)
4 (V=H, W=lone pair electron)

Tetrahedron Letters, **1994**, *35*, 5239

Synthesis of the C_{13}-C_{19} Unit in the Spiroketal Fragment of Calyculins

Ken Takebuchi, Yasumasa Hamada,* and Takayuki Shioiri*
Faculty of Pharmaceutical Sciences, Nagoya City University, Tanabe-dori, Mizuho-ku, Nagoya 467, JAPAN



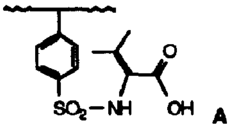
3 **8** **11** **2** (C_{13}-C_{19} unit)

Tetrahedron Letters, **1994**, *35*, 5243

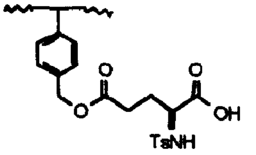
Polymer-supported Chiral Borane Promoters for the Asymmetric Aldol Reaction of Benzaldehyde with Silyl Ketene Acetal

Syun-ichi Kiyooka,* Yuichi Kido, and Yuichi Kaneko
Department of Chemistry, Kochi University, Akebono-cho, Kochi 780, Japan

Polymer-supported chiral boranes, formed from chiral polymers (**A** and **B**) having pendant α-amino acid moiety and BH_3·THF, effectively promoted the asymmetric aldol reaction in THF with up to 90% ee.



A

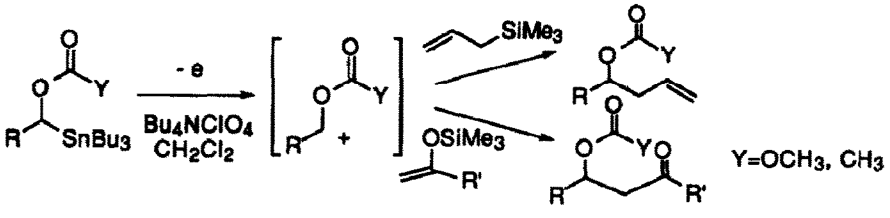


B

Tetrahedron Letters, **1994**, *35*, 5247

Anodic Oxidation of α-Alkoxycarbonyloxy and α-Acyloxy Organotin Compounds

Jun-ichi Yoshida,* Yuko Morita, Yuji Ishichi, and Sachihiko Isoe* Department of Material Science, Faculty of Science, Osaka City University, Sugimoto 3-3-138, Sumiyoshi, Osaka 558, Japan



Tetrahedron Letters, **1994**, *35*, 5251

A NOVEL PHOTOCHEMICAL REACTION OF [3]DENDRALENE DERIVATIVES

Keiji Okada,* Katsuji Maehara, and Masaji Oda*
Department of Chemistry, Faculty of Science, Osaka University, Toyonaka, Osaka 560, Japan

A new photochemical cyclization of [3]dendralene derivative is reported. The conceivable trimethylenemethane intermediate was trapped by molecular oxygen.

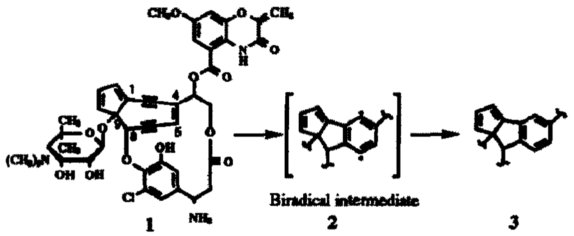
1a, 1b a: $R_1=R_2=Me$, b: $R_1,R_2=-(CH_2)_5-$ 2a, 2b

Tetrahedron Letters, **1994**, *35*, 5253

REMARKABLE KINETIC SOLVENT ISOTOPE EFFECT ON THE CYCLOAROMATIZATION OF C-1027 CHROMOPHORE, A 9-MEMBERED ENEDIYNE, AND THE THERMOCHEMISTRY.

Ken-ichiro Yoshida,* Yoshinori Minami and Toshio Otani, Tokushima Research Center, Taiho Pharmaceutical Co., Ltd., Tokushima 771-01, Japan; Yukio Tada, Hanno Research Center, Taiho Pharmaceutical Co., Ltd., Saitama 357, Japan; Masahiro Hirama, Department of Chemistry, Faculty of Science, Tohoku University, Sendai 980-77, Japan

The energetics of the cycloaromatization reaction of C-1027 chromophore (1), a highly strained enediyne, was investigated.

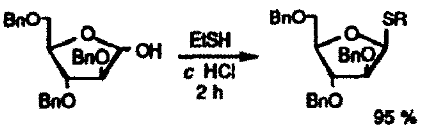


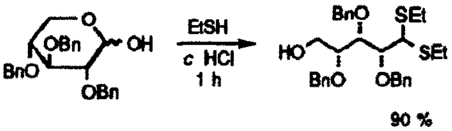
1 2 3

Tetrahedron Letters, **1994**, *35*, 5257

A Facile Synthesis of 1-Thiopentofuranoside

Sayoko Hiranuma, Tetsuya Kajimoto*, Chi-Huey Wong*
Frontier Research Program, The Institute of Physical and Chemical Research 2-1 Hirosawa, Wako-shi, 351-01, Japan
& Department of Chemistry, The Scripps Research Institute 10666 North Torrey Pines Road, La Jolla, CA 92037, USA.



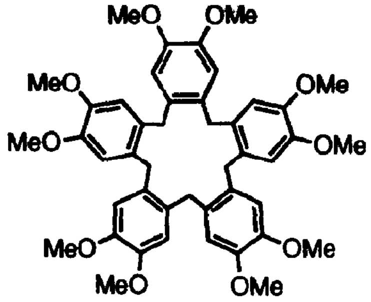


A FIRST SELECTIVE SYNTHESIS OF CYCLOPENTAVERATRYLENE

Tetrahedron Letters, **1994**, *35*, 5261

Hiroshi Hara,* Hiroshi Nakamura, Shin-ichi Watanabe, and Osamu Hoshino*
Faculty of Pharmaceutical Sciences, Science University of Tokyo,
Shinjuku-ku, Tokyo 162, Japan

A selective synthesis of the title compound starting from 3,4-bis (6-bromoveratryl)veratrole or 3,4-diveratrylveratrole is described.

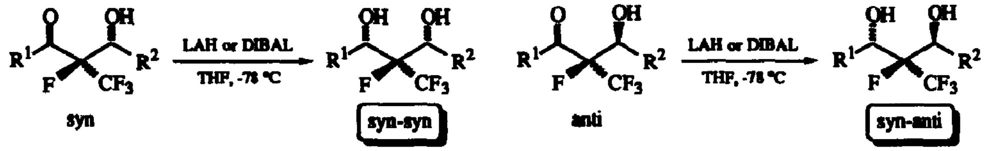


Asymmetric Reduction of 2-Fluoro-2-(trifluoromethyl)-3-hydroxy Ketones with Lithium Aluminum Hydride or Diisobutylaluminum Hydride. Highly Stereoselective Synthesis of 2-Fluoro-2-(trifluoromethyl)-1,3-diols

Tetrahedron Letters, **1994**, *35*, 5263

Takashi Ishihara,* Koichi Yamaguchi, Manabu Kuroboshi, and Kiitiro Utimoto
Department of Industrial Chemistry, Faculty of Engineering, Kyoto University, Sakyo-ku, Kyoto 606, Japan

The reduction of the titled hydroxy ketones with LAH or DIBAL proceeded with high 1,2-syn stereoselection, irrespective of the stereochemistry of the β carbon, giving the corresponding 1,3-diols in excellent yields.

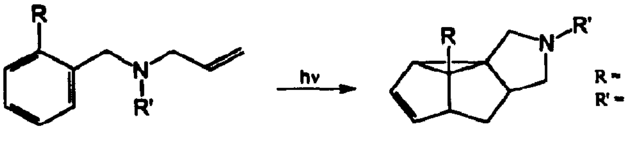


INTRAMOLECULAR *meta* PHOTOCYCLOADDITION OF 3-BENZYLAZAPROP-1-ENES.

Tetrahedron Letters, **1994**, *35*, 5267

David C. Blakemore and Andrew Gilbert, Chemistry Department,
The University of Reading, Whiteknights, P.O. Box 224, Reading, Berkshire, RG6 2AD, U.K.

N-Acetyl and N-carbomethoxy-3-benzylazaprop-1-enes undergo intramolecular *meta* photocycloaddition to give the linear azatriquinane.



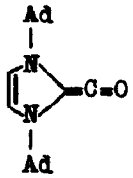
R = Me or OMe
R' = COMe or CO_2Me

SYNTHESIS OF 1,3-DI-1-ADAMANTYLIMIDAZOL-2-CARBONYL FROM 1,3-DI-1-ADAMANTYLIMIDAZOL-2-YLIDENE

Tetrahedron Letters, **1994**, *35*, 5271

Serge N. Lyashchuk and Yuri G. Skrypnik
Institute of Physical Organic and Coal Chemistry
of the Ukrainian Academy of Sciences, 340114,
Donetsk, Ukraine

Synthesis of a new stable sterically-hindered ketene, 1,3-di-1-adamantylimidazol-2-carbonyl, is described

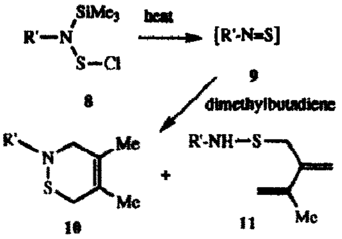


Tetrahedron Letters, **1994**, *35*, 5275

Alkylthionitroso and Arylthionitroso Compounds Generated from *N*-Trimethylsilyl-*N*-chlorothioalkylamine Precursors

Martin R. Bryce,* Antony Chesney, Julie N. Heaton, Graham N. McKelvey
Department of Chemistry, University of Durham, Durham, DH1 3LE, U.K.
and Martin Anderson
Crop Protection Department, Shell Research Ltd., Sittingbourne, Kent, ME9 8AG, U.K.

Abstract: Alkylthionitroso and arylthionitroso compounds **9** have been generated from precursors **8** and intercepted by reaction with dimethylbutadiene to yield Diels-Alder and ene adducts **10** and **11**.

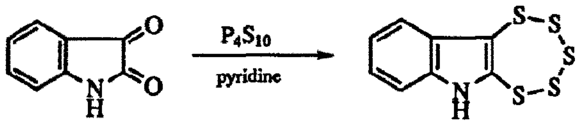


Tetrahedron Letters, **1994**, *35*, 5279

TRANSFORMATION OF ISATIN WITH P_4S_{10} TO PENTATHIEPINO[6,7-b]INDOLE IN ONE STEP

Jan Bergman* Department of Organic Chemistry, Royal Institute of Technology, S-100 44 Stockholm, Sweden

Claes Stålhandske Department of Inorganic Chemistry 2, Chemical Center, Box 124, S-221 00 Lund, Sweden

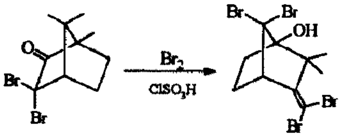


Tetrahedron Letters, **1994**, *35*, 5283

DIBROMOCAMPHOR BROMINATION PRODUCT OF 1-HYDROXYCAMPHENE SKELETON

Róża Antkowiak and Wiesław Z. Antkowiak*
Faculty of Chemistry, Adam Mickiewicz University, Grunwaldzka 6, 60-780 Poznań, Poland

The presence of hydroxyl in the isolated minor product structure supports the assumed alcohol character of the intermediates occurring in the bromination process.



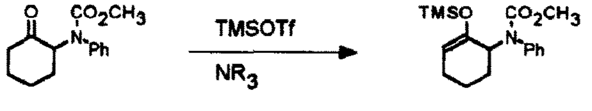
The minor product

Tetrahedron Letters, **1994**, *35*, 5285

REGIOSPECIFIC PROCEDURE FOR THE PREPARATION OF SILYL ENOL ETHERS FROM α-(N-ALKOXYCARBONYLAMINO)KETONES.

Luciana Rossi and Angelo Pecunioso*
Glaxo Research Laboratories; GLAXO Spa, via Fleming 4, 37100 Verona, Italy

A general selective procedure for the preparation of "kinetic" silyl enol ethers from cyclic and acyclic α-(N-alkoxycarbonylamino)ketones is described.

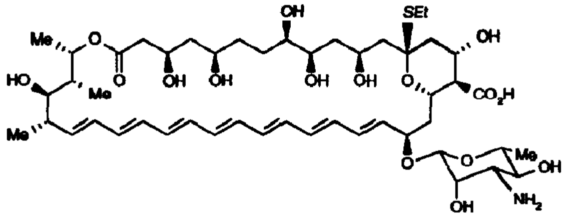


Tetrahedron Letters, **1994**, *35*, 5289

PREPARATION OF A NOVEL C-13 THIOACETAL DERIVATIVE OF AMPHOTERICIN B.

Andrew W. Taylor* and David T. MacPherson,
SmithKline Beecham Pharmaceuticals, Great Burgh, Yew
Tree Bottom Road, Epsom, Surrey, KT18 5XQ, U.K.

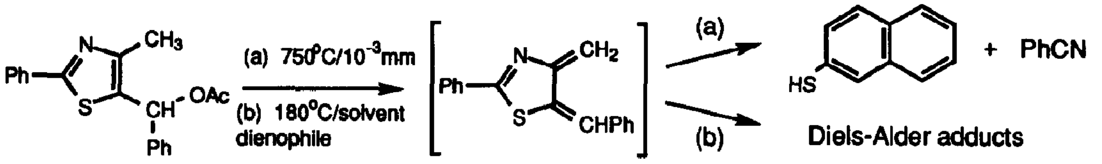
A selective protecting group strategy has facilitated the transformation of Amphotericin B into the novel 13-thioacetal derivative shown.



Tetrahedron Letters, **1994**, *35*, 5293

THIAZOLE *o*-QUINODIMETHANES: THE GENERATION, ELECTROCYCLISATION AND DIELS-ALDER REACTIONS OF PHENYL SUBSTITUTED DERIVATIVES

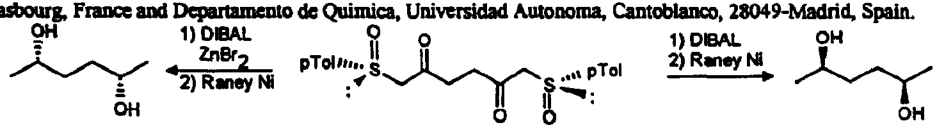
Andrew J. Potter and Richard C. Storr* School of Chemistry, The University of Liverpool, P.O. Box 147, Liverpool L69 3BX



Tetrahedron Letters, **1994**, *35*, 5297

ASYMMETRIC SYNTHESIS OF BOTH ENANTIOMERS OF 2.5-HEXANE DIOL AND 2.6-HEPTANE DIOL INDUCED BY CHIRAL SULFOXIDES.

Guy Solladié*, Nathalie Huser, José Luis Garcia-Ruano *, Javier Adrio, M.Carmen Carreño and Amelia Tito*
Ecole Européenne des Hautes Etudes des Industries Chimiques, Laboratoire de Stéréochimie associé au CNRS ; 1, rue Blaise Pascal, 67008-Strasbourg, France and Departamento de Quimica, Universidad Autonoma, Cantoblanco, 28049-Madrid, Spain.

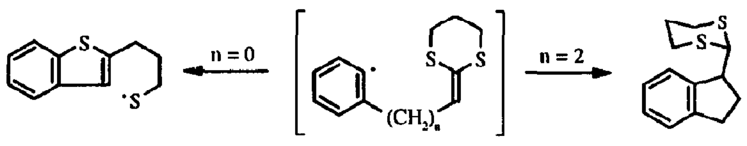


Reduction of the diketodisulfoxide with DIBAL or DIBAL / $ZnBr_2$, gave after desulfurization optically pure (R,R) or (S,S)-2,5-heptane diol.

Tetrahedron Letters, **1994**, *35*, 5301

Dichotomy in The Addition of Carbon-Centred Radicals to Ketenedithioacetals

David C. Harrowven* and Rory Browne, *Department of Chemistry, University of Wales, Bangor, Gwynedd, LL57 2UW.*



Tetrahedron Letters, **1994**, *35*, 5303

The effect of Zinc(II)Bromide on the reduction of a Chiral, non-Racemic, Benzylidene Sulphinamide Derived from a Recoverable Cyclic Sulphinamide

David R. J. Hose,[a] Tony Raynham[b] and Martin Wills.[a]
a. School of Chemistry, Bath University, Bath, UK. b. Roche Products Ltd, Welwyn Garden City, UK.