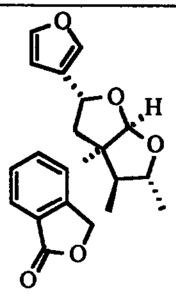
GRAPHICAL ABSTRACTS

CLERODANE AND AROMATIC SECO-CLERODANE DITERPENOIDS FROM *Salvia rhyacophila*.

Tetrahedron, **1991**, *47*, 7199

María del Carmen Fernández, Baldomero Esquivel, Jorge Cárdenas,
Ana Adela Sánchez, Ruben Alfredo Toscano and Lydia Rodríguez-Hahn*
Instituto de Química de la Universidad Nacional Autónoma de México,
Circuito Exterior, Ciudad Universitaria, Coyoacan 04510, México, D F

From the aerial parts of *Salvia rhyacophila* seven clerodane diterpenoids were isolated. Rhyacophiline (**12**), an aromatic seco-clerodane diterpenoid was isolated and its structure established by spectral means and X-ray diffraction analysis



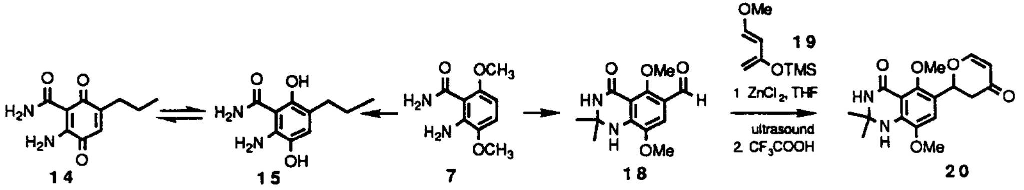
12

Synthesis Directed Towards Putative Advanced Intermediates in Sarubicin A Biosynthesis

Tetrahedron, **1991**, *47*, 7209

Steven J Gould*, Rodney L Eisenberg, and Larry R Hillis
Department of Chemistry, Oregon State University, Corvallis, Oregon 97331-4003, USA

3,6-Dihydroxyanthranilamide and 3,6-diyhydroxy-5-propylanthranilamide, **15**, were synthesized, while the former was too unstable to isolate the latter was stable and could be reversibly oxidized to the quinone **14** 3,6-Dimethoxyanthranilamide, **7**, was treated with acetone/TsOH, brominated, lithiated, and then formylated to give **18** which was used in a hetero-Diels-Alder reaction with Danishefsky's diene, **19**, to make C-glycoside **20** The relevance to the biosynthesis of sarubicin A is discussed

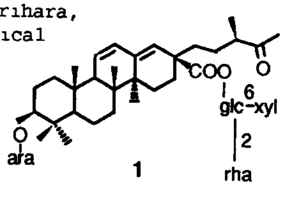


ILEXOSIDES E,F,G,H AND I, NOVEL ANTI-ALLERGIC 18, 19-SECO-TRITERPENE GLYCOSIDES FROM FRUIT OF *ILEX CRENATA*

Tetrahedron, **1991**, *47*, 7219

Takashi kakuno, Kazuko Yoshikawa*, Shigenobu Arihara,
Masao Takei, Koichi Endo·Faculty of Pharmaceutical
Sciences, Tokushima-Bunri University,
Tokushima-shi, Tokushima, 770, Japan

Ilexosides E(1),I(5) and other three homologues with anti-allergic effct have been isolated from the title plant.



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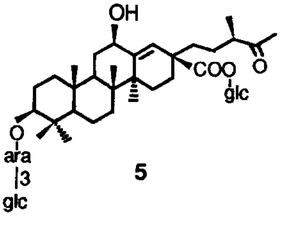
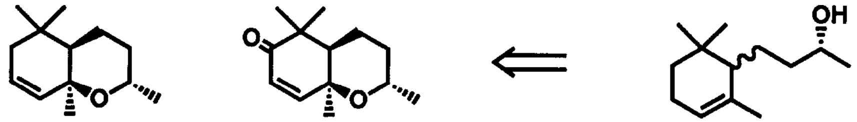


5

A Synthetic Study of (-)-Dihydroedulan II and Related Compounds

Tetrahedron, **1991**, *47*, 7227

Takeshi Sugai, Tomoki Yokochi, Naoyuki Watanabe and Hiromichi Ohta*
Department of Chemistry, Keio University, Hiyoshi 3-14-1, Yokohama 223, Japan



(-)-Dihydroedulan II **1**   (+)-**2**   obtained by lipase-catalyzed kinetic resolution

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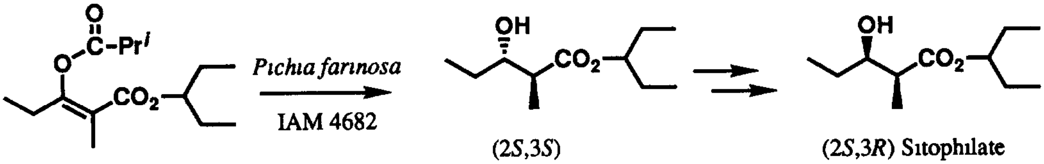
A Synthesis of (-)-Sitophilate by Utilizing Yeast-mediated Reduction of an Enol Ester

Tetrahedron, **1991**, *47*, 7237

Takeshi Sugai, Daisuke Sakuma, Naoki Kobayashi and Hiromichi Ohta*
Department of Chemistry, Keio University, Hiyoshi 3-14-1, Yokohama 223, Japan

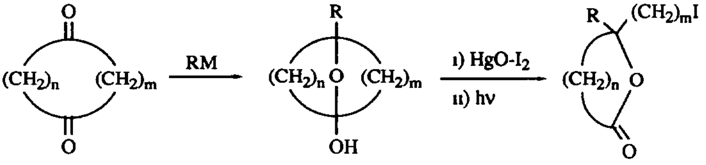


(2*S*,3*S*)   (2*S*,3*R*) Sitophilate

Tetrahedron, **1991**, *47*, 7245

A NEW ROUTE TO γ-SUBSTITUTED γ-LACTONES AND δ-SUBSTITUTED δ-LACTONES BASED ON THE REGIOSELECTIVE β-SCISSION OF ALKOXYL RADICALS GENERATED FROM TRANSANNULAR HEMIACETALS[1]

Kazuhiro Kobayashi, Akiyoshi Sasaki, Yoshikazu Kanno, and Hiroshi Suginome*
Organic Synthesis Division, Faculty of Engineering, Hokkaido University, Sapporo 060, Japan



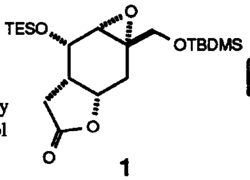
n=2 or 3, m=3 or 4, R=H, alkyl, or aryl

Tetrahedron, **1991**, *47*, 7259

Pd(II)-MEDIATED INTRAMOLECULAR ACETAL FORMATION APPLIED TO A SUBSTRATE PREPARED FROM D-GLUCOSE : A FORMAL SYNTHESIS OF ENANTIOMERIC PANICULIDE B

Kin-ichi Tadano,* Akiko Miyake , and Seiichiro Ogawa
Department of Applied Chemistry, Keio University, Hiyoshi, Yokohama 223, Japan

The key synthetic intermediate 1 of sesquiterpene paniculide B was efficiently synthesized from a densely functionalized enantiomerically pure cyclohexenol 2, which was prepared from D-glucose



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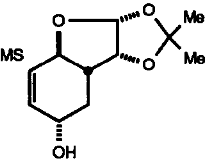

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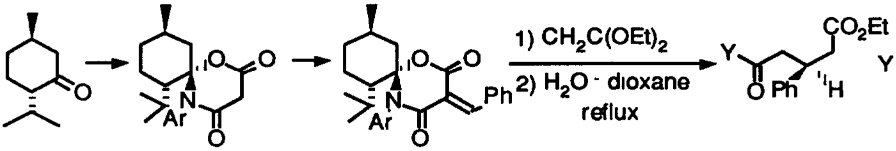
Tetrahedron, **1991**, *47*, 7271

Chiral Spirocyclic (Z)-5-Arylmethylene-1,3-oxazine-4,6-diones, New Chiral Heterodienes

Masayuki Sato,* Noritaka Kitazawa, Shinya Nagashima, and Chikara Kaneko,*
Pharmaceutical Institute, Tohoku University, Aobayama, Sendai 980, Japan
Naoko Inoue and Toshio Furuya, Tsukuba Research Laboratory, Yamanouchi Pharmaceutical Co Ltd , 21 Miyukigaoka, Tsukuba, Ibaraki 305, Japan

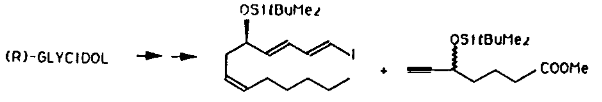


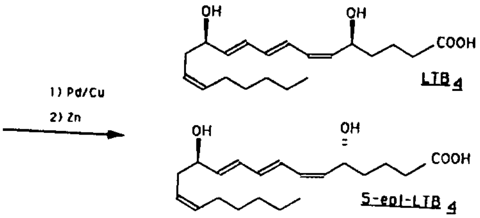
Y = NHAr and OH

Tetrahedron, **1991**, *47*, 7279

TOTAL SYNTHESIS OF (+)-LEUKOTRIENE B4 METHYL ESTER AND ITS 5-EPIMER FROM (R)-GLYCIDOL

M Avignon-Tropis M Treilhou, J R Pougny†
Centre de Recherche de Biochimie et Génétique cellulaires CNRS
118 Route de Narbonne, 31062 Toulouse
I Fréchard Ortuno G Linstrumelle*
Laboratoire de Chimie Associé au CNRS Ecole Normale Supérieure
24 rue Lhomond 75231 Paris Cedex 05

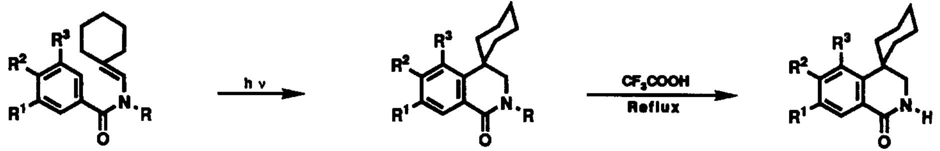




Tetrahedron, **1991**, *47*, 7287

PHOTOCYCLISATION DE *N*-BENZOYLENAMINES. SYNTHESES DE SPIROCYCLOHEXANES EN SERIE ISOQUINOLEINE

J -C Gramain, S Mavel, Y Troin, D Vallée-Goyet
Chimie des Substances Naturelles, Université Blaise Pascal, URA 485 du CNRS, 63177 Aubière Cedex France



The photocyclization of substituted *N*-benzoylenamines is described and the regioselectivity of the reaction studied

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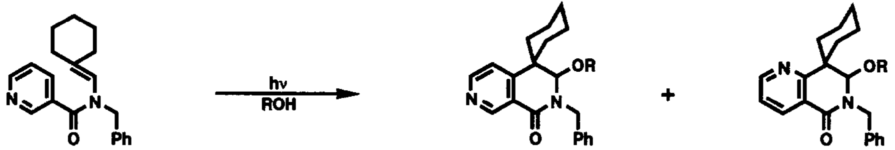
Tetrahedron, **1991**, *47*, 7301

PHOTOCYCLISATION DE *N*-AROYLENAMINES DERIVEES D'ACIDES CARBOXYLIQUES HETEROAROMATIQUES. SYNTHESES DE SPIROCYCLOHEXYL PIPERIDINES ACCOLEES A UN HETEROCYCLE

J -C Gramain, Y Troin, D Vallée-Goyet
Chimie des Substances Naturelles, Université Blaise Pascal, URA 485 du CNRS, 63177 Aubière Cedex France



The photocyclization of *N*-aroylenamines, carried out in nucleophilic solvents, led to functionalized heterocyclic spiranic compounds

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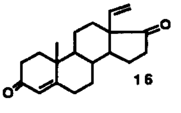
Tetrahedron, **1991**, *47*, 7309

SYNTHESIS OF 18-SUBSTITUTED ANDROST-4-EN-3-ONE DERIVATIVES AS POTENTIAL INHIBITORS OF ALDOSTERONE BIOSYNTHESIS

Antoinette Viger, Suzy Coustal, Philippe Schambel and Andrée Marquet
Laboratoire de Chimie Organique Biologique - URA CNRS 493 - Université Paris 6 - 75252 PARIS CEDEX05- F

Androst-4-en-3-one derivatives substituted at the 18-methyl group bearing a 17-keto or 17-spirolactone function have been synthesized and tested *in vitro* as inhibitors of aldosterone biosynthesis



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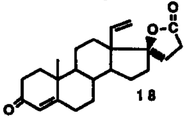

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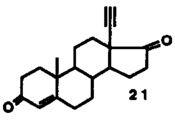

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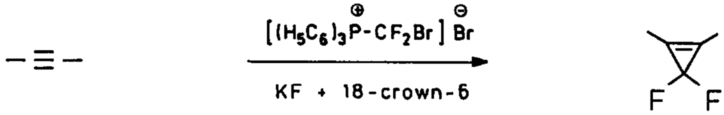
Tetrahedron, **1991**, *47*, 7323

gem-DIFLUOROCYCLOPROPENES BY [1+2] CYCLOADDITION REACTIONS BETWEEN DIFLUOROCARBENE AND ACETYLENES HAVING TERMINAL OR INTERNAL TRIPLE BONDS

Yves BESSARD and Manfred SCHLOSSER *
Institut de Chemie organique, Université de Lausanne, Switzerland

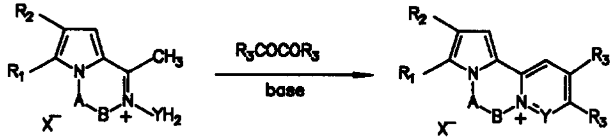


Tetrahedron, **1991**, *47*, 7329

NEW USES OF THE WESTPHAL CONDENSATION. SYNTHESIS OF PI-DONOR-PI-ACCEPTOR HETEROCYCLES

María P Matia[a], Jesús Ezquerra[b], Francisco Sánchez-Ferrando[c], José L García-Navío[a], Juan J Vaquero[a] and Julio Alvarez-Builla*[a], [a] Departamento de Química Orgánica, Universidad de Alcalá, (Spain), [b] Centro de Investigación LILLY S A , (Spain), [c] Departament de Química, Universitat Autónoma de Barcelona, (Spain)

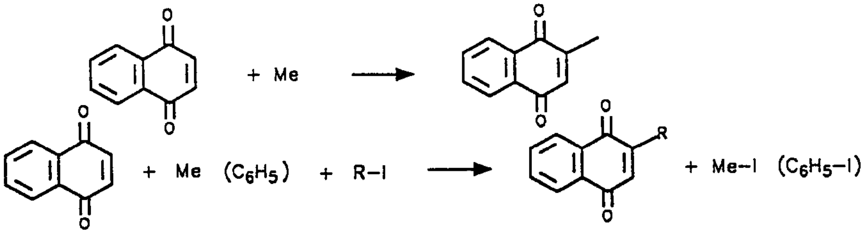
A two-step synthesis of pyrido[1,2-a]-pyrrolo[2,1-c]pyrazin-7-ium salts and related fused heterocycles, with linked π-donor and π-acceptor moieties, is described



Tetrahedron, **1991**, *47*, 7343

HOMOLYTIC ALKYLATION OF NAPHTHOQUINONE AND METHYL-NAPHTHOQUINONE.ENTHALPIC, STERIC AND POLAR EFFECTS.

F.Coppa, F.Fontana, F.Minisci*, M.C Nogueira Barbosa, E. Vismara, Dip Chimica, Politecnico, pzza Leonardo da Vinci 32, 20133 Milan, Italy

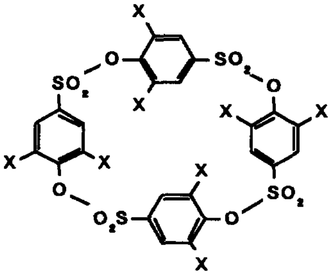


Tetrahedron, **1991**, *47*, 7353

CYCLIC TETRAMERS FROM 3,5-DISUBSTITUTED 4-HYDROXYBENZENESULFONYL CHLORIDES. THEIR SYNTHESIS AND CHARACTERIZATION

G Cevasco,[a] S Penco,[a] S Thea,[a] and V Busetti[b]
[a] Istituto di Chimica Organica, Università di Genova e C N R., Centro di Studio sui Diariloidi, corso Europa 26, Genova Italia.
[b] Dipartimento di Chimica Organica, Università di Padova, Via Marzolo 1, Padova, Italia.

The reaction of two 3,5-disubstituted 4-phenolsulfonyl chlorides with tertiary aliphatic amines in aprotic solvents leads to cyclic tetrameric products.

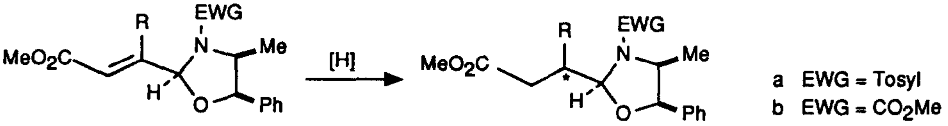


Tetrahedron, **1991**, *47*, 7357

ASYMMETRIC HYDROGENATION OF NEPH-DERIVED OXAZOLIDINES

A BERNARDI,[1] O CARUGO,[2] A PASQUARELLO,[1] A SIDJIMOV,[1] G POLI[1*]
1 Centro CNR per lo Studio delle Sostanze Organiche Naturali. Dipartimento di Chimica Organica e Industriale
2 Dipartimento di Chimica Inorganica, Università di Pavia

The hydrogenation of 3-methyl-fumaric and maleic ester monoaldehydes protected as oxazolidines of nor-ephedrine derivation takes place with diastereoisomeric ratios up to 95 5



Tetrahedron, **1991**, *47*, 7363

STRUCTURAL STUDIES OF ANTI-HIV 3'-α-FLUOROTHYMIDINE & 3'-α-AZIDOTHYMIDINE BY 500 MHz ^{1}H-NMR SPECTROSCOPY & MOLECULAR MECHANICS (MM2) CALCULATIONS

J Plavec, L H Koole, A Sandström & J Chattopadhyaya*

Department of Bioorganic Chemistry, Box 581, Biomedical Center,
University of Uppsala, S-751 23 Uppsala, Sweden

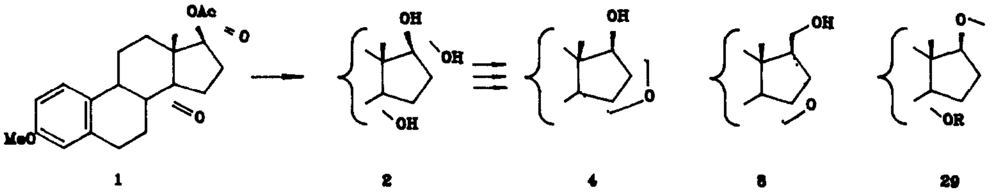
500 MHz ^{1}H-NMR studies of anti-HIV 3'-α-fluorothymidine (FLT) and 3'-α-azidothymidine (AZT) in aqueous solution, in conjunction with their molecular mechanics (MM2) calculations, have provided insight for the first time into their conformational dynamics [pseudorotation of the furanose ring phase angle (P) and puckering amplitude (ν_m), rotation around the C4'-C5' bond (γ), and rotation around the glycosidic C1'-N1 bond (χ)]

Tetrahedron, **1991**, *47*, 7377

Chemoselective Reactions of 14,17α-Bis(hydroxymethyl)-3-methoxyestra-1,3,5(10)-trien-17β-ol. Synthesis of Novel 14,17-Hetero-bridged 19-Norsteroids.

J.R. Bull & L.M. Steer, *University of Cape Town, Rondebosch 7700, RSA.*

*Efficient synthetic routes to **4** and **8**, and derived hormone analogues are described, during the attempted conversion of dicarbaldehyde (**1**), via the triol (**2**), into 14-functionalised 17-spiro-oxiranes (e.g. **29**; R = SiBu^{t}Me)$_2$*

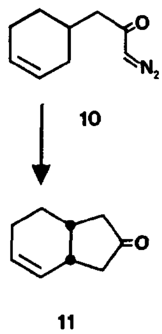


Tetrahedron, **1991**, *47*, 7403

REGIOCONTROL BY THE CARBON-CARBON DOUBLE BOND IN THE $Rh_2(OAc)_4$ MEDIATED CARBON-HYDROGEN INSERTION OF α-DIAZO-KETONES.

P. Ceccherelli*, M. Curini*, M C. Marcotullio, O Rosati
Università degli Studi, 06100 Perugia, Italy

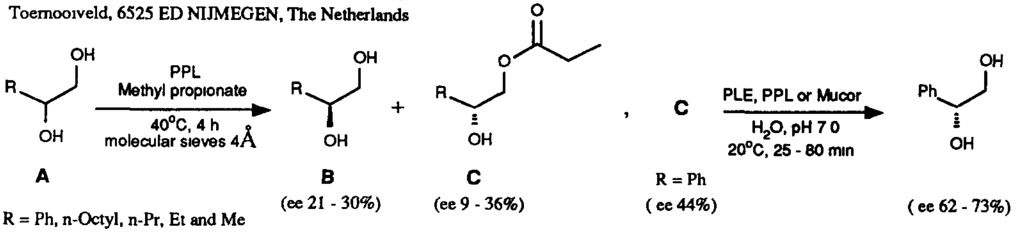
Diazo carbonyl compounds, when catalyzed by dirhodium tetraacetate, insert to allylic position. This phenomenon was exploited in cyclic systems **3d**, **5d**, **5g**, and **10** The reactivity toward allylic insertion is corroborated by the unexpected six-membered ring cyclization in the transformation **5g** ⟶ **9**



Tetrahedron, **1991**, *47*, 7409

PPL-CATALYZED RESOLUTION OF 1,2- AND 1,3-DIOLS IN METHYL PROPIONATE AS SOLVENT AN APPLICATION OF THE TANDEM USE OF ENZYMES

A J M Janssen, A J H Klunder and B Zwanenburg*
Department of Organic Chemistry, NSR center for Molecular Structure, Design and Synthesis, University of Nijmegen
Toernooiveld, 6525 ED NIJMEGEN, The Netherlands



Tetrahedron, **1991**, *47*, 7417

ON THE AZETIDIN-2-ONE RING FORMATION. A ^{1}H NMR INVESTIGATION.

Adele Bolognese*, Dipartimento di Chimica Organica e Biologica,
via Mezzocannone 16, 80134 Napoli, Italy.

M. Vittoria Diurno and Orazio Mazzoni, Dipartimento di Chimica Farmaceutica
e Tossicologica, via D. Montesano 49, 80131 Napoli, Italy.

Federico Giordano, Dipartimento di Chimica, Università di Napoli,
via Mezzocannone 4, 80134 Napoli, Italy.

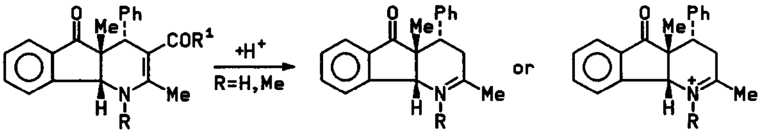
The Staudinger reaction mechanism was investigated by NMR experiments.

Tetrahedron, **1991**, *47*, 7429

SYNTHESIS AND ISOMERIZATION OF 1-H-4,4a,5,9b-TETRAHYDROINDENO[1,2-b]PYRIDINES

*VLūsis, D Muceniece, VStonkuss, G Duburs, Institute of Organic Synthesis, Latvian Academy of Sciences (Latvia)

The isomerization of 1H-4,4a,5,9b-tetrahydroindenopyridines containing an acyl function at C-3 leads to 3H-4,4a,5,9b-tetrahydroindenopyridines in acidic medium



Tetrahedron, **1991**, *47*, 7437

OKADAIC ACID A PROTON AND CARBON NMR STUDY

Manuel Norte*, Rafael González, José J Fernández and Manuel Rico*[#]

C P N O "Antonio González", Instituto Universitario de Bioorgánica, Universidad de La Laguna,
La Laguna 38206, Tenerife, Spain
[#]Instituto Rocasolano, Instituto de Estructura de la Materia, C S I C , Serrano 119, Madrid 28006, Spain

Abstract Okadaic acid is an extremely interesting toxin responsible for diarrhetic shellfish poisoning (DSP) This interest is due not only to its fascinating structure but also to its unknown biosynthetic origin In this paper we report on the full NMR study of this molecule, including the appropriate 2D homo and heteronuclear NMR experiments, necessary to carried out its biosynthetic study

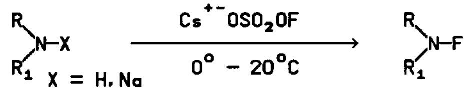
N-FLUORINATION WITH CESIUM FLUOROXYSULFATE

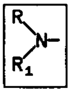
Tetrahedron, **1991**, *47*, 7447

Andrei A.Gakh[*], *Sergei V.Romaniko, Bogdan I.Ugrak and Albert A Fainzilberg*

N.D.Zelinsky Institute of Organic Chemistry, Academy of Sciences
of the USSR, Leninsky prospect, 47, 117913, Moscow, USSR

Cesium fluoroxysulfate was proved to be a N-fluorinating agent for some nitrogen compounds. Yields of products obtained, mainly monofluoroderivatives, depend on structures of initial compounds.



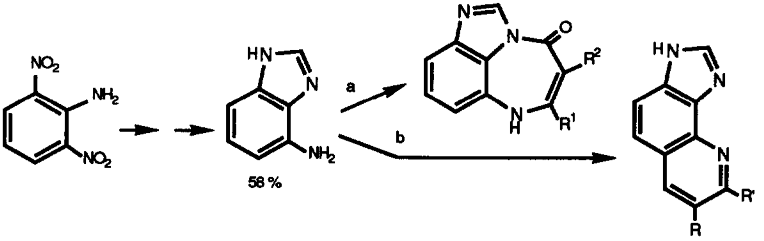


= NH_2CONH— , $BuOOCNH$— , $CH_3C_6H_4SO_2(t\text{-}Bu)N$— , (5-carbethoxymethyl-1,2,4-oxadiazol-3-yl)-amino— , N-phtalimido— , N-saccharino— , benz-1,2,3-triazol-1-yl— , pyridin-1-yl—

REACTIVITY OF 4(7)-AMINOBENZIMIDAZOLE AS A BIDENTATE NUCLEOPHILE

Tetrahedron, **1991**, *47*, 7459

A Marcos, C Pedregal and C Avendaño*, Departamento de Química Orgánica y Farmacéutica, Facultad de Farmacia, Universidad Complutense 28040 MADRID (Spain)



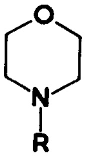
a) β-oxoesters, b) β-diketones

Tetrahedron, **1991**, *47*, 7465

THE EFFECT OF EXOCYCLIC CONJUGATION ON THE INVERSION OF A SATURATED SIX-MEMBERED RING. A DYNAMIC NMR STUDY OF N-SUBSTITUTED MORPHOLINES.

L.Lunazzi[a,*], D.Casarini[a], M.A.Cremonini[a], and J.E.Anderson[b,*], [a]University of Bologna, (Italy), [b]University College London, (United Kingdom).

Ring Inversion barriers for N-substituted morpholines 1 are reported and decrease markedly with increasing conjugation along the series 1f–1j where substituents have similar steric properties.



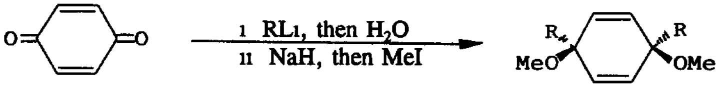
1

a) R = H
f) cyclohexyl
g) cyclohexenyl
h) phenyl
i) 4-aminophenyl
j) 4-nitrophenyl

Tetrahedron, **1991**, *47*, 7471

STEREOSELECTIVE TWO-STEP CHEMICAL PREPARATION OF 1,4-DIALKYL-1,4-DIMETHOXYCYCLOHEXA-2,5-DIENES

Francisco Alonso and Miguel Yus*
Departamento de Química Orgánica, Universidad de Alicante,
Aptdo 99, 03080 Alicante, Spain



1

2 (45-60%)

(R=Me, Et, *n*-Bu, Ph)

Tetrahedron, **1991**, *47*, 7477

CATALYTIC ACTIVITY OF CYCLOPHOSPHAZENIC POLYPODANDS IN PHASE-TRANSFER REACTIONS COMPARISON WITH OPEN-CHAIN ANALOGUES

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Cyclophosphazenic polypodands are efficient catalysts in anion promoted reactions (e g nucleophilic substitution, alkylation, reduction, oxidation reactions) under SL and LL-PTC conditions Catalytic activity is mainly related to their complexation capability

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Tetrahedron, **1991**, *47*, 7489

REGIO- AND STEREO-CHEMISTRY OF THE COUPLING REACTION OF PHENYLSULPHENYL-, PHENYLSULPHINYL- AND PHENYLSULPHONYL-PENTADIENYL METALS.

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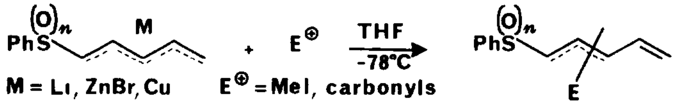

The α-regioisomers undergo [1,5] and double [3,2] sigmatropic rearrangemer