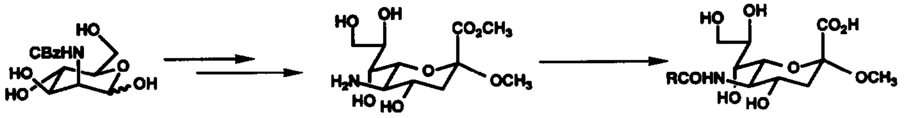
Tetrahedron, **1993**, *49*, 1

SYNTHESIS OF POTENTIAL INHIBITORS OF HEMAGGLUTINATION BY INFLUENZA VIRUS: CHEMOENZYMIC PREPARATION OF N-5 ANALOGS OF *N*-ACETYLNEURAMINIC ACID.

Michelle A. Sparks, Kevin W. Williams, Christine Lukacs, Andreas Schrell, Gregory Priebe, Andreas Spaltenstein and George M. Whitesides*
Department of Chemistry, Harvard University, Cambridge, MA 02138

An improved chemoenzymic route to neuraminic acid **2** is described. **2** was acylated to yield N-acyl neuraminic acids which were evaluated as inhibitors of influenza virus-cell adhesion using the HAI assay.



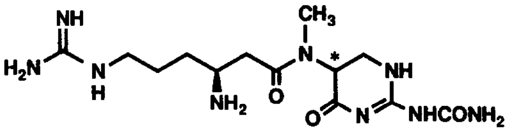
3 2

Tetrahedron, **1993**, *49*, 13

A NEW ANTI-MRSA DIPEPTIDE, TAN-1057 A

Yasunori Funabashi*, Shigetoshi Tsubotani, Katsuo Koyama, Nozomi Katayama and Setsuo Harada
Discovery Research Division, Takeda Chemical Industries, Ltd. Jusohonmachi-2, Yodogawa-ku, Osaka 532, Japan

The structure of a new dipeptide antibiotic, TAN-1057 A, produced by *Flexibacter* sp. PK-74, was determined The antibiotic was specifically effective against infections of staphylococcus species including MRSA.



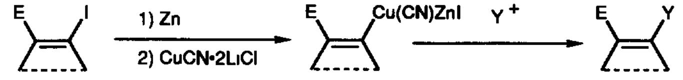
**S*, TAN-1057 A
**R*, TAN-1057 B

Tetrahedron, **1993**, *49*, 29

Preparation and Reactivity of Functionalized Alkenyl-Zinc, -Copper, and -Chromium Organometallics.

Paul Knochel* and C Janakiram Rao[1], Philipps-Universität Marburg, Fachbereich Chemie, Hans-Meerwein-Straße, D-3550 Marburg/Germany

Electron-withdrawing group containing alkenyl iodides insert Zn (or $CrCl_2$) and react in the presence of Cu(I) or Pd(0) with various electrophiles



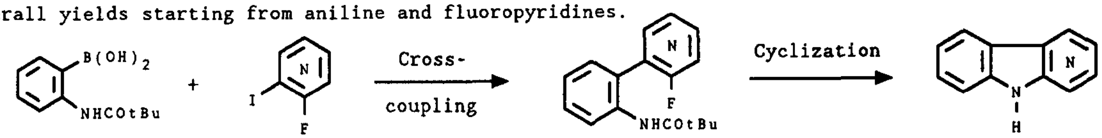
E = COR, CO_2R, SO_2R

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

CONNECTION BETWEEN METALLATION AND CROSS-COUPLING STRATEGIES. A NEW CONVERGENT ROUTE TO AZACARBAZOLES.

Patrick ROCCA, Francis MARSAIS, Alain GODARD and Guy QUEGUINER*.
URA CNRS 1429, INSA de Rouen, BP 08, 76131 Mont-Saint-Aignan Cédex, FRANCE.

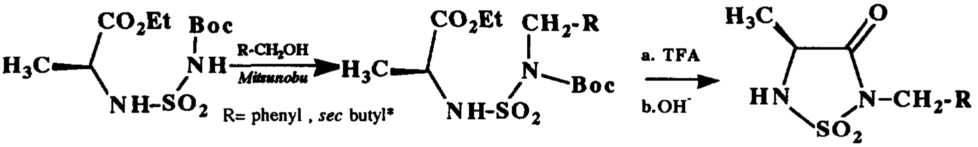
The four parent α-, β-, γ- and δ-carbolines were prepared in four steps with good overall yields starting from aniline and fluoropyridines.



Tetrahedron, **1993**, *49*, 65

Synthesis of N-protected chiral *sulfahydantoins*

G.Dewynter,N.Aouf,M.Criton,J-L.Montero
Lab. de chimie bio-organique.USTL.Montpellier.France



The enantiospecific synthesisof N2-protected sulfahydantoins was carried out starting from chlorosulfonyl isocyanate and amino/hydroxy-estersvia Mitsunobu reaction. Symmetric N,N-sulfonyldipeptides can be obtained by a similar route

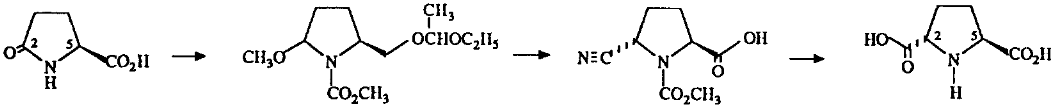
---

Tetrahedron, **1993**, *49*, 77

A Short Synthesis of C-2 Symmetric (2S,5S)Pyrrolidine-2,5 Dicarboxylic Acid, A Constituent of Red Alga *Schizymenia dubyi*

Nicole Langlois* and Anne Rojas
Institut de Chimie des Substances Naturelles, CNRS, F-91198 Gif-sur-Yvette

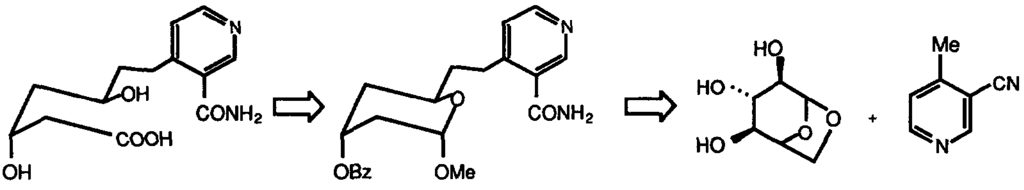
(2S, 5S) pyrrolidine-2,5-dicarboxylic acid was synthesized from (S) pyroglutamic acid in 32% overall yield.



Tetrahedron, 1993, *49*, 83

Towards a New Type of HMG-CoA Reductase Inhibitors: Part II: Dramatic Substituents Effects in the C-5 Epimerisation of Carbohydrate Derivatives

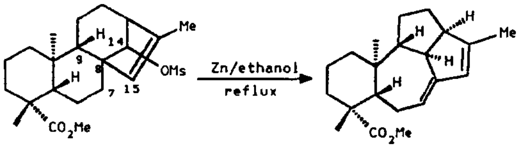
P. Boquel[a], C. Taillefumier[a], Y. Chapleur[a*], P. Renaut,[b] S. Samreth[b], F.D. Bellamy[b*]
a) Laboratoire de Chimie Organique 3, Université de Nancy I, BP 239, F-54506 Vandoeuvre, France.
b) Laboratoire Fournier, Centre de Recherche, F-21121 Daix, France.



Tetrahedron, 1993, *49*, 97

A NOVEL REARRANGEMENT OF 14-MESYLOXY-ENT-KAURENOIDS

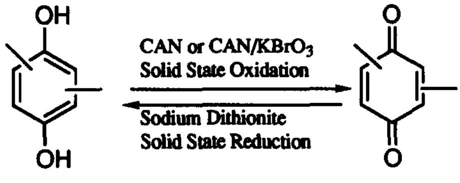
Yun-Xing Cheng[a] Wei-Shan Zhou[a*] Hou-Ming Wu[b]
a. Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences, Shanghai 200032.
b. State Key Laboratory of Bio-organic Chemistry and Natural Product Chemistry, Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences, Shanghai 200032, CHINA



Tetrahedron, 1993, *49*, 105

Solid State Redox Chemistry of Hydroquinones and Quinones

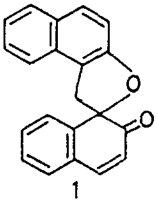
Jeroni Morey* and José M. Saá*
Departament de Química. Universitat de les Illes Balears. E-07071 Palma de Mallorca. Spain.



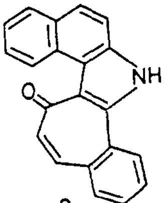
Solid state oxidation of hydroquinones to the corresponding quinones was achieved with various Ce(IV) reagents. Solid $KBrO_3$ can be used as cooxidant when a catalytic amount of CAN was employed. Solid state sodium dithionite reduction of quinones yields highly colored quinhydrones and, eventually, hydroquinones. Both solid state oxidations and reductions appear to involve gaseous reagents.

Tetrahedron, **1993**, *49*, 113

Reaction of Spironaphthalenones with Hydroxylamine :Part I. A Reinvestigation of the Mechanism. Tirumalai R.Kasturi*, Srirangam K. Jayaram, Palle V.P. Pragnacharyulu, Jitendra A. Sattigeri, Gowrawanam M.Reddy and Kaipenchery A.Kumar. Dept. of Organic Chemistry, Indian Institute of Science,Bangalore-560012,INDIA.



1

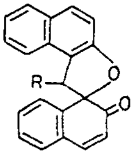


2

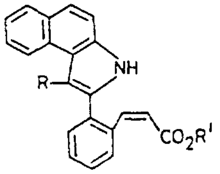
Reaction of spironaphthalenones 1b-o with hydroxylamine results in the formation of pyrrolotropones 2b-o.

Tetrahedron, **1993**, *49*, 125

Reaction of Spironaphthalenones with Hydroxylamine : Part II. Structure of Product in the Reaction of 1'-Substituted Spironaphthalenone. Tirumalai R.Kasturi*, Kaipenchery A.Kumar and Palle V.P.Pragnacharyulu. Dept. of Organic Chemistry,Indian Institute of Science, Bangalore-560012,INDIA.



1

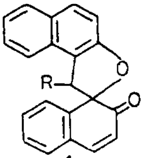


2

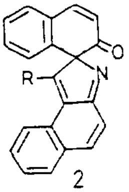
Reaction of 1'-aryl substituted spironaphthalenones 1a-h with hydroxylamine in different alcohols resulted in substituted cinnamic esters 2a-m.

Tetrahedron, **1993**, *49*, 135

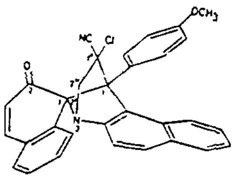
Reaction of Spironaphthalenones with Hydroxylamine :Part III.A Novel Mechanism for the Formation of Products and Trapping of an Intermediate. Tirumalai R.Kasturi*, Kaipenchery A. Kumar, Palle V.P.Pragnacharyulu and Gundi Sridevi.Dept.of Organic Chemistry,Indian Institute of Science,Bangalore-560012,INDIA.



1



2



3

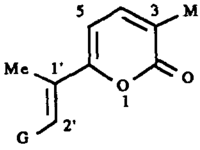
Formation of pyrrolotropones or pyrrolo esters by the reaction of spironaphthalenones 1 with NH_2OH proceeds via the isopyrrole intermediate 2 which has been trapped as a Diels-Alder adduct 3.

Tetrahedron, **1993**, *49*, 141

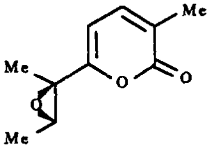
Gibepyrones: α-Pyrones from *Gibberella fujikuroi*

A. F. Barrero*, J. E. Oltra, M. M. Herrador, E. Cabrera, J. F. Sánchez,J. F. Quílez,
F. J. Rojas, J. F. Reyes. Departamento de Química Orgánica, Facultad de Ciencias, Universidad de Granada, 18071. Granada. Spain.

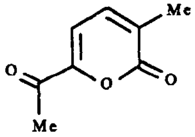
Abstract: Gibepyrones A-F (1-4, 6 and 7) were identified in three different culture media of *G. fujikuroi* (IMI 58289). Their structures were determined using both spectroscopic techniques and chemical synthesis. Their antimicrobial activity has been screened.



1 G= CH_3, **2** G= CH_2OH,
3 G= CHO,**4** G= CO_2H,



6



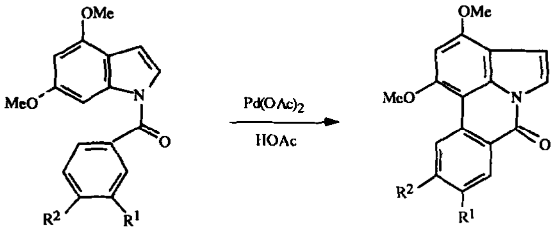
7

Tetrahedron, **1993**, *49*, 151

Synthesis of Pyrrolophenanthridones By Aryl-Aryl Coupling Reactions

David St.C. Black* , Paul A. Keller, and Naresh Kumar
School of Chemistry, University of New South Wales, P.O. Box 1, Kensington, N.S.W. 2033, Australia.

N-Aroyl-4,6-dimethoxyindoles were converted by palladium acetate in acetic acid into pyrrolophenanthridones in moderate yields (30-65%). These products are related to some pyrrolophenanthridone alkaloids, which lack the methoxyl groups.

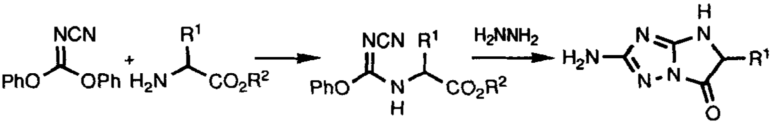


Tetrahedron, **1993**, *49*, 165

Synthesis of 1,2,4-Triazoles and 1,2,4,6-Tetraazabicyclo[3.3.0]octanes from Diphenyl Cyanocarbonimidate.

Competition between Addition of Hydrazines to Esters or Nitriles.

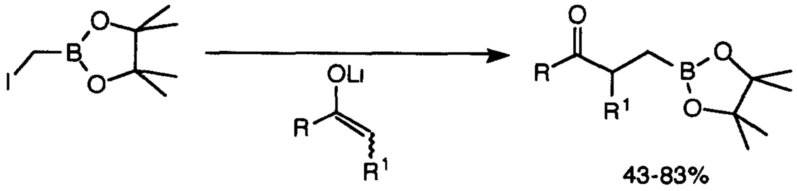
Peter J. Garratt, Simon N. Thorn and Roger Wrigglesworth
Department of Chemistry, University College London, Gordon Street, London WC1H 0AJ, U.K. and Sandoz Institute for Medical Research, Gower Place, London WC1E 6BN, U.K.



Tetrahedron, **1993**, *49*, 177

β-BORONATE CARBONYL DERIVATIVES: SYNTHESIS AND EVIDENCE FOR THE INTERVENTION OF BORONATE "ATE"-COMPLEXES IN ENOLATE ALKYLATIONS.

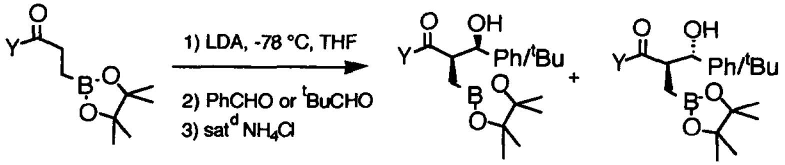
Richard J. Mears and Andrew Whiting
Department of Chemistry, U.M I.S.T., P.O.Box 88, Manchester M60 1QD.



Tetrahedron, **1993**, *49*, 187

THE ORIGIN OF THE STEREOSELECTIVITY IN THE ALDOL REACTIONS OF β-BORONATE CARBONYL DERIVATIVES

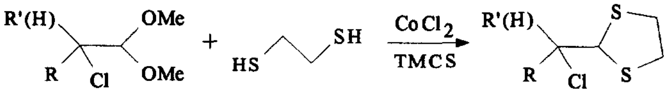
Anthony D.M. Curtis, Richard J. Mears, and Andrew Whiting*.
Department of Chemistry, U.M.I.S.T., P.O. Box 88, Manchester, M60 1QD.



Tetrahedron, **1993**, *49*, 199

α-CHLOROMERCAPTALS FROM α-CHLOROACETALS AND THIOLS

F. Bellesia, M. Boni, F. Ghelfi* and U M Pagnoni
Dipartimento di Chimica dell'Università, Via Campi 183, I-41100 Modena, (Italy)



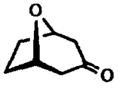
α-Chloromercaptals are prepared in good yields by a $CoCl_2$-trimethylchlorosilane catalysed transdithioacetalization of α-chloroacetals with thiols in acetonitrile

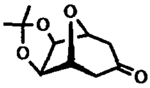
Tetrahedron, 1993, *49*, 207

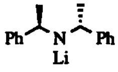
ENANTIOSELECTIVE DEPROTONATION OF 8-OXABICYCLO[3.2.1]OCTAN-3-ONE SYSTEMS USING HOMOCHIRAL LITHIUM AMIDE BASES

Barry J. Bunn, Paul J. Cox, and Nigel S. Simpkins*, Department of Chemistry, University of Nottingham, University Park, Nottingham, NG7 2RD, UK.

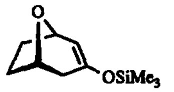
An in-depth study of the asymmetric transformation of ketones 6 and 7 into the enol silanes 12 and 10, using homochiral lithium amide (HCLA) bases such as 4, is described, along with further transformations of 12 and 10 into monocyclic products.


(6)

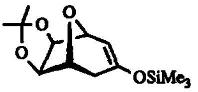

(7)



(4)



(12)

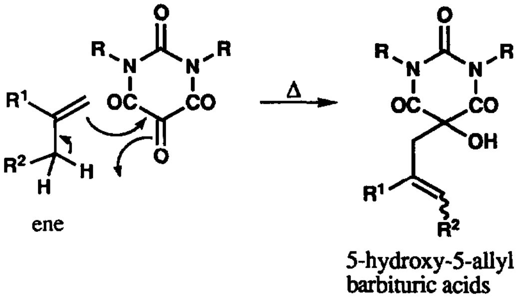


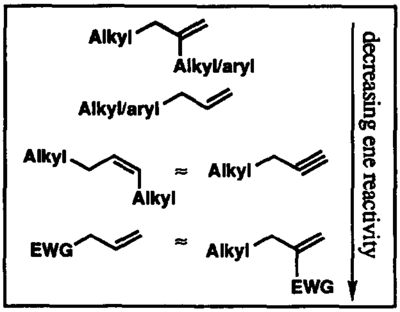
(10)

Tetrahedron, 1993, *49*, 219

Thermal Ene Reactions of Alloxan and 1,3-Dimethylalloxan

G. Bryon Gill* and Muhammad S. Hj. Idris
Department of Chemistry, The University, Nottingham NG7 2RD, England



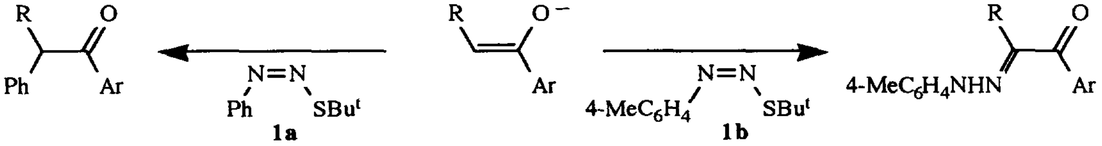


Tetrahedron, 1993, *49*, 235

α-ARYLATION vs. α-ARYLHYDRAZONYLATION OF ALKYL ARYL KETONES WITH ARYLAZO *tert*-BUTYL SULFIDES

C. Dell'Erba, M. Novi, G. Petrillo* and C. Tavani

Potassium enolates of alkyl aryl ketones undergo effective α-phenylation or α-(4-methylphenyl)hydrazonylation by reaction, respectively, with azosulfides **1a** or **1b** in DMSO at room temperature.



Tetrahedron, **1993**, *49*, 243

THE STERIC COURSE OF SOME ELECTROPHILIC ADDITIONS TO THE TETRAHYDROPYRIDAZINE RING MOIETY OF BENZO[g]PHTHALAZINO[1,2-b]PYRIDAZINE-6,13-DIONE DERIVATIVES

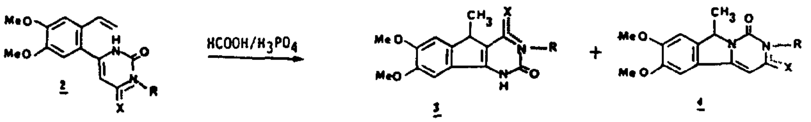
M. Carmen Cano, Fernando Gómez-Contreras*, Ana M. Sanz, and María J. R. Yunta
Departamento de Química Orgánica I, Facultad de Ciencias Químicas, Universidad Complutense, 28040 Madrid (Spain)

The functionalization of ring A in anthracyclinone related compounds has been studied via electrophilic additions. Stereochemical and conformational features involved have been evaluated.

Tetrahedron, **1993**, *49*, 255

APPLICATIONS OF NOVEL CARBON-NITROGEN BOND CLEAVAGE REACTION (PART-I). A NEW SYNTHESIS/ DERIVATISATION OF 5H-INDENO[1,2d]PYRIMIDINES AND PYRIMIDO[6,1-a]ISOINDOLES

Bansi Lal* and Ramesh M. Gidwani
Dept. of Chemistry, Hoechst Centre for Basic Research, Hoechst India Limited, Mulund (West), Bombay 400 080, India.

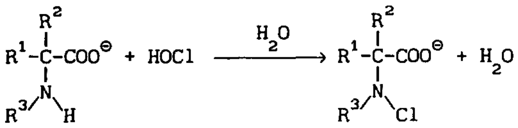


Tetrahedron **1993**, *49*, 275

α-AMINO ACIDS CHLORINATION IN AQUEOUS MEDIA

X.L. Armesto; M. Canle; J.A. Santaballa*
Universidad de La Coruña. Facultad de Ciencias. Departamento de Química Fundamental e Industrial. A Zapateira, s/n. E-15071 La Coruña. SPAIN.

The rate of α- amino acids chlorination is controlled by the chlorine transfer between the chlorinating agent and the nitrogen of the free amino group. The bimolecular rate constants are evaluated.



$$\mathrm{R^1\text{-}\underset{\underset{R^3\diagup N\diagdown H}{|}}{\overset{\overset{R^2}{|}}{C}}\text{-}COO^{\ominus}} + \mathrm{HOCl} \xrightarrow{H_2O} \mathrm{R^1\text{-}\underset{\underset{R^3\diagup N\diagdown Cl}{|}}{\overset{\overset{R^2}{|}}{C}}\text{-}COO^{\ominus}} + \mathrm{H_2O}$$

Tetrahedron, **1993**, *49*, 285

FORMATION OF C_{60} AND POLYCYCLIC AROMATIC HYDROCARBONS UPON ELECTRIC DISCHARGES IN LIQUID TOLUENE

Mihály T. Beck,* Zoltán Dinya, Sándor Kéki and Lajos Papp
Department of Physical Chemistry, Lajos Kossuth University,
Research Group of Antibiotics of the Hungarian Academy of Sciences and
Department of Inorganic and Analytical Chemistry Debrecen 10, Hungary 4010

The formation of C_{60} besides a great number of polycyclic aromatic compounds occurs when electric discharges(20 kV, AC) are made in liquid toluene.