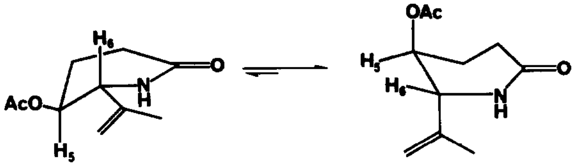
GRAPHICAL ABSTRACTS

Tetrahedron, **1994**, *50*, 7947

CONFORMATIONAL ANALYSIS OF δ-LACTAMS.

Nicolas Boudreault, Richard G. Ball†, Christopher Bayly,
Michael A. Bernstein and Yves Leblanc*
Merck Frosst Centre for Therapeutic Research, P.O. Box 1005,
Pointe-Claire - Dorval, Quebec, H9R 4P8, Canada
†Merck & Co., Inc., 126 Lincoln Avenue, Rahway,
New Jersey, U.S.A. 07065-0900

It has been observed that C-5 oxygen substituted lactams exist, in solution principally, in the axial conformation due to the attractive gauche effect. This form is also present in the solid state.



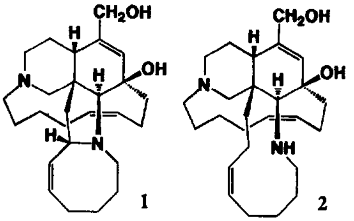
Tetrahedron, **1994**, *50*, 7957

Ircinols A and B, First Antipodes of Manzamine-Related Alkaloids from an Okinawan Marine Sponge

Masashi Tsuda, Naoko Kawasaki, and Jun'ichi Kobayashi*

Faculty of Pharmaceutical Sciences, Hokkaido University, Sapporo 060, Japan

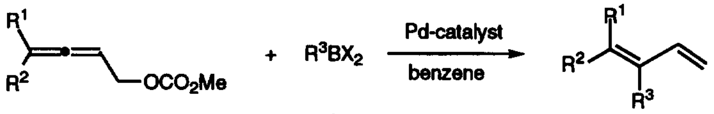
Two new manzamine-related alkaloids, ircinols A (**1**) and B (**2**), have been isolated from the Okinawan marine sponge *Amphimedon* sp.



Tetrahedron, **1994**, *50*, 7961

A New Facile Synthesis of 2-Substituted 1,3-Butadiene Derivatives *via* Palladium-Catalyzed Cross-Coupling Reaction of 2,3-Alkadienyl Carbonates with Organoboron Compounds.

Tsukasa Moriya, Toshinari Furuuchi, Norio Miyaura,* Akira Suzuki
Department of Applied Chemistry, Faculty of Engineering, Hokkaido University, Sapporo 060, Japan



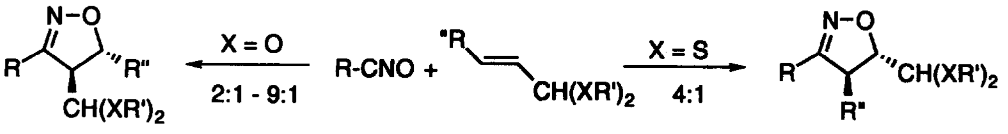
R^3 = alkyl, 1-alkenyl, and aryl

Tetrahedron, **1994**, *50*, 7969

REVERSING THE REGIOCHEMICAL COURSE OF 1,3-DIPOLAR CYCLOADDITION OF NITRILE OXIDES BY MODIFICATION OF DIPOLAROPHILES

Akio Kamimura* and Kenzi Hori, Department of Chemistry, Faculty of Liberal Arts, Yamaguchi University, Yamaguchi 753, Japan

Choice of carbonyl protective group reverses the regiochemistry of nitrile oxide cycloaddition.



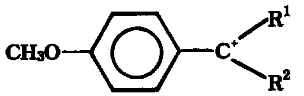
Tetrahedron, **1994**, *50*, 7981

Theoretical Studies of the Effects of α-Substituents on the Resonance Demand of 4-Methoxybenzyl Carbocations

Ikchoon Lee*, Dong Soo Chung and Hak Jin Jung†
*Department of Chemistry, Inha University, Inchon 402-751, Korea
† Department of Chemistry, Dongshin University, Naju, Chonnam 520-714, Korea

AM1 studies on :

$CH_3OC_6H_4CR^1R^2Cl$ ---->



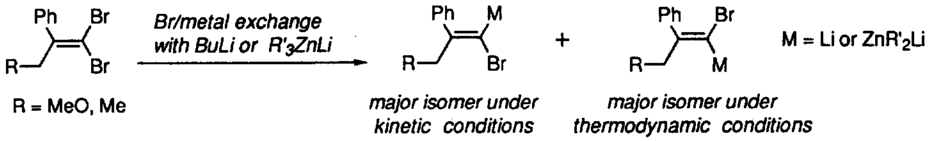
\+ Cl^-

$\Delta q(C_\alpha^+)$ and $\Delta q(O^+)$ are linear with polar substituent constants $\Sigma\sigma^*$ of R^1 and R^2.

Tetrahedron, **1994**, *50*, 7987

STEREOCHEMISTRY IN CARBENOID FORMATION BY BROMINIE/LITHIUM AND BROMINE/ZINC EXCHANGE REACTIONS OF *gem*-DIBROMO COMPOUNDS.

Toshiro Harada,* Takeshi Katsuhira, Kazuhiro Hattori, and Akira Oku*, Department of Chemistry, Kyoto Institute of Technology, Matsugasaki, Sakyo-ku, Kyoto 606 , Japan

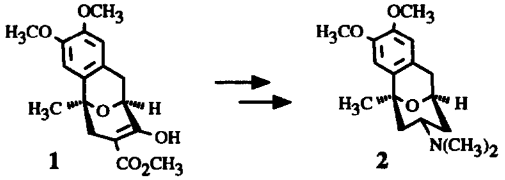


Tetrahedron, **1994**, *50*, 8003

Benzomorphan Analogous CNS Agents: Synthesis of Homochiral Epoxybenzocyclooctenamines

Bernhard Wünsch*, Matthias Zott, Georg Höfner, Institut für Pharmazie und Lebensmittelchemie der Universität München, Sophienstr.10, D-80333 Munich, Germany

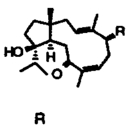
Starting with the enol ester **1** a stereoselective synthesis of the homochiral tricyclic amine **2** as well as the CNS effects of **2** are described.



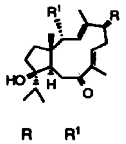
Tetrahedron, **1994**, *50*, 8011

NEW DOLABELLANES FROM THE MARINE ALGA *DICTYOTA PARDALIS* f. *PSEUDOHAMATA*

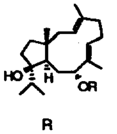
Gabriele M. König and Anthony D. Wright, Department of Pharmacy, Swiss Federal Institute of Technology (ETH) Zürich, Winterthurerstrasse 190, CH-8057 Zürich, Switzerland.



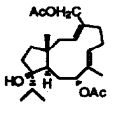
R	
OAc	1
H	6



R	R¹	
H	H	7
H	OAc	8
OAc	H	2



R	
H	3
Ac	4



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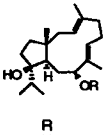
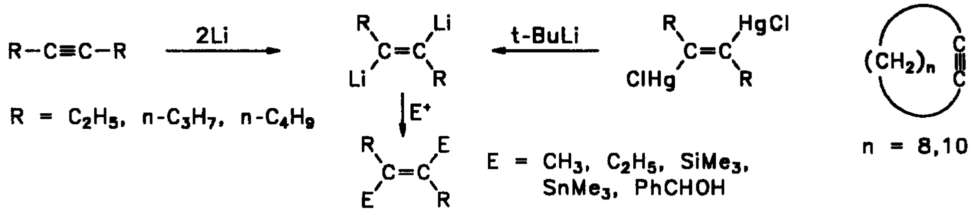


R	
H	9
Ac	10

Tetrahedron, **1994**, *50*, 8019

Polylithiumorganic Compounds - 20.
STEREOSELECTIVE SYNTHESIS OF VICINAL DILITHIO-ALKENES BY ADDITION OF LITHIUM METAL TO CARBON-CARBON TRIPLE BONDS

Adalbert Maercker and Ulrich Girreser - Institut für Organische Chemie der Universität Siegen, D-57068 Siegen (Germany)



R = C_2H_5, n-C_3H_7, n-C_4H_9

E = CH_3, C_2H_5, $SiMe_3$, $SnMe_3$, PhCHOH

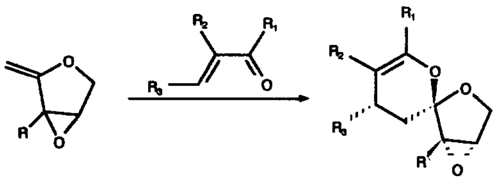
n = 8,10

Tetrahedron, **1994**, *50*, 8035

π-Facial Diastereoselection in [4+2]-Cycloadditions of 3,4-Epoxy-2-methyleneoxolanes with Oxadienes: A Short Synthesis of Spiroketals.

P. Pale[a*], J. Bouquant[a], J. Chuche[a] and P. A. Carrupt[b], P. Vogel[c*]
a) Laboratoire de chimie organique physique, associé au CNRS, Université de Reims-Champagne-Ardenne; 51100 Reims, France.
b) Institut de Chimie Thérapeutique, Université de Lausanne, BEP- Dorigny, Suisse
c) Institut de Chimie Organique, Université de Lausanne, 2 rue de la Barre, Lausanne, Suisse

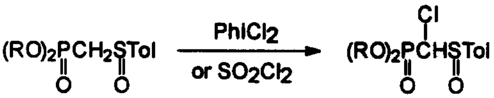
Hetero Diels-Alder reaction of oxadienes with 3,4-epoxy-2-methylene oxolanes gave 3,4-epoxy-1,6-dioxaspiro[4, 5]dec-7-enes with high stereoselectivity. Good yields of adducts were obtained in the presence of mild Lewis acids, such as $ZnCl_2$ or $SnCl_2$. Oxadiene addition is anti relative to the allylic epoxy substituent and totally endo selective relative to the enol ether function. *Ab initio* calculations suggested that the very high diastereo selectivity observed originates from conformational preferences in the transition state.



Tetrahedron, **1994**, *50*, 8053

STEREOCHEMISTRY OF α-CHLORINATION OF α-PHOSPHORYL SULFOXIDES.

M.Mikolajczyk*[a], W.H.Midura[a], S.Grzejszczak[a], F.Montanari[b], M.Cinquini[b], M.W.Wieczorek[c], J.Karolak-Wojciechowska[c]
[a]Centre of Molecular and Macromolecular Studies,Polish Academy of Sciences,90-363 Lodz,Sienkiewicza 112,Poland
[b]Centro C.N.R. e Istituto di Chimica Industriale dell' Universita', 21023 Milan, Via C.Golgi 19, Italy
[c]Institute of General Chemistry, Technical University, 90-924 Lodz, Zwirki 36, Poland



$$\underset{\mathbf{1}}{(RO)_2\underset{\|}{\overset{}{P}}CH_2\underset{\|}{S}Tol} \xrightarrow[\text{or } SO_2Cl_2]{PhCl_2} \underset{\mathbf{2}}{(RO)_2\underset{\|}{P}\overset{Cl}{C}H\underset{\|}{S}Tol}$$
$$\text{(P=O, S=O)}$$

1 2

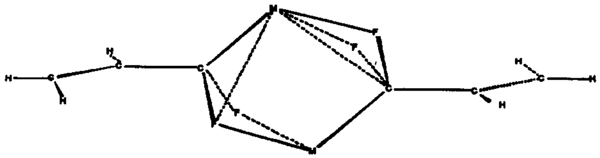
Chlorination of (+)-(S)-α-dimethoxyphosphorylmethyl p-tolyl sulfoxide indicates that the reaction occurs with retention of configuration at both chiral centres.

Tetrahedron, **1994**, *50*, 8073

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

C.Canepa, P.Antoniotti and G.Tonachini* Istituto di Chimica Organica, Università di Torino, v. P.Giuria, 7 10125 Torino, Italy

The interaction of a discrete number of water molecules (modelling ether molecules) reduces the dimerization energies significantly, but the equilibrium still lies in favour of the dimers.

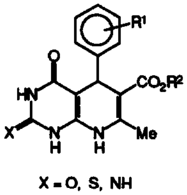


Tetrahedron, **1994**, *50*, 8085

SYNTHESIS AND STRUCTURE OF NEW PYRIDO[2,3-d]PYRIMIDINE DERIVATIVES WITH CALCIUM CHANNEL ANTAGONIST ACTIVITY

A. Pastor,[a] R. Alajarin,[a] J. J. Vaquero,[a] J. Alvarez-Builla,*[a] M. Fau de Casa-Juana,[b] C. Sunkel,[b] J. G. Priego,[b] I. Fonseca,[c] J. Sanz-Aparicio[c]
[a]*Depto. de Química Orgánica, Univ. de Alcalá. 28871-Alcalá de Henares. Madrid.* [b]*Laboratorios Alter S.A. Mateo Inurria 30, 28036-Madrid.* [c]*Instituto Rocasolano, CSIC, Serrano 19, 28006-Madrid. Spain*

Several new pyrido[2,3-d]pyrimidine derivatives with vasorelaxant activity were synthesized by reaction of aminopyrimidines and arylmethyleneacetoacetates. Structural and conformational aspects were studied by X-ray analysis.

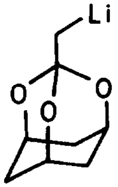


Tetrahedron, **1994**, *50*, 8099

A ß,ß,ß-TRIALKOXYETHYLLITHIUM STABLE TOWARDS FRAGMENTATION: A CARBOXYL PROTECTED ACETIC ACID DIANION EQUIVALENT.

Sosale Chandrasekhar* and Chandra Deo Roy, Department of Organic Chemistry, Indian Institute of Science, Bangalore 560 012, India.

The titled compound, shown alongside, has been prepared from the corresponding bromide (0-5 °C); its addition to benzaldehyde defines a novel route to ß-phenyl-ß-aminopropanoic acid in 5 steps.

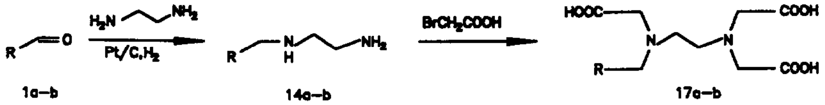


Tetrahedron, **1994**, *50*, 8103

REDUCTIVE AMINATION OF ALDOHEXOSES WITH MONO- AND BIFUNCTIONAL ALKYL AMINES: CONVERSION OF CARBOHYDRATES INTO EDTA TYPE COMPLEXING AGENTS.

Hendrik Lammers*, Joop A. Peters, and Herman van Bekkum, Laboratory of Organic Chemistry and Catalysis, Delft University of Technology, Julianalaan 136, 2628 BL Delft, The Netherlands

Reductive amination of D-galactose (**1a**) or D-mannose (**1b**) and subsequent carboxymethylation resulted in sugar based EDTA type complexing agents **17a-b** with promising coordinating abilities.



Tetrahedron, **1994**, *50*, 8117

A COMPARATIVE STUDY ON THE PHOTO-INDUCED ARYLATION OF β-DICARBONYL COMPOUNDS BY ARYLAZOSULFIDES AND ITS USE IN THE SYNTHESIS OF METHYL LABELED 2-ARYLPROPIONIC ACIDS

Mercè Tona, Francisco Sánchez-Baeza and Angel Messeguer *
Dpt. Biological Organic Chemistry, CID (CSIC). J. Girona, 18. 08034 Barcelona, Spain.

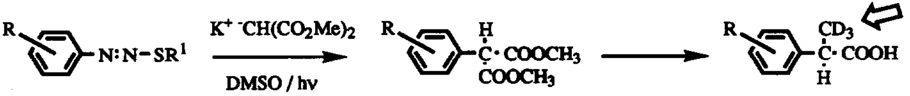


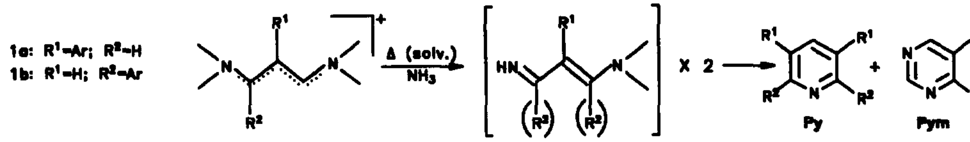
Photo-induced reaction of selected arylazosulfides in the presence of [K⁺ ⁻CH(CO₂Me)₂], followed by regioselective methylation, hydrolysis and decarboxylation, is a convenient route for the synthesis of Ketoprofen and Ibuprofen isotopomers labeled at C-2.

Tetrahedron, **1994**, *50*, 8127

Selectivities in the Formation of Pyridines and Pyrimidines by Ammonia-induced Cyclocondensations of Vinamidiniums

S. Natarajan Balasubrahmanyam,* Bommuswamy Jeyashri and Irishi N. Narayanan Namboothiri,
Department of Organic Chemistry, Indian Institute of Science, Bangalore 560 012, India

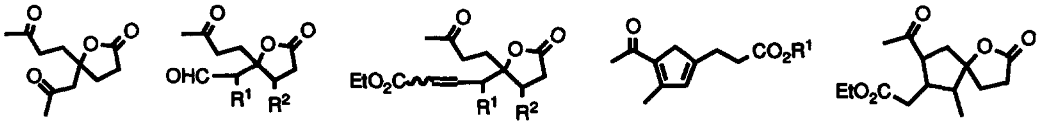
Monosubstituted vinamidiniums, 1a and 1b, cyclocondense in the presence of ammonia and yield specific substituted pyridines and pyrimidines. Reasons for the specificity are discussed.



Tetrahedron, **1994**, *50*, 8143

SYNTHESIS OF 5,5-DISUBSTITUTED 2(3*H*)-DIHYDROFURANONES CONTAINING SIDE-CHAIN CARBONYL FUNCTIONS, AND SOME DERIVATIVES.

Joan Bassa,[1] Marta Planas,[1] Cristóbal Segura,[1] Montserrat Ventura,[1]* and Rosa M. Ortuño.[2]*
Departament de Química, 1: Universitat de Girona. 2: Universitat Autònoma de Barcelona. Spain.

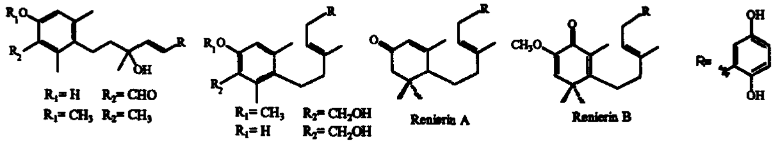


Tetrahedron, **1994**, *50*, 8153

SESQUITERPENE HYDROQUINONES FROM THE SPONGE *RENIERA MUCOSA*

Eva Zubía, María J. Ortega, J. Luis Carballo and Javier Salvá*
Departamento de Química Orgánica. Facultad de Ciencias del Mar. Apdo. 40, 11510 Puerto Real, Cádiz, SPAIN.

The sponge *Reniera mucosa* contains eight new compounds, six of them of the panicein class and two novel cyclohexenones renierin A and renierin B, together with seven related known compounds.

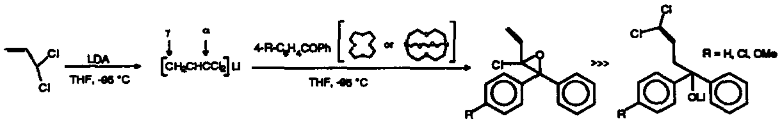


Tetrahedron, **1994**, *50*, 8161

ADDITION REACTION OF *gem*-DICHLOROALLYL LITHIUM TO BENZOPHENONES IN THE PRESENCE OF MACROCYCLIC LIGANDS: FORMATION OF CHLORO OXIRANES

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

Benzophenones selectively attack the γ terminus of *gem*-dichloroallyl lithium, but show an increasing α selectivity in the presence of 12-crown-4 and cryptand [2.1.1]. The lithium alkoxide intermediates undergo epoxidation by internal S_N reaction.

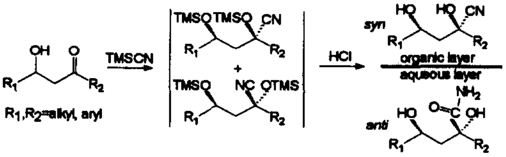


Tetrahedron, **1994**, *50*, 8169

ON THE DIASTEREOSELECTIVITY OF CYANIDE ADDITION TO β-HYDROXYKETONES: ONE-POT SYNTHESIS OF *syn* β-HYDROXYCYANOHYDRINS AND *anti* 2,4-DIHYDROXYAMIDES

Manohar Singh Batra, Francisco J. Aguilar and Ernesto Brunet* *Departamento de Química, C-I. Facultad de Ciencias. Universidad Autónoma de Madrid, 28049-Madrid, Spain* Fax 34 1 397 3966

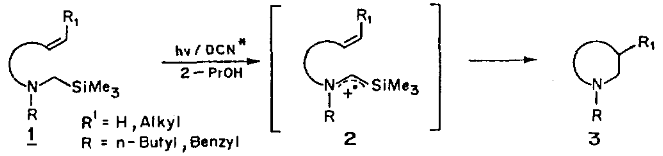
The intrinsic stereoselectivity of TMSCN addition to β-hydroxyketones in the presence of 18-crown-6 or ZnI_2 resulted lower than that previously reported but a convenient and simple work-up procedure rendered diastereoselectively *syn* β-hydroxycyanohydrins and *anti* 2,4-dihydroxyamides in a single step.



Tetrahedron, **1994**, *50*, 8185

PHOTOINDUCED ELECTRON TRANSFER (PET) PROMOTED CYCLISATIONS OF 1-[N-ALKYL-N-(TRIMETHYLSILYL) METHYL] AMINES TETHERED TO PROXIMATE OLEFIN:MECHANISTIC AND SYNTHETIC PERSPECTIVES

G.Pandey*, G.Devi Reddy and G.Kumaraswamy
Div. of Org. Chem. (Syn), National Chemical Laboratory, Pune 8, India

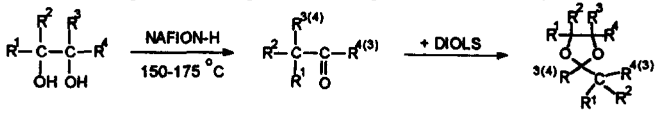


Tetrahedron, **1994**, *50*, 8195

TRANSFORMATION OF 1,2-DIOLS OVER PERFLUORINATED RESINSULFONIC ACIDS (NAFION-H)

I. Bucsi*; Á. Molnár; M. Bartók; G. A. Olah⁺
Department of Organic Chemistry, József Attila University, H-6720 Szeged, Dóm tér 8, Hungary,
⁺Loker Hydrocarbon Research Institute, University of Southern California, Los Angeles, CA, 90089-1661, U.S.A.

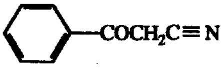
1,2-Diols can be dehydrated with Nafion-H catalyst under relatively mild conditions (150-175°C) as compared to zeolites. The characteristic trans-formation route, as in general, is the pinacol rearrangement followed by cyclization to substitued 1,3-dioxolanes.



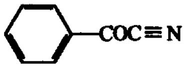
Tetrahedron, **1994**, *50*, 8203

ZINC-PROMOTED REACTIONS. 9. THE FATE OF THE CYANO GROUP IN THE REDUCTION OF SIMPLE CYANOKETONES AND N-CYANOAMINES

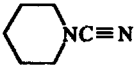
Maria Luisa Di Vona, Luciana Luchetti, Vittorio Rosnati. Dipartimento di Scienze e Tecnologie Chimiche, Università degli Studi di Roma "Tor Vergata", Via della Ricerca Scientifica, 00133 Roma, Italia



1



2



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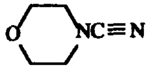


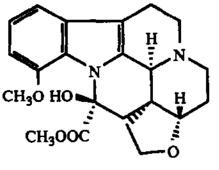
4

Tetrahedron, **1994**, *50*, 8209

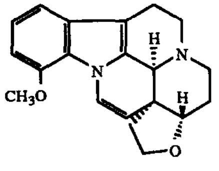
SYNTHESIS OF *VINCA* ALKALOIDS AND RELATED COMPOUNDS, LXXI
SYNTHESIS OF (±)-CUANZINE, (±)-DECARBOMETHOXY-APOCUANZINE, AND SOME OF THEIR EPIMERS

Ferenc Sóti*‡, Mária Kajtár-Peredy,
Zsuzsanna Kardos-Balogh, Mária Incze,
Gábor Keresztury, Gábor Czira, and Csaba Szántay*
Central Research Institute for Chemistry,
Hungarian Academy of Sciences,
H-1525 Budapest, POB 17, Hungary

We started the synthesis from 7-methoxytryptamine.



(±)-Cuanzine



(±)-Decarbomethoxyapocuanzine

Tetrahedron, **1994**, *50*, 8227

ZINC *MESO*-TETRAPHENYLPORPHYRIN AS SHIFT REAGENT FOR NADH-MODELS

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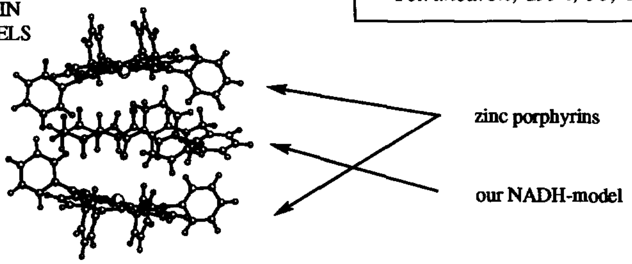
By the use of zinc *meso*-tetraphenylporphyrin as shift reagent, the conformations of two new NADH-models have been determined.



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MICHAEL AND SUBSTITUTION REACTIONS OF BICYCLIC TETRONIC, TETRAMIC AND THIOTETRONIC ESTERS

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Reaction of heterocycles [1] with nucleophiles led to the formation of a range of addition [4] and substitution [5] products. (X = O, NH, S; R = H, Me, Y = OR, SR, NHR, O_2CCF_3, Me, nBu)