Tetrahedron, 1991, 47, 9317

Tetrahedron, 1991, 47, 9329

Tetrahedron, 1991, 47, 9351

## THEORETICAL STUDY OF CHEMICAL INTERACTIONS IN CROWN ETHER-CATION COMPLEXES

Itaru Hataue, Yasuo Oishi, Masaaki Kubota and Hiroshi Fujimoto Division of Molecular Engineering, Kyoto University, Kyoto 606, Japan

From the optimized structures of complexes of crown ethers with a guest cation Li<sup>+</sup>, a feature of chemical interactions in these species has been elucidated in terms of paired interacting orbitals.

X=0, NH, S

#### TOTAL SYNTHESIS OF (+)-MONOMORINE I VIA NITRONE CYCLOADDITION ROUTE

Masayuki Ito and Chihiro Kibayashi\*

Tokyo College of Pharmacy, Horinouchi, Hachioji, Tokyo 192-03, Japan

An enantioselective total synthesis of (+)-monomorine I (1) based on asymmetric nitrone cycloaddition with the chiral allylic ether 8 as a dipolarophile is reported.

# 5,6-DIHYDRO-3,5-DIHYDROXY-4H-PYRIDONES - NEW MAILLARD PRODUCTS FROM 6-O-SUBSTITUTED HEXOSES AND PRIMARY AMINES

Berthold Kettner, Franz Led1,\*a)
Holger Lerche, Theodor Severin\*
Institut für Pharmazie und Lebensmittelchemie der Universität,
Sophienstr. 10, 8000 München 2
Institut für Lebensmittelchemie
und Analytische Chemie der
Universität,a) Pfaffenwaldring 55,
7000 Stuttgart 80

Dihydropyridones 7 have been isolated from reaction mixtures of primary amines and 6-O-substituted hexoses 1 such as isomaltose, glucose-6-phosphate and 6-O-benzylgalactose in yields up to 20%.

Tetrahedron, 1991, 47, 9357

On the Way to Aflatoxins and Related Structure Types. Regiocontrolled Annulations by Application of Homogenous Palladium Catalysis, Urethane Tether and o,o'-Diiodine Effect.

Boris Schmidt and H. Martin R. Hoffmann\*

Department of Organic Chemistry, University of Hannover, Schneiderberg 1 B, 3000 Hannover, Germany Homogenous palladium catalyzed intramolecular hydroarylation afforded ABC substructures of  $AFM_1$  and austo-

cystine.

Tetrahedron, 1991, 47, 9369

# STEREOSELECTIVITY OF HYDROGEN TRANSFER WITH CHIRAL NADH MODELS AS A FUNCTION OF CONFIGURATION AND CONFORMATION

Y. Combret, J. J. Torché, N. Plé, J. Duflos, G. Dupas, J. Bourguignon and G. Quéguiner URA 1429, LCOH INSA-IRCOF, BP08 76131 Mont Saint Aignan (France)

NADH models 1, 2 and 3, bearing a chiral amide group have been synthesized. A NMR spectroscopy study has shown that compound 2 and its precursors could have conformers due to the hindered rotation of the amide moiety. Compound 3 reduced methyl benzoylformate with 85 % e.e.

Tetrahedron, 1991, 47, 9383

SYNTHESIS OF 5',8-CYCLOPURINE AND OF 5',6 CYCLODIHYDROPYRIMIDINE NUCLEOSIDES USING INTRAMOLECULAR RADICAL CYCLISATION BASED ON THE ARYL TELLURIDE RADICAL EXCHANGE PROCESS.

Derek H.R. Barton, <sup>a</sup> Stephane D. Géro, <sup>b</sup> Béatrice Quiclet-Sire <sup>b</sup>, Mohammad Samadi <sup>a</sup>and Claire Vincent <sup>b</sup>, <sup>a</sup>Department of Chemistry, Texas A&M University, College Station, Texas 77843, U.S.A. <sup>b</sup> Institut de Chimie des Substances Naturelles, C.N.R.S., 91198 Gif-sur-Yvette, France. The synthesis of C-cyclopurine and C-cyclodihydropyrimidine nucleosides has been effected using 5'-aryltelluronucleosides by intramolecular radical cyclisation.

THE SYNTHESIS OF SOME 3-AMINO-2-HALOMETHYL, 2-HALOMETHYL-3-(subst.AMINO)- AND 2-HALOMETHYL-3-HETARYL-QUINAZOLIN-4(3H)-ONES AS POTENTIAL PLANT PROTECTING AGENTS.

József Fetter, Tibor Czuppon, Gyula Hornyák and Antal Feller Department of Organic Chemistry, Technical University of Budapest Hungary

$$R^* = NH_2 . NHCOOR, hetaryl$$

Tetrahedron, 1991, 47, 9411

NEW EXAMPLES OF ACYCLIC AND CYCLIC C-15 ACETOGENINS FROM

LAURENCIA PINNATIFIDA. REASSIGNMENT OF THE ABSOLUTE CONFIGURATION FOR E AND Z PINNATIFIDIENYNE.

Manuel Norte, Antonio G. González, Fernando Cataldo, Matías L. Rodríguez and Iván Brito; C.P.N.O. "Antonio González", Instituto Universitario de Bio-Orgánica, Universidad de La Laguna, 38206, La Laguna, Tenerife, Spain.

Seven new C-15 acetogenins have been isolated from Laurecia pinnatifida, their structures being established by spectroscopic methods and chemical correlations. The absolute configuration of E and Z pinnatifidienyne have been reassigned on the basis of X-ray analysis.

Cl OAc

CI OR

9 Z isomer: R=H 10 E isomer: R=H 11 Z isomer : R=Ac 12 E isomer : R=Ac Br R O

13 Z isomer 14 E isomer

#### AN IMPROVED SYNTHESIS OF 1α-HYDROXY VITAMIN D<sub>3</sub>

Tetrahedron, 1991, 47, 9419

W. Nerinckx, P.J. De Clercq\*, State University of Gent, Krijgslaan, 281 (S.4), B-9000 GENT (Belgium) and C. Couwenhoven, W.R.M. Overbeek, S.J. Halkes\*, Duphar B.V., Weesp (The Netherlands)

From the known previtamin-D<sub>3</sub> adduct 1 the stereoselective synthesis of 1α-OH vitamin D<sub>3</sub> involves bromination (2), substitution with Hg(II)acetate (3) and hydrolysis to known diol 4.

### HETEROANNULATION OF 4-OXO-4H-1-BENZOPYRANS (CHROMONES) VIA THE CONJUGATE ADDITION OF HALOALKANOLS IN THE PRESENCE OF BASE

Peter J. Cremins, Roy Hayes, and Timothy W. Wallace\*

Department of Chemistry and Applied Chemistry, University of Salford, Salford M5 4WT, U.K.

Chromones (4-oxo-4*H*-1-benzopyrans) with electron acceptors at C-3 react with 2-haloethanols and potassium carbonate in acetone to give tetrahydrofuro[2,3-b][1]benzopyran-4-ones, the products derived from chromone-3-carbaldehydes also undergoing *in situ* deformylation.

Tetrahedron, 1991, 47, 9439

### INTRAMOLECULAR TRAPPING OF DIFLUOROALKYL RADICALS BY TETHERED OLEFINS IN THE ASYMMETRIC SYNTHESIS OF 2.4-DISUBSTITUTED-3,3-DIFLUOROTETRAHYDROFURANS

Giancarlo Cavicchio a, Valeria Marchettia, Alberto Amone, Pierfrancesco Bravo, and Fiorenza Viani

<sup>a</sup>Dipartimento di Chimica, Ingegneria Chimica e Materiali, Università di L'Aquila, L'Aquila, Italy; <sup>b</sup>C.N.R.- Centro di Studio per le Sostanze Organiche Naturali, Dipartimento di Chimica, Politecnico, Milano, Italy.

 $n = 0,1,2; R^1 = H, Cl; R^2 = H, Me; R^3 = H, Ph, CO_2Et, Me, Cl$ 

Radical cyclization of several chiral unsaturated ethers, performed following the tributyltin hydride method, afforded, in moderate to high diastereoselection, the title compounds with prevailing trans arrangement of substituents in 2 and 4.

#### Tetrahedron, 1991, 47, 9449

#### ALLYLIC AMINATION PROMOTED BY COPPER

Jubaraj B. Baruah and Ashoka G. Samuelson; Department of Inorganic and Physical Chemistry, Indian Institute of Science, Bangalore, 560 012 India.

A mild method for the synthesis of allylic amines.

$$R \longrightarrow X + \frac{R_1}{R_2} \longrightarrow R \longrightarrow N + \frac{R_1}{R_2} \longrightarrow R_2 + \frac{R_1}{R_2} \longrightarrow$$

## CONFORMATIONAL ANALYSIS OF 2-ALKYL-1,4-DITHIANES AND RELATED COMPOUNDS BY NMR SPECTROSCOPY AND MMX

Yu.A.Strelenko<sup>a</sup>, V.V.Samoshin<sup>b</sup>, E.I.Troyansky<sup>a\*</sup>, D.V.Demchuk<sup>a</sup>, G.I.Nikishin<sup>a</sup>, and N.S.Zefirov<sup>b</sup>;

<sup>a</sup>N.D.Zelinsky Institute of Organic Chemistry the USSR Academy of Science, Moscow, U.S.S.R.

bM.V.Lomonosov Moscow State University, Moscow, U.S.S.R.

R=Me, C<sub>6</sub>H<sub>13</sub>, CH<sub>2</sub>OH, CMe<sub>2</sub>OH

 $R = CH_2OAc$ ,  $CH_2Cl$ 

Equatorial conformer predominates

Axial conformer predominates

### THE EFFECT OF THE CARBONYL GROUP IN THE CYCLIZATION OF 1-HEXENYL RADICALS

A. C. Serra, C. M. M. da Silva Corrêa\*, and M. L. C. do VALE Centro de Investigação em Química (INIC) - Faculdade de Ciências 4000 PORTO - PORTUGAL

Tetrahedron, 1991, 47, 9463

The radical chain cyclization of allyl ether derivatives promoted by tosyl halides and light is supressed by the presence of a carbonyl group conjugated with the double bond (acrylic double bond).

Tetrahedron, 1991, 47, 9489

MECHANISTIC STUDIES ON THE ROLE OF CARBON DIOXIDE IN THE SYNTHESIS OF METHYLCARBAMATES FROM AMINES AND DIMETHYLCARBONATE IN THE PRESENCE OF CO<sub>2</sub>.

#### M. Aresta\* and E. Quaranta

Dipartimento di Chimica, Università, Campus Universitario, 70126, Bari, Italy Centro CNR-MISO, Via Amendola, 173, 70126, Bari, Italy.

Carbon dioxide can promote, catalytically, the synthesis of N-alkylmethylcarbamates from amines and dimethylcarbonate.

CO2 (cat.)

 $RNH_2 + OC(OMe)_2$ 

RNHC(0)0Me + Me0H