GRAPHICAL ABSTRACTS

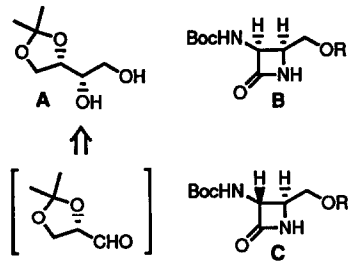
Tetrahedron, **1992**, *48*, 4067

A Revised Mechanism for Chemoselective Reduction of Esters with Borane–Dimethyl Sulfide Complex and Catalytic Sodium Tetrahydroborate Directed by Adjacent Hydroxyl Group

Seiki Saito,* Teruhiko Ishikawa, Akiyoshi Kuroda, Kazuya Koga, and Toshio Moriwake*

Department of Applied Chemistry, Faculty of Engineering, Okayama University, Tsushima, Okayama, Japan 700

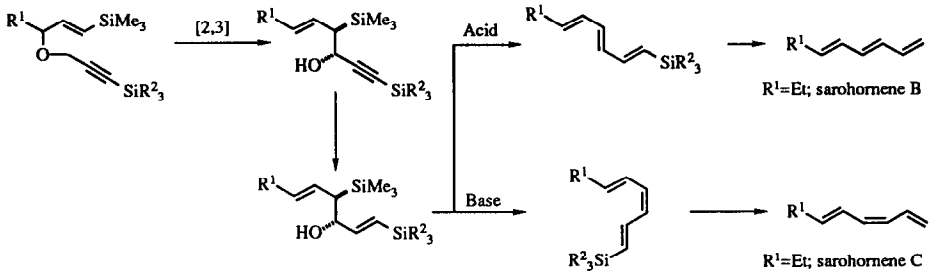
The plausible mechanism for the reduction of the ester groups with a strong preference for one located α to the hydroxyl groups of (*S*)-malates and (*R*,*R*)-tartrate–based derivatives has been proposed together with its application to the syntheses of chiral synthons such as **A**, **B**, and **C**.



Tetrahedron, **1992**, *48*, 4087

[2,3]Wittig Rearrangement-Peterson Olefination Sequence: A Stereocontrolled Entry to Terminal Conjugated Trienes

Naoyuki Kishi, Toshihiko Maeda, Koichi Mikami, and Takeshi Nakai*
Department of Chemical Technology, Tokyo Institute of Technology, Meguro-ku, Tokyo 152, Japan

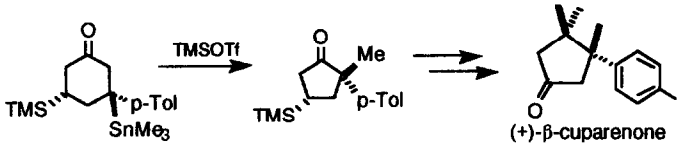


Tetrahedron, **1992**, *48*, 4099

LEWIS ACID-INDUCED REACTION OF SILICON-CONTAINING STANNYL KETONES AND ITS APPLICATION TO THE SYNTHESIS OF (+)-β-CUPARENONE

Tadashi Sato*, Masahito Hayashi, and Toshihiro Hayata
Department of Applied Chemistry, Waseda University, Ookubo 3, Shinjuku-ku, Tokyo 169, Japan

(+)-β-Cuparenone was synthesized by the Lewis-acid catalyzed reaction of a β-stannylcyclohexanone derivative.



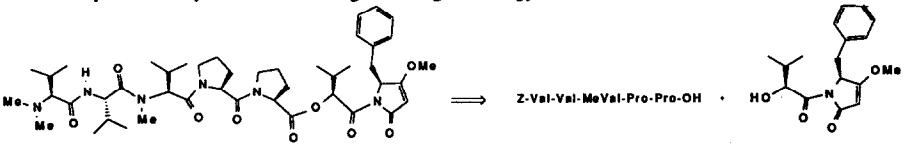
Tetrahedron, **1992**, *48*, 4115

TOTAL SYNTHESIS OF THE PROPOSED STRUCTURE OF DOLASTATIN 15

Nadia Patino, Eric Frérot, Nathalie Galeotti, Joël Poncet*, Jacques Coste, Marie-Noëlle Dufour, and Patrick Jouin

Centre CNRS-INSERM de Pharmacologie -Endocrinologie, 34094 Montpellier Cedex 5, France

The titled compound was synthetised following a convergent strategy.



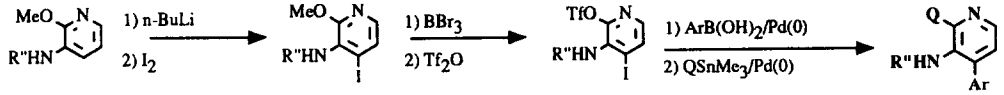
Tetrahedron, **1992**, *48*, 4123

CONVERGENT SYNTHESIS OF THE STREPTONIGRIN ALKALOID SKELETON. DIRECTED METALATION CONNECTION TO ARYL-ARYL CROSS-COUPLING.

Alain Godard*, Jean-Claude Rovera, Francis Marsais

Nelly Plé and Guy Quéguiner.

LCOFH, URA 1429. 76131 BP08-Mont-Saint-Aignan Cedex France.



R"=tBuCO Q= 2-quinolyl Ar=  *(over-all yields: 32-44%)*

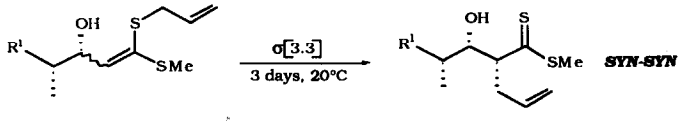
Tetrahedron, **1992**, *48*, 4135

Asymmetric Induction in the Thio-Claisen Rearrangement. Creation of three Contiguous Stereogenic Centres from α-Hydroxy Ketene Dithioacetals.

Pierre Beslin* and Stéphane Perrio.

Laboratoire de Chimie des Composés Thio-organiques (Associé au CNRS), ISMRA, 14050 Caen, France.

Asymmetric induction by an external hydroxy group in Thio-Claisen rearrangement provides a *syn-syn* major α-allyl-β-hydroxy dithioester.



Tetrahedron, **1992**, *48*, 4147

STRUCTURAL ANALYSIS OF A STEREOCHEMICAL MODIFICATION OF FLAVIN ADENINE DINUCLEOTIDE IN ALCOHOL OXIDASE FROM METHYLOTROPHIC YEASTS

R.M. Kellogg*, W. Kruizinga, L.V. Bystrykh, L. Dijkhuizen, W. Harder,
Departments of Organic Chemistry and of Microbiology, University of Groningen, Groningen, The Netherlands

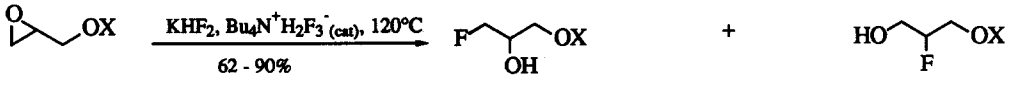
A modified form of the coenzyme FAD has been isolated, purified, and characterized structurally. By NMR experiments coupled with degradation studies it has been demonstrated that the change consists of an inversion of the configuration of the C2′ carbon in the sugar chain attached to the isoalloxazine ring (ribitol in natural FAD).

Tetrahedron, **1992**, *48*, 4163

REGIOSELECTIVE CONVERSION OF *O*-PROTECTED GLYCIDOLS TO FLUOROHYDRINS CATALYZED BY TETRABUTYLAMMONIUM DIHYDROGENTRIFLUORIDE UNDER SOLID-LIQUID PTC CONDITIONS

Dario Landini,* Domenico Albanese, and Michele Penso*
Centro CNR and Dipartimento di Chimica Organica e Industriale dell'Università, via Venezian 21, I-20133 Milano, Italy

A number of *O*-protected glycidols are regioselectively converted into the corresponding fluorohydrins $FCH_2CH(OH)CH_2OX$ by reaction with catalytic amounts of $Bu_4N^+H_2F_3^-$ and a molar excess of KHF_2.



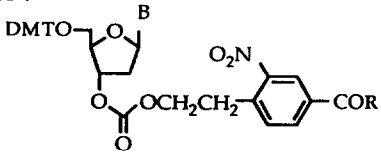
X = Me, Bn, Tr, Allyl, Ph, 4-ClC6H4, MEM, PhCH2OCH2, THP, PhCO, Ms, Ts

Tetrahedron, **1992**, *48*, 4171

A SYNTHETIC PROCEDURE FOR THE PREPARATION OF OLIGONUCLEOTIDES WITHOUT USING AMMONIA AND ITS APPLICATION FOR THE SYNTHESIS OF OLIGONUCLEOTIDES CONTAINING O-4-ALKYLTHYMIDINES.

R. Eritja*[1], J. Robles[2], A. Aviñó[1], F. Albericio[2], and E. Pedroso[2].
[1] CID-CSIC (Spain) and [2] Universitat de Barcelona (Spain).

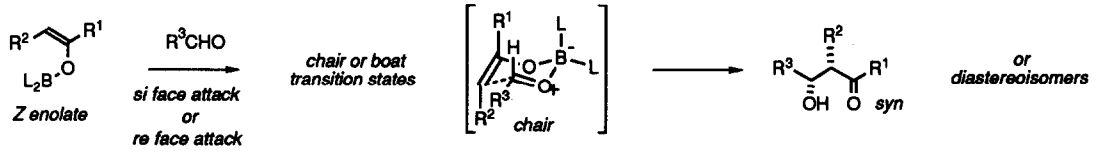
Oligonucleotides containing ammonia sensitive bases are prepared with NPEOC and NPE protected nucleosides linked to 4-(3-hydroxyethyl)-3-nitrobenzoic acid derivatives.



Tetrahedron, **1992**, *48*, 4183

Developing a Force Field for the Transition State of the Aldol Reaction of Enolborinates: Evaluation of the Use of Fixed Point Charges.

Anna Bernardi,[a*] Andrea Cassinari,[a] Angiolina Comotti,[a] Mark Gardner,[b] Cesare Gennari,[a] Jonathan M. Goodman,[b*] and Ian Paterson.[b]
(a) Dipartimento di Chimica Organica e Industriale, Università di Milano, Centro CNR per lo Studio delle Sostanze Organiche Naturali, via Venezian 21, 20133 Milano, Italy. (b) University Chemical Laboratory, Lensfield Road, Cambridge CB2 1EW England, UK.

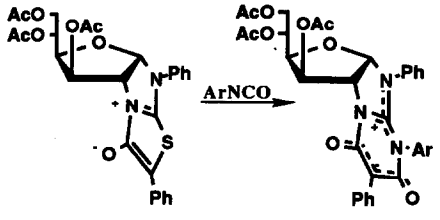


A method for assigning atom-centred point charges is described and applied to the boron-mediated aldol reaction.

Tetrahedron, **1992**, *48*, 4193

A NEW SYNTHESIS OF 6-OXOPYRIMIDINIUM-4-OLATES. THEORETICAL STUDY OF THE REGIO-SELECTIVE CYCLOADDITION OF ARYLISOCYANATES WITH A 1,3-THIAZOLIUM-4-OLATE SYSTEM.

M. Avalos[a], R. Babiano[a], M.J. Diánez[b], J. Espinosa[c], M.D. Estrada[b], J.L. Jiménez[a], A. López-Castro[b], M.M. Méndez[a], and J.C. Palacios[a]. *Dpto. de Química Orgánica[a] and Dpto. de Química Física[c], Universidad de Extremadura, 06071-Badajoz, Spain, and Instituto de Ciencias de Materiales de Sevilla[b], C.S.I.C., Universidad de Sevilla, 41071-Sevilla, Spain.*



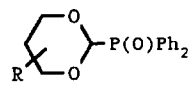
Tetrahedron, **1992**, *48*, 4209

A SOLUTION AND SOLID STATE CONFORMATION OF 2-DIPHENYL-PHOSPHINOYL-1,3-DIOXANES. THE NATURE OF O-C-P ANOMERIC INTERACTIONS.

M. Mikołajczyk[a]; P.P. Graczyk[a]; M.W. Wieczorek[b] and G. Bujacz[b]*

[a]Center of Molecular and Macromolecular Studies, P.A.S., Łódź, Sienkiewicza 112, Poland.

[b]Institute of Technical Biochemistry, Łódź, Stefanowskiego 4/10, Poland.



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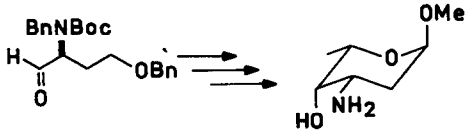
Synthesis and conformation of dioxanes 1-4 (both conformationally labile and fixed) is described. Strong anomeric effect (19.7 kJ/mol) was found to operate in O-C-P system. This effect could stem from the n_O-σ^*_{C-P} hyperconjugation and intramolecular hydrogen bond formation.

Tetrahedron, **1992**, *48*, 4231

THE TOTAL SYNTHESIS OF L-DAUNOSAMINE

Janusz Jurczak,* Janusz Kozak, and Adam Golebiowski
Institute of Organic Chemistry, Polish Academy of Sciences, 01-224 Warszawa, Poland

A new synthesis of L-daunosamine, starting from N,O-dibenzyl-N-tert-butoxycarbonyl-L-homoserinal, is described.



Tetrahedron, **1992**, *48*, 4239

AN EFFICIENT SYNTHESIS OF FURANOCOUMARINS

Eva Zubía, Francisco Rodríguez Luis, Guillermo M. Massanet and Isidro G. Collado*
Departamento de Química Orgánica. Facultad de Ciencias. Universidad de Cádiz. Apdo. 40, 11510 Puerto Real, Cádiz, SPAIN.

An efficient synthesis of linear and angular furanocoumarins has been carried out starting from iodoumbelliferone derivatives. The average yields are higher than those reported before. First synthesis of 6-iodo-umbelliferone is described.