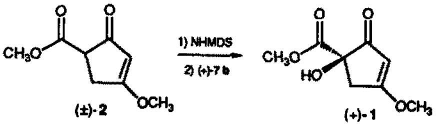
GRAPHICAL ABSTRACTS

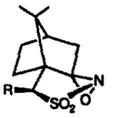
Tetrahedron, **1990**, *47*, 173

ENANTIOSELECTIVE SYNTHESIS OF (+)-KJELLMANIANONE

*Bang-Chi Chen, Michael C Weismiller, and Franklin A Davis**
Department of Chemistry, Drexel University, Philadelphia, PA 19104
*Diane Boschelli, James R Empfield, and Amos B Smith, III**
Department of Chemistry, the Laboratory for Research on the Structure of Matter,
and the Monell Chemical Senses Center, University of Pennsylvania, Philadelphia, PA 19104

An asymmetric synthesis of the highly oxygenated cyclopentanoid antibiotic (+)-kjellmanianone (**1**) has been achieved The key step entailed enantioselective hydroxylation of the prochiral sodium enolate of β-keto ester **2** with the new, enantiomerically pure N-sulfonyloxaziridine **7b**, affording **1** in 68 5% ee



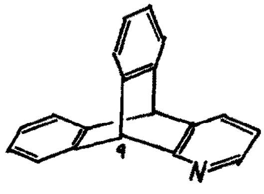

(+)-7b, R = p-$CF_3C_6H_4CH_2$

Tetrahedron, **1990**, *47*, 183

STRAINED HETEROCYCLIC SYSTEMS 19
1-AZATRIPTYCENE AND DERIVATIVES

J Hodge Markgraf,* Howard A Davis, Peter S Ernst, Kevin S Hirsch,
Kathryn J Leonard, Marlene E. Morrison, and Christopher R. Myers
Department of Chemistry, Williams College, Williamstown, MA, 01267 USA

The preparations of the title compound and its 9-chloro, 9-deutero, and 1-oxide derivatives are reported. The basicity of the title compound is compared to unstrained analogs

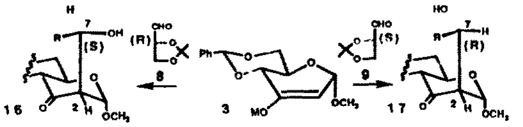


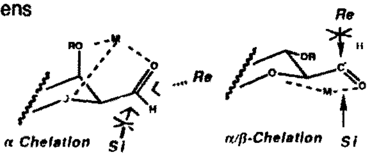
Tetrahedron, **1990**, *47*, 189

CARBOHYDRATE-DERIVED PARTNERS DISPLAY REMARKABLY HIGH STEREOSELECTIVITY IN ALDOL COUPLING REACTIONS

Kuo Long Yu, Sheetal Handa, Raymond Tsang, and Bert Fraser-Reid*
Department of Chemistry, Paul M Gross Chemical Laboratory, Duke University, Durham, North Carolina 27706, USA

Aldol condensation of enolate **3** with aldehydes exemplified by **8** and **9** give (only) diastereomers **16** and **17** respectively The products are predictable on the basis of chelation to α or α/β oxygens

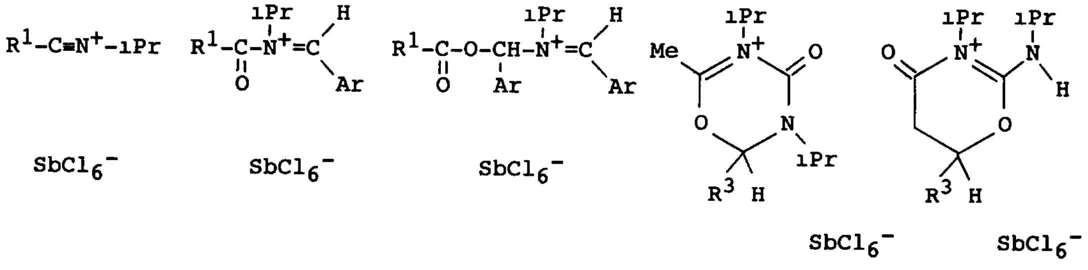




Tetrahedron, **1990**, *47*, 205

N-ACYLIMINIUM SALTS FROM THE REACTION OF NITRILIUM SALTS WITH ALDEHYDES

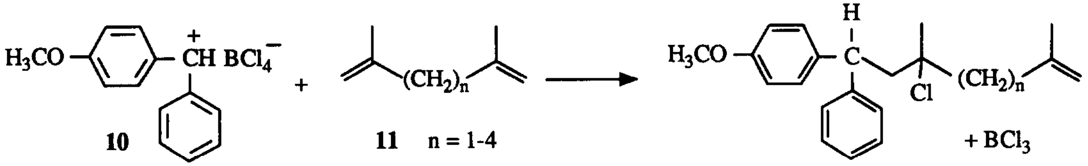
J.C.Jochims,* M.O.Glocker, J.Hofmann, H.Fischer, Universitat Konstanz (FRG)



Tetrahedron, **1990**, *47*, 219

ADDITIONS OF CARBENIUM IONS TO NONCONJUGATED DIENES
THE RETARDING (-I)-EFFECT OF THE SECOND DOUBLE BOND

Bernhard IRRGANG and Herbert MAYR*
Institut fur Chemie der Medizinischen Universität zu Lubeck, Ratzeburger Allee 160, D-2400 Lübeck



Kinetic studies on the title reaction show that the nucleophilicity of the dienes **11** increases with increasing distance between the double bonds

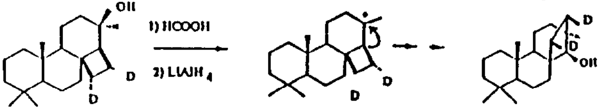
---

Tetrahedron, **1990**, *47*, 229

MECHANISM OF THE REARRANGEMENT OF THE BICYCLO[4.2.0] OCTAN SYSTEM TO THE BICYCLO [3.2.1] OCTAN SYSTEM

Josette BASTARD, Duc DO KHAC,* Marcel FETIZON and Chantal PREVOST , Labo. de Synthese Organique, Ecole Polytechnique, 91128 Palaiseau Cedex, France
Jean-Claude BELOEIL, Institut de Chimie des Substances Naturelles, C.N.R S

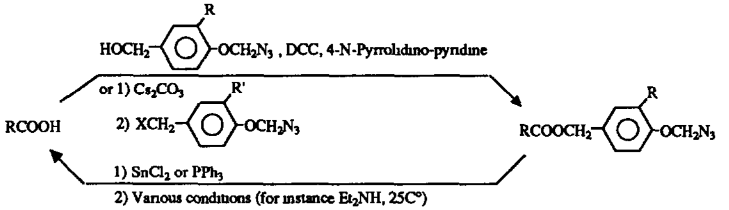
A steroselective introduction of deuterium on the migrating bond permits to establish that the rearrangement mechanism of ion A is concerted The stereochemistry of the deuterium atoms is determined using NMR and molecular mechanics



Tetrahedron, **1990**, *47*, 239

THE ABz CARBOXYL PROTECTING GROUPS. APPLICATION IN PEPTIDE SYNTHESIS

Bernard LOUBINOUX, Philippe GERARDIN
Université de Nancy I, Faculté des Sciences, Laboratoire de Chimie Organique 4,
URA CNRS n° 486, B.P 239, 54506 Vandoeuvre-les-Nancy Cédex (France)



The easily prepared ABz esters are cleaved in very mild conditions They are used without any racemisation in peptide synthesis The Boc group can be removed in the presence of the ABz groups and the ABz groups can be cleaved in the presence of the Boc, Z or Bzl groups

---

Tetrahedron, **1990**, *47*, 249

Configuration and Conformation of (-) 8-phenylmenthyl 3-amino-2-hydroxy-5-methylhexanoate.

A. Solladié-Cavallo, N. Khiar; E.H.I.C.S., 1 rue B. Pascal, 67008 Strasbourg
J. Fischer, A. DeCian; Université Louis Pasteur, 4 rue B. Pascal, 67070 Strasbourg

From Comparison of X-ray structure with NMR and IR data it can be postulated that there are but minor changes in the conformation of compound **6al** from the solid state to the solution and that conformation of compound **3al** is similar to that of **6al**. A KF-bridged species is proposed to explain the extra stability of configuration 2S,3R in the presence of an excess of KF during the key step of formation of **3al** (equilibrated reaction) and the increase of asymmetric induction in those conditions.

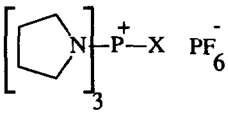
It is shown that the generaly invoqued $\pi\pi^*$ electronic interaction is probably not responsable of the cis conformation which is due to electrostatic and van der Waals interactions.

Tetrahedron, **1990**, *47*, 259

PyBOP® AND PyBroP: TWO REAGENTS FOR THE DIFFICULT COUPLING OF THE α,α-DIALKYL AMINO ACID, Aib.

Eric Frérot, Jacques Coste*, Antoine Pantaloni, Marie-Noelle Dufour and Patrick Jouin
Centre CNRS-INSERM de Pharmacologie-Endocrinologie, 34094 Montpellier Cédex 5, France

The difficult coupling of α-aminoisobutyric acid (Aib) was carried out using PyBOP and PyBroP in a comparative study with BOP and BroP These reagents gave good results under simple conditions



X = OBt PyBOP®
X = Br PyBroP

Tetrahedron, **1990**, *47*, 271

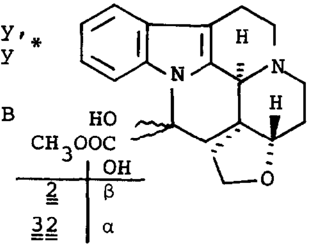
SYNTHESIS OF VINCA ALKALOIDS AND RELATED COMPOUNDS LV

SYNTHESIS OF (±)-DESMETHOXY CUANZINE

Ferenc Sóti*, Mária Kajtár-Peredy, Gábor Keresztury, Mária Incze, Zsuzsanna Kardos-Balogh, Csaba Szántay*

Central Research Institute for Chemistry of the Hungarian Academy of Sciences, H-1525 Budapest, POB 17, Hungary

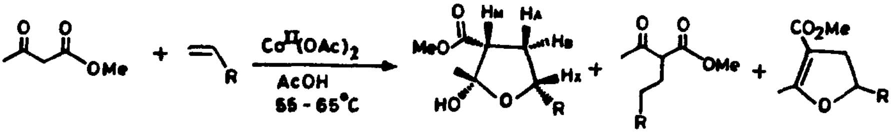
(±)-Desmethoxy cuanzine (2) and its epimer (32) has been synthesised.



Tetrahedron, **1990**, *47*, 297

STEREOSELECTIVE SYNTHESIS OF SUBSTITUTED TETRAHYDROFURANS - IDENTIFICATION AND ANALYSIS BY PROTON NMR AND MNDO, MM2 CALCULATIONS

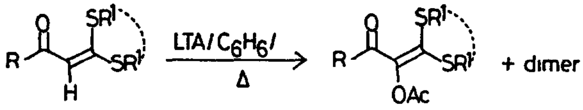
P Tarakeshwar, Javed Iqbal* and S. Manogaran*
Department of Chemistry, Indian Institute of Technology, Kanpur, India



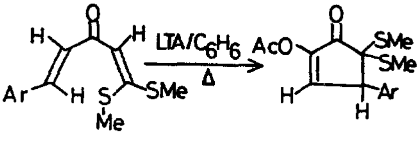
Tetrahedron, **1990**, *47*, 305

STUDIES ON LEAD TETRAACETATE OXIDATION OF α-OXOKETENE DITHIOACETALS

Laxminarayan Bhat, Abraham Thomas, Hiriyakkanavar Ila* and Hiriyakkanavr Junjappa*, Department of Chemistry, North-Eastern Hill University, Shillong-793 003, Meghalaya, India.



R = Ar, Me, R^1 = Me, $-(CH_2)_2-$

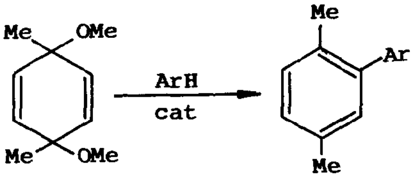


Ar=substituted aryl

Tetrahedron, **1990**, *47*, 313

REACTIVITY OF 3,6-DIMETHOXY-3,6-DIMETHYL-CYCLOHEXA-1,4-DIENE (PART 2). REGIOSELECTIVE ARYLATION OF ELECTRON-RICH AROMATIC COMPOUNDS

Francisco Alonso and Miguel Yus*
Departamento de Química Orgánica,
Facultad de Ciencias, Universidad de Alicante,
03690 Alicante, Spain

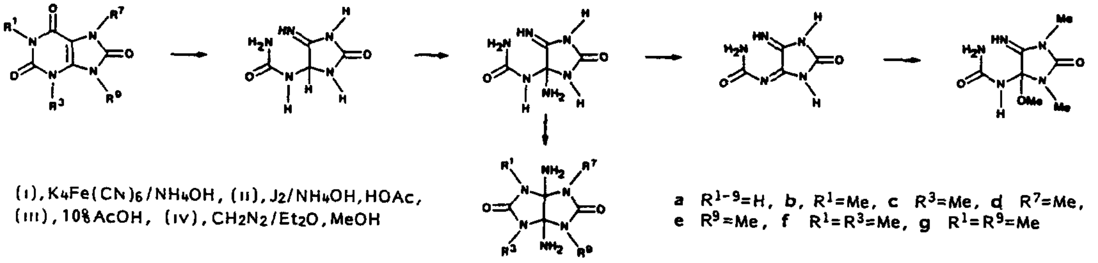


ArH = furan, thiophene, pyrrole, 2-methylfuran, indole, 1,3,5-trimethoxybenzene
cat = $ZnCl_2$, H_2SO_4 c

Tetrahedron, **1990**, *47*, 317

Synthesis and Structure of Dehydro-4-imino-allantoin and Its Covalent Adducts

T Popović, L.Sokolić, N Modric, A.Palković, and M.Poje*
Laboratory of Organic Chemistry, Faculty of Science, University of Zagreb,
P.O.Box 153, 41001 Zagreb, Croatia, Yugoslavia



(i), $K_4Fe(CN)_6/NH_4OH$, (ii), J_2/NH_4OH, HOAc, (iii), 10% AcOH, (iv), CH_2N_2/Et_2O, MeOH

a R^{1-9}=H, b, R^1=Me, c R^3=Me, d R^7=Me, e R^9=Me, f R^1=R^3=Me, g R^1=R^9=Me

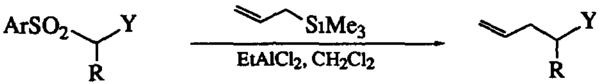
---

Tetrahedron, **1990**, *47*, 323

SYNTHESIS OF HOMOALLYLIC SULPHIDES AND SELENIDES BY LEWIS ACID MEDIATED DISPLACEMENT REACTIONS OF SULPHONES

Nigel S Simpkins, Department of Chemistry, University of Nottingham, University Park, Nottingham NG7 2RD, England

ABSTRACT A number of α-seleno- and α-thio-substituted sulphones have been prepared, and subsequently reacted with allyltrimethylsilane, using $EtAlCl_2$ as Lewis acid, to give homoallylic selenides or sulphides respectively

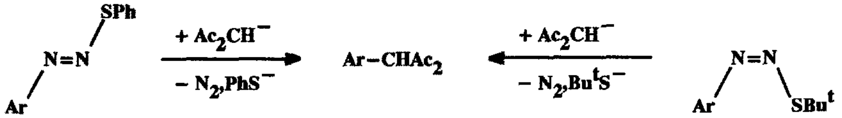


Ar = Ph, Y = SePh, or Ar =Tol, Y = SMe

Tetrahedron, **1990**, *47*, 333

ARYLATION OF POTASSIUM 2,4-PENTANEDIONATE VIA $S_{RN}1$ ON DIAZOSULFIDES

Carlo Dell'Erba, Marino Novi,* Giovanni Petrillo, Cinzia Tavani, and Paolo Bellandi
Istituto di Chimica Organica, C.N.R. Centro di Studio sui Diariloidi e loro Applicazioni, Corso Europa 26, I-16132 Genova, Italy



Satisfactory yields of arylation products are obtained in the presence of an electron-withdrawing group in Ar