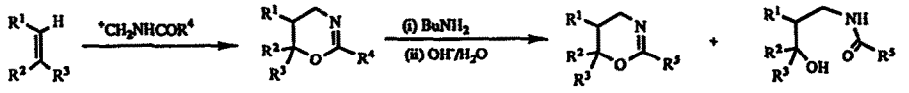
Tetrahedron, **1993**, *49*, 3907

SYNTHESIS AND SOME TRANSFORMATIONS OF SUBSTITUTED 5,6-DIHYDRO-4*H*-1,3-OXAZINES

Alan R. Katritzky,[a]* Irina V. Shcherbakova,[a] Robert D. Tack,[b] and Xue-Qian Dai[a]
[a]Department of Chemistry, University of Florida, Gainesville, FL 32611-2046, USA
[b]Paramins Division, Exxon Chemical Limited, Abingdon, UK

Substituted 5,6-dihydro-4*H*-1,3-oxazines, obtained by acid-catalyzed amidoalkylation of the terminal olefins, undergo further transformations involving the heteroring and/or the substituent.

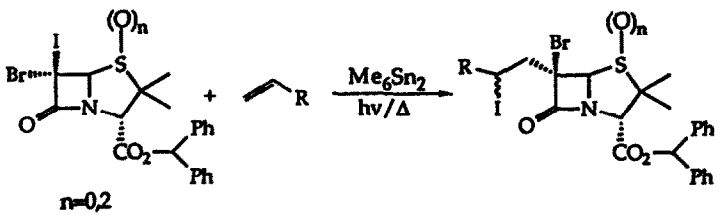


Tetrahedron, **1993**, *49*, 3919

FUNCTIONALIZATION OF PENICILLINS VIA IODINE ATOM TRANSFER CHEMISTRY

C. B. Ziegler, Jr.* and T. L. Fields
American Cyanamid Company
Medical Research Division

Carbon - carbon bond formation via iodine atom transfer methodology represents a novel way to funtionalize the 6-position of the penicillin nucleus. This work explores the synthetic scope and limitations of this reaction.

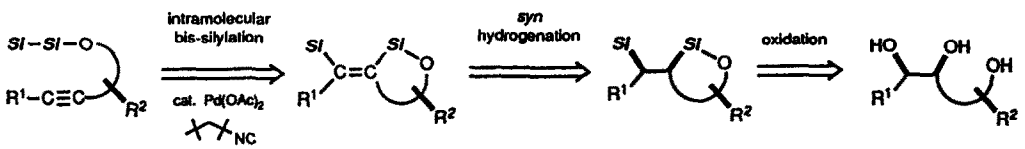


Tetrahedron, **1993**, *49*, 3933

STEREOSELECTIVE SYNTHESIS OF 1,2,4-TRIOLS VIA INTRAMOLECULAR BIS-SILYLATION OF CARBON–CARBON TRIPLE BONDS FOLLOWED BY HYDROGENATION

Masahiro Murakami, Hideaki Oike, Mitsuru Sugawara, Michinori Suginome and Yoshihiko Ito
Department of Synthetic Chemistry, Faculty of Engineering, Kyoto University, Yoshida, Kyoto 606-01, Japan

A new strategy for the stereoselective synthesis of 1,2,4-triols is provided by the intramolecular bis-silylation of carbon–carbon triple bonds followed by *syn* hydrogenation.

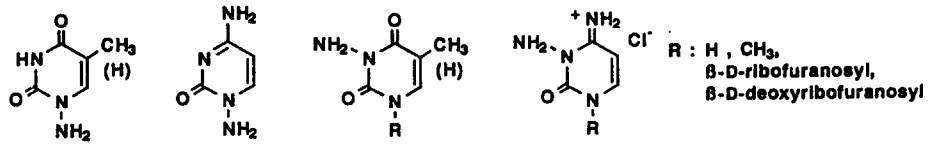


Tetrahedron, **1993**, *49*, 3947

SYNTHESES AND PROPERTIES OF N-AMINOPYRIMIDINES

Kohfuku Kohda,* Isao Kobayashi, Kenji Itano, Shoji Asano and Yutaka Kawazoe
Faculty of Pharmaceutical Sciences, Nagoya City University, Tanabedori, Mizuho-ku, Nagoya 467, Japan.

N-Aminated pyrimidine bases and nucleosides were synthesized and physicochemical properties of the N-amino group and its substituent effects on UV absorption and basicity of the pyrimidine nucleus are reported.

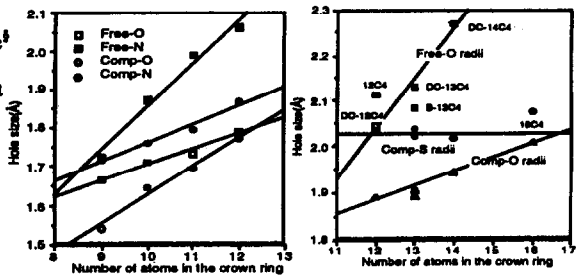


Tetrahedron, **1993**, *49*, 3959

Theoretical Study on Crown Compounds as Building Blocks of Functional Molecules I. The Relation between the Hole Size and the Number of Atoms in the Ring of Cyclic Ethers and Amines.

Kenzi Hori*†, Yoshihiko Haruna†, Akio Kamimura†, Hiroshi Tsukube‡ and Takayuki Inoue§
†Department of Chemistry, Faculty of Liberal Arts, Yamaguchi University, Yamaguchi 753, Japan; ‡Department of Chemistry, College of Liberal Arts & Science, Okayama University, Okayama 700, Japan; §Computer Science Department, Asahi Chemical Industry CO., LTD. Fuji, Shizuoka 416, Japan

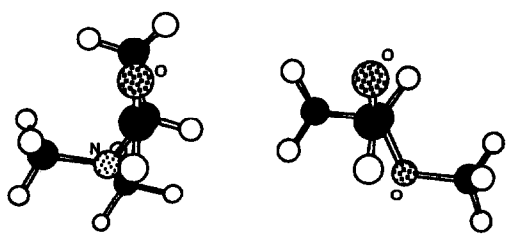
A method was developed to quantitatively calculate the hole sizes of crown compounds and applied to both the X-ray coordinates and those from MO calculations.



Tetrahedron, **1993**, *49*, 3971

On the Origin of π-Facial Diastereoselectivity in Nucleophilic Additions to Chiral Carbonyl Compounds 3. Rotational Profiles of 2-Methoxypropanal, and 2-N,N-Dimethylaminopropanal.

G. Frenking*, K.F. Köhler, and M.T. Reetz**
Fachbereich Chemie, Philipps-Universität Marburg, Hans-Meerwein-Straße, D-W-3550 Marburg, Germany, and Max-Planck-Institut für Kohlenforschung, Kaiser-Wilhelm-Platz 1, D-W-4330 Mülheim/Ruhr, Germany.

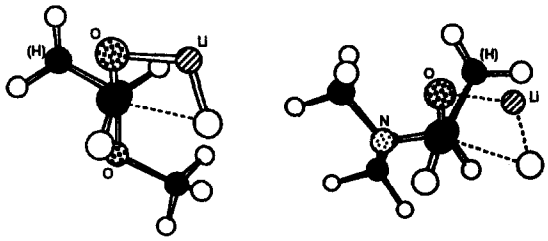


The rotational profiles of 2-methoxypropanal and 2-N,N-dimethylaminopropanal are theoretically predicted using ab initio methods at the MP2/6-31G(d)//3-21G level of theory. The conformational energies show a strong dependence on the torsion angle not only around the C-C bond but also around the C-R (R=OMe, NMe_2) bond.

Tetrahedron, **1993**, *49*, 3983

On the Origin of π-Facial Diastereoselectivity in Nucleophilic Additions to Chiral Carbonyl Compounds 4. Calculated Transition State Structures for the Addition of Nucleophiles to 2-Methoxypropanal, and 2-N,N-Dimethylaminopropanal.

G. Frenking*, K.F. Köhler, and M.T. Reetz**
Fachbereich Chemie, Philipps-Universität Marburg, Hans-Meerwein-Straße, D-W-3550 Marburg, Germany, and
Max-Planck-Institut für Kohlenforschung, Kaiser-Wilhelm-Platz 1, D-W-4330 Mülheim/Ruhr, Germany.



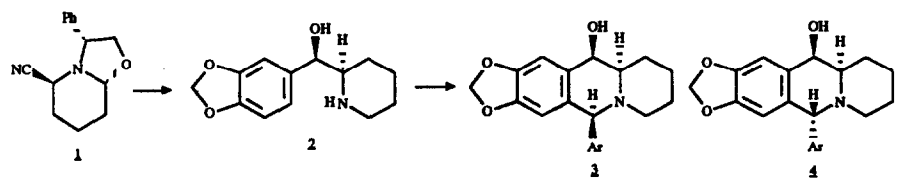
The transition state structures of the nucleophilic addition of LiH to 2-methoxypropanal **1** and 2-N,N-dimethylaminopropanal **2** have been calculated at the MP2/6-31G(d)//3-21G level of theory. The analysis of the theoretical data shows that Coulombic, electronic and steric interactions as well as conformational energies may be dominant for determining the energetically lowest lying transition states.

Tetrahedron, **1993**, *49*, 3995

Asymmetric Synthesis. XXVIII : Hydroxylated Benzoquinolizidine Analogues of Podophyllotoxin via the CN(R,S) Method.

Philippe Lienard, Jean-Charles Quirion*, Henri-Philippe Husson.
ICSN, CNRS, 91198 Gif/Yvette, France.
URA 1310 du CNRS, Faculté des Sciences Pharmaceutiques et Biologiques, 4, Avenue de l'Observatoire, 75270, Paris Cedex 06, France.

Two epimeric benzoquinolizidine analogues 3 and 4 of podophyllotoxin have been prepared from the common intermediate 2, obtained stereoselectively by alkylation and reduction of synthon 1.

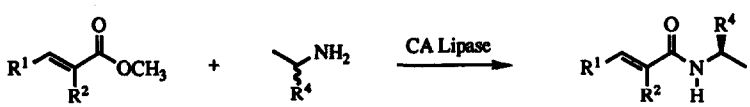


Tetrahedron, **1993**, *49*, 4007

LIPASE CATALYZED AMINOLYSIS OF ETHYL PROPIOLATE AND ACRYLIC ESTERS. SYNTHESIS OF CHIRAL ACRYLAMIDES

Susana Puertas, Rosario Brieva, Francisca Rebolledo and Vicente Gotor*
Departamento de Química Orgánica e Inorgánica. Universidad de Oviedo. 33071 Oviedo. Spain.

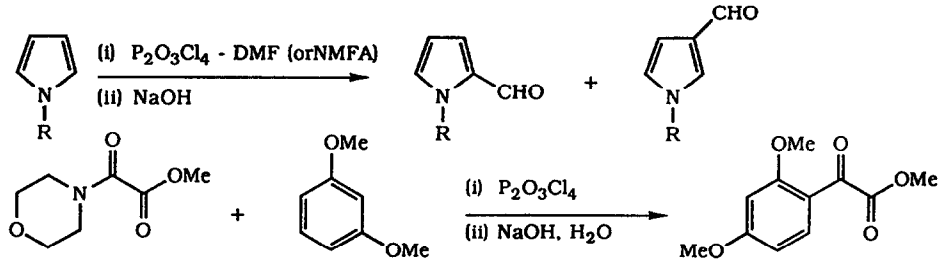
Candida antarctica **lipase is a useful catalyst in the aminolysis of acrylic esters and aliphatic amines. If racemic amines are used, the corresponding optically active acrylic amide is obtained in moderate-high enantiomeric excess.**



Tetrahedron, **1993**, *49*, 4015

Vilsmeier Formylation and Glyoxylation Reactions of Nucleophilic Aromatic Compounds Using Pyrophosphoryl chloride

IM Downie, MJ Earle, H Heaney, and KF Shuhaibar
Department of chemistry, Loughborough University of Technology, Leicestershire, England, LE11 3TU

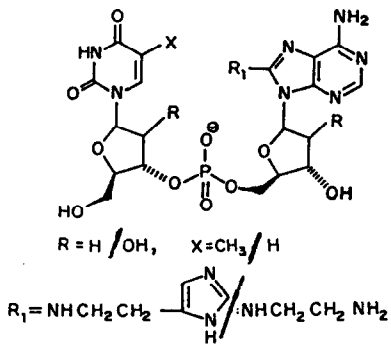


Tetrahedron, **1993**, *49*, 4035

SYNTHESIS AND CONFORMATIONAL STUDIES OF d(TpA) AND r(UpA) CONJUGATED WITH HISTAMINE AND ETHYLENEDIAMINE

T.P.Prakash, R.Krishnakumar and K.N.Ganesh*,
Bio-Organic Unit, Organic Chemistry Division, National Chemical Laboratory, Pune 411 008, India.

Dinucleotides d(TpA) and r(UpA) conjugated at C8 (A) with histamino/ethylenediamino substituents have been synthesized for modelling the molecular interactions that occur at catalytic site of nucleases. ^{1}H and ^{31}P-NMR analysis indicate that an increase in percentage of S conformers of modified sugar residue, while maintaining anti-glycosyl torsion. The results have importance in rational design of appropriate models for active site of nucleases.

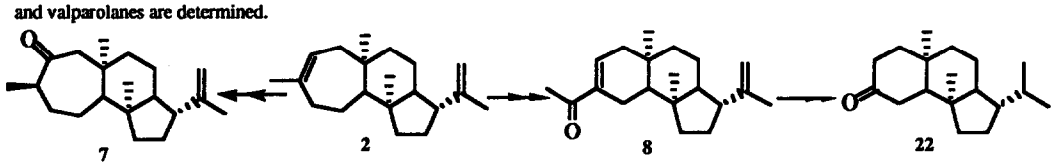


Tetrahedron, **1993**, *49*, 4051

VALPARANE, A NEW DITERPENE SKELETON (PART IV). ABSOLUTE STEREOCHEMISTRY OF VALPARONE, VALPAROLONE AND OTHER COMPOUNDS WITH VALPARANE SKELETON

Julio G. Urones*, Isidro S. Marcos, Pilar Basabe, Concepción Alonso, Isabel M. Oliva, Narciso M. Garrido, David D. Martín and Anna M. Lithgow. Departamento de Química Orgánica. Universidad de Salamanca. Plaza de los Caídos 1–5, 37008 Salamanca, Spain.

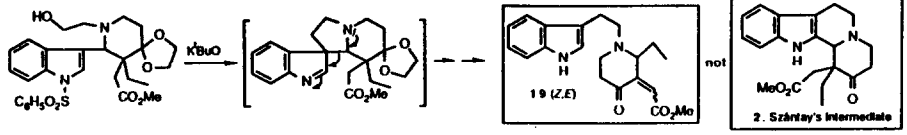
The structural determination of a series of tricyclic diterpenoids with the new carbon skeletons: valparane (2 and 7) and valparolane (8) is described. By means of the CD curve of the cyclohexanone obtained from valparolone (22), the absolute stereochemistry of valparanes and valparolanes are determined.



Tetrahedron, **1993**, *49*, 4063

SYNTHETIC STUDIES ON INDOLE ALKALOIDS.VII. EFFECT OF THE PIPERIDINE RING SUBSTITUTION ON INTRAMOLECULAR K^{t}BUO-BF$_3$.ET$_2$O CYCLIZATION OF *N*-(2-HYDROXYETHYL)-2-[1-(PHENYLSULFONYL)-3-INDOLYL]PIPERIDINES

A. Diez, C. Vila, and M. Rubiralta*
Laboratory of Organic Chemistry. Faculty of Pharmacy. University of Barcelona. 08028-Barcelona, Spain

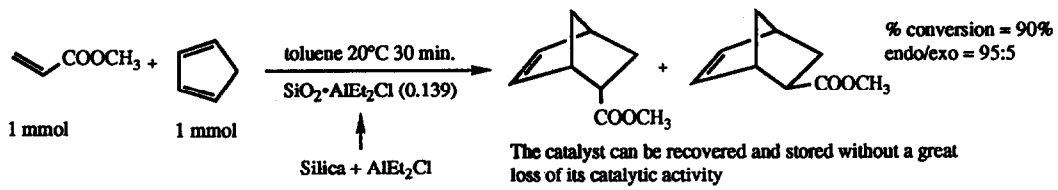


The reaction of *N*-(2-hydroxyethyl)-2-[1-(phenylsulfonyl)-3-indolyl]piperidines with K^{t}BuO/BF$_3$.Et$_2$O, which usually leads to indolo[2,3-*a*]quinolizidine systems, shows a different outcome when the starting aminoalcohol (4) is 3,3-disubstituted.

Tetrahedron, **1993**, *49*, 4073

SILICA AND ALUMINA MODIFIED BY LEWIS ACIDS AS CATALYSTS IN DIELS-ALDER REACTIONS OF CARBONYL-CONTAINING DIENOPHILES.

C.Cativiela, J.M. Fraile, J.I. García, J.A. Mayoral*, E. Pires, A.J. Royo, F.Figueras#, L.C. de Mènorval#.
Dpto Q^a Orgánica. I.C.M.A. Universidad de Zaragoza-C.S.I.C. 50009-Zaragoza (Spain)
#Lab. Chim. Organique Physique et Cinetique Apliquées. URA 418, C.N.R.S., E.N.S.C.M., 34053 Montpellier (France)



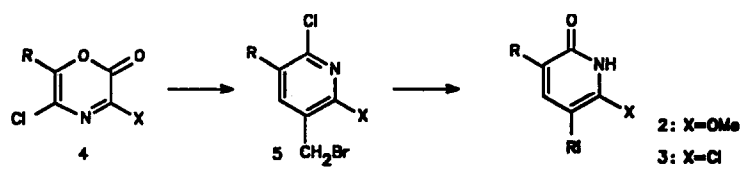
The catalyst can be recovered and stored without a great loss of its catalytic activity

Tetrahedron, **1993**, *49*, 4085

SYNTHESIS OF 6-METHOXY- AND 6-CHLORO-2(1*H*)-PYRIDINONE ACYCLO-C-NUCLEOSIDES FROM 2*H*-1,4-OXAZIN-2-ONES.

Lieven Meerpoel, Gert J. Joly and Georges J. Hoornaert*
Laboratorium voor Organische Synthese, Departement Scheikunde, K.U.Leuven, Celestijnenlaan 200-F, B-3001 Leuven, Belgium

Various stable 6-methoxy- and 6-chloro-2(1H)-pyridinone acyclo-C-nucleosides 2 and 3 are prepared from 6-variated 3-methoxy- and 3-chloro-2H-1,4-oxazin-2-ones 4 via the 3-bromomethylpyridines 5.

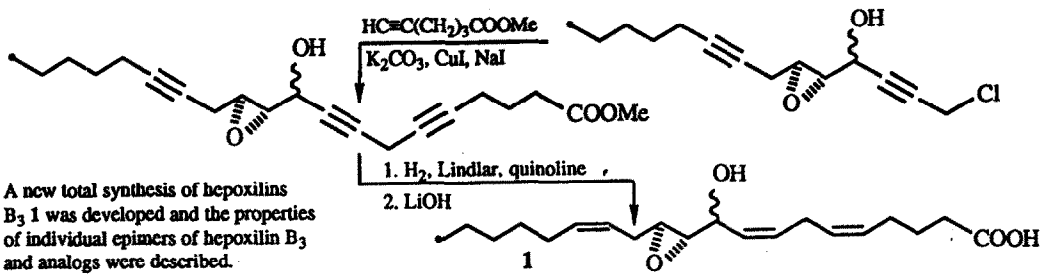


Tetrahedron, **1993**, *49*, 4099

SYNTHESIS, PROPERTIES, AND IDENTIFICATION OF EPIMERIC HEPOXILINS (-)-(10R)-B_3 AND (+)-(10S)-B_3

Ludmila L.Vasiljeva, Tatjana A.Manukina, Peter M.Demin, Margarita A.Lapitskaja, and Kasimir K.Pivnitsky

Institute of Experimental Endocrinology, National Endocrinology Scientific Center RAMS, Moscow, RUSSIA



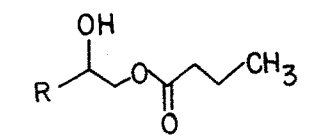
A new total synthesis of hepoxilins B_3 1 was developed and the properties of individual epimers of hepoxilin B_3 and analogs were described.

Tetrahedron, **1993**, *49*, 4107

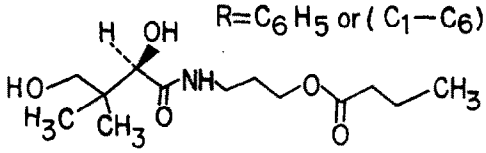
Regioselective Esterification of Diols and Triols with Lipases in Organic Solvents

V. S. Parmar,* Rita Sinha, K. S. Bisht, Sandhya Gupta, A.K. Prasad and Poonam Taneja

Department of Chemistry, University of Delhi, Delhi-110 007 (India)



Diols and triols have been esterified regioselectively in the presence of porcine pancreatic lipase in organic solvents.

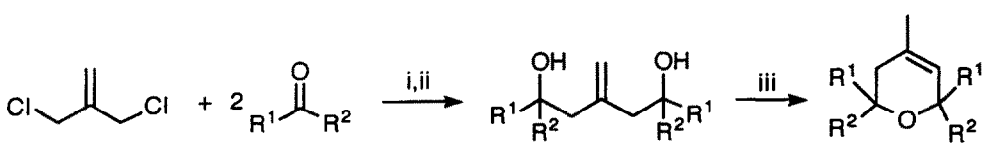


Tetrahedron, **1993**, *49*, 4117

NAPHTHALENE-CATALYSED LITHIATION OF 3-CHLORO-2-CHLOROMETHYLPROPENE IN A BARBIER-TYPE PROCESS WITH CARBONYL COMPOUNDS

C. Gómez, D. J. Ramón and M. Yus*

Departamento de Química Orgánica, Facultad de Ciencias, Universidad de Alicante, Apdo. 99, 03080 Alicante, Spain

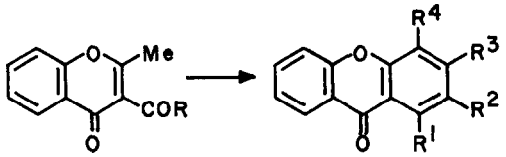


[*Reagents and conditions*: i, Li powder, $C_{10}H_8$ cat. (6%), THF, -78 to 20°C; ii, H_2O; iii, 12 M HCl-Et_2O]

Tetrahedron, 1993, *49*, 4127

BENZOPYRANS. PART 30. SYNTHESIS OF SUBSTITUTED XANTHONES FROM 3-ACYL-2-METHYL-1-BENZOPYRAN-4-ONES

Chandra Kanta Ghosh[a,*], Sirin Sahana[a] and Amarendra Patra[b]
[a]Department of Biochemistry, Calcutta University, Calcutta 700 019
[b]Department of Chemistry, Calcutta University, Calcutta 700 009

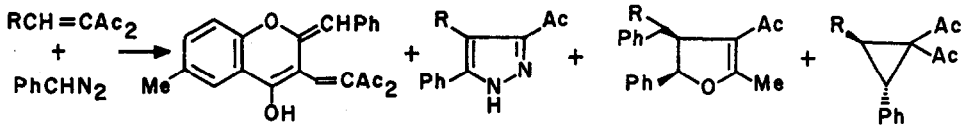


R = H , Me

Tetrahedron, 1993, *49*, 4135

BENZOPYRANS. 31. REACTION OF 1,1-DIACETYL-2-(6-METHYL-4-OXO-4*H*-1-BENZOPYRAN-3-YL)ETHYLENE WITH PHENYLDIAZOMETHANE

Chandra Kanta Ghosh* and Sirin Sahana
Department of Biochemistry, Calcutta University, Calcutta 700 019



R = 6-Methyl-4-oxo-4*H*-1-benzopyran-3-yl