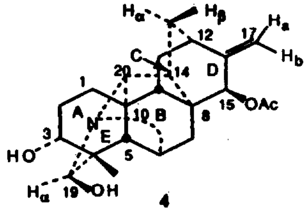
GRAPHICAL ABSTRACTS

Tetrahedron, **1994**, *50*, 12283

THE STRUCTURE OF ANDERSOBINE, A NEW DITERPENOID ALKALOID FROM *DELPHINIUM ANDERSONII* GRAY

Balawant S. Joshi,[1] Mohindar S. Puar,[2] Yili Bai,[1] A. Mukendi Panu,[1] and S. W. Pelletier[1]
[1]Institute for Natural Products Research & Department of Chemistry, The University of Georgia, Athens, GA 30602-2556, U.S.A.; [2]Schering-Plough Research Institute, 2015 Galloping Hill Road, Kenilworth, New Jersey 07033, U.S.A.

The structure of andersobine (4), a new diterpenoid alkaloid from *Delphinium andersonii* Gray, has been determined by ^1H, ^{13}C, ^1H homonuclear COSY, HETCOR, one dimentional nOe, 2D nOe, and selective INEPT nmr spectral studies.



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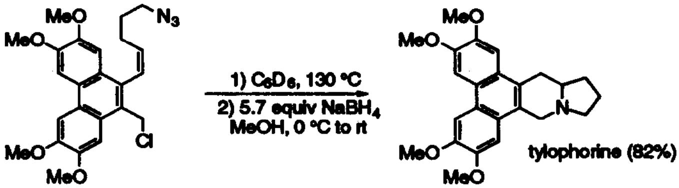
Tetrahedron, **1994**, *50*, 12293

SYNTHESIS OF (±)-TYLOPHORINE BY THE INTRAMOLECULAR CYCLOADDITION OF AN AZIDE WITH AN ω-CHLOROALKENE.

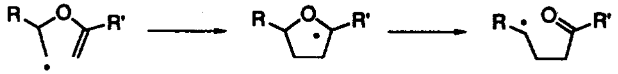
William H. Pearson* and Rajesh Walavalkar
Department of Chemistry, The University of Michigan, Ann Arbor, MI 48109-1055



Tetrahedron, **1994**, *50*, 12305

Mechanism of the Rearrangement of 2-(Vinyloxy)alkyl to 4-Ketobutyl Radicals

D. Crich* and Q. Yao, Dept. of Chemistry, Univ. Illinois at Chicago, 845 W. Taylor St., Chicago, Il 60607-7061.

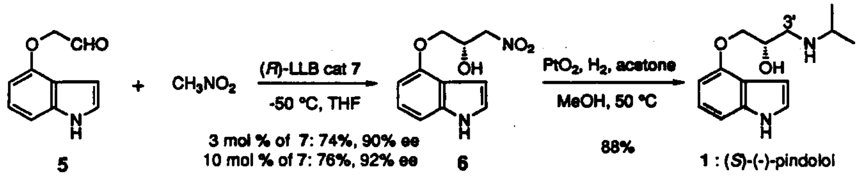


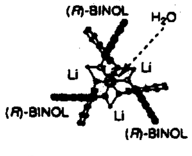
The title rearrangement is shown to occur via a stepwise mechanism involving closure to a tetrahydrofuranyl radical, which can be trapped, followed by a fragmentation step.

Tetrahedron, **1994**, *50*, 12313

Syntheses of (*S*)-(-)-Pindolol and [3'-^{13}C]-(*R*)-(-)-Pindolol Utilizing a Lanthanum-Lithium-(*R*)-BINOL ((*R*)-LLB) Catalyzed Nitroaldol Reaction

Hiroaki Sasai, Yoichi M. A. Yamada, Takeyuki Suzuki, and Masakatsu Shibasaki*
Faculty of Pharmaceutical Sciences, University of Tokyo, Bunkyo-ku, Tokyo 113, Japan





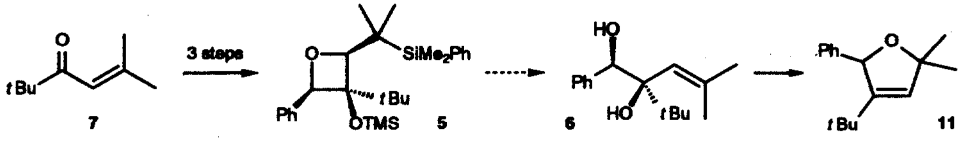
7: Lanthanum-Lithium-(*R*)-BINOL ((*R*)-LLB) Catalyst

Tetrahedron, **1994**, *50*, 12319

THE β-SILICON EFFECT AS A CONTROL ELEMENT FOR THE REGIOSELECTIVE RING OPENING OF OXETANES

Thorsten Bach* and Kristian Kather, Organisch-Chemisches Institut der Universität, Orléansring 23, D-48149 Münster, Germany

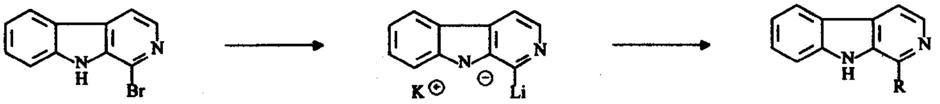
The silyl substituted oxetane 5 was prepared from ketone 7 in order to evaluate the effect of the silicon group on a projected ring opening to the diol 6. Regioselective ring opening occured, but 6 underwent a subsequent ring closure to the dihydrofuran 11.



Tetrahedron, **1994**, *50*, 12329

1,9-DIMETALATED ß-CARBOLINES. VERSATILE BUILDING BLOCKS FOR THE TOTAL SYNTHESIS OF ALKALOIDS

Franz Bracher*, and Dirk Hildebrand, Institut für Pharmazeutische Chemie, 38106 Braunschweig, Germany; Institut für Pharmazeutische Chemie, 35037 Marburg, Germany



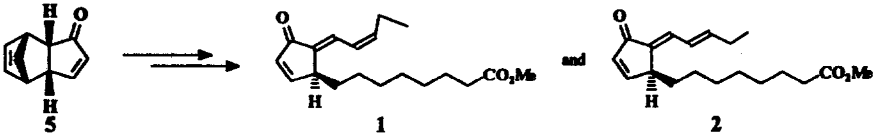
Reactions of 1,9-dimetalated ß-carbolines with electrophiles lead to various ß-carboline alkaloids.

Tetrahedron, **1994**, *50*, 12337

TOTAL SYNTHESIS AND STRUCTURAL REVISION OF CHROMOMORIC ACID C-I AND C-II METHYL ESTERS

Zhi-Yu Liu*, Hong Dong and Xin-Jie Chu
Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences, 354 Fenglin Lu, Shanghai 200032, CHINA

Stereospecific total synthesis of chromomoric acid C-I and C-II methyl esters (1 and 2) and a revision of original assignment were described.



Tetrahedron, **1994**, *50*, 12349

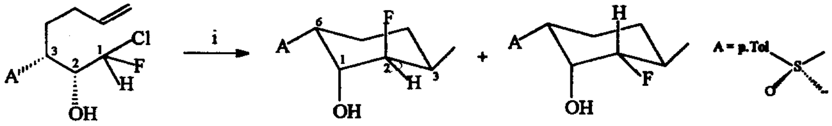
SELECTIVE TRANSFORMATION OF α,α-DIBROMOMETHYL KETONES INTO α-MONOSULFENYLATED KETONES

M. Boeykens and N. De Kimpe, Department of Organic Chemistry, University of Gent, Faculty of Agricultural and Applied Biological Sciences, Coupure Links 653, B-9000 Gent, Belgium

Tetrahedron, **1994**, *50*, 12361

ON THE SYNTHESIS OF OPTICALLY PURE MONOFLUOROCYCLOHEXANOL DERIVATIVES BY THE FLUORINATED SULPHOXIDE CHIRON ROUTE.

Alberto Arnone, Pierfrancesco Bravo, Massimo Frigerio, Fiorenza Viani, Giancarlo Cavicchio, and Marcello Crucianelli



(1*R/S*,2*R*,3*R*,*R*$_S$)-**2** (1*S*,2*R*,3*R*,6*R*,*R*$_S$)-**1** (1*S*,2*S*,3*R*,6*R*,*R*$_S$)-**1**

i) Bu_3SnH, hv, benzene, 35°C.

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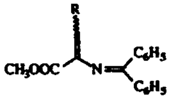
Reactions of 3-Carbomethoxy-2-Aza-1,3-Butadiene Derivatives with Dienophiles

Cesarino Balsamini*[a], Annalida Bedini[a], Roberta Galarini[a], Gilberto Spadoni[a], Giorgio Tarzia [b], Mahmoud Hamdan[b].

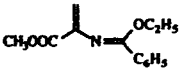
a: Istituto di Chimica Farmaceutica - Università degli Studi - Piazza del Rinascimento 6, 61029 - Urbino - Italia.
b: Glaxo Research Laboratories - Via Fleming,4 - 37100 Verona - Italia.

2-Azadienes 1a-e react with selected electron-poor dienophiles giving 4+2 cycloadducts; the 1-ethoxy analogue 2 undergoes Diels-Alder or Michael-type additions depending on the nature of the dienophile.

a: R=H
b: $R=CH_3$ (E)
c: $R=CH_3$ (Z)
d: $R=C_6H_5$ (E)
e: $R=C_6H_5$ (Z)



1a-e



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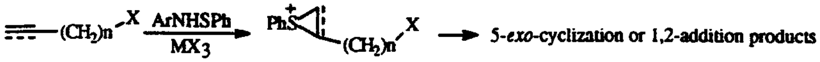
Tetrahedron, **1994**, *50*, 12395

REACTION OF 4'-NITROBENZENESULFENANILIDE (NBSA) WITH LEWIS ACIDS. A STUDY OF ITS APPLICATION IN SULFENOCYCLIZATION OF ALKENES AND ALKYNES.

Luisa Benati, Laura Capella, Pier Carlo Montevecchi* and Piero Spagnolo
Dipartimento di Chimica Organica "A. Mangini", Viale Risorgimento 4, I-40136 Bologna, Italy

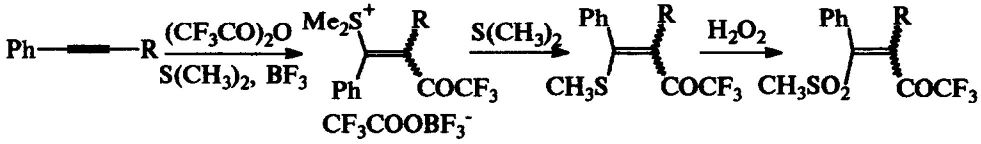


Ar = $C_6H_4NO_2$-p; MX_3 = BF_3, $AlCl_3$, $AlBr_3$; X = OH, COOH, $CH=CH_2$; n = 1,2,3.

Tetrahedron, **1994**, *50*, 12407

PERFLUOROACYLATION OF ALKYNES

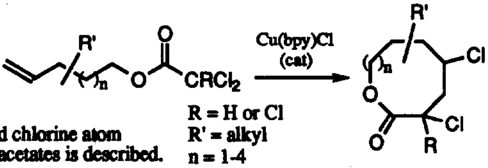
V.G.Nenajdenko, E.S.Balenkova*
Department of Chemistry, Moscow State University, Moscow 119899, Russia



Tetrahedron, **1994**, *50*, 12415

SYNTHESIS OF MEDIUM-SIZED LACTONES BY THE COPPER(I) CHLORIDE/2,2'-BIPYRIDINE-CATALYZED CYCLIZATION OF DI- AND TRICHLOROACETATES

Frank O. H. Pirrung, Henk Hiemstra* and W. Nico Speckamp*,
Laboratory of Organic Chemistry, University of Amsterdam,
Nieuwe Achtergracht 129, 1018 WS Amsterdam, The Netherlands.
Bernard Kaptein and Hans E. Schoemaker,
DSM Research, P. O. Box 18, 6160 MD Geleen, The Netherlands.

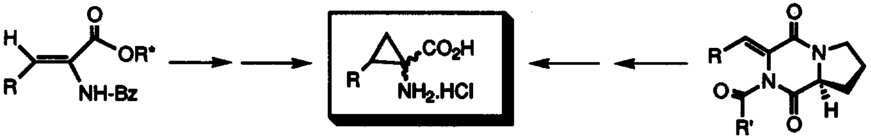


The formation of 8- to 11-membered lactones by Cu(bpy)Cl catalyzed chlorine atom transfer *endo*-cyclization of (un)-substituted alkenyl di- and trichloroacetates is described.

Tetrahedron, **1994**, *50*, 12443

ASYMMETRIC SYNTHESES OF 1-AMINO-2-PHENYL(ALKYL)-CYCLOPROPANECARBOXYLIC ACIDS BY DIASTEREOSELECTIVE CYCLOPROPANATION OF HIGHLY FUNCTIONALIZED MONOCHIRAL OLEFINES

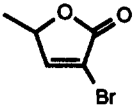
C. Alcaraz,[a] M.D. Fernández,[a] M.P. de Frutos,[a] J.L. Marco,[a] M. Bernabé,*[a] C. Foces-Foces,[b] F.H. Cano[b]
[a] Instituto de Química Orgánica, CSIC, Juan de la Cierva, 3, 28006-Madrid (Spain)
[b] Departamento de Rayos-X, Instituto de Química Física "Rocasolano", CSIC, Serrano 119, 28006-Madrid (Spain)

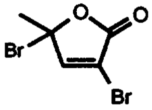


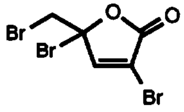
Tetrahedron, **1994**, *50*, 12457

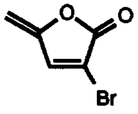
THE BROMINATION OF β-ANGELICA LACTONE REVISITED: SYNTHESIS OF NEW 3-BROMOMETHYLENE AND 3-BROMOMETHYL-2(5*H*)-FURANONES.

Cristina Ochoa de Echagüen and Rosa M. Ortuño*
Universitat Autònoma de Barcelona, Departament de Química, 08193 Bellaterra, Barcelona, Spain.







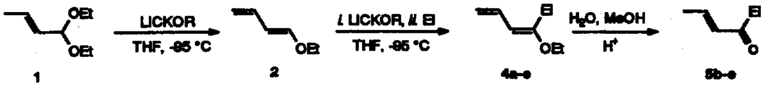


Tetrahedron, **1994**, *50*, 12463

1-SUBSTITUTED 1-ETHOXY DIENES OBTAINED BY REACTION OF 1,1-DIETHOXYBUT-2-ENE WITH ELECTROPHILES IN THE PRESENCE OF THE MIXED METAL BASE LICKOR

Cristina Prandi and Paolo Venturello*- Istituto di Chimica Organica dell'Università, Via P. Giuria, 7 10125 Torino, Italy

1,4-Elimination in 1,1-diethoxybut-2-ene (1), promoted by LICKOR reagent, leads to (*E*)-1-ethoxybuta-1,3-diene (2). The obtained alkoxy diene 2 undergo further metallation and reaction with electrophiles, giving α-substituted dienes 4a-e. The corresponding carbonyl compounds 5b-e can be obtained by mild acid work-up.



Tetrahedron, **1994**, *50*, 12469

AB-INITIO MCSCF STUDY OF THE HOMOLYTIC S-S BOND DISSOCIATION IN DISULPHIDES, THIOSULPHINATES AND α-DISULPHOXIDES.

Rois Benassi*, Gian Luca Fiandri and Ferdinando Taddei
Dipartimento di Chimica, Università, Via Campi 183, 41100 Modena, Italy

R-S-S-R (1)   R-S(O)-S-R (2)   R-S(O)-S(O)-R (3)   R= H, CH_3

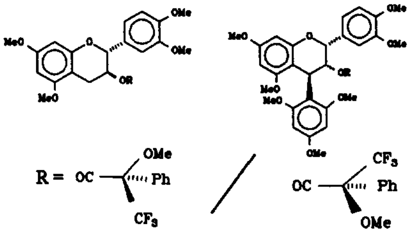
The geometrical and electronic properties of the title compounds and of the relative radicals originated from S-S cleavage were calculated with *ab-initio* MO MCSCF wavefunctions. The energy profiles for S-S bond cleavage were also determined.

Tetrahedron, **1994**, *50*, 12477

OLIGOMERIC FLAVANOIDS. PART 17. ABSOLUTE CONFIGURATION OF FLAVAN-3-OLS AND 4-ARYLFLAVAN-3-OLS *VIA* THE MOSHER METHOD

W. Rossouw, A.F. Hundt, J.A. Steenkamp, and D. Ferreira
Department of Chemistry, University of the Orange Free State, P.O. Box 339, Bloemfontein, 9300 South Africa

^{1}H NMR analysis of *R*-(+)- and *S*-(-)-MTPA esters of flavan-3-ols and 4-arylflavan-3-ols permits assessment of the absolute configurations at C-3 of these condensed tannin structural units.

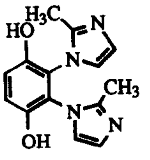


Tetrahedron, **1994**, *50*, 12489

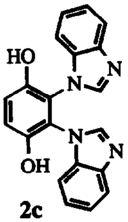
Imidazole and Benzimidazole Addition to Quinones. Formation of *meso* and *d,l* Isomers and Crystal Structure of the *d,l* Isomer of 2,3-Bis(benzimidazol-1'-yl)-1,4-Dihydroxybenzene

C. Escolástico, M.D. Santa María, R.M. Claramunt, M.L. Jimeno, I. Alkorta, C. Foces-Foces, F.H. Cano and J. Elguero, Departamento de Química Orgánica y Biología, Instituto 'Rocasolano', UNED y CSIC, E-28040 Madrid, Spain.

Compound **2b** exists in the solid state as the *d,l* isomer and in solution as a 50:50 mixture of *d,l* and *meso* isomers. Both isomers of compound **2c** can be isolated in the solid state and the X-ray structure of the *d,l* isomer has been determined. ^{1}H NMR (n.O.e. effects), ^{13}C CPMAS NMR and AM1 semiempirical calculations have been used to explore the potential energy surface.



2b



2c

Tetrahedron, **1994**, *50*, 12511

Ab Initio Theoretical Study of the Monomer-Dimer Equilibrium in Lithium and Sodium *gem*-Dichloro Allyl and Methyl Systems.

Carlo Canepa and Glauco Tonachini* Istituto di Chimica Organica, Università di Torino, v. P.Giuria, 7 10125 Torino, Italy

The interaction with a discrete number of water molecules (modelling ether molecules) reverses the sign of the dimerization energy: the equilibrium is estimated to lie in favour of the monomers, in contrast with the results obtained for the fluorinated systems.