

GRAPHICAL ABSTRACTS

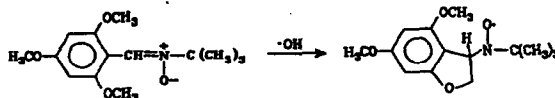
Tetrahedron Lett. 1990, 31, 7395

2,4,6-TRIMETHOXYPHENYL *tert*-BUTYL NITRONE (MO)₃PBN, AS A DETECTOR OF HYDROXYL RADICALS IN THE PRESENCE OF PEROXIDES, SUPEROXIDE AND PEROXYL RADICALS

Edward G. Janzen*, Coit M. DuBose and Yashige Kotake

Departments of Clinical Studies and Biomedical Sciences, Ontario Veterinary College, University of Guelph, Guelph, Ontario N1G 2W1, Canada and Molecular Toxicology Research Group, Oklahoma Medical Research Foundation, 825 N.E. 13th Street, Oklahoma City, Oklahoma 73104

2,4,6-Trimethoxyphenyl *tert*-butyl nitron, (MO)₃PBN is proposed as a spin trap for hydroxyl radicals.

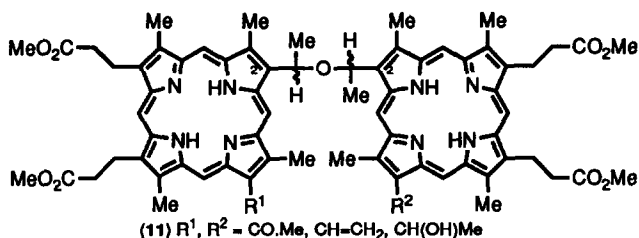


Tetrahedron Lett. 1990, 31, 7399

SYNTHESES, STABILITY, AND TUMORICIDAL ACTIVITY OF PORPHYRIN DIMERS AND TRIMERS WITH ETHER LINKAGES

Ravindra K. Pandey, Fuu-Yau Shiau, Craig J. Medforth, Thomas J. Dougherty, and Kevin M. Smith. Dept. of Radiation Medicine, Roswell Park Memorial Institute, 686 Elm St., Buffalo, NY 14263, and Dept. of Chemistry, University of California, Davis, CA 95616.

Regiochemically pure ether dimers (e.g. 11) and trimers are prepared from hematoporphyrin.

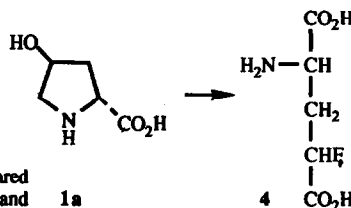


Tetrahedron Lett. 1990, 31, 7403

NEW STEREOSPECIFIC SYNTHESSES AND X-RAY DIFFRACTION STRUCTURES OF (-)-D-ERYTHRO- AND (+)-L-THREO-4-FLUOROGLUTAMIC ACID

Miloš Hudlický and Joseph S. Merola
Department of Chemistry
Virginia Polytechnic Institute and State University
Blacksburg, VA 24060

L-threo-4-Fluoroglutamic acid (4) and *D-erythro*-4-fluoroglutamic acid (8) were prepared from *L-trans*-4-hydroxyproline (1a) and *D-cis*-4-hydroxyproline (5a), respectively, and their structures were confirmed by x-ray diffraction.

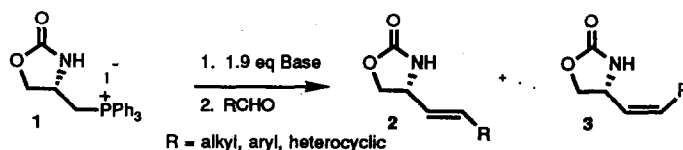


Tetrahedron Lett. 1990, 31, 7407

A NEW NUCLEOPHILIC ALANINOL SYNTHON FROM SERINE.

Mukund P. Sibi* and Paul A. Renhowe
Department of Chemistry, North Dakota State University, Fargo, ND 58105

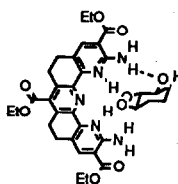
Preparation of the Wittig reagent 1 from *L*-serine and its condensation with various aldehydes is described. The effect of base, reaction conditions, and additives on the stereoselectivity of the condensation is also discussed.



TWISTED POLYAZA CLEFTS FOR THE COMPLEXATION OF CYCLOHEXANE-POLYOLS

Chia-Yu Huang, Larry A. Cabell, and Eric V. Anslyn*
 Department of Chemistry
 The University of Texas at Austin
 Austin TX 78712

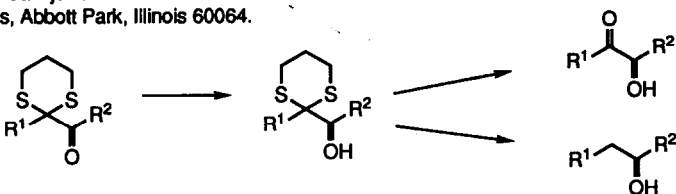
The synthesis of a polyazacleft with convergent hydrogen bond donors and acceptors is discussed. The cleft exists in a twisted form which allows it to recognize and bind non-planar guests such as 1,2-transcyclohexanediol, 1,3-cis-cyclohexanediol and 1,3-2-cyclohexanetriol.



ENANTIOSELECTIVE REDUCTIONS OF 2-ACYL-1,3-DITHIANES USING THE COREY OXAZABOROLIDINE CATALYST

Michael P. DeNinno*, Richard J. Perner and Linda Lijewski
 Pharmaceutical Discovery, Abbott Laboratories, Abbott Park, Illinois 60064.

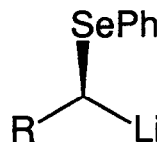
The enantioselective reduction of acyl dithianes is described. The products are useful precursors for optically active alcohols and alpha-hydroxy ketones.



ON THE CONFIGURATIONAL STABILITY OF α -PHENYLSELENO-ALKYL-LITHIUM COMPOUNDS

Reinhard W. Hoffmann, Manfred Julius and Karen Oltmann
 Fachbereich Chemie der Philipps-Universität, D 355 Marburg

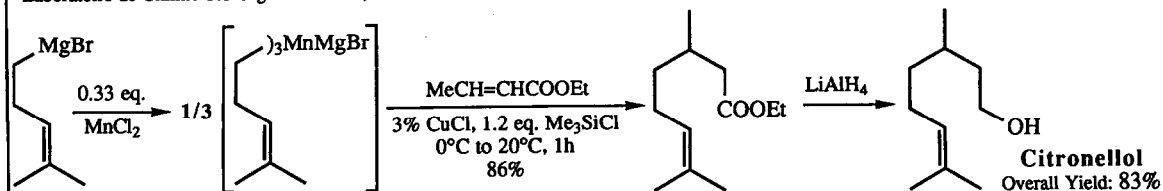
The α -phenylseleno-alkyl-lithium compounds have been shown to be configurationally stable at -125°C in MeTHF.



ORGANOMANGANESE (II) REAGENTS XXII. COPPER-CATALYZED CONJUGATE ADDITION OF ORGANOMANGANESE REAGENTS TO α , β -ETHYLENIC ESTERS.

Gérard CAHIEZ* and Mouad ALAMI

Laboratoire de Chimie des Organoelements, tour 44-45; Université P. & M. Curie, 4 Place Jussieu F-75252 PARIS Cédex 05

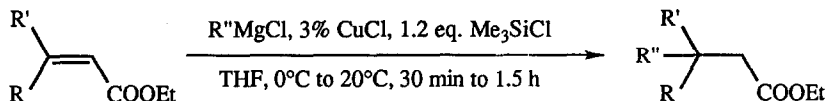


COPPER-CATALYZED CONJUGATE ADDITION OF ORGANOMAGNESIUM REAGENTS TO α , β -ETHYLENIC ESTERS: A SIMPLE HIGH YIELD PROCEDURE.

Tetrahedron Lett. 1990, 31, 7425

Gérard CAHIEZ* and Mouad ALAMI

Laboratoire de Chimie des Organocéléments, tour 44-45; Université P. & M. Curie, 4 Place Jussieu F-75252 PARIS Cédex 05



The reaction occurs under mild conditions with methyl or ethyl enoates to give good yields (generally 70 to 90%) of conjugate addition products. The use of both low temperatures and additives such as $\text{BF}_3 \cdot \text{Et}_2\text{O}$ or hazardous HMPT is avoided and only a stoichiometric amount of organomagnesium reagent is necessary. Me_3SiCl (1.2 eq.) can be replaced by MeSiCl_3 (0.45 eq.).

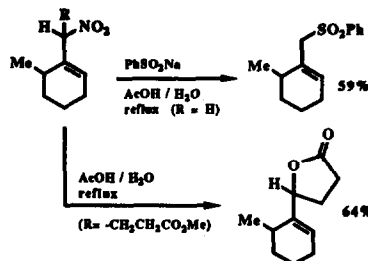
Tetrahedron Lett. 1990, 31, 7429

A PRACTICAL SOLVOLYTIC ACCESS TO ALLYLIC SULPHONES AND LACTONES FROM ALLYLIC NITRO COMPOUNDS

Bernard Barlaam, Jean Boivin, and Samir Z. Zard*

Laboratoire de Synthèse Organique associé au C.N.R.S., Ecole Polytechnique, 91128 Palaiseau, France.

Summary. Allylic nitro derivatives can be readily solvolysed in aqueous acetic acid to give allylic sulphones in the presence of a sulphinic salt or allylic lactones if the substrate contains a suitably located ester group.

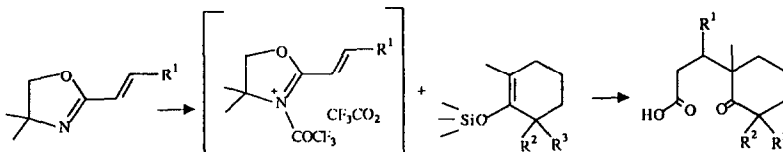


Tetrahedron Lett. 1990, 31, 7433

EFFICIENT SYNTHESIS OF SUBSTITUTED δ -OXO ACIDS

Nicole Langlois* and Nathalie Dahuron

Institut de Chimie des Substances Naturelles, C.N.R.S., 91198 Gif-sur-Yvette, France

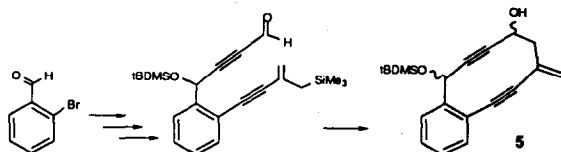


Tetrahedron Lett. 1990, 31, 7437

Synthesis of a new 10-membered ring functionalised cyclodiynol related to Neocarzinostatin chromophore

Jean Suffert

Laboratoire de Stéréochimie Organométallique, EHICS 1, rue Blaise Pascal, 67000 Strasbourg France



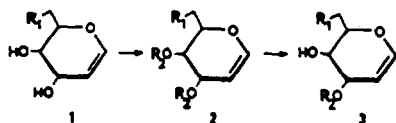
Cyclodiynol 5 was synthesized from 2-bromobenzaldehyde in 8 steps and 19% overall yield through an intramolecular allylsilane terminated cyclisation

DEPROTECTION REGIOSELECTIVE DE D-GLYCAL CHLOROACETYLES
PAR L'ACETATE D'HYDRAZINE

Tetrahedron Lett. 1990, 31, 7441

Salah BOUHRON et Philippe J.A. VOTTEK^d

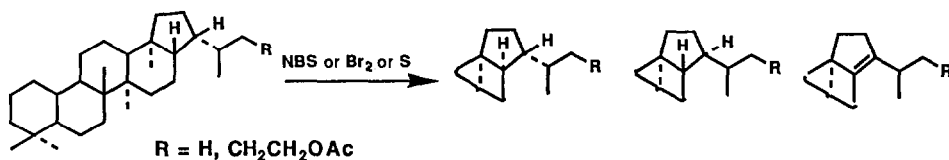
Centre d'Etudes Nucléaires, DR6/LCH/MV, BP 85X, F. 38041 Grenoble Cedex.



- 1a D-glucosyl R₁ = OH 2a R₁ = R₂ = ClCH₂CO 3a R₁ = R₂ = ClCH₂CO
 1b D-galactosyl R₁ = OH 2b R₁ = R₂ = ClCH₂CO 3b R₁ = R₂ = ClCH₂CO
 1c L-rhamnosyl R₁ = H 2c R₁ = H, R₂ = ClCH₂CO 3c R₁ = H, R₂ = ClCH₂CO

Tetrahedron Lett. 1990, 31, 7445

BROMINE, N-BROMOSUCCINIMIDE AND SULPHUR INDUCED ISOMERIZATIONS
IN THE HOPANE SERIES. P. Bisseret and M. Rohmer*. Ecole Supérieure de Chimie de
Mulhouse, 3, rue A. Werner, F68093 Mulhouse Cedex, France.



Tetrahedron Lett. 1990, 31, 7449

TOTAL SYNTHESIS OF ISOROBUSTIN

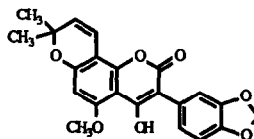
Derek H.R. BARTON^a, Dervilla M.X. DONNELLY^{*b}, Jean-Pierre FINET^c,

and Patrick J. GUIRY^b a - Department of Chemistry, Texas A&M University, College Station, Texas, 77843, U.S.A.

b - Department of Chemistry, University College Dublin, Belfield, Dublin 4, Ireland.

c - Laboratoire SREP, Université de Provence, 13397 Marseille Cedex 13, France.

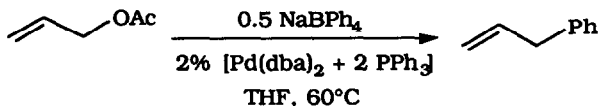
The synthesis of isorobustin involving an organolead-mediated arylation
is performed in five steps from 5-methoxyresorcinol with a 34% overall yield.



Tetrahedron Lett. 1990, 31, 7453

PALLADIUM-CATALYZED PHENYLATION OF ALLYLIC ACETATES
BY TETRAPHENYLBORATE ANION

Jean-Yves Legros and Jean-Claude Flaud,
Laboratoire de Synthèse Asymétrique,
CNRS URA 255, Université de Paris-Sud,
91405 Orsay Cedex, France

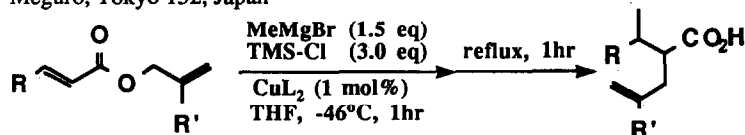


9 examples, 50-87%

**A CATALYTIC ROLE OF Cu(II) FOR CONJUGATE
ADDITION OF GRIGNARD REAGENTS.
A COMPLETELY DIFFERENT BEHAVIOR FROM ORGANOCUPRATES.**

Youji Aoki and Isao Kuwajima*

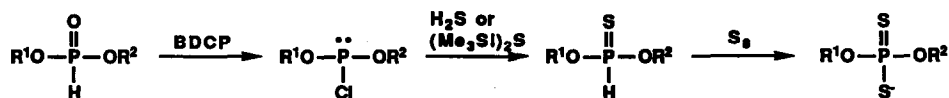
Department of Chemistry, Tokyo Institute of Technology,
Meguro, Tokyo 152, Japan



**A FACILE CONVERSION OF DIALKYL PHOSPHONATES
TO DIALKYL PHOSPHORODITHIOATES**

Takeshi Wada and Tsujiaki Hata*

Department of Life Chemistry, Tokyo Institute of Technology, 4259 Nagatsuta, Midoriku, Yokohama 227, Japan

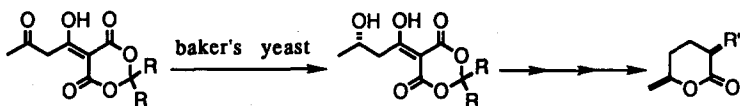


**Highly Enantioselective Reduction of Aceto-
acetylated Meldrum's Acid with Fermenting
Baker's Yeast**

Masayuki Sato,* Jun-ichi Sakaki, Yoshiaki Sugita, Tsuyoshi Nakano,
and Chikara Kaneko*

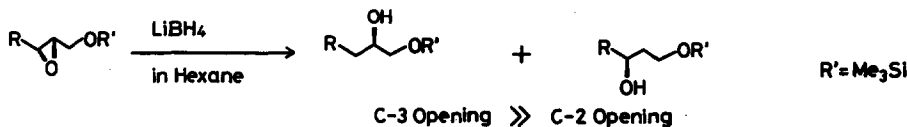
Pharmaceutical Institute, Tohoku University, Aobayama, Sendai 980, Japan

Acetoacetylated Meldrum's
acid was enantioselectively
reduced with fermenting
baker's yeast.



**REGIOSELECTIVE REDUCTIVE OPENING OF 2,3-EPOXY ALCOHOL
DERIVATIVES WITH LITHIUM BOROHYDRIDE IN A SOLID STATE**

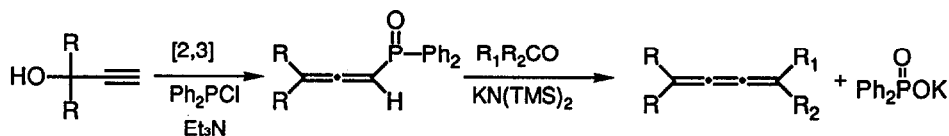
Keisuke Sugita, Makoto Onaka,* and Yusuke Izumi*
Department of Synthetic Chemistry, School of Engineering,
Nagoya University, Chikusa, Nagoya 464, Japan



A NEW METHOD FOR THE SYNTHESIS OF [3]-CUMULENES AND ENEYNECUMULENES RELATED TO NEOCARZINOSTATIN CHROMOPHORE

Isao Saito,* Kazuhiro Yamaguchi, Ryu Nagata and Eiji Murahashi

Department of Synthetic Chemistry, Faculty of Engineering, Kyoto University, Kyoto 606, Japan



ABSOLUTE CONFIGURATION OF THE RUBIGINONES AND PHOTO-INDUCED OXIDATION OF THE C1 HYDROXYL OF THE ANTIBIOTICS TO A KETONE

M. Oka, M. Konishi*, T. Oki and M. Ohashi*

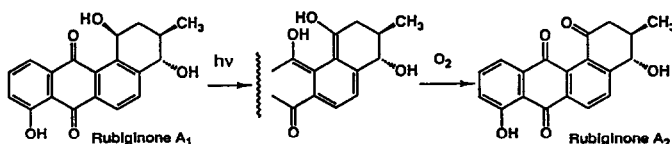
Bristol-Myers Squibb Research Institute,

2-9-3 Shimo-meguro, Meguro-ku, Tokyo 153,

Japan and *Department of Materials Science,

The University of Electrocommunication, 5-1,

Chofugaoka 1 chome, Chofu-shi, Tokyo 182, Japan



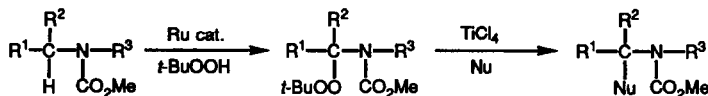
The absolute stereochemistry of rubiginones was established and a facile photo-induced oxidation of their C1 hydroxyls to the ketones was explained in relation to the absolute stereochemistry.

NOVEL METHOD FOR α -SUBSTITUTION OF AMINES VIA *N*-METHOXYCARBONYL- α -*t*-BUTYLDIOXYAMINES

Takeshi Naota, Takeshi Nakato, and Shun-Ichi Murahashi*

Department of Chemistry, Faculty of Engineering Science, Osaka University, Toyonaka, Osaka 560, Japan

α -Substitution of amines can be performed by ruthenium-catalyzed oxidation of *N*-methoxycarbonylamines with *t*-butyl hydroperoxide followed by treatment with nucleophiles in the presence of titanium tetrachloride.



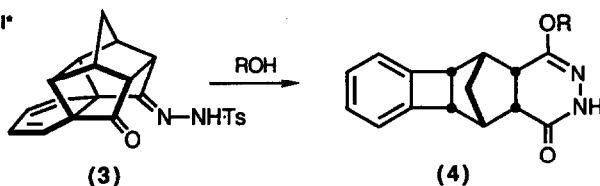
AN UNUSUAL REARRANGEMENT OF A CAGE DIKETONE MONOTOSYLHYDRAZONE; A NEW FRAGMENTATION OF THE PCUD SKELETON

James M. Coxon*, Siew Tai Fong and Peter J. Steel*

Chemistry Department, University of Canterbury,

Christchurch, New Zealand.

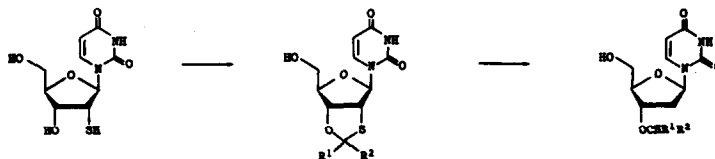
The tosylhydrazone (3) undergoes smooth conversion in refluxing alcohols to the pentacyclic pyridazine derivatives (4).



A NEW PROCEDURE FOR THE PREPARATION OF 3'-O-ALKYL DERIVATIVES OF 2'-DEOXYRIBONUCLEOSIDES

Bhalchandra V. Joshi and Colin B. Reese*

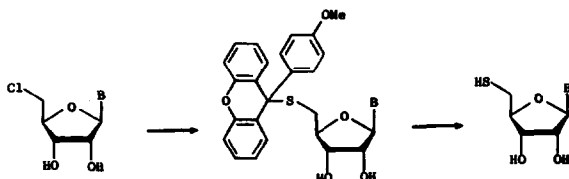
Department of Chemistry, King's College London, Strand, London WC2R 2LS, England



9-(4-METHOXYPHENYL)XANTHEN-9-THIOL: A USEFUL REAGENT FOR THE PREPARATION OF THIOLS

Jonathan H. Marriott, Mina Mottahedeh and Colin B. Reese*

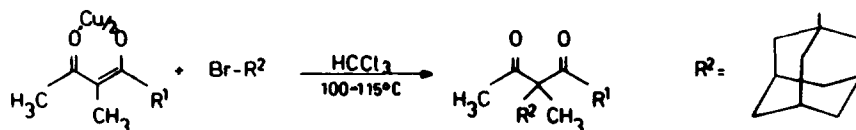
Department of Chemistry King's College London, Strand, London WC2R 2LS, England



ALKYLATIONS OF α -METHYL SUBSTITUTED β -DIKETONES THROUGH THEIR Cu(II) COMPLEXES. PREPARATION OF STERICALLY CONGESTED β -DIKETONES.

M.E. Lloris, J. Marquet, M. Moreno-Mañas

Dep. of Chemistry, Univ. Autònoma de Barcelona, Bellaterra, 08193-Barcelona, Spain.



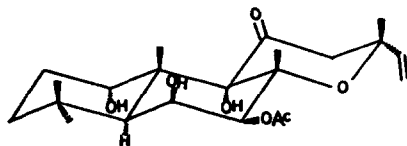
STEREISOMERS OF COLEONOL (FORSKOLIN) AND RELATED DITERPEOIDS

R.A. Vishwakarma^a and J.S. Tandon^b

^aCentral Institute of Medicinal & Aromatic Plants, and

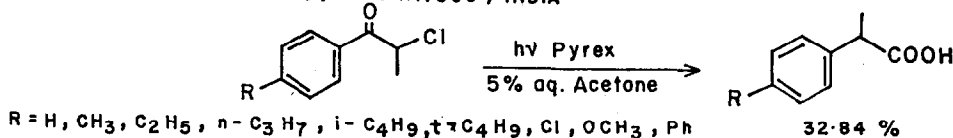
^bCentral Drug Research Institute, Lucknow, India

Regio- and stereoselective inversion of various hydroxyl group of coleonol (forskolin) by Mitsunobu reaction led to new and unnatural stereoisomeric forskolins as potent adenylate cyclase stimulant.



LIGHT-MEDIATED DIRECT TRANSFORMATION OF
2-CHLORO-PROPIOPHENONES INTO 2-ARYLPROPIONIC ACIDS

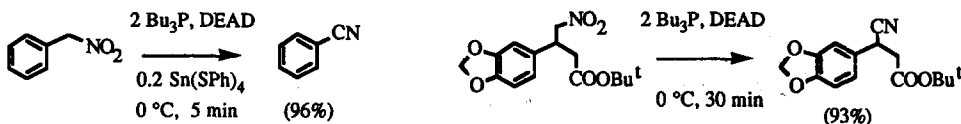
Harikisan R. Sonawane^{*}, Dilip G. Kulkarni and Nagaraj R. Ayyangar
National Chemical Laboratory, Pune 411008, INDIA



NEW SYNTHETIC 'TRICKS'.
DIRECT CONVERSION OF NITRO COMPOUNDS TO NITRILES

Fèlix Urpí and Jaume Vilarrasa

Departament de Química Orgànica, Universitat de Barcelona, 08028 Barcelona

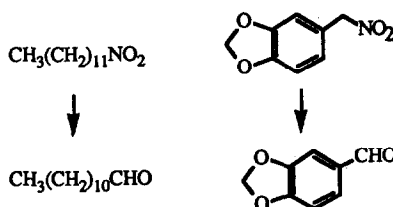


NEW SYNTHETIC 'TRICKS'. A NOVEL ONE-POT
PROCEDURE FOR THE CONVERSION OF PRIMARY NITRO GROUPS INTO ALDEHYDES

Fèlix Urpí and Jaume Vilarrasa

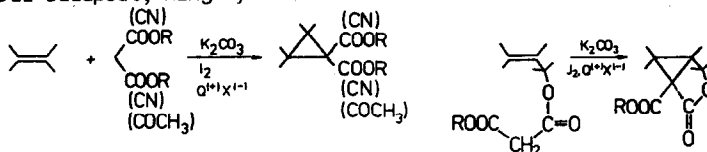
Departament de Química Orgànica, Universitat de Barcelona

Combination of Sn²⁺/PhSH and Sn²⁺/tartrate complexes,
in the presence of sodium hydrosulphite, converts primary
nitro groups into hydroxysulphonates; workup affords pure
aldehydes in 80-91% overall yields.



REACTION OF NON-ACTIVATED OLEFINS WITH CH-ACIDS; A
NOVEL METHOD FOR THE PREPARATION OF ELECTROPHILIC
CYCLOPROPANES

"László Tóke, Gábor T. Szabó, Zoltán Hell, and Gábor Tóth" Technical University of
Budapest, H-1521 Budapest, Hungary

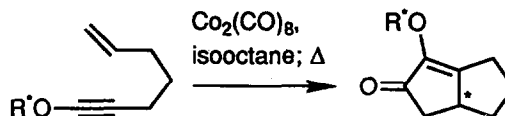


ASYMMETRIC INDUCTION STUDIES IN THE INTRAMOLECULAR PAUSON-KHAND CYCLIZATION OF 7-ALKOXY-1-HEPTEN-6-YNES

M. Poch,^a E. Valentí,^a A. Moyano,^a M. A. Pericàs,^a J. Castro,^a A. DeNicola,^a and A. E. Greene^{b*}

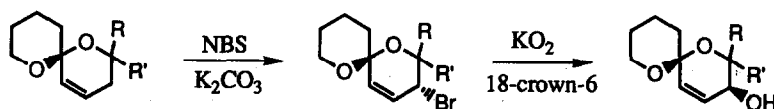
^aDepartament de Química Orgànica, Universitat de Barcelona, Martí i Franquès 1-11, 08028 Barcelona, Spain, and ^bLEDSS, Université J. Fourier, BP 53X, 38041 Grenoble, France.

Asymmetric induction has been achieved in the intramolecular Pauson-Khand reaction of 7-alkoxy-1-hepten-6-yne derivatives derived from chiral alcohols.



ALLYLIC OXIDATION OF UNSATURATED SPIROKETALS

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

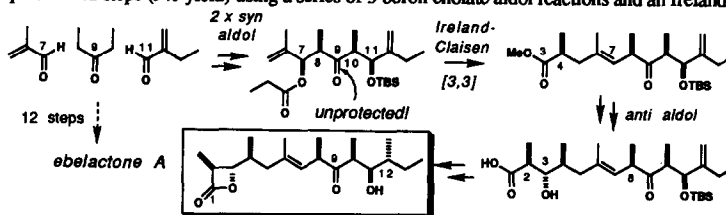


R, R' = H, Me

TOTAL SYNTHESIS OF THE ESTERASE INHIBITOR (±)-EBELACTONE A USING AN ALDOL-CLAISEN STRATEGY

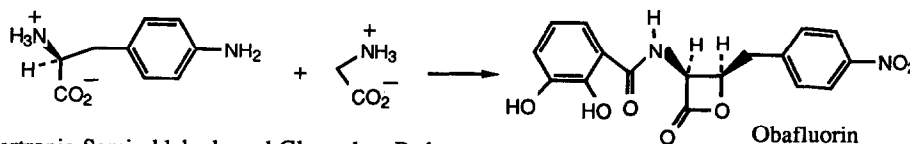
Ian Paterson* and Alison N. Hulme, University Chemical Laboratory, Lensfield Road, Cambridge CB2 1EW, UK

(±)-Ebelactone was prepared in 12 steps (9% yield) using a series of 3 boron enolate aldol reactions and an Ireland-Claisen rearrangement.



The Biosynthesis of The *Pseudomonas* Antibiotic Obafuorin from *p*-Aminophenylalanine and Glycine (Glyoxylate)

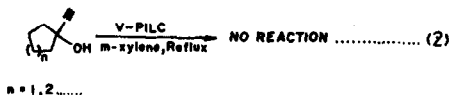
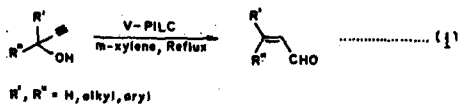
Richard B. Herbert* and Andrew R. Knaggs, School of Chemistry, The University, Leeds LS2 9JT



Tartronic Semi-aldehyde and Glyoxylate Pathways

Shape-Selective Isomerisation of α -Acetylenic Alcohols to α,β -Ethylenic Carbonyl Compounds By Vanadium-Pillared Montmorillonite Catalyst

B.M. Choudary*, A. Durga Prasad and V.L.K. Valli
Inorganic & Physical Chemistry Division
Indian Institute of Chemical Technology
Hyderabad 500 007, INDIA.



AN ELECTROCHEMICAL DETERMINATION OF RELATIVE pK_a OF WEAK ACIDS IN N,N -DIMETHYLFORMAMIDE

F. Maran*, M.G. Severin and E. Vianello
Dipartimento di Chimica Fisica, Universita' di Padova, via Loredan 2, 35131 Padova, Italy

The modifications caused by a weak acid on the voltammetric pattern of α -bromoamides in DMF are quantitatively analyzed to get the pK_a for a series of selected N-H acids with respect to the pK_a of the electroactive amide. A correlation with the pertinent pK_a in DMSO is presented.