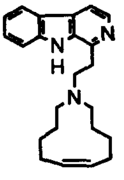
GRAPHICAL ABSTRACTS

Tetrahedron, **1991,** *47,* 8067

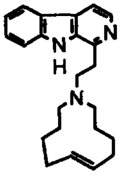
A Total Synthesis of Manzamine C and Its Geometrical Isomer

Yasuhiro Torisawa,[a] Akihiro Hashimoto,[a] Masako Nakagawa,*[,a]
Hiroko Seki,[b] Ritsuko Hara,[b] and Thoru Hino *[,a,b]
Faculty of Pharmaceutical Sciences,[a] and The Chemical Analysis Center,[b]
Chiba University,1-33, Yayoi-cho, Chiba-shi, 260 Japan

Manzamine C (1) and its geometrical isomer (2) have been synthesized.



1



2

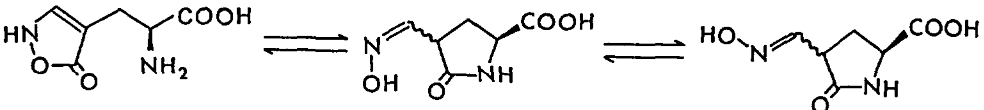
Tetrahedron, **1991,** *47,* 8079

A NOVEL AMINO ACID ANTIBIOTIC TAN-950

Shigetoshi Tsubotani*, Yasunori Funabashi, Masayuki Takamoto,
Seiji Hakoda and Setsuo Harada

Research and Development Division, Takeda Chemical Industries

The structures of novel antifungal antibiotics, TAN-950 A, B, C, D and E, were determined.



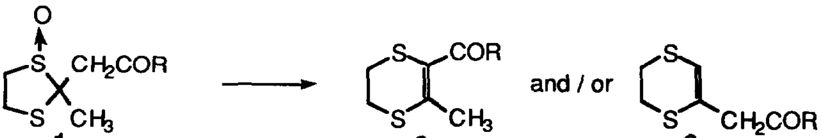
TAN-950 A (1)   TAN-950 B, D (2, 4)   TAN-950 C, E (3, 5)

Tetrahedron, **1991,** *47,* 8091

REARRANGEMENT MECHANISMS OF 1,3-DITHIOLANE SULFOXIDES.

Wha Suk Lee, Koo Lee, Kee Dal Nam, and Yang Joon Kim Organic Chemistry Research Laboratory.
Korea Institute of Science and Technology, P.O.Box 131, Cheongryang, Seoul, Korea

Thermal or acid catalyzed rearrangement of 1 resulted in 2 and / or 3 depending on the stereochemistry of 1 and reaction conditions. The mechanisms of ring expansion reactions are described.



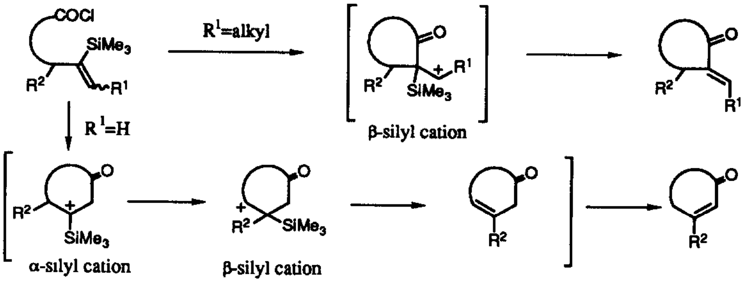
1   2   3

R = NHC_6H_5 , OCH_3

Tetrahedron, **1991,** *47,* 8111

Vinylsilane-Terminated Cycloacylation: A General Synthetic Approach to Four- to Six-Membered Cyclic Ketones and its Regiochemical Features

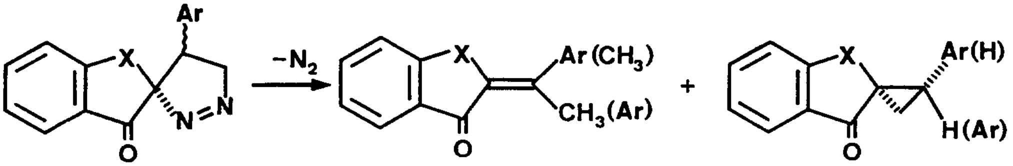
Naoyuki Kishi, Koichi Mikami*, Takeshi Nakai*
Department of Chemical Technology, Tokyo Institute of Technology, Meguro-ku, Tokyo 152, Japan



Tetrahedron, **1991,** *47,* 8119

THERMAL DECOMPOSITION OF SOME NEW SPIRO-1-PYRAZOLINES

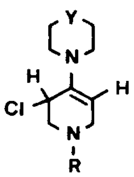
G.Tóth[a], A.Lévai[b], Z.Dinya[b] and G.Snatzke[c];
[a] Technical University Budapest (Hungary)
[b] Kossuth University Debrecen (Hungary)
[c] Ruhr University Bochum (Germany)

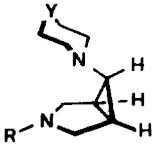


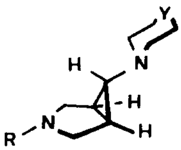
Tetrahedron, **1991,** *47,* 8133

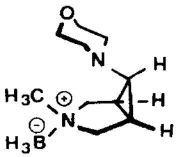
FUNCTIONALIZED CHLOROENAMINES IN AMINOCYCLOPROPANE SYNTHESIS - VIII. AMINO-AZABICYCLO[3.1.0]-HEXANE DIASTEREOMERS FROM CHLOROENAMINES AND BOROHYDRIDE

E. Vilsmaier*, C. Tetzlaff, V. Butz and G. Maas
Fachbereich Chemie der Universität Kaiserslautern, Kaiserslautern, Germany







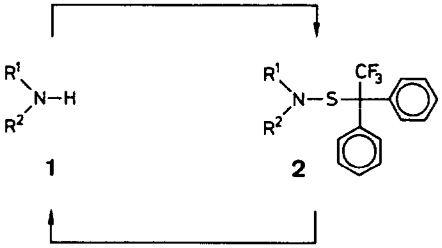


Tetrahedron, **1991**, *47*, 8145

The TDE Sulfenyl Group as a Protective Group for Amines

Thomas Netscher * and Thomas Weller
Chemisches Laboratorium der Universität,
Albertstr. 21, D-7800 Freiburg i. Br., FRG

The synthesis, cleavage, and properties of 2,2,2-trifluoro-1,1-diphenylethane- (TDE-) sulfenamides **2**, derived from amines **1**, are described.

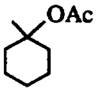


Tetrahedron, **1991**, *47*, 8155

OLEFINS BY TRANSITION METAL CATALYZED ELIMINATION REACTIONS FROM TERTIARY ALCOHOLS AND ACETATES

Thomas Schmidt, Max-Planck-Institut für Kohlenforschung, Kaiser-Wilhelm-Platz 1, D-4330 Mülheim an der Ruhr 1, F.R.G.

Compounds 1 to 5 are converted to olefins in high yield by transition metal catalyzed elimination reactions. β-Cedrene can be obtained as main product from 5 with molybdenum catalysts.



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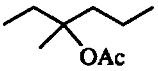
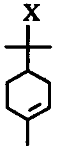
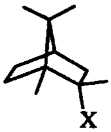


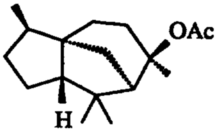
2



3a, X = OH
3b, X = OAc



4a, X = OH
4b, X = OAc

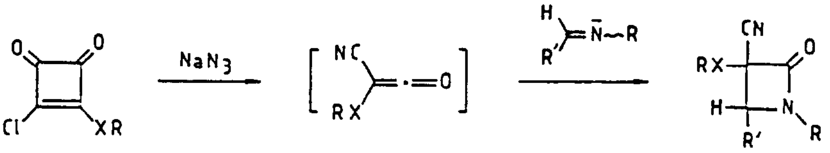


5

Tetrahedron, **1991**, *47*, 8161

Synthesis and Reactivity of Captodative Cyanoketenes

Marie-Christine Labille, Zdenek Janousek, and Heinz G. Viehe*
Laboratoire de Chimie Organique, Place L. Pasteur 1, B-1348 Louvain-la-Neuve, Belgium

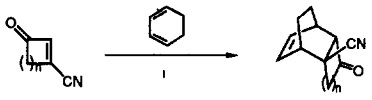


Tetrahedron, **1991**, *47*, 8167

β-CYANOCYCLOBUTENONE AS A HIGHLY REACTIVE DIENOPHILE IN COMPARISON TO β-CYANOCYCLOPENTENONE.

Bruno Bienfait, Geneviève Coppe-Motte, Robert Merényi, Heinz G.Viehe. Laboratoire de Chimie Organique, 1, Place L Pasteur, B-1348 Louvain-la-Neuve, Belgium

Willi Sicking, Reiner Sustmann. Institut fur Organische Chemie der Universitat Essen, Postfach 103764, D-4300 Essen, Germany



n = 1 i = RT,CHCl$_3$, 10 hrs, yield = 79 %

n = 2 i =C$_6$H$_6$ reflux, 50 days, yield = 21 %

Dienophile reactivity is found experimentally to be high for the four membered ring and very low for the five membered ring. Calculations (PM3 method) agree

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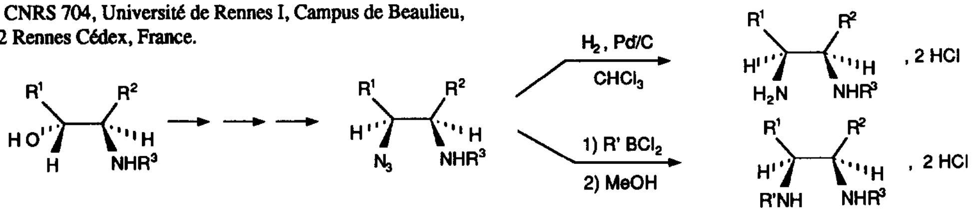
Tetrahedron, **1991**, *47*, 8177

SYNTHESIS OF 1,2-AMINOAZIDES. CONVERSION TO UNSYMMETRICAL VICINAL DIAMINES BY CATALYTIC HYDROGENATION OR REDUCTIVE ALKYLATION WITH DICHLOROBORANES.

A. Benalil, B. Carboni, M. Vaultier. Groupe de Physicochimie Structurale, URA CNRS 704, Université de Rennes I, Campus de Beaulieu, 35042 Rennes Cédex, France.



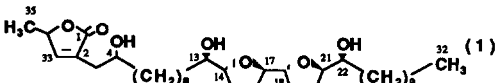
Tetrahedron, **1991**, *47*, 8195

MOLVIZARIN AND MOTRILIN: TWO NOVEL CYTOTOXIC BIS-TETRAHYDROFURANIC γ-LACTONE ACETOGENINS FROM *ANNONA CHERIMOLIA*

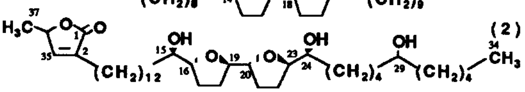
Diego CORTES*, Saw H. MYINT and Reynald HOCQUEMILLER

Laboratoire de Pharmacognosie, Faculté de Médecine et Pharmacie, Université de Rouen, 76800 Saint Étienne du Rouvray; and Laboratoire de Pharmacognosie, SDI 62330 CNRS, Faculté de Pharmacie, Université Paris-Sud, 92290 Châtenay-Malabry, France

Two new cytotoxic adjacent bis-tetrahydrofuranic acetogenins, molvizarin (1) and motrilin (2), have been isolated from the cytotoxic methanolic extract of *Annona cherimolia* (Annonaceae). Their structures were established on the basis of 2D-NMR spectroscopic techniques.



(1)



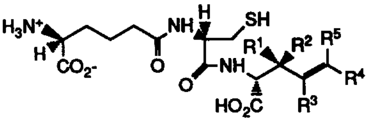
(2)

Tetrahedron, **1991**, *47*, 8203

SYNTHESIS OF δ-L-α-AMINOADIPOYL-L-CYSTEINYL -D-ALLYLGLYCINE, AND EIGHT DEUTERATED ANALOGUES, SUBSTRATES FOR THE INVESTIGATION OF THE MECHANISM OF ACTION OF ISOPENICILLIN N SYNTHASE.

Jack E. Baldwin*, Mark Bradley, Nicholas J. Turner, Robert M. Adlington, Andrew R. Pitt, and Helen Sheridan.
The Dyson Perrins Laboratory and the Oxford Centre for Molecular Sciences, Oxford University,
South Parks Road, Oxford, UK. OX1 3QY.

Abstract: The synthesis of δ-L-α-aminoadipoyl-L-cysteinyl-D-allylglycine (1a) from its component amino acids is described, along with the synthesis of eight analogues (1b-i) specifically deuterated at C-3 and/or C-5 of the allylglycine residue.



	R^1	R^2	R^3	R^4	R^5		R^1	R^2	R^3	R^4	R^5
(1a)	H	H	H	H	H	(1f)	H	H	D	D	H
(1b)	H/D	D/H	H	H	H	(1g)	D	D	H	H	H
(1c)	D	H	H	H	H	(1h)	D	D	H	H	D
(1d)	H	D	D	H	H	(1i)	D	D	D	D	H
(1e)	H	H	H	H	D						

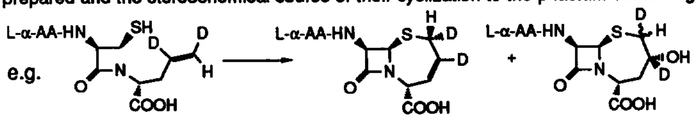
Tetrahedron, **1991**, *47*, 8223

ENZYMIC CONVERSION OF DEUTERATED ANALOGUES OF δ-L-α-AMINOADIPOYL-L-CYSTEINYL-D-ALLYLGLYCINE, AN UNNATURAL SUBSTRATE FOR ISOPENICILLIN N SYNTHASE: A UNIFIED THEORY OF SECOND RING CLOSURE.

Jack E. Baldwin*, Mark Bradley, Nicholas J. Turner, Robert M. Adlington, Andrew R. Pitt, and Andrew E. Derome.
The Dyson Perrins Laboratory and the Oxford Centre for Molecular Sciences,
Oxford University, South Parks Road, Oxford, OX1 3QY.

Abstract: The enzyme Isopenicillin N Synthase catalyses the conversion of the modified substrate δ-L-α-aminoadipoyl-L-cysteinyl-D-allylglycine to six β-lactam containing metabolites. Eight tripeptides deuterated in the allylglycine moiety have been prepared and the stereochemical course of their cyclization to the β-lactam containing metabolites has been investigated.

e.g.



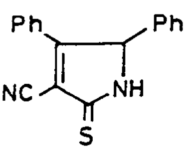
+ four other β-lactam products

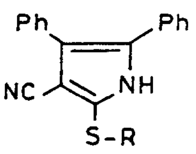
Tetrahedron, **1991**, *47*, 8243

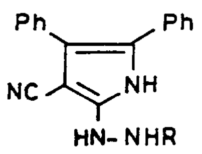
BENZOIN IN HETEROCYCLIC SYNTHESIS: SYNTHESIS AND REACTIONS OF 4-CYANO-2,3-DIPHENYL-2H-PYRROLE -5-THIONE

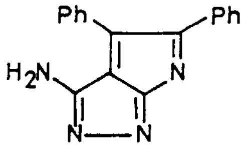
Fathy A. Khalifa, Nabila A. Ismail+, Ahmed H.H. Elghandour and Hussein F. Zohdi, Department of Chemistry, Faculty of Science, Cairo University, Giza, A.R. Egypt and +Zagazig University, Zagazig, A.R. Egypt.

Several new pyrrole and pyrazole derivatives were synthesised via the reactions of 4-cyano-2,3-diphenyl-2H-pyrrole-5-thione with different reagents.





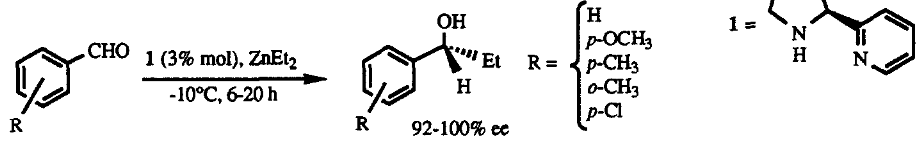




Tetrahedron, **1991**, *47*, 8251

Chiral Ligands Containing Heteroatoms. 8. 2-[(2*S*)-2-Pyrrolidinyl]Pyridine as Novel Catayst in the Enantioselective Addition of Diethylzinc to Aldehydes

Giorgio Chelucci, Sandra Conti, Massimo Falorni* and Giampaolo Giacomelli
Dipartimento di Chimica dell'Universita', via Vienna 2, I-07100 Sassari, Italy



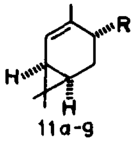
Compound 1 is an effective enantioselective catalyst in the addition of diethylzinc to aldehydes: optically active secondary alcohols in up to 100% ee were obtained in high yields.

Tetrahedron, **1991**, *47*, 8259

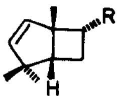
Photoinduced Vinylcyclopropane-Cyclopentene Rearrangement: A Methodology for Chiral Bicyclo[3.2.0]heptenes. Formal Syntheses of (±)-Grandisol and Naturally Occurring (-)-$\Delta^{9(12)}$-Capnellence and its Antipode

H.R. Sonawane*, V.G. Naik, N.S. Bellur, V.G. Shah, P.C. Purohit, M.U. Kumar,
D.G. Kulkarni and J.R. Ahuja
National Chemical Laboratory, Pune 411008, India

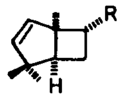
The photochemical transformation of Δ^2-carene derivatives (**11a-g**) into chiral bicyclo[3.2.0]heptenes (**12a-g** and **13a-g**) and their use in the syntheses of (+)- and (-)-$\Delta^{9(12)}$-capnellene (**3**) and (±)-grandisol (**2**) is presented.



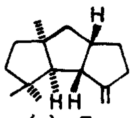
11a-g



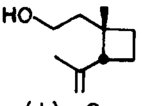
12a-g



13a-g



(-)-3

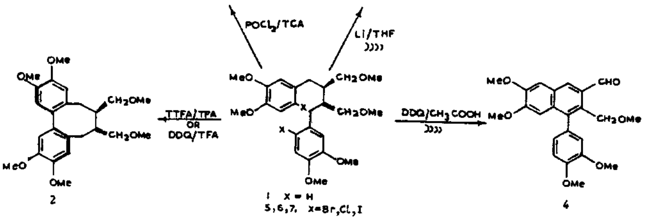


(±)-2

Tetrahedron, **1991**, *47*, 8277

OXIDATIVE ARYL-ARYL, ARYL-BENZYL COUPLING OF LIGNANS-REACTIONS OF PHYLLANTHIN AND HALODERIVATIVES WITH TTFA, DDQ, Li/THF)))) : SYNTHESIS OF DIBENZOCYCLOOCTADIENE SYSTEM AND PHYLTETRALIN

Panchagnula Satyanarayana*, Somepalli Venkateswarlu And Kamma N. Viswanatham
Department of Organic Chemistry, School of Chemistry, Andhra University,
Visakhapatnam-530 003, India.



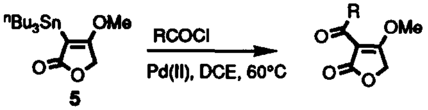
Tetrahedron, **1991**, *47*, 8285

The Total Synthesis of Agglomerin A and (±)-Carolinic Acid. A General Method for the Prepartion of 3-Acyl Tetronic Acids Via Direct Acylation of O-Methyl 3-Stannyl Tetronates.

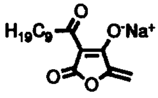
Steven V. Ley*, Mark L. Trudell and David J. Wadsworth

Dept. of Chemistry, Imperial College of Science, Technology and Medicine, London SW7 2AY, United Kingdom

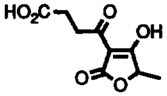
A variety O-methyl 3-acyl tetronates were prepared in good yields from the corresponding acid chlorides via a palladium catalyzed acylation of O-methyl 3-(tri-*n*-butylstannyl) tetronate **5**. This new synthetic method was exploited for the total synthesis agglomerin A **3a** and (±)-carolinic acid **15**.



5



3a



15

Tetrahedron, **1991**, *47*, 8297

X=Y-ZH Systems as potential 1,3-Dipoles. Part 34. Generation of Nitrones from Oximes. Tandem Michael Addition- 1,3-Dipolar Cycloaddition Reactions. Class 2 Processes Utilising Bifunctional Michael Acceptor-Dipolarophile Components.

Ronald Grigg,*[a] Michael J. Dorrity,[b] Frances Heaney,[b] John F. Malone,[b] Shuleewan Rajviroongit,[b] Visuvanathar Sridharan,[a] and Sivagnanasundram Surendrakumar.[a]

a. School of Chemistry, Leeds University, Leeds LS2 9JT. b. Chemistry Department, Queens University, Belfast BT9 5AG.

Oximes react with bifunctional substrates via an intermediate N-alkenyl nitrone to give bridge ring cycloadducts in good yield.