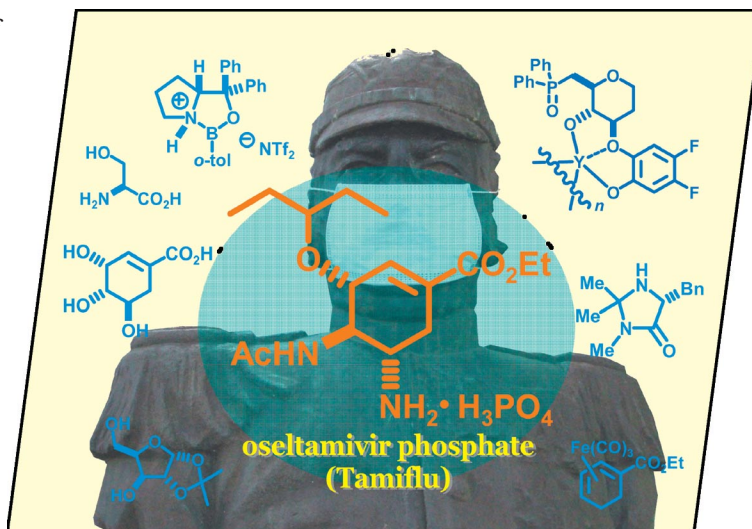


The EUChemSoc Societies have taken the significant step into the future by merging their traditional journals, to form two leading chemistry journals, the *European Journal of Inorganic Chemistry* and the *European Journal of Organic Chemistry*. Three further EUChemSoc Societies (Austria, Czech Republic and Sweden) are Associates of the two journals.

COVER PICTURE

The cover picture shows the chemical structure of oseltamivir phosphate (Tamiflu). Its representative starting materials and the asymmetric catalysts that provide its starting materials are also shown. Anybody can catch influenza. However, it is very scary, as it can be fatal. Oseltamivir phosphate is a potent antiinfluenza drug, that could protect humans from a possible influenza pandemic. The development of a synthetic route for oseltamivir phosphate that can satisfy its worldwide demand in a safe and environmentally friendly way is a great challenge today. In the Microreview by M. Shibasaki and M. Kanai on p. 1839ff, synthetic strategies of oseltamivir are presented.



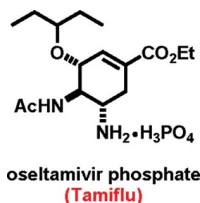
MICROREVIEW

Anti-influenza Drugs

M. Shibasaki,* M. Kanai 1839–1850

Synthetic Strategies for Oseltamivir Phosphate

Keywords: Oseltamivir phosphate / Influenza / Process chemistry / Asymmetric catalysis / Analogue synthesis / Tamiflu



Synthetic strategies for oseltamivir phosphate, an important orally active anti-influenza drug, are reviewed.

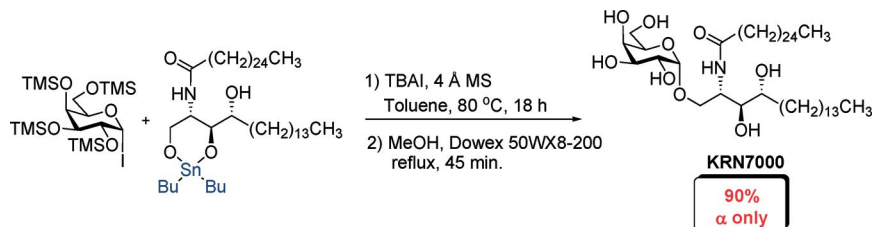
SHORT COMMUNICATION

α -Glycosyl Ceramides

O. Boutureira, J. A. Morales-Serna,
Y. Díaz, M. I. Matheu,
S. Castellón* 1851–1854

Direct and Efficient Glycosylation Protocol for Synthesizing α -Glycolipids: Application to the Synthesis of KRN7000

Keywords: Glycosylation / Glycolipids / Phytosphingosine / Tin



α -Glycosyl iodides react with stannyl ethers in the presence of Bu_4NI to give the biologically active galactosyl ceramide

KRN7000 and other α -glycolipids in excellent yield with complete α -selectivity.

FULL PAPERS

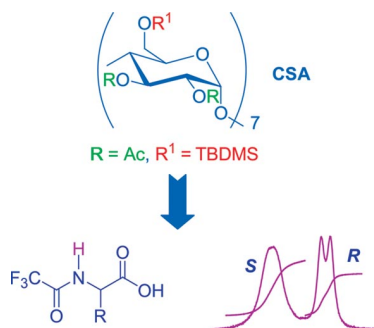
NMR Enantiodiscrimination

G. Uccello-Barretta,* F. Balzano,
F. Pertici, L. Jicsinszky, G. Sicoli,
V. Schurig 1855–1863



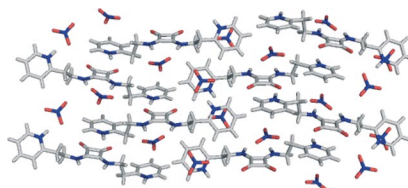
External vs. Internal Interactions in the Enantiodiscrimination of Fluorinated α -Amino Acid Derivatives by Heptakis[2,3-di-*O*-acetyl-6-*O*-(*tert*-butyldimethylsilyl)]- β -cyclodextrin, a Powerful Chiral Solvating Agent for NMR Spectroscopy

Keywords: Cyclodextrins / Enantiomeric purity / Enantiodiscrimination / NMR spectroscopy



Heptakis[2,3-di-*O*-acetyl-6-*O*-(*tert*-butyldimethylsilyl)]- β -cyclodextrin functions as an efficient chiral auxiliary for the NMR enantiodiscrimination of fluorinated α -amino acids. The origin of enantiodiscrimination in solution has been elucidated by NMR investigations and comparison with cyclic and acyclic model compounds

The important role of anion- π and hydrogen-bonding interactions is manifested in the crystal packing of the first example of a squaramide-nitrate salt solid structure.



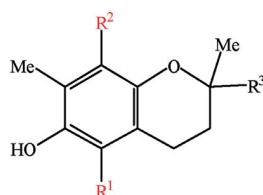
C. Rotger,* B. Soberats,
D. Quiñero, A. Frontera, P. Ballester,
J. Benet-Buchholz, P. M. Deyà,
A. Costa* 1864–1868

Crystallographic and Theoretical Evidence of Anion- π and Hydrogen-Bonding Interactions in a Squaramide-Nitrate Salt

Keywords: Amides / Anions / Pi interactions / Molecular recognition

Amphiphilic Antioxidants

C- β -D-Glucopyranosyl chromanols and tocopherols (containing either a deprotected or an acetyl-protected Glc moiety) were synthesized by 4–5-step procedures. These new antioxidants were evaluated for their ability to inhibit the peroxidation of linoleic acid in SDS micelles. The position of the C-glucopyranosyl moiety on the phenolic nucleus emerges as the critical structural determinant of their activity.



$R^1 = \text{Me or } \beta\text{-D-Glc or } \beta\text{-D-(Ac)}_4\text{Glc}$
 $R^2 = \text{Me or } \beta\text{-D-Glc or } \beta\text{-D-(Ac)}_4\text{Glc}$
 $R^3 = \text{Me or phytlyl (C}_{16}\text{H}_{33})$

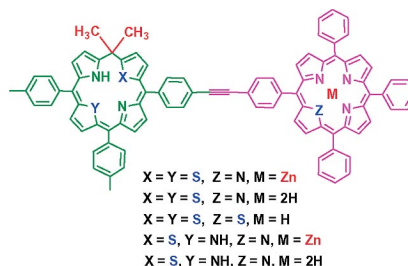
L. He, S. Galland, C. Dufour,
G.-R. Chen,* O. Dangles,* B. Fenet,
J.-P. Praly* 1869–1883

C-D-Glucopyranosyl Derivatives of Tocopherols – Synthesis and Evaluation as Amphiphilic Antioxidants

Keywords: C-Glycosides / Tocopherol / Chromanol / Antioxidant / Lipid peroxidation

Thiaphlorin–Porphyrin Dyads

Synthesis and preliminary anion-binding properties of a series of thiaphlorins and thiaphlorin–porphyrin dyads are reported.



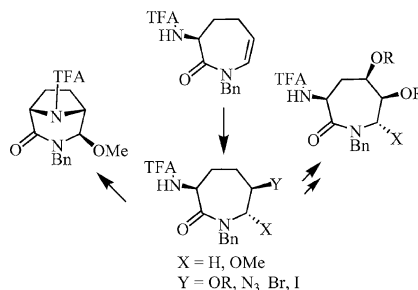
I. Gupta, R. Fröhlich,
M. Ravikanth* 1884–1900

Synthesis and Anion-Binding Studies of Thiaphlorins and Covalently Linked Thiaphlorin–Porphyrin Dyads

Keywords: Thiaphlorins / Porphyrins / Anion sensing

3-Aminocaprolactam Scaffolds

Highly regio- and diastereoselective *syn*-dihydroxylation, hydroxy-, azido-, and halo-methoxylations and subsequent eliminations were performed on cyclic 6,7-dehydro-L-lysine, leading to new mono-, di- and trisubstituted 3-aminocaprolactams. Structural and mechanistic aspects of these reactions, as well as the origin of the observed diastereoselectivities are discussed.



C. Levraud, S. Calvet-Vitale, G. Bertho,
H. Dhimane* 1901–1909

Diastereoselective Additions to (3*S*)-3-Aminodehydrocaprolactams: Development of a Versatile Synthesis of New Substituted Cyclic L-Lysines

Keywords: 3-Aminocaprolactam / Diastereoselective addition / Halomethoxylation / Azidomethoxylation / Anchimeric assistance

CONTENTS

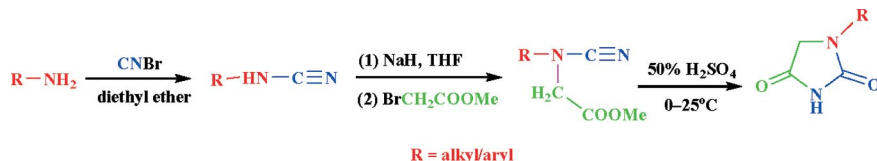
Hydantoin Synthesis

V. Kumar, M. P. Kaushik,*
A. Mazumdar 1910–1916



An Efficient Approach for the Synthesis of N-1 Substituted Hydantoin

Keywords: Cyanamides / N heterocycles / Cyclizations / Retro reactions



A three-step route for the synthesis of N-1 alkyl/aryl-substituted hydantoin was developed. The reactions of amines with cyanogen bromide gave cyanamides. Treatment with methyl bromoacetate afforded

methyl *N*-cyano-*N*-alkyl/aryl aminoacetate, which upon reaction with H₂SO₄ afforded various N-1 substituted hydantoin in very good yields.

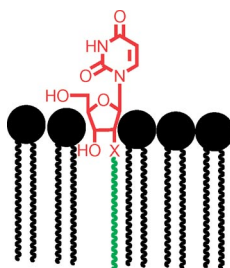
Nucleolipids

O. Kaczmarek, N. Brodersen, A. Bunge,
L. Löser, D. Huster, A. Herrmann,
A. Arbuzova, J. Liebscher* 1917–1928



Synthesis of Nucleosides with 2'-Fixed Lipid Anchors and Their Behavior in Phospholipid Membranes

Keywords: Nucleosides / Amphiphiles / Lipophiles / Membrane anchoring / Membranes



New nucleosides with lipid anchors attached to the ribose moiety have been synthesized. Their anchoring behavior in large unilamellar POPC vesicles as phospholipid membrane models has been studied by MAS NMR spectroscopy.

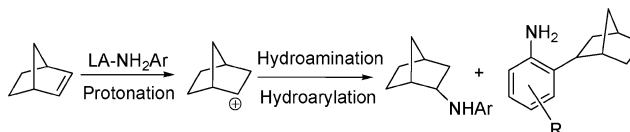
Olefin Hydroamination

X. Cheng, Y. Xia, H. Wei, B. Xu,
C. Zhang, Y. Li,* G. Qian, X. Zhang,
K. Li, W. Li 1929–1936



Lewis Acid Catalyzed Intermolecular Olefin Hydroamination: Scope, Limitation, and Mechanism

Keywords: Hydroamination / Lewis acids / Amines / Catalysis / Mechanisms



The hydroamination reactions of norbornene with aromatic amines catalyzed by different Lewis acids are presented. A mechanism involving a carbocation was found to be most favorable, as supported

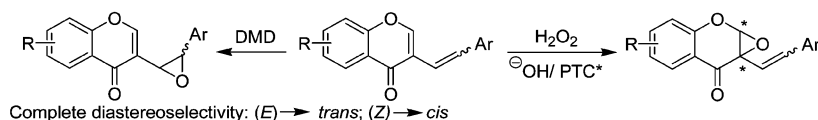
by the experimental results. This mechanistic insight allowed the controllable synthesis of allylamine and tetrahydroquinoline from isoprene and aromatic amines.

Epoxidation

T. Patonay,* A. Kiss-Szikszai, V. M. Silva,
A. M. S. Silva, D. C. G. A. Pinto,
J. A. S. Cavaleiro, J. Jekő 1937–1946

Microwave-Induced Synthesis and Regio- and Stereoselective Epoxidation of 3-Styrylchromones

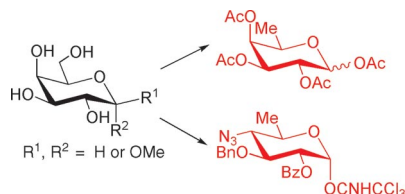
Keywords: Solvent-free reaction / Microwave-assisted synthesis / Enantioselective epoxidation / O heterocycles



The microwave-assisted solvent-free synthesis of (*E*)-3-styrylchromones from 3-formylchromones and phenylmalonic acid has been developed. Treatment of the alkenes with dimethyldioxirane led to the exclusive formation of 3-(3-aryloxiran-2-yl)chromones with complete diastereoselectivity,

whereas treatment with hydrogen peroxide under alkaline conditions afforded 2,3-epoxy-3-styrylchromanones as the only products. Wynberg epoxidation allowed the synthesis of enantiomerically enriched 2,3-epoxy-3-styrylchromanones, but only with moderate *ee* values.

The title compounds were synthesized from methyl α - or β -D-galactopyranoside. Essential to obtaining furanose-free final products was conducting acetolyses with 4-*O*-protected pyranoside intermediates that did not allow pyranose to furanose conversion.

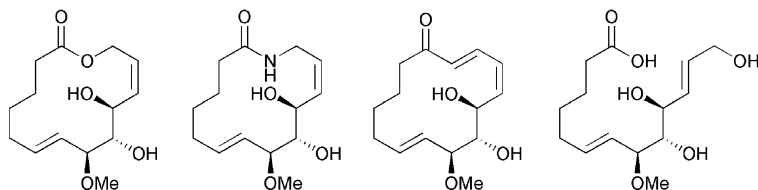


S. Hou, P. Kováč* 1947–1952

A Convenient Synthesis of Furanose-Free D-Fucose Per-*O*-Acetates and a Precursor for Anthrose

Keywords: Latent anthrose donor / Acetolysis / Carbohydrates / Synthetic methods / Deoxygenation

Novel Migrastatin Analogues



The synthesis of novel macrolactam and macroketone analogues of migrastatin and their biological evaluation are described.

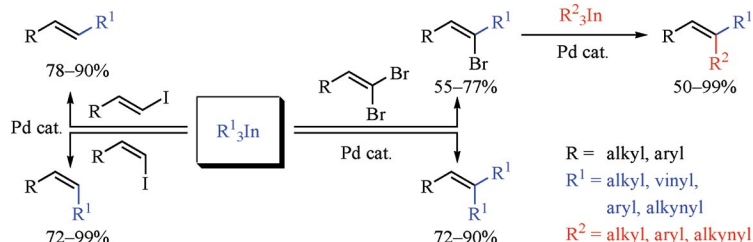
tin and their biological evaluation are described.

G. Anquetin, G. Horgan, S. Rawe, D. Murray, A. Madden, P. MacMathuna, P. Doran, P. V. Murphy* 1953–1958

Synthesis of Novel Macrolactam and Macroketone Analogues of Migrastatin from D-Glucal and Comparison with Macrolactone and Acyclic Analogues: A Dorrigin A Congener Is a Potent Inhibitor of Gastric Cancer Cell Migration

Keywords: Carbohydrates / Tumour cell migration inhibitor / Cancer / Horner olefination / Migrastatin / Dorrigin A / Natural products

Cross-Coupling Reactions



The regio- and stereoselectivity of the palladium-catalysed cross-coupling reactions of indium organometallics with stereo-

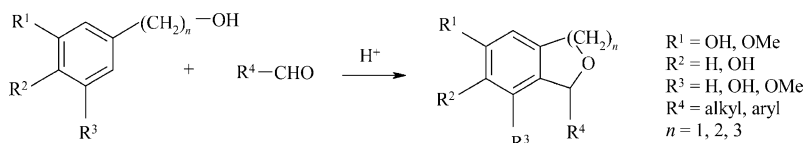
defined 1-haloalkenes and 1,1-dihaloalkenes have been studied.

R. Riveiros, L. Saya, J. Pérez Sestelo,* L. A. Sarandeses* 1959–1966

Palladium-Catalysed Cross-Coupling Reactions of Triorganoindium Reagents with Alkenyl Halides

Keywords: Indium / Cross-coupling / Palladium / Homogeneous catalysis / Haloalkenes / Stereoselective reactions

Modified Pictet–Spengler Reaction



The oxa-Pictet–Spengler reaction, which is useful in the synthesis of hydroxyisochromans, was used to synthesize 1,3-dihydroiso-

benzofuran and homoisochromans derivatives. The different results are discussed.

M. Guiso, A. Betrow, C. Marra* 1967–1976

The Oxa-Pictet–Spengler Reaction: A Highlight on the Different Efficiency between Isochroman and Phthalan or Homoisochroman Derivative Syntheses

Keywords: Fused-ring systems / Oxygen heterocycles / Synthetic methods

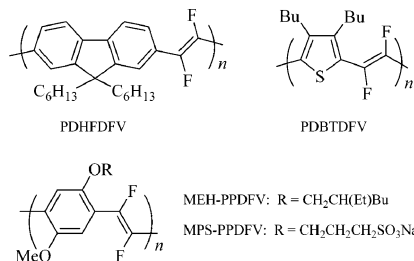
CONTENTS

Fluorinated Poly(arylenevinylene)s

F. Babudri, A. Cardone, G. M. Farinola,
C. Martinelli, R. Mendichi, F. Naso,*
M. Striccoli 1977–1982

Synthesis of Poly(arylenevinylene)s with
Fluorinated Vinylene Units

Keywords: Polymers / Stannanes / Cross-
coupling / Blueshift / Fluorine



Poly(arylenevinylene) polymers bearing
fluorine atoms in the vinylene units were
obtained by a Stille cross-coupling reaction
of (*E*)-(1,2-difluoro-1,2-ethenediyl)bis(tri-
butylstannane) (**4**) with diiodoaryl deriva-
tives.

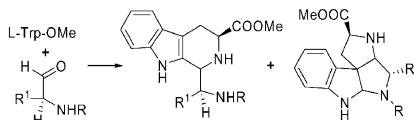
Indole-Based Ring Systems

I. M. Gomez-Monterrey, P. Campiglia,
A. Bertamino, C. Aquino, O. Mazzoni,
M. V. Diurno, R. Iacovino, M. Saviano,
M. Sala, E. Novellino,
P. Grieco* 1983–1992



Synthesis of Novel Indole-Based Ring Sys-
tems by Acid-Catalysed Condensation
from α -Amino Aldehydes and L-Trp-OMe

Keywords: Indoles / Amino aldehydes / Ca-
talysis / Condensation reactions / Hetero-
cycletitl



Compounds containing a tetrahydro- β -
carboline and a novel octahydropyr-
rolo[3',2':3,4]pyrrolo[2,3-*b*]indole system
have been efficiently synthesized by acid-
catalysed condensation of tryptophan with
different α -amino aldehyde derivatives.
Here we report the characterization of
these new compounds and preliminary
studies of the reactivity of the tetrahydro-
 β -carboline system.

CORRECTION

P. Gupta, P. Kumar* 1993

An Efficient Total Synthesis of Decarestric-
tine D

Keywords: Macrolides / Hydrolytic kinetic
resolution / Sharpless asymmetric dihydrox-
ylation / Cross metathesis / Ring-closing
metathesis

If not otherwise indicated in the article, papers in issue 10 were published online on March 13, 2008