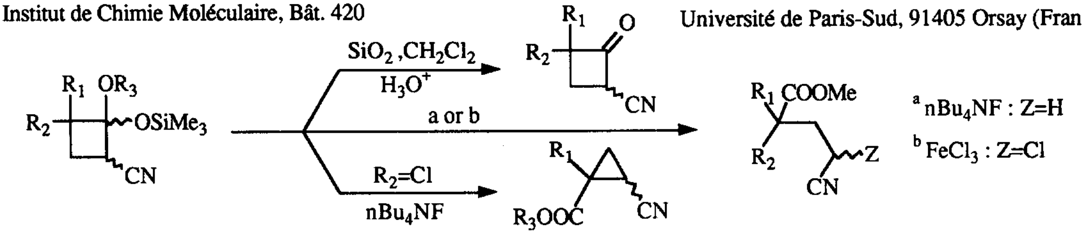
GRAPHICAL ABSTRACTS

Tetrahedron, **1992**, *48*, 6361

Synthetic Applications of the [2+2] cycloaddition products of ketene alkylsilylacetals with acrylonitrile.

Gérard ROUSSEAU and Alain QUENDO Laboratoire des Carbocycles, Institut de Chimie Moléculaire, Bât. 420 Université de Paris-Sud, 91405 Orsay (France)

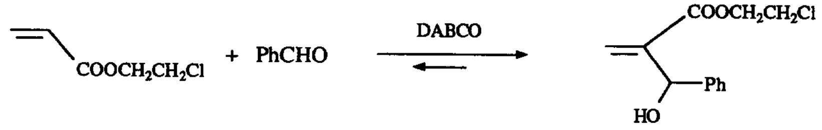


Tetrahedron, **1992**, *48*, 6371

THE *'BAYLIS -HILLMAN* REACTION' MECHANISM AND APPLICATIONS REVISITED

Yves Fort, Marie Christine Berthe, and Paul Caubere*
Laboratoire de Chimie Organique I, URA CNRS 457, Université de Nancy I, B.P. 239, 54506 Vandœuvre-les-Nancy cédex, France

It is shown that reaction of aryl, benzyl, alkyl and functional alkyl acrylic esters with benzaldehyde, in the presence of DABCO, strongly depends upon the electronic and steric effects of the ester part. Moreover, for the first time, it is shown that the overall condensation is equilibrated.

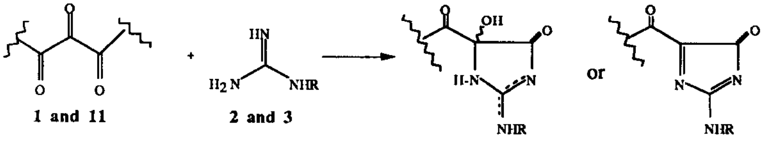


Tetrahedron, **1992**, *48*, 6385

RÉACTION DES GUANIDINES AVEC LES COMPOSÉS TRICARBONYLÉS VICINAUX : NOUVEL ACCÈS AUX COMPOSÉS À SQUELETTE 2-AMINOIMIDAZOLIQUE

C. Quirosa-Guillou, D. Z. Renko and C. Thal
Institut de Chimie des Substances Naturelles, CNRS, 91198 Gif/Yvette Cedex, France

Addition of guanidines 2 and 3 to vicinal tricarbonyls 1 and 11 leads to 2-aminoimidazole system :



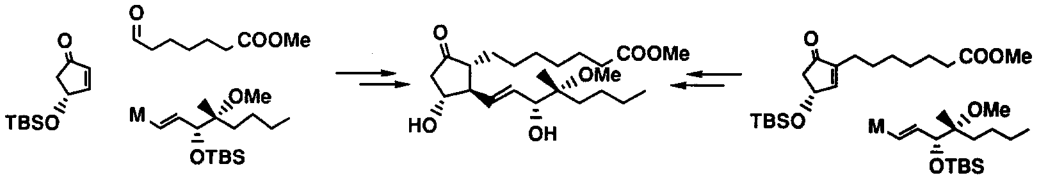
1 and 11 2 and 3

Tetrahedron, **1992**, *48*, 6393

TOWARDS A LARGE SCALE PREPARATION OF MEXIPROSTIL

L. Van Hijfte* and M. Kolb
Marion Merrell Dow Research Institute, Strasbourg Center, 16 Rue d'Ankara, 67009 Strasbourg Cedex France

The synthesis of optically pure Mexiprostil both via a three component coupling process and via a conjugate addition approach is described. The atypical ω-side chain building block is prepared stereoselectively from nerol.



Tetrahedron, **1992**, *48*, 6403

AN EFFICIENT AND STEREOSELECTIVE SYNTHESIS OF INSECT PHEROMONES BY WAY OF NICKEL-CATALYZED GRIGNARD REACTIONS. SYNTHESES OF GOSSYPLURE AND PHEROMONES OF *EUDIA PAVONIA* AND *DROSOPHILA MELANOGASTER.*

J.-P. Ducoux, P. Le Ménez, and N. Kunesch,*Laboratoire de Chimie des Substances Thérapeutiques Naturelles, Faculté de Pharmacie, 92296 Châtenay-Malabry, France; G. Kunesch,* Laboratoire de Chimie Bioorganique et Bioinorganique, 91405 Orsay CEDEX, France; E. Wenkert,* Department of Chemistry (0506), University of California-San Diego, La Jolla, California 92093, U.S.A.

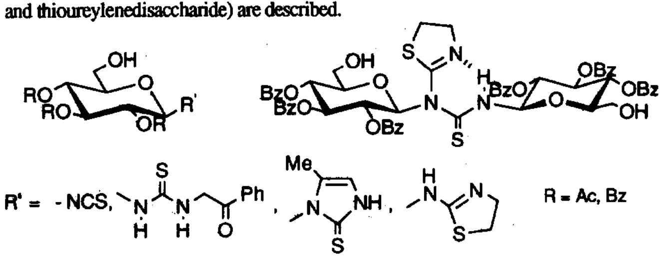
Three pheromones, (6Z,11Z)-hexadeca-6,11-dien-1-yl acetate, (5Z,9Z)-heptacosa-5,9-diene and gossyplure, have been synthesized each by two consecutive sequences of nickel-assisted Grignard reactions with cyclic enol ethers, like dihydropyrane (DHP) or dihydrofurane (DHF).

Tetrahedron, **1992**, *48*, 6413

Partially Protected D-Glucopyranosyl Isothiocyanates. Syntheses and Transformations into Thiourea and Heterocyclic Derivatives.

Jose FUENTES, Wenceslao MOREDA, Carmen ORTIZ, Inmaculada ROBINA, and Colin WELSH.
Departamento de Química Orgánica. Facultad de Química. Universidad de Sevilla. 41071 Sevilla. Spain.

The syntheses of 6-unprotected glucosyl derivatives (isothiocyanates, thioureas, nucleosides, aminothiazoline, and thioureylenedisaccharide) are described.

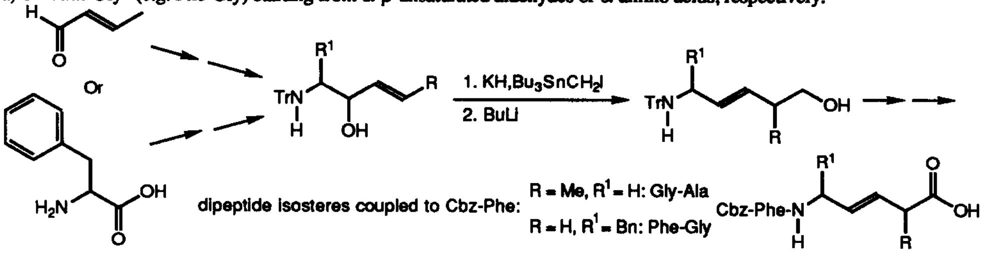


Tetrahedron, **1992**, *48*, 6425

SYNTHESIS OF ALKENE DIPEPTIDE ISOSTERES EMPLOYING THE WITTIG-STILL REARRANGEMENT

Karen M. Bol and Rob M.J Liskamp*
Gorlaeus Laboratories, University of Leiden, P.O. Box 9502, 2300 RA Leiden, The Netherlands

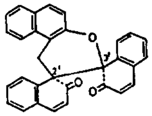
The [2,3]-Wittig-Still rearrangement can be employed for the synthesis of alkene dipeptide isosteres of "Gly-Xxx" (e.g. Gly-Ala) or "Xxx-Gly" (e.g. Phe-Gly) starting from α-β-unsaturated aldehydes or α-amino acids, respectively.



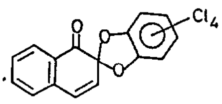
Tetrahedron, **1992**, *48*, 6439

DISPIRONAPHTHALENONES AND SPIRONAPHTHALENONES AS NOVEL DEHYDROGENATION REAGENTS.

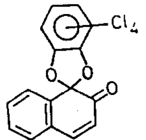
Tirumalai R. Kasturi* and Jitendra A. Sattigeri; Department of Organic Chemistry, Indian Institute of Science, Bangalore 560 012, INDIA.



1



2



3

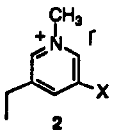
Dispironaphthalenone 1 and Spironaphthalenones 2 & 3 have been used to dehydrogenate dihydroaromatic compounds.

Tetrahedron, **1992**, *48*, 6445

STUDIES ON THE NUCLEOPHILIC ADDITION TO 3,5-DISUBSTITUTED PYRIDINIUM SALTS

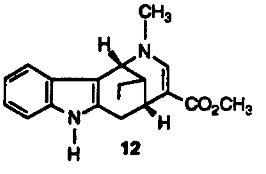
Rodolfo Lavilla*, Teresa Gotsens, Sonia Rodríguez and Joan Bosch*
Laboratory of Organic Chemistry, Faculty of Pharmacy, University of Barcelona, Barcelona 08028, Spain

The scope and limitations of different nucleophilic additions to pyridinium salts **2** have been studied, and a straightforward synthesis of the Aspidospermatan-type system **12** has been accomplished.



2

b: X= CN
c: X= CO$_2$CH$_3$

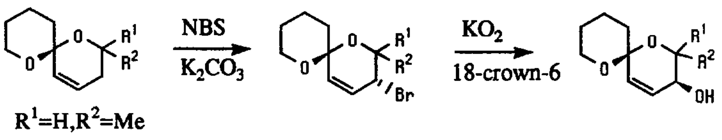


12

Tetrahedron, **1992**, *48*, 6455

ALLYLIC FUNCTIONALIZATION OF THE 1,7-DIOXASPIRO[5.5]UNDEC-4-ENE AND 1,6,8-TRIOXADISPIRO[4.1.5.3]PENTADEC-13-ENE RING SYSTEMS.

Margaret A.Brimble*, Michael K. Edmonds and Geoffrey M. Williams
Department of Chemistry and Biochemistry, Massey University,
Palmerston North, New Zealand.

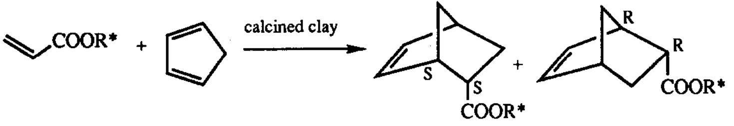


Tetrahedron, **1992**, *48*, 6467

EFFECT OF CLAY CALCINATION ON CLAY-CATALYSED DIELS-ALDER REACTIONS OF CYCLOPENTADIENE WITH METHYL AND (-)-MENTHYL ACRYLATES.

C. Cativiela, F. Figueras#, J.M. Fraile, J.I. García, J.A. Mayoral*, L.C. de Menorval#, E. Pires.
Universidad de Zaragoza-C.S.I.C. 50009-Zaragoza (Spain). #URA 418, C.N.R.S. E.N.S.C.M., 34053 Montpellier (France)

Calcined Zn(II) and Fe(III)-exchanged K10 montmorillonites are better catalysts than dried clays in the reaction between methyl acrylate and cyclopentadiene. Calcined Zn(II) clay again shows higher catalytic activity and leads to better diasteromeric excess in the reaction of (-)-menthyl acrylate with cyclopentadiene. Furthermore, calcined clays are easily recovered with no loss of catalytic properties.



Tetrahedron, **1992**, *48*, 6477

VINYL CARBONATES AS NOVEL ALKOXYCARBONYLATION REAGENTS IN ENZYMATIC SYNTHESIS OF CARBONATES.

Marcos Pozo, Rosalino Pulido and Vicente Gotor*
Departamento de Química Orgánica e Inorgánica, Facultad de Química, Universidad de Oviedo, 33071 Oviedo, Spain

Abstract: Vinyl carbonates can be used in the enzymatic synthesis of carbonates, carbamates and in the resolution of racemic alcohols.

$$ROCO_2CH{=}CH_2 + R'OH \xrightarrow{\text{lipase}} R'OCO_2R$$

$$ROCO_2CH{=}CH_2 + n\text{-}BuNH_2 \xrightarrow{\text{lipase}} n\text{-}BuNHCO_2R$$

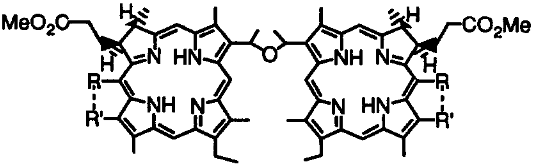
Tetrahedron, **1992**, *48*, 6485

SYNTHESIS AND STUDY OF CHLORIN AND PORPHYRIN DIMERS WITH ETHER LNKAGE

Alexander S Brandis, Andrey N Kozyrev, Andrey F Mironov

M.V.Lomonosov Institute of Fine Chemical Technology, Moscow 117571, *Russia*

Novel dimers of chlorophyll compounds with ether linkage were synthesized.



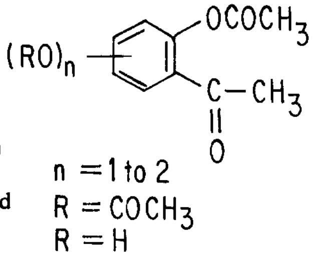
Tetrahedron, **1992**, *48*, 6495

REGIOSELECTIVE DEACYLATION OF POLYACETOXY ARYL-METHYL KETONES BY LIPASES IN ORGANIC SOLVENTS

VS Parmar*, AK Prasad, NK Sharma, SK Singh, HN Pati and Suman Gupta

Department of Chemistry, University of Delhi, Delhi - 110 007 (India)

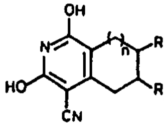
Lipases from Porcine pancreas and *Candida cylindracea* have been used for regioselective deacylation of polyacetoxy aryl-methyl ketones.



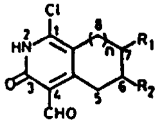
Tetrahedron, **1992**, *48*, 6499

REACTION OF 4-CYANO-1,3-DIHYDROXY-5,6,7,8-TETRAHYDROISOQUINOLINES WITH VILSMEIER REAGENT: STRUCTURE AND MECHANISM OF FORMATION OF [2,7]NAPHTHYRIDINES.

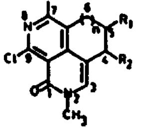
Tirumalai R.Kasturi*, Subramaniam Arumugam, Lata Mathew, Srirangam K.Jayaram, Parthasarathi Dastidar and Tayur N.Guru Row.
Department of organic chemistry, Indian Institute of science, Bangalore-560 012, INDIA.



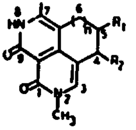
1



2



5



8

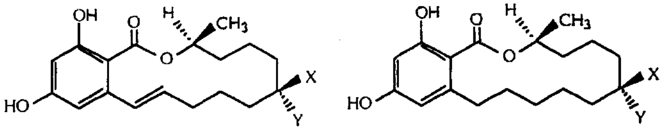
Vilsmeier reaction of 1 gave chloroaldehyde 2 and [2,7]naphthyridine compounds 5 & 8. The reaction is generalised with a variety of substrates.

Tetrahedron, **1992**, *48*, 6511

ENZYMATIC KINETIC SEPARATION OF STEREOISOMERIC MACROCYCLIC LACTONE DERIVATIVES, 7α,β-O-ACYL *trans*-ZEARALENOLS AND 7α,β-O-ACYL ZEARANOLS

Mirjana Gelo, Vitomir Šunjić

"Ruđer Bošković" Institute
P.O.B. 1016, 41001 Zagreb, Croatia



Lipase catalyzed kinetic separation of the compounds 1-8 proceeded with very high (≥80%) to complete (100%) diastereoselectivity. Preferential hydrolysis of the 7β-isomers is explained by the conformational preference of the lipase active site for these diastereomers.

	X	Y		
1	H	$OCOCH_3$	**5**	(7α)
2	$OCOCH_3$	H	**6**	(7β)
3	H	$OCOH_2Cl$	**7**	(7α)
4	$OCOH_2Cl$	H	**8**	(7β)

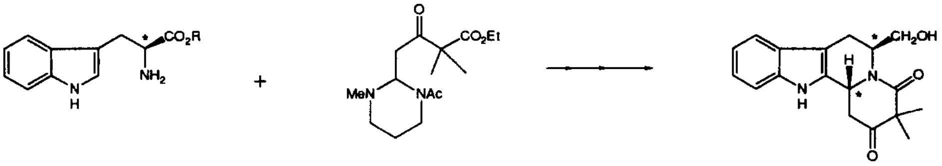
Tetrahedron, **1992**, *48*, 6521

MODELS OF FOLATE COFACTORS - 24

A ROUTE TO OPTICALLY ACTIVE OCTAHYDROINDOLO[2,3-a]QUINOLIZINES

R.H. Huizenga and U.K. Pandit, University of Amsterdam

(The Netherlands)

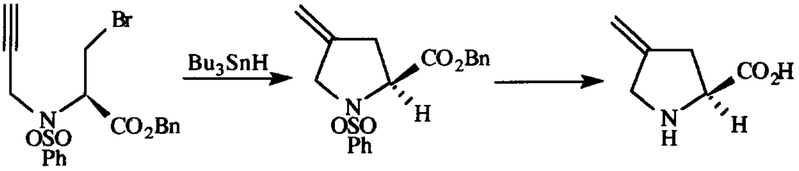


Tetrahedron, **1992**, *48*, 6529

A RADICAL ROUTE TO 2(S)-4-EXOMETHYLENE PROLINE

Robert M. Adlington and Simon J. Mantell
The Dyson Perrins Laboratory, University of Oxford, South Parks Road, Oxford, OX1 3QY.

A new route to 2(S)-4-exomethylene proline via a 5-Exo-dig radical cyclisation is described



Tetrahedron, **1992**, *48*, 6537

Solution Structures of Nonameric and Decameric Branched-RNA Modelling the Lariat of Group II and Nuclear pre-mRNA Introns (Splicing) by 500 MHz NMR Spectroscopy

Peter Agback, Corine Glemarec, Christian Sund & Jyoti Chattopadhyaya*
Department of Bioorganic Chemistry, Box 581, Biomedical Center,
University of Uppsala, S-751 23 Uppsala, Sweden

Solution structures of nonameric and decameric branched RNAs have been elucidated by 500 MHz NMR spectroscopy (HOHAHA, DQFCOSY, NOESY & ROESY) and compared with the constituent trimeric, pentameric and heptameric branched RNAs. These studies showed that the tertiary structures of all branched RNAs are dictated by the constraint about the 2'→5' phosphate. The 2'→5' constraint was found to be however much stronger in trimer **1** and pentamer **3** than in tetramer **2**, heptamer **4**, nonamer **5**, and decamer **6**.