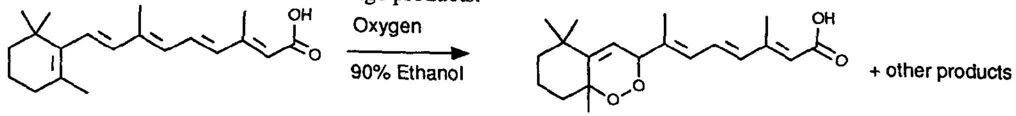
Tetrahedron, 45, 7679, (1989)

CHARACTERIZATION OF AUTOXIDATION PRODUCTS OF RETINOIC ACID

A. R. Oyler,* M. G. Motto, R. E. Naldi, K. L. Facchine,
P. F. Hamburg, D. J. Burinsky, R. Dunphy, and M. L. Cotter
R. W. Johnson Pharmaceutical Research Institute at Ortho Pharmaceutical Corporation, Raritan, NJ 08869

Retinoic acid underwent autoxidation in 90% ethanol at 25-85.5 °C to give epoxides, dioxetanes, an endoperoxide, and double-bond cleavage products.

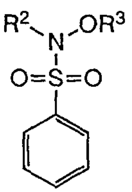


Tetrahedron, 45, 7695, (1989)

REACTION OF HYDROXYLAMINE WITH BENZENESULFONYL CHLORIDE. X-RAY CRYSTAL STRUCTURE OF PILOTY'S ACID AND OTHER BENZENESULFONYLHYDROXYLAMINES.

John N. Scholz,‡ Paul S. Engel,*‡ Christopher Glidewell,*† and Kenton H. Whitmire‡

Contribution from the Department of Chemistry, Rice University, P. O. Box 1892, Houston, TX 77251 and
Department of Chemistry, The Purdie Building, University of St. Andrews, St. Andrews, Scotland KY16 9ST



	R^2	R^3
1	H	H
2	SO_2Ph	H
3	H	SO_2Ph
4	SO_2Ph	SO_2Ph

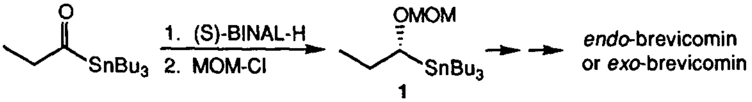
The reaction of $PhSO_2Cl$ with $HONH_2$ produces Piloty's acid, **1**. The structure of this and all other (phenylsulfonyl)hydroxylamines (**2** - **4**) was determined by X-ray crystallography. The salt from $PhSO_2NHNH_2$ and $PhSO_3H$ was obtained as a by-product of **1** and its molecular structure was also determined. The formation of these compounds and the crucial role of hydrogen bonding in their crystal structure are discussed. ^{13}C NMR data are given.

Tetrahedron, 45, 7709, (1989)

ENANTIOSELECTIVE SYNTHESES OF endo- AND exo-BREVICOMIN VIA α-ALKOXYSTANNANES

J. Michael Chong* and Eduardo K. Mar, Guelph-Waterloo Centre for Graduate Work in Chemistry
Chemistry Department, University of Waterloo, Waterloo, Ontario, Canada N2L 3G1

Short and enantioselective syntheses of *endo*- and *exo*-brevicomin via homochiral α-alkoxystannane **1** are described.

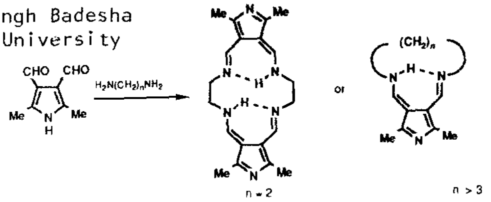


Tetrahedron, 45, 7717, (1989)

PYRROLE STUDIES PART 41. REACTIVITY OF 3,4-DIFORMYL-2,5-DIMETHYLPYRROLE WITH DIAMINOALKANES. AN UNUSUAL FORMATION OF 2-AZAFULVENES.

Sayed Ali Naghi Taheri, R. Alan Jones, Santokh Singh Badesha and Majed M. Hania. School of Chemical Sciences, University of East Anglia. NR4 7TJ UK.

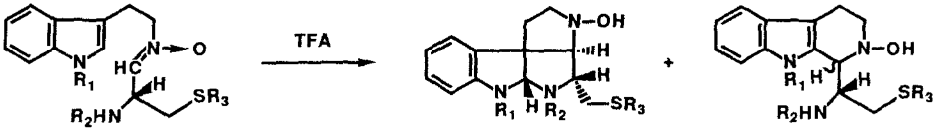
The diformylpyrrole reacts with α,ω-diamino alkanes to yield 2:2 macrocylic adducts or 1:1 bicycloadducts, depending upon the alkane chain length. Both adducts exist as 2-azafulvenes instead of 1$\underline{H}$-pyrroles.



Tetrahedron, 45, 7729, (1989)

THE PICTET-SPENGLER REACTION OF N_b-HYDROXYTRYPTAMINES AND CYSTEINALS. I. ISOLATION OF TETRACYCLIC INTERMEDIATES AND FORMATION OF OPTICALLY ACTIVE N_b-HYDROXY-TETRAHYDRO-β-CARBOLINES.

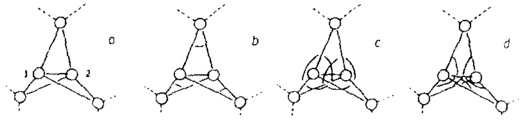
Jinjun Liu, Masako Nakagawa*, and Tohru Hino*
Faculty of Pharmaceutical Sciences, Chiba University, Yayoi-cho, Chiba-shi, 260, Japan

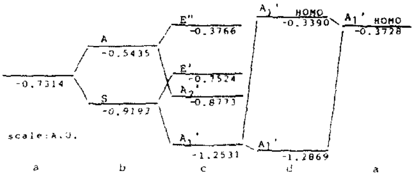


Tetrahedron, 45, 7743, (1989)

AN ANALYSIS OF THE THROUGH-BOND INTERACTION USING THE LOCALIZED MOLECULAR ORBITALS WITH AB INITIO CALCULATIONS -- V HOMO ENERGY LEVELS OF MANY PROPELLANE COMPOUNDS

Takashi Ushio, Tsuyoshi Kato, Kehong Ye, and Akira Imamura*
Department of Chemistry, Faculty of Science, Hiroshima University, Higashisenda-machi, Nakaku, Hiroshima 730, Japan





Interaction diagram for [1.1.1]-propellane

When trough bond interactions are added, HOMO interacts only one outside skeleton orbital which has the A_1' symmetry in the symmetry group of D_3h.

Tetrahedron, 45, 7759, (1989)

FULLY AUTOMATIC SIMULTANEOUS MULTIPLE PEPTIDE SYNTHESIS IN MICROMOLAR SCALE - RAPID SYNTHESIS OF SERIES OF PEPTIDES FOR SCREENING IN BIOLOGICAL ASSAYS

GERD SCHNORRENBERG* and HELMUT GERHARDT#
*** Department of Medicinal Chemistry, Boehringer Ingelheim KG, D-6507 Ingelheim, FRG**
 # Zinsser Analytic GmbH, Eschborner Landstrasse 136, D-6000 Frankfurt 94,FRG

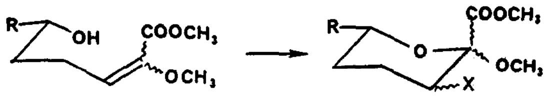
Up to 48 different peptides can be synthesized simultaneously in microtiterplates applying Fmoc strategy on polystyrene resins. All reagent and liquid handling is automatically performed by a robotic sample processor.

Tetrahedron, 45, 7765, (1989)

HETEROCYCLISATIONS DES HYDROXY-6 METHOXY-2 HEXENE-2 ET HEPTENE-2 OATES DE METHYLE.

Véronique FAIVRE, Christine LILA, Alfred SAROLI et Alaîn DOUTHEAU.
Laboratoire de Chimie Organique.Institut National des Sciences Appliquées de Lyon - FRANCE.

Tetrahydropyran derivatives are formed in good yields by cyclisation of the title compounds mediated by various electrophilic reagents.Cyclisations of Z and E isomers of the starting alcohols are stereospecific.

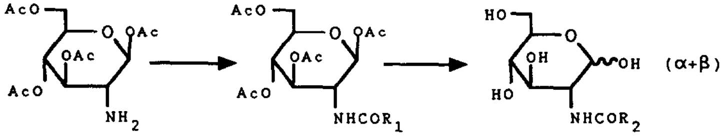


R = H, CH_3 X = OH, SePh, Br, I.

Tetrahedron, 45, 7783, (1989)

4-HYDROXYBUTYRIC ACID (AND ANALOGUES) DERIVATIVES OF D-GLUCOSAMINE

F. Dardoize[*a],C. Goasdoué[a], N. Goasdoué[a], H.M. Laborit[b], G. Topall[b] ([a]Université P. M. Curie, 4 Place Jussieu, 75230 Paris Cedex 05, France; [b]CEPBEPE, Hopital Boucicaut, 75730 Paris cedex 15, France.)



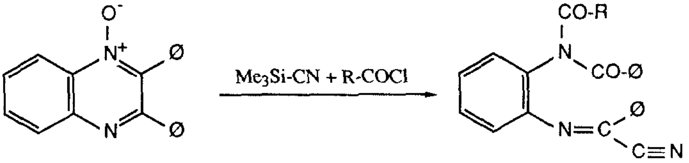
R_1=$(CH_2)_3OMEM$, $(CH_2)_3OAc$, $CH=CHCH_2OAc$, CH_2CH_2COOH.
R_2=$(CH_2)_3OH$, $CH=CHCH_2OH$, CH_2CH_2COOH.

Tetrahedron, 45, 7795, (1989)

AN UNEXPECTED RING-OPENING IN THE REISSERT REACTION ON 2,3-DIPHENYLQUINOXALINE-N-OXIDE;

J. Nasielski*, S. Heilporn and (the late)
R. Nasielski-Hinkens, Laboratoire de Chimie Organique, Université Libre de Bruxelles, 1050 Bruxelles, Belgium.

2,3-Diphenylquinoxaline-N-oxide reacts with trimethylsilyl cyanide and an acid chloride to give a ring-opened product:



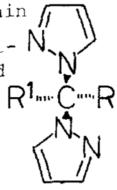
R = phenyl (84 %); *meta*-methylphenyl (89 %); *para*-nitrophenyl (80 %); *t*-butyl (88 %). When reacted with benzoyl chloride and potassium cyanide, 2,3-diphenylquinoxaline-N-oxide gives mainly homocycle monochlorinated 2,3-diphenylquinoxalines.

Tetrahedron, 45, 7805, (1989)

A CONFORMATIONAL STUDY OF BIS-, TRIS- AND TETRAKIS-PYRAZOLYLMETHANE. CRYSTALLOGRAPHY, L.S.R., DIPOLE MOMENTS AND THEORETICAL CALCULATIONS

R.M. Claramunt*, J. Elguero, M.J. Fabre, C. Foces-Foces, F.H. Cano, I.H. Fuentes, C. Jaime and C. López, Departamento de Química Orgánica, UNED, 28040 Madrid, Spain

MM2 and MNDO calculations of the title compounds **1**, **2**, **3** (pz = pyrazol-1-yl) are compared with crystallographic data for compound **3** (C2/c) and with solution conformations deduced from LSR experiments and dipole moments. The isomerization process of compound **3** and the conformational requirements to accomodate a metal near two or three N atoms are discussed in connection with theoretically calculated values.



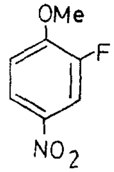
1
$R^1 = R^2 = H$
2
$R^1 = pz$, $R^2 = H$
3
$R^1 = R^2 = pz$

Tetrahedron, 45, 7817, (1989)

THE SEARCH FOR NEW BIOCHEMICAL PHOTOPROBES. II.
THE NUCLEOPHILIC PHOTOSUBSTITUTION OF 2-FLUORO-4-NITROANISOLE.

R.Pleixats, M.Figueredo, J.Marquet*, M.Moreno-Mañas*, A.Cantos
Department of Chemistry. Universitat Autònoma de Barcelona.
08193 Bellaterra. Barcelona. Spain.

The photosubstitutions of 2-fluoro-4-nitroanisole with several amines are studied. The preparative results, and the limiting quantum yields obtained from photoreactions with several nucleophiles suggest the possible usefulness of 2-fluoro-4-nitrophenyl ethers as biochemical photoprobes.

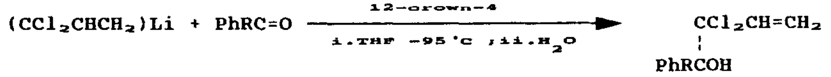


Tetrahedron, 45, 7827, (1989)

EFFECT OF LITHIUM COMPLEXATION BY 12-CROWN-4 ON THE REGIOSELECTIVITY OF THE ATTACK OF *GEM*-DICHLOROALLYL-LITHIUM ON SOME CARBONYL COMPOUNDS

E.Angeletti, R.Baima, C.Canepa, I.Degani, G.Tonachini* and P.Venturello*
Istituto di Chimica Organica dell' Universita`
Via P. Giuria, 7 10125 Torino Italy

The significant α selectivity shown by substituted benzaldehydes and acetophenone in the reaction with *gem*-dichloroallyllithium in the presence of 12-crown-4 is reported and discussed on the basis of theoretical computations.



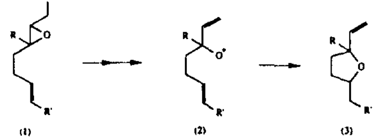
$$(CCl_2CHCH_2)Li + PhRC{=}O \xrightarrow[\text{i.THF } -95\,^\circ\text{C ; ii.}H_2O]{\text{12-crown-4}} \begin{array}{c} CCl_2CH{=}CH_2 \\ | \\ PhRCOH \end{array}$$

Tetrahedron, 45, 7835, (1989)

INTRAMOLECULAR REACTIONS OF ALLYLOXY RADICALS

Amanda Johns, John A. Murphy and Michael S. Sherburn
Department of Chemistry, University of Nottingham, University Park, Nottingham, NG7 2RD.

The stereoselectivity of cyclisations of allyloxy radicals (2) → (3) has been studied, and the methodology has been used to synthesise the naturally occurring lilac alcohols.

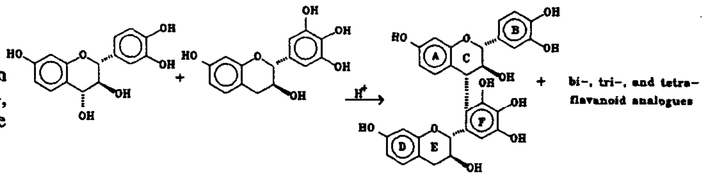


Tetrahedron, 45, 7859, (1989)

OLIGOMERIC FLAVANOIDS. PART 13. SYNTHESIS OF PROFISETINIDINS BASED ON (-)-ROBINETINIDOL AND (+)-EPIFISETINIDOL.

Johannes C.S. Malan, Jacobus A. Steenkamp, Desmond A. Young and Daneel Ferreira,
Department of Chemistry, University of the Orange Free State, P.O. Box 339, Bloemfontein, 9300, South Africa.

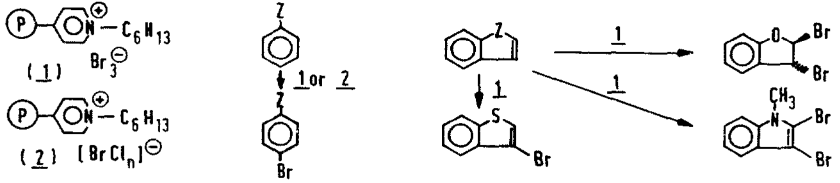
Acid-catalyzed condensation of (+)-mollisacacidin and (-)-robinetinidol afforded a novel series of bi-, tri-, and tetra-flavanoid profisetinidins including the first C-E-ring linked analogue.



Tetrahedron, 45, 7869, (1989)

BROMINATION OF AROMATIC MOLECULES WITH POLYMER SUPPORTED REAGENTS

Barbara Zajc and Marko Zupan
Department of Chemistry and J.Stefan Institute, University of Ljubljana, 61000 Ljubljana, Yugoslavia

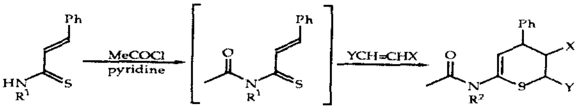


Tetrahedron, 45, 7879, (1989)

GENERATION AND CYCLOADDITIONS OF 2-(N-ACYLAMINO)-1-THIA-1,3-DIENES. PART II. RATIONALIZATION OF REACTIVITY USING AN FMO APPROACH.

Ian T. Barnish,[b] Colin W.G. Fishwick,*[a] David R. Hill[a] and Csaba Szantay Jr.[a]
[a] School of Chemistry, The University of Leeds, Leeds LS2 9JT, U.K.
[b] Pfizer Central Research, Sandwich, Kent CT13 9NJ, U.K.

2-(N-Acylamino)-1-thia-1,3-dienes are a new class of reactive hetero-1,3-diene. These systems undergo Diels-Alder cycloaddition to electron deficient, non-activated and electron rich alkenes to give usefully functionalised dihydrothiopyrans in good yields.

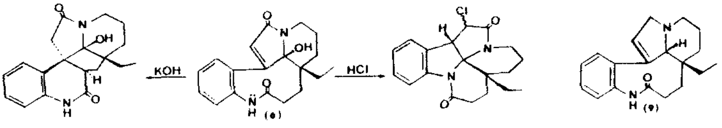


Tetrahedron, 45, 7899, (1989)

Alkaloids of Leuconotis griffithii and L. eugenifolia

S.H. Goh*, A. Razak Mohd Ali and W.H. Wong
Dept. of Chemistry, University of Malaya and FRIM, Kuala Lumpur, MALAYSIA.

The plants provide a variety of Strychnos and Aspidosperma-Hunteria alkaloids including ring-opened indole alkaloids leuconolam (6), rhazinilam and 5,21-dihydrorhazinilam (9).

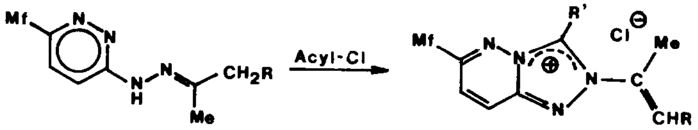


Tetrahedron, 45, 7921, (1989)

STUDIES OF PYRIDAZINE COMPOUNDS, XXV.
REINVESTIGATION OF ACYLATION OF PYRIDAZINYLHYDRAZONES.

Géza Szilágyi, Péter Mátyus, Institute for Drug Research and
Pál Sohár*, EGIS Pharmaceuticals, Spectroscopic Department, H-1475 Budapest, POB 100, HUNGARY

Acylation of pyridazinylhydrazones to triazolo[4,3-*b*]pyridazinium salts. Structure by ir, H-1 and C-13 nmr. Reaction mechanism and ring — chain tautomerism.



Mf: morpholino, R: COO-*t*-Bu,
R': 2-Cl-Ph, 3-CF_3-Ph, 4-Cl-Ph,
4-OMe-Ph, 4-NO_2-Ph, Cl-CH_2

Tetrahedron, 45, 7929, (1989)

SPIRO-DIHYDROFURAN-PYRAZOLIDINONES FROM TETRAACETYLETHYLENE AND AZO-DICARBONYL COMPOUNDS

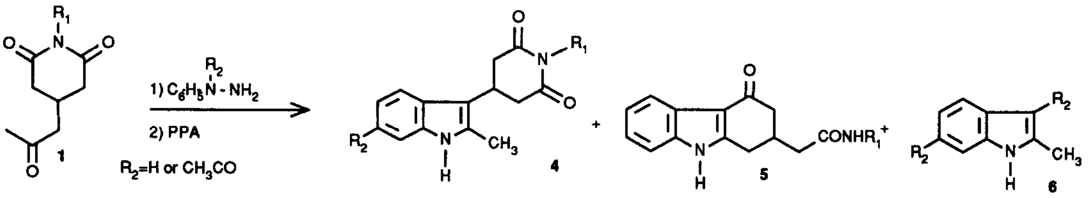
A.M.Celli, D.Donati, M.Scotton*
Istituto di Chimica Organica, Università di Siena (Italy)

R–R=N–C_6H_5
R=OEt
R=C_6H_4–X

Tetrahedron, 45, 7939, (1989)

THE FISCHER INDOLIZATION OF 4-ACETONYL-2,6-PIPERIDINEDIONES

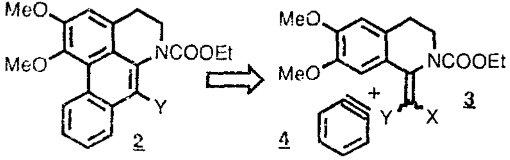
Mercedes Amat, Enric Sanfeliu, and Joan Bosch
Laboratory of Organic Chemistry, Faculty of Pharmacy, University of Barcelona, 08028-Barcelona, Spain.



Tetrahedron, 45, 7947, (1989)

THE INTERMOLECULAR BENZYNE CYCLOADDITION APPROACH TO 7-SUBSTITUTED APORPHINOIDS. MECHANISTIC CONSIDERATIONS.

N. Atanes, L. Castedo, A. Cobas, E. Guitián, C. Saá and J.M. Saá.
Dpt. Química Orgánica. Universidad de Santiago. 15706 Santiago de Compostela. Spain



Compound 3 reacts with benzyne to yield adduct 2. Mechanistic proposals for this reaction are discussed