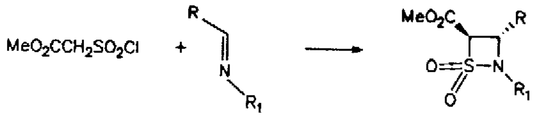
GRAPHICAL ABSTRACTS

Tetrahedron Lett. 30, 2869 (1989)

THE SYNTHESIS AND REACTIONS OF 4-CARBOMETHOXY β-SULTAMS

Michael J. Szymonifka* and James V. Heck
Merck Sharp and Dohme Research Laboratories, P.O. Box 2000, Rahway , NJ 07065

Abstract: *The preparation of 4-carbomethoxy-1,2-thiazetidine-1,1-dioxides from carbomethoxymethanesulfonyl chloride and imines is described.*

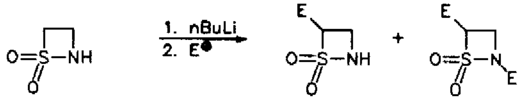


Tetrahedron Lett. 30, 2873 (1989)

THE PREPARATION AND ALKYLATION OF β-SULTAM MONO- AND DIANIONS

Michael J. Szymonifka* and James V. Heck
Merck Sharp and Dohme Research Laboratories, P.O. Box 2000, Rahway, NJ 07066

Abstract: *The reaction of 2-unsubstituted 1,2-thiazetidine-1,1-dioxides with n-butyllithium affords dianions which react selectively with a variety of electrophiles.*

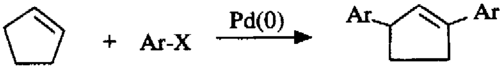


Tetrahedron Lett. 30, 2877 (1989)

PALLADIUM CATALYZED DOUBLE HECK ARYLATION OF CYCLOPENTENE

Mahavir Prashad*, John C. Tomesch, James R. Wareing, Howard C. Smith, and Seung Hoon Cheon.
Sandoz Research Institute, 59 Route 10, P.O. Box 11, East Hanover, NJ 07936

A convenient synthesis of 1,3-diarylcyclopentenes is described via a Palladium Catalyzed double heck arylation of cyclopentene with aromatic halides.

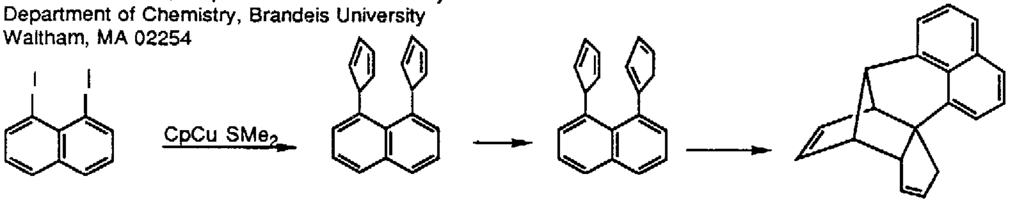


In contrast to classical heck conditions, phase transfer catalysis conditions suppressed double bond scrambling in the product.

Tetrahedron Lett. 30, 2881 (1989)

COFACIAL CYCLOPENTADIENES. SYNTHESIS AND REACTIONS OF 1,8-BIS(CYCLOPENTADIENYL)NAPHTHALENE.

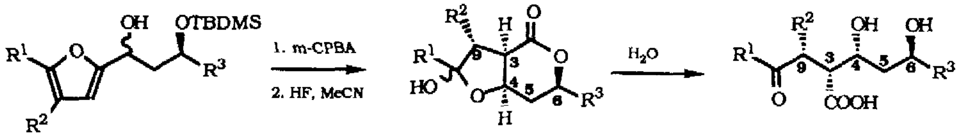
Dana A Gronbeck, Stephen A. Matchett and Myron Rosenblum
Department of Chemistry, Brandeis University
Waltham, MA 02254



Tetrahedron Lett. 30, 2885 (1989)

Acid-Catalyzed Rearrangement of Pyran Derivatives. An Approach to the Stereoselctive Synthesis of 1,3-Diol Derivatives.

Philip DeShong*, David M. Simpson, and Ming-Teh Lin
Department of Chemistry and Biochemistry, University of Maryland, College Park, MD 20742

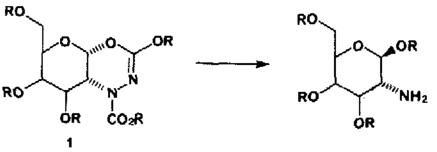


Tetrahedron Lett. 30, 2889 (1989)

HETERO DIELS-ALDER REACTION OF BIS (TRICHLOROETHYL) ACODICARBOXYLATE AND GLYCALS: PREPARATION OF A C_1-C_1 2-AMINO DISACCARIDE

Y. Leblanc* and B.J. Fitzsimmons, M.F.C.I., P.O. Box 1005,
Pointe Claire-Dorval, Quebec, Canada H9R 4P8

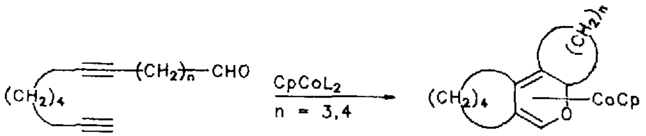
Five and six membered glycals reacts with BTCEAD to give [4+2] cycloadducts 1. These adducts were then converted to 2-amino sugars. A structurally complex 2-amino disaccharide was prepared using this methodology.



Tetrahedron Lett. 30, 2893 (1989)

SYNTHESIS OF CpCo-COMPLEXED α-PYRANS VIA AN INTRAMOLECULAR [2+2+2] CYCLOADDITION

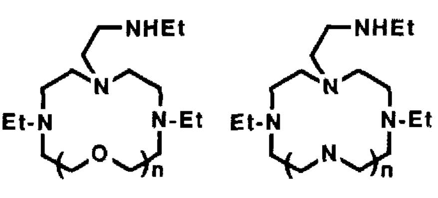
Rolf Gleiter and Volker Schehlmann, Organisch-Chemisches Institut
der Universität Heidelberg, Im Neuenheimer Feld 270, D-6900 Heidelberg(FRG)



Tetrahedron Lett. 30, 2897 (1989)

NOVEL SYNTHESES OF MONOFUNCTIONALIZED TRIAZA-CROWNS AND CYCLAMS WITH A SECONDARY AMINE GROUP ON A SIDE CHAIN

K. E. Krakowiak, J. S. Bradshaw, N. K. Dalley,
W. Jiang and R. M. Izatt, Department of
Chemistry, Brigham Young University
Provo, Utah 84602 U. S. A.



Tetrahedron Lett. 30,2901(1989)

Isolation, Identification, and Synthesis of Sex Pheromone Components of the Carob Moth, *Ectomyelois ceratoniae*

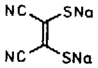
T.C. Baker[1*], W. Francke[2], C. Löfstedt[3], B.S. Hansson[3], J.-W. Du[4], P.L. Phelan[5], R.S. Vetter[1], R. Youngman[1]
1 Dept. of Entomology, Univ. of Calif. Riverside, CA, USA
2 Inst. für Organische Chemie, Universität Hamburg, FRG
3 Dept. of Animal Ecology, University of Lund, Sweden
4 Shanghai Inst. of Entom., Acad. Sinica, Shanghai, China
5 Department of Entomology, OARDC/OSU, Wooster, Ohio, USA

GC/EAD + GC/MS investigations showed (Z,E)-9,11,13-tetradecatrienal, (Z,E)-9,11-tetradecadienal and (Z)-9-tetradecenal to be the sex pheromone of the carob moth. Blends of synthetic compounds are active.

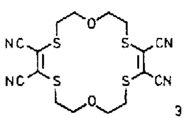
Tetrahedron Lett. 30,2903(1989)

ZUR SYNTHESE MAKROCYCLISCHER O/S-KRONENETHER MIT DICYANOETHYLENDITHIOLAT

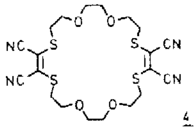
G. Märkl und R. Vybiral, Institut für Organische Chemie der Universität Regensburg, Universitätsstr. 31, 8400 Regensburg, BRD.



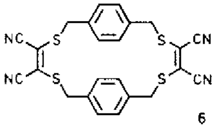
2



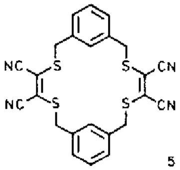
3



4



6



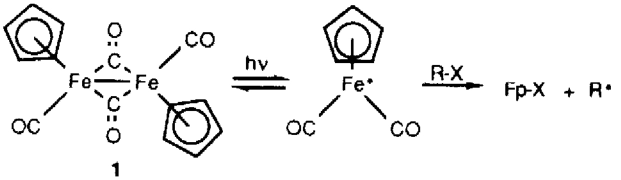
5

Tetrahedron Lett. 30,2907(1989)

GENERATION AND SYNTHETIC USE OF ALKYL RADICALS WITH $[CpFe(CO)_2]_2$ AS MEDIATOR

Gebhard Thoma und Bernd Giese*, Institut für Organische Chemie, Technische Hochschule Darmstadt
Petersenstr. 22, D-6100 Darmstadt, Germany

Irradiation of dimeric iron complex 1 in the presence of alkyl halides yields alkyl radicals that are useful in organic synthesis.



1

Tetrahedron Lett. 30,2911(1989)

PHEROMONES, 71. IDENTIFICATION AND SYNTHESIS OF FEMALE SEX PHEROMONE OF ERI-SILKWORM, *Samia cynthia ricini* (LEPIDOPTERA: SATURNIIDAE).

Hans Jürgen Bestmann[a)*)], Athula B. Attygalle[a)], Jürgen Schwarz[a)], Wolfgang Garbe[a)], Otto Vostrowsky[a)] and Ichiro Tomida[b)]
[a)]Organic Chemistry Institute of the FAU-University Erlangen-Nürnberg, Henkestr. 42, D-8520 Erlangen, FRG
[b)]Faculty of Agriculture, Shinshu University, Minamiminowa, Nagano-ken, 399-45 Japan.

1

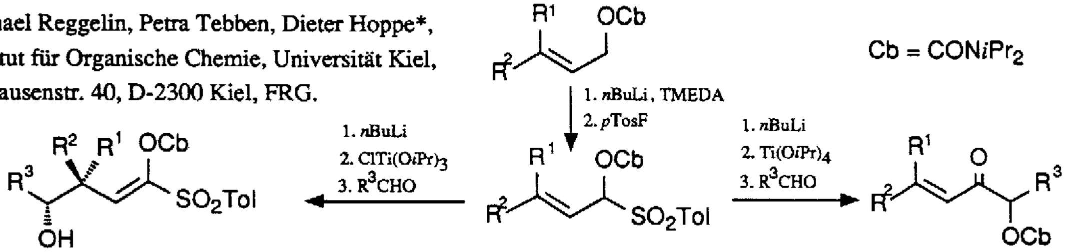
2

The two triple unsaturated compounds 1 and 2 were identified as the major pheromone components of the eri-silkworm moth, *Samia cynthia ricini*, females.

SYNTHESIS AND DEPROTONATION OF 1-(*p*-TOLUENESULFONYL)-2-ALKENYL CARBAMATES. DICHOTOMOUS ACHIRAL d^1 AND CHIRAL d^3 REAGENTS FOR CARBONYL ADDITION DIRECTED BY METAL EXCHANGE

Tetrahedron Lett. 30, 2915 (1989)

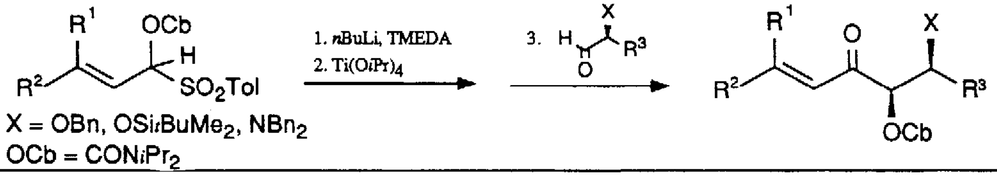
Michael Reggelin, Petra Tebben, Dieter Hoppe*,
Institut für Organische Chemie, Universität Kiel,
Olshausenstr. 40, D-2300 Kiel, FRG.



ENANTIOMERICALLY PURE α', β'-DIFUNCTIONALIZED α, β-ENONES BY HIGHLY DIASTEREOSELECTIVE NUCLEOPHILIC ALKENOYLATION OF CHIRAL ALDEHYDES

Tetrahedron Lett. 30, 2919 (1989)

Michael Reggelin, Petra Tebben, Dieter Hoppe*,
Institut für Organische Chemie, Universität Kiel, Olshausenstr. 40, D-2300 Kiel, FRG.



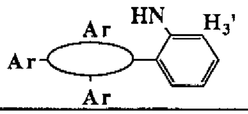
ASSIGNMENTS OF THE CHEMICAL SHIFTS OF MESO-PHENYL PROTONS AND CARBONS OF TETRAKIS-5,10,15,20-(α,β,α,β-ORTHO-AMIDOPHENYL)PORPHYRINS

Tetrahedron Lett. 30, 2923 (1989)

B.Boitrel, E.Camilleri, Y.Fléché, A.Lecas and E.Rose*

Laboratoire de Chimie Organique, Unité Associée au CNRS 408, Tour 45,
4 Place Jussieu, Université P.M.Curie, 75252 Paris Cedex 05, France.

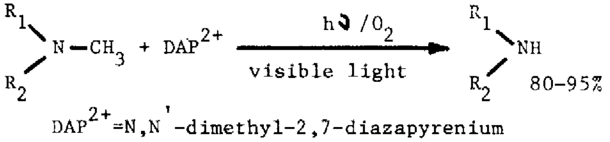
The H3' proton resonates at the lowest field
Ar = - o - C_6H_4NHCOR



ELECTRON TRANSFER ACTIVATION. PHOTOCHEMICAL N-DEMETHYLATION OF TERTIARY AMINES.

Tetrahedron Lett. 30, 2927 (1989)

J. Santamaria, R. Ouchabane and J. Rigaudy
Laboratoire de Recherches Organiques de l'ESPCI, 75005 Paris



DAP^{2+}=N,N'-dimethyl-2,7-diazapyrenium

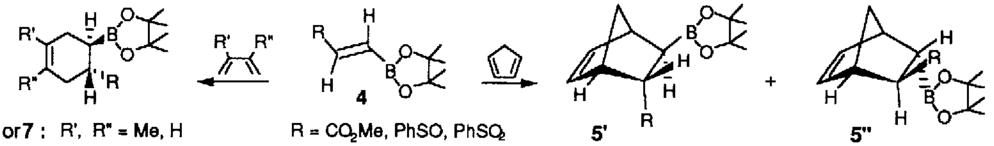
Tetrahedron Lett. 30, 2929 (1989)

Vinylboronates β-substituted by an electron withdrawing group : a new type of electron deficient olefins.

P. Martinez-Fresneda[a] and M. Vaultier*[b]

a Departamento de Quimica Organica, Facultad de Ciencias, Universidad de Murcia, E 30001 Murcia, Spain. b Groupe de Physicochimie Structurale associé au C.N.R.S., Université de Rennes I, Av. du Général Leclerc, 35042 Rennes Cédex.

The synthesis of the vinylboronates **4** is described. They are shown to be good dienophiles.



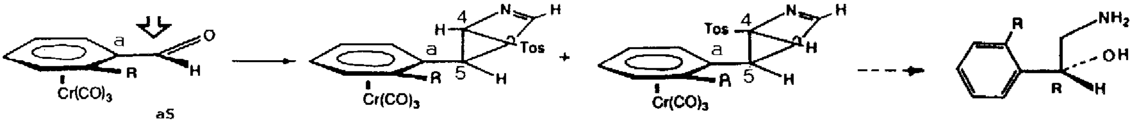
6 or**7** : R', R" = Me, H   R = CO_2Me, PhSO, $PhSO_2$ **5'**   **5"**

Tetrahedron Lett. 30, 2933 (1989)

ARENE-CHROMIUM-TRICARBONYL COMPLEXES: STEREOSELECTIVE REACTIONS WITH ISOCYANIDE.

A. Solladié-Cavallo, S. Quazzotti; EHICS, 1, rue B. Pascal, Strasbourg. ***S. Colonna, A. Manfredi;*** *Universita di Milano, 19 via Golgi, Milano*

98% of A.I. is obtained during addition of TosMic with chiral complexes **2** and **3**. The diastereoselectivity of the formation of the oxazolines is studied and the diastereomers clearly assigned.

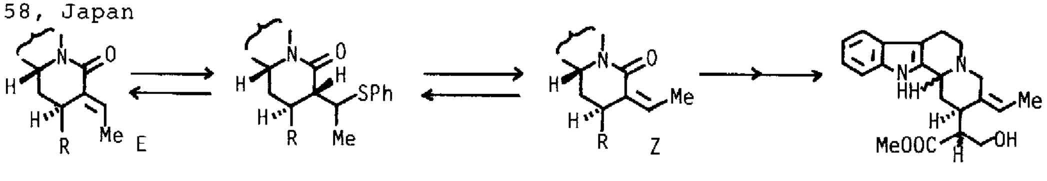


aS   Oxazoline Trans aS5S4R   Oxazoline Cis aS5S4S

Tetrahedron Lett. 30, 2941 (1989)

STEREOSELECTIVE ISOMERIZATION OF ETHYLIDENE LACTAM FOR THE SYNTHESIS OF (±)-Z-ISOSITSIRIKINES

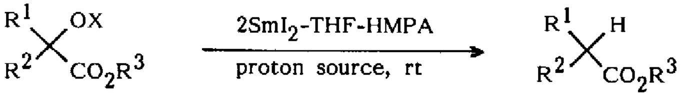
Takeaki Naito,* Tetsuro Shinada, Okiko Miyata, and Ichiya Ninomiya
Kobe Women's College of Pharmacy, 4-19-1, Motoyamakita, Higashinada, Kobe 658, Japan



Tetrahedron Lett. 30, 2945 (1989)

A HIGHLY EFFICIENT DEOXYGENATION OF α-OXYGENATED ESTERS VIA SmI_2-INDUCED ELECTRON TRANSFER PROCESS

Kazuhiro Kusuda, Junji Inanaga,* and Masaru Yamaguchi
Department of Chemistry, Kyushu University 33, Hakozaki, Higashi-ku, Fukuoka 812, Japan



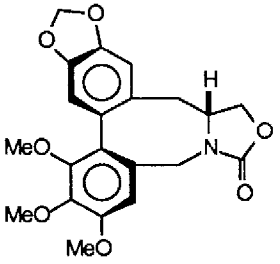
The method was applied to the one-step conversion of (R,R)-tartrates to (R)-malates.

Tetrahedron Lett. 30, 2949 (1989)

DESIGN, SYNTHESIS, AND ANTITUMOR ACTIVITY OF STEGANACIN AZA-ANALOGUES

Kiyoshi Tomioka,* Yoshihiro Kubota, Hisashi Kawasaki and Kenji Koga*, *Faculty of Pharmaceutical Sciences, University of Tokyo, Tokyo 113, Japan*

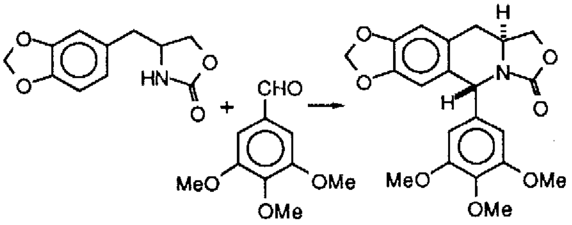
Artificial steganacin aza-analogue was designed and synthesized in a quite efficient way.



Tetrahedron Lett. 30, 2953 (1989)

SYNTHESIS AND ANTITUMOR ACTIVITY OF PODOPHYLLOTOXIN AZA-ANALOGUES

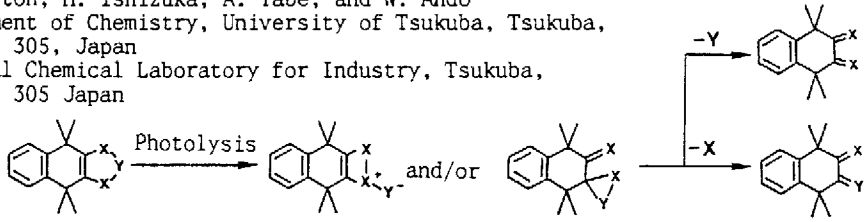
K. Tomioka,* Y. Kubota, and K. Koga,*
Faculty of Pharmaceutical Sciences, University of Tokyo, Hongo, Bunkyo-ku, Tokyo 113, Japan



Tetrahedron Lett. 30, 2955 (1989)

Competitive Photochemical Decarcogenation of 1,2,5-Thiadiselenole

N. Tokitoh, H. Ishizuka, A. Yabe,[†] and W. Ando*
Department of Chemistry, University of Tsukuba, Tsukuba, Ibaraki 305, Japan
[†] National Chemical Laboratory for Industry, Tsukuba, Ibaraki 305 Japan

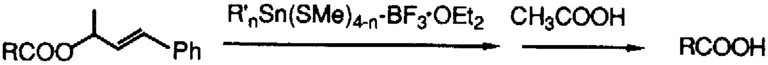


X = Se, Y = S

Tetrahedron Lett. 30, 2959 (1989)

APPLICATION AND SYNTHETIC APPLICATION OF THIOSTANNANES. PROTECTION OF CARBOXYL GROUPS WITH α-METHYLCINNAMYL ALCOHOL AS A MEANS OF CHEMODIFFERENTIATION AND SELECTIVE ACTIVATION

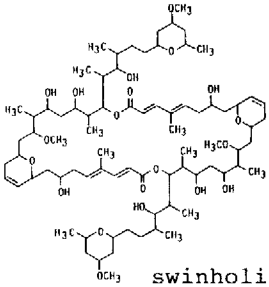
Tsuneo Sato, Junzo Otera,* and Hitosi Nozaki
Department of Applied Chemistry, Okayama University of Science, Ridai-cho, Okayama 700, Japan



Tetrahedron Lett. 30,2963(1989)

STRUCTURE OF SWINHOLIDE A, A POTENT CYTOTOXIC MACROLIDE FROM THE OKINAWAN MARINE SPONGE THEONELLA SWINHOEI

Motomasa Kobayashi, Jun-ichi Tanaka, Taketo Katori, Miki Matsuura, and Isao Kitagawa*
Faculty of Pharmaceutical Sciences, Osaka University,
1-6, Yamada-oka, Suita, Osaka 565, Japan

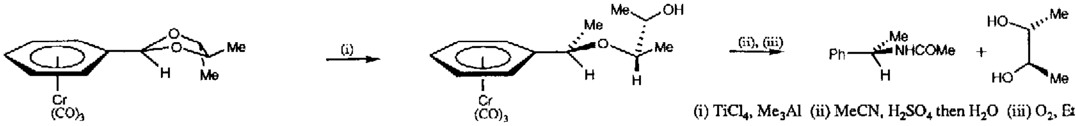


swinholide A

Tetrahedron Lett. 30,2967(1989)

ASYMMETRIC SYNTHESIS OF N-ACETYL-1-PHENYLETHYLAMINE

Stephen G. Davies[a] *, Roger F. Newton[b] and Jonathan M. J. Williams[a]
[a]The Dyson Perrins Laboratory, South Parks Road, Oxford, OX1 3QY, UK.
[b]Glaxo Group Research Ltd., Ware, Herts, SG10 0DJ, UK.



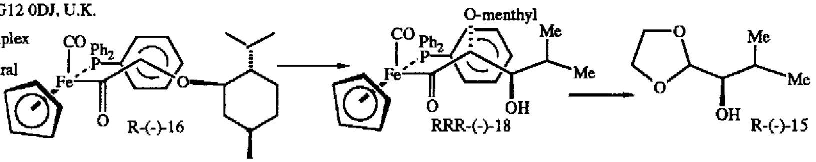
(i) $TiCl_4$, Me_3Al (ii) MeCN, H_2SO_4 then H_2O (iii) O_2, Et_2O

Tetrahedron Lett. 30,2971(1989)

Application of the iron acyl complex R-(-)-[($\eta^5C_5H_5$)Fe(CO)(PPh_3) $COCH_2O$({1R,2S,5R}menthyl)] as a homochiral formyl anion equivalent.

Stephen G. Davies[a]*, David Middlemiss[b] Alan Naylor[b] and Martin Wills[a].
[a]Dyson Perrins Laboratory, South Parks Road, Oxford, OX1 3QY, U.K.
[b]Glaxo Group Research, Ware, Herts, SG12 0DJ, U.K.

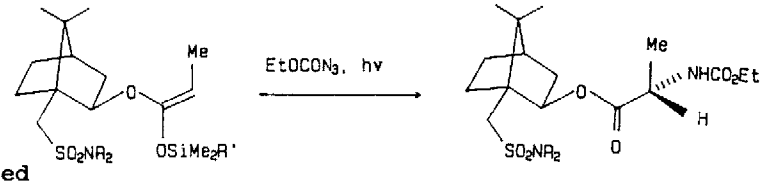
The enantiomerically pure iron acyl complex R-(-)-16 represents a source of homochiral formyl anion equivalent applicable to the synthesis of enantiomerically pure α–hydroxy acetals from aldehydes.



Tetrahedron Lett. 30,2975(1989)

ASYMMETRIC SYNTHESIS OF N-SUBSTITUTED α-AMINO ESTERS

M. Antonietta Loreto, Lucio Pellacani, and Paolo A. Tardella
Dipartimento di Chimica
Università "La Sapienza"
P.le Aldo Moro 2
I-00185 Roma, Italy



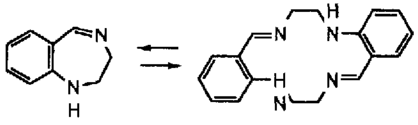
A one pot asymmetric amination of silyl ketene acetals is described

Tetrahedron Lett. 30, 2979 (1989)

RING INTERCONVERSION BETWEEN A 7-MEMBERED RING (2,3-DIHYDRO-1,4-BENZODIAZEPINE) AND A 14-MEMBERED RING (2,3,9,10-DIBENZO-1,5,8,12-TETRA-AZACYCLOTETRADECA-4,11-DIENE).

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

Structure elucidation of the macrocyclic ligand **6** and interconversion to the benzodiazepine **4** is reported.



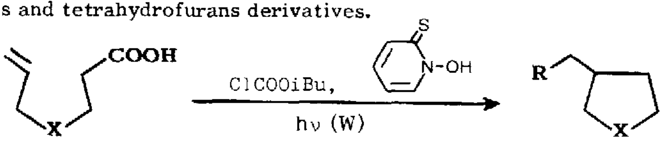
4 6

Tetrahedron Lett. 30, 2983 (1989)

The Use of Acyl Derivatives of N-hydroxy-2-thiopyridone in a Simple Synthesis of Pyrrolidines and Tetrahydrofurans

E.Castagnino*, S.Corsano* and D.H.R.Barton§
*Istituto di Chimica Farmaceutica e Tecnica Farmaceutica, Università degli Studi, 06100 Perugia, Italy.
§Department of Chemistry, Texas A&M University, College Station, Texas 77843, U.S.A.

3-Allylamino and 3-allyloxypropionic acids can give smoothly, via their thiohydroxamic esters, pyrrolidines and tetrahydrofurans derivatives.



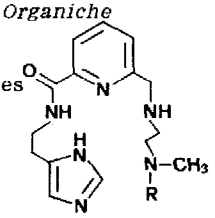
X = NAc, $NCH_2CH=CH_2$, O
R = H or SPy

Tetrahedron Lett. 30, 2987 (1989)

A MICELLAR MODEL OF BLEOMYCIN ANTIBIOTICS

M. Cristini, P. Scrimin, and U. Tonellato
Department of Organic Chemistry and Centro CNR Meccanismi Reazioni Organiche
Universita' di Padova, via Marzolo 1, I-35131 Padova, Italy

The lipophilic ligand 1 forms, as a Fe^{III} complex, micellar aggregates which show, in the presence of H_2O_2, catalytic properties in the oxidation of *p*-nitrophenyl methyl sulfide.



1 : R = n-$C_{18}H_{33}$

Tetrahedron Lett. 30, 2991 (1989)

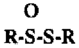
SILICON IN ORGANOSULPHUR CHEMISTRY. Part 1. SYNTHESIS OF TRISULPHIDES.

Giuseppe Capozzi,* Antonella Capperucci, Alessandro Degl'Innocenti, Rosa Del Duce, and Stefano Menichetti.
Centro C.N.R. 'Chimica e Struttura dei Composti Eterocicli e loro Applicazioni', Dipartimento di Chimica Organica -Universita' di Firenze - via G. Capponi 9, 50121 Firenze, Italy.

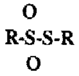
The reaction of bis(trimethylsilyl)sulphide 1 with thiosulphinates 2 and thiosulphonates 3 in $CHCl_3$ gives symmetrical alkyl- or aryl-trisulphides 4 in high yields.

$Me_3Si\text{-}S\text{-}SiMe_3$

1


$R\text{-}\overset{O}{S}\text{-}S\text{-}R$

2


$R\text{-}\underset{O}{\overset{O}{S}}\text{-}S\text{-}R$

3

R-S-S-S-R

4

Tetrahedron Lett. 30,2995(1989)

SILICON IN ORGANOSULPHUR CHEMISTRY. Part 2. SYNTHESIS OF UNSYMMETRICAL DISULPHIDES.

Giuseppe Capozzi,* Antonella Capperucci, Alessandro Degl'Innocenti, Rosa Del Duce, and Stefano Menichetti.
Centro C.N.R. 'Chimica e Struttura dei Composti Eterocicli e loro Applicazioni', Dipartimento di Chimica Organica -Universita' di Firenze - via G. Capponi 9, 50121 Firenze, Italy.

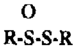
Usymmetrical aryl- and alkyl-disulphides 1 are prepared from silylsulphides 2 and thiosulphinates 3 or thiosulphonates 4. Silyl sulphinic esters 5 are also obtained in the reaction of 2 with 4 .

R-S-S-R^1

1

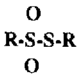
R^1-S-SiMe$_3$

2



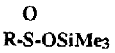
$R\text{-}\overset{O}{S}\text{-}S\text{-}R$

3



$R\text{-}\underset{O}{\overset{O}{S}}\text{-}S\text{-}R$

4



$R\text{-}\overset{O}{S}\text{-}OSiMe_3$

5

Tetrahedron Lett. 30,2999(1989)

SINGLE ELECTRON TRANSFER IN $LiAlH_4$ REDUCTION OF A STEROIDAL VINYL IODIDE

Suresh K. Pradhan* and Girish S. Patil
Pharmaceutical Division, Bombay University Department of Chemical Technology

Result of $LiAlH_4$ reduction of E-20-iodopregna-5,17(20)-diene provides support for SET