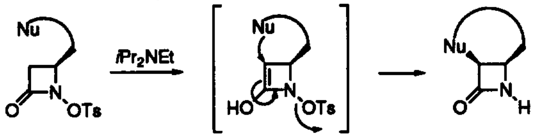
GRAPHICAL ABSTRACTS

Tetrahedron, **1994**, *50*, 8275

Syntheses of Novel Bicyclic β-Lactams by Intramolecular Nucleophilic Transfer Reactions of *N*-Tosyloxy β-Lactams

Peter R. Guzzo, Min Teng, Marvin J. Miller*
Department of Chemistry and Biochemistry, University of Notre Dame, Notre Dame, IN 46556

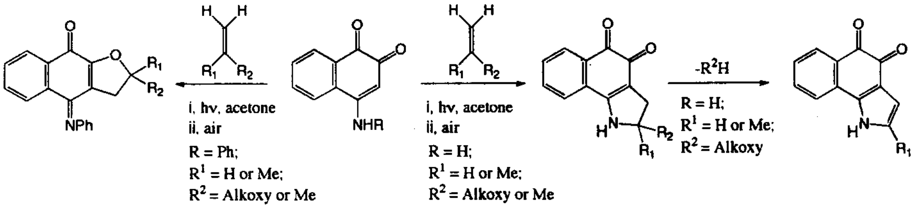
A novel intramolecular nucleophile transfer reaction of several *N*-tosyloxy β-lactams was used to construct bicyclic β-lactams that generally possessed *cis* stereochemistry.



Tetrahedron, **1994**, *50*, 8293

Photoinduced Molecular Transformations. Part 151.
One-Pot Synthesis of 1*H*-Benz[*g*]indole-4,5-diones by a Regioselective [3+2] Photoaddition of 4-Amino-1,2-naphthoquinones with Alkenes

Hiroshi Suginome,* Hideo Sakurai, Akiyoshi Sasaki, Hiroyasu Takeuchi, and Kazuhiro Kobayashi
Organic Synthesis Division, Faculty of Engineering, Hokkaido University, Sapporo 060,Japan



Tetrahedron, **1994**, *50*, 8301

HIGHLY SELECTIVE CROSS-COUPLING REACTIONS OF ARYL(HALO)SILANES WITH ARYL HALIDES: A GENERAL AND PRACTICAL ROUTE TO FUNCTIONALIZED BIARYLS

Yasuo Hatanaka,* Yoshinori Okahara, Ken-ichi Goda, and Tamejiro Hiyama*†
Sagami Chemical Research Center, 4-4-1 Nishiohnuma, Sagamihara, Kanagawa, 229, Japan. †Research Laboratory of Resources Utilization, Tokyo Institute of Technology, 4259 Nagatsuda, Midori-ku, Yokohama, 227, Japan

The cross-coupling reactions of aryl(halo)silanes with aryl halides promoted by KF and palladium catalyst give the corresponding biaryls in good yields.

$$\mathrm{Ar{-}Si(halo)_mR_{3\text{-}m}} + \mathrm{X{-}Ar'} \xrightarrow{\text{Pd cat / KF}} \mathrm{Ar{-}Ar'}$$

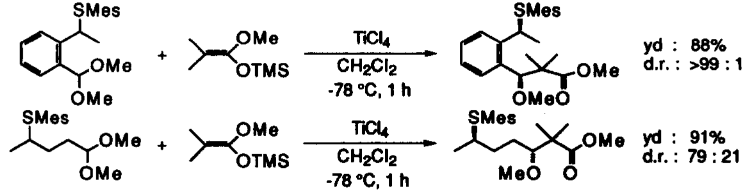
halo = Cl, F; R = Me, Et, *n*-Pr, Ar; m = 1, 2; X = Br , I

Tetrahedron, **1994**, *50*, 8317

REMOTE ASYMMETRIC INDUCTION USING NEIGHBORING GROUP PARTICIPATION OF A SULFENYL GROUP

Yukihiko Hashimoto, Yasushi Sato, Noriko Takeshita, Kazuaki Kudo, and Kazuhiko Saigo*
Department of Chemistry and Biotechnology, Faculty of Engineering, The University of Tokyo, Hongo, Bunkyo-ku, Tokyo 113, Japan

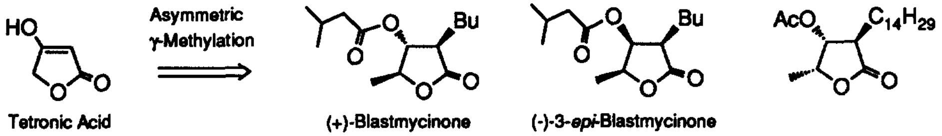
Benzaldehyde and aliphatic aldehyde derivatives having mesitylthio group react with silylated carbon nucleophiles to give the corresponding aldol adducts with high diastereoselectivities by the neighboring group participation of the sulfenyl group.



Tetrahedron, **1994**, *50*, 8337

TOTAL ASYMMETRIC SYNTHESES OF (+)-BLASTMYCINONE AND RELATED γ-LACTONES

Kiyoharu Nishide, Atsunori Aramata, Teruki Kamanaka, Takehisa Inoue, and Manabu Node*
Kyoto Pharmaceutical University, Misasagi, Yamashina, Kyoto 607, Japan

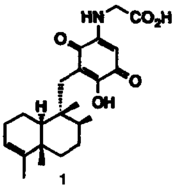


Tetrahedron, **1994**, *50*, 8347

Nakijiquinones A and B, New Antifungal Sesquiterpenoid Quinones with an Amino Acid Residue from an Okinawan Marine Sponge

Hideyuki Shigemori, Tatsushi Madono, Takuma Sasaki[a], Yuzuru Mikami[b], and Jun'ichi Kobayashi* *Faculty of Pharmaceutical Sciences, Hokkaido University, Sapporo 060, Japan,* [a]*Cancer Research Institute, Kanazawa University, Kanazawa 920, Japan, and* [b]*Research Center for Pathogenic Fungi and Microbial Toxicoses, Chiba University, Chiba 280, Japan*

Two new sesquiterpenoid quinones with an amino acid residue, nakijiquinones A (1) and B (2), have been isolated from an Okinawan marine sponge (family Spongiidae).



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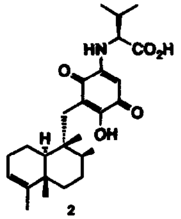

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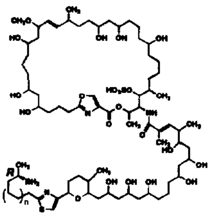
Tetrahedron, **1994**, *50*, 8355

Isolation and Structures of Theonezolides B and C from the Okinawan Marine Sponge *Theonella* sp.

Kazuhiko Kondo, Masami Ishibashi, and Jun'ichi Kobayashi*

Faculty of Pharmaceutical Sciences,
Hokkaido University, Sapporo 060, Japan

Two new macrolides, theonezolides B (2) and C (3), have been isolated from the Okinawan marine sponge *Theonella* sp. Absolute stereochemistry of one chiral center was determined by synthesis of ozonolysis products.



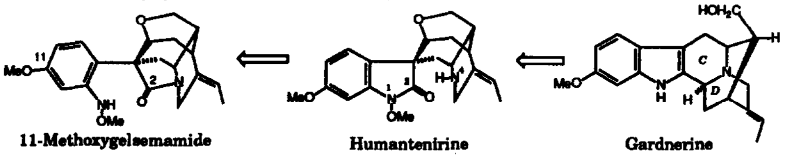
2 n=2
3 n=4

Tetrahedron, **1994**, *50*, 8363

A Biomimetic Synthesis of a Novel Seco Indole Alkaloid, 11-Methoxygelsemamide

Hiromitsu Takayama, Mariko Kitajima and Shin-ichiro Sakai*
Faculty of Pharmaceutical Sciences, Chiba University, 1-33, Yayoi-cho, Inage-ku, Chiba 263, Japan

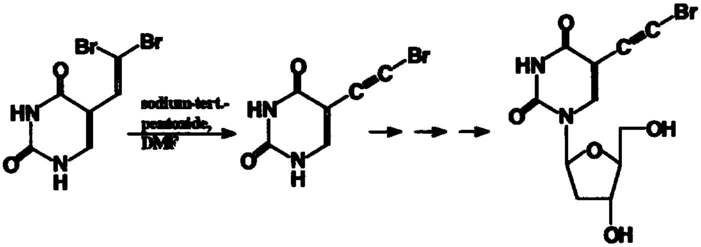
A new type of *Gelsemium* alkaloid, 11-methoxygelsemamide, having a 1,2-secoindole system, was first synthesized from a sarpagine type indole alkaloid, gardnerine *via* humantenirine.



SYNTHESIS OF A POTENTIAL ANTIVIRAL COMPOUND: 5-BROMOETHYNYL-2'-DEOXYURIDINE

Tetrahedron, **1994**, *50*, 8371

K. Eger*, M. Jalalian, M. Schmidt
Universität Leipzig, Institut für Pharmazie, Brüderstr. 34, D-04103 Leipzig, Germany



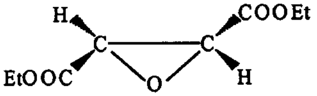
5-Bromoethynyldesoxyuridine was prepared starting from dibomovinyluracil. The product was tested on virustatic effects.

A Convenient Synthesis of Optically Pure (2*R*,3*R*)-2,3-Epoxysuccinyl-Dipeptides

Tetrahedron, **1994**, *50*, 8381

Andreas Korn, Sabine Rudolph-Böhner, and Luis Moroder*
Max-Planck-Institut für Biochemie, Am Klopferspitz 18a, D-82152 Martinsried

Starting from diethyl (2*R*,3*R*)-trans-2,3-epoxysuccinate 1 compounds 2a-d are synthesized in a multi-step reaction sequence via the N-hydroxysuccinimide or pentafluorophenyl ester method.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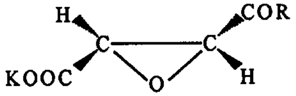

2a-d

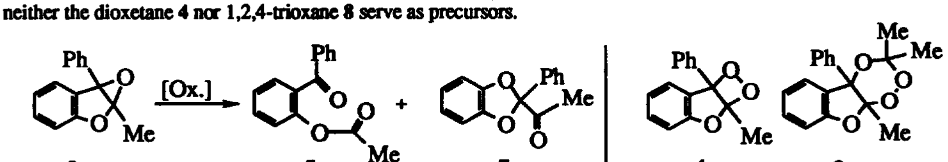
Comp.	R
2a	-Gly-Pro-OK
2b	-Leu-Pro-OK
2c	-Leu-Arg-OK
2d	-Leu-Agm

Generation of 1,2-Dioxetane Decomposition Products in the Oxidation of 3-Phenyl-2-methylbenzofuran Epoxide by Dimethyldioxirane (DMD) and the Oxodiperoxomolybdenum Complex.

Tetrahedron, **1994**, *50*, 8393

Waldemar Adam*, Markus Sauter,
Institute of Organic Chemistry, University of Würzburg, Am Hubland, D-97074 Würzburg, Germany.

Dimethyldioxirane and HMPA-MoO(O_2)$_2$ oxidize the benzofuran epoxide 2 to the dioxetane 4 decomposition products 5 and 7, but neither the dioxetane 4 nor 1,2,4-trioxane 8 serve as precursors.



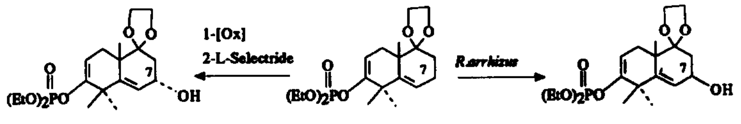
2 5 7 4 8

Chemobiological Transformations of Octalone and Hydrindenone Derivatives

Tetrahedron, **1994**, *50*, 8399

S.Arseniyadis*, R.Rodriguez, M.Muñoz Dorado, R.Brondi Alves, J.Ouazzani and G.Ourisson§
Institut de Chimie des Substances Naturelles, CNRS, F-91198 Gif-sur-Yvette (France)
§Laboratoire de Chimie Organique des Substances Naturelles, associé au CNRS, Université Louis Pasteur, 5 rue Blaise Pascal, F-67084 Strasbourg (France)

A comparative study of chemical versus microbiological functionalization of octalone and hydrindenone derivatives is presented.

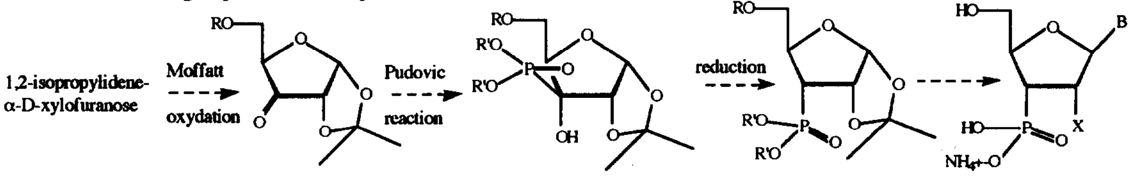


18 (25%) 15 17 (76%)

Tetrahedron, **1994**, *50*, 8427

3'-C-Phosphonates as Nucleotides Analogues. Synthesis Starting from Original C-Phosphonosugars (in ribo- and deoxyribo- series)

C. Serra, G. Dewynter, J-L. Montero* and J-L. Imbach
Lab. de Chimie Bio-organique. UM II. Montpellier. FRANCE



(R and R': protecting groups, X = H and OH, B = thymine and adenine)

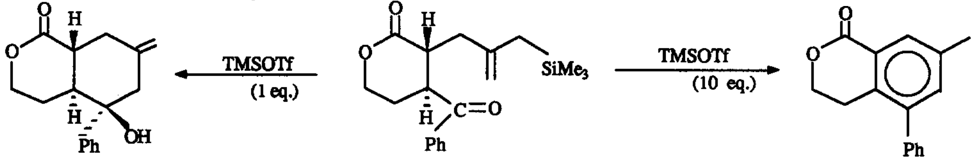
A synthesis of 3'-C-phosphononucleosides starting from α-D-xylofuranose *via* the Pudovic reaction followed by reduction with a stereocontrol of the reactions.

Tetrahedron, **1994**, *50*, 8445

Easy Access to Highly Functionalized Bicyclic Lactones and ketones.

M.-C. Roux, L. Wartski and M. Nierlich, D. Vigner, M. Lance
Institut de Chimie Moléculaire d'Orsay, Laboratoire des Carbocycles, Université de Paris-Sud, 91405 Orsay (France) and CEA Saclay, 91191 Gif-sur-Yvette (France)

Lewis acid catalyzed cyclization of lactones bearing trans vicinal aroyl and allylic moieties provided stereoselectivity functionalized trans fused ring lactones or aromatic analogues.

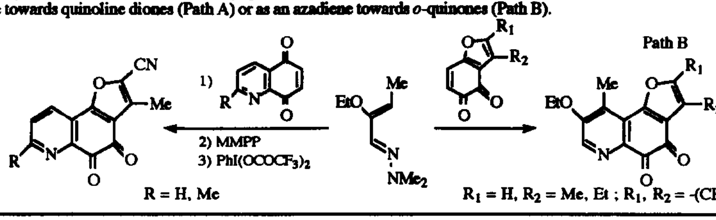


Tetrahedron, **1994**, *50*, 8457

2-ETHOXYBUT-2-ENAL N,N-DIMETHYLHYDRAZONE: A USEFUL REAGENT FOR THE SYNTHESIS OF FURO[2,3-*f*]QUINOLINE-4,5-DIONES

Pascal Nebois,[a] Omar Cherkaoui,[a] Leila Benameur,[a] Houda Fillion*[a] and Bernard Fenet[b]
[a]Laboratoire de Chimie Organique, Institut des Sciences Pharmaceutiques et Biologiques 8, avenue Rockefeller, F-69373 Lyon Cedex 08, France.
[b]Centre de RMN, Université Claude Bernard Lyon I, F-69622 Villeurbanne Cedex, France

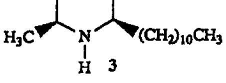
Regiospecific syntheses of subetituted furo[2,3-*f*]quinoline-4,5-diones were performed using 2-ethoxybut-2-enal N,N-dimethylhydrazone as a nucleophile towards quinoline diones (Path A) or as an azadiene towards *o*-quinones (Path B).



Tetrahedron, **1994**, *50*, 8465

Absolute Configuration of the Solenopsins, Venom Alkaloids of the Fire Ants.

S. Leclercq[1], I. Thirionet[1], F. Broeders[1], D. Daloze[1], R. Vander Meer[2] and J.C. Braekman[1]*
[1] Laboratory of Bio-organic Chemistry (CP 160/7) - Faculty of Sciences - University of Brussels, 50 Av. F. Roosevelt - 1050 Brussels - Belgium. [2] Laboratory of Medical and Veterinary Entomology Research - US Department of Agriculture - 1600 SW 23rd Drive, P.O. Box 14565 - Gainesville - Florida 32604 - U.S.A.



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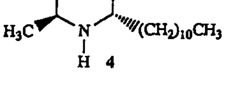

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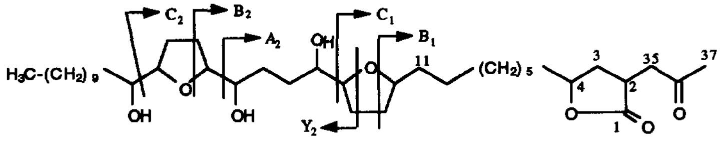
A practical method allowing to determine the absolute configuration of the solenopsins (e. g. 3 and 4) and a new synthesis of (2S,6R)-3 and (2S,6S)-4 starting from L-alanine are presented.

Tetrahedron, **1994**, *50*, 8479

STRUCTURAL ELUCIDATION OF ACETOGENINS FROM ANNONACEAE BY FAST ATOM BOMBARDMENT MASS SPECTROMETRY

Olivier Laprévote and Bhupesh C. Das*
Institut de Chimie des Substances Naturelles, C.N.R.S., avenue de la Terrasse, 91198 Gif-sur-Yvette Cedex, France

Collision-induced dissociation of $[M+Li]^+$ ions formed by FAB from annonaceous acetogenins provides characteristic fingerprints, allowing their unambiguous structural identification.

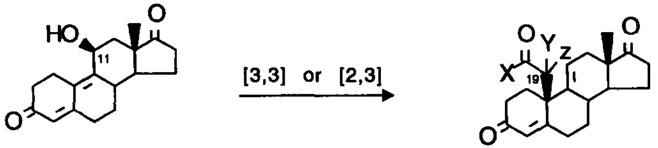


Tetrahedron, **1994**, *50*, 8491

A New Route to 19-Substituted Steroids from 19-Nor Steroids: Sigmatropic [3,3] and [2,3] Rearrangements Revisited,

D. Lesuisse*, F. Canu and B. Tric, Centre de Recherche de Roussel Uclaf, 102, Route de Noisy, 93235 Romainville Cedex, France.

Abstract: Sigmatropic [3,3] and [2,3] rearrangements of 11-substituted estradienedione derivatives gave rise to new 19-substituted androstenedione analogs .

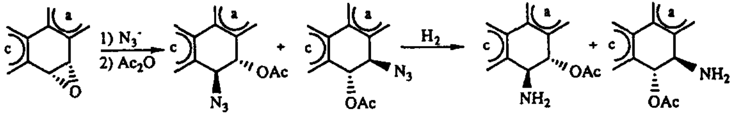


Tetrahedron, **1994**, *50*, 8505

ON THE REGIOSELECTIVITY IN TRANSFORMATION OF BENZO[*a*]-PYRENE 4,5-OXIDE AND 3-METHYLCHOLANTHRENE 11,12-OXIDE TO THE CORRESPONDING β-AMINO-ALCOHOL DERIVATIVES.

Jochanan Blum*, Merav Setty-Fichman, Lea Efron and Sason Shaik, Department of Organic Chemistry, The Hebrew University, Jerusalem 91904, Israel; Ronald G. Harvey, The Ben-May Institute, University of Chicago, Chicago, Illinois 63637, USA

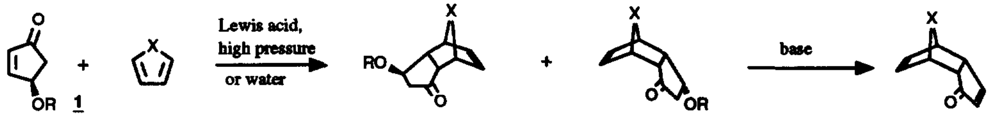
K-Oxides of benzo[*a*]pyrene and of 3-methylcholanthrene are converted into biologically active β-acetyloxy-amino derivatives. The regioselectivity corresponds to new HMO calculations.



Tetrahedron, **1994**, *50*, 8515

4-HYDROXYCYCLOPENT-2-EN-1-ONE AND DERIVATIVES AS CHIRAL SYNTHETIC EQUIVALENTS OF CYCLOPENTADIENONE IN ASYMMETRIC DIELS-ALDER REACTIONS.

P.P.M.A. Dols, A.J.H. Klunder, B. Zwanenburg*
Department of Organic Chemistry, NSR Center for Molecular Structure, Design and Synthesis
University of Nijmegen, Toernooiveld, 6525 ED Nijmegen, The Netherlands.

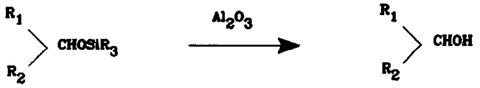


The diastereofacial selectivity of the asymmetric Diels-Alder reactions with enantiopure 1 is very dependend on the nature of the dienophile, the diene and the reaction conditions. It can be rationalized by invoking both steric and electronic (Cieplak) effects.

Tetrahedron, **1994**, *50*, 8539

UTILIZATION OF NEUTRAL ALUMINA AS A MILD REAGENT FOR THE SELECTIVE CLEAVAGE OF PRIMARY AND SECONDARY SILYL ETHERS

Joan Feixas, Anna Capdevila and Angel Guerrero*
Department of Biological Organic Chemistry, C.I.D., C.S.I.C., Jordi Girona 18-26. 08034 Barcelona, Spain



R_1= alkyl, alkenyl, phenyl; R_2 = H, alkyl; R_3 = TMS, TBDMS, TIPS, TPDPS.

Tetrahedron, **1994**, *50*, 8551

DIRECT TRANSFORMATION OF TRIALKYL PHOSPHATES INTO ORGANOLITHIUM COMPOUNDS BY A DTBB-CATALYSED LITHIATION

D. Guijarro, B. Mancheño and M. Yus*
Departamento de Química Orgánica, Facultad de Ciencias, Universidad de Alicante, Apdo. 99, 03080 Alicante, Spain

$$\underset{\mathbf{1}}{(\mathrm{R'O})_2\mathrm{P(O)OR}} \xrightarrow[\text{ii, H}_2\text{O}]{\text{i. Li, DTBB cat., E}^+} \underset{\mathbf{2}\ (25\text{-}94\%)}{\mathrm{RE}\ \ \text{and/or}\ \ \mathrm{R'E}}$$

[R= or ≠R'=Et, $CH_2CH{=}CH_2$, Pr^i, Bu^n, Ph, $PhCH_2$; E^+=Me_3SiCl, $PhMe_3SiCl$, Pr^iCHO, PhCHO, Et_2CO, $\overline{(CH_2)_5C}O$, PhCOEt]