

GRAPHICAL ABSTRACTS

CORTICOIDS FROM 17-OXOSTEROIDS
Tetrahedron Lett. 1990, 31, 3669

J. Gregory Reid and Therese Debiak-Krook
 Chemical Process R & D, The Upjohn Co., Kalamazoo, MI 49001

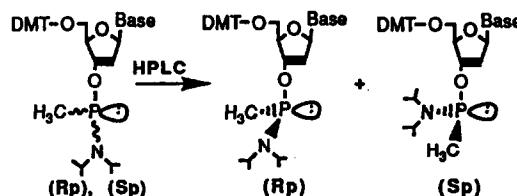
A new and practical process has been developed for the conversion of androstan-17-ones to corticoids.


Separation of 5'-Dimethoxytrityl-2'-Deoxy-nucleoside-3'-O-Methylphosphonamidite Diastereomers by Normal Phase Chromatography.
Tetrahedron Lett. 1990, 31, 3673

Alexander V. Lebedev*, Adam I. Riker,
 Jason P. Rife, and Eric Wickstrom*

Department of Chemistry, University of South Florida, Tampa, FL, 33620, USA.

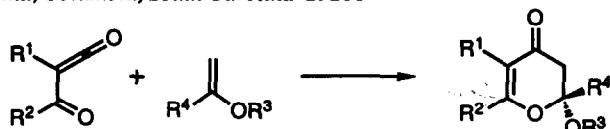
*Institute of Bioorganic Chemistry, Siberian Division of the Academy of Sciences of the USSR, Novosibirsk 630090, USSR.


CYCLOADDITION REACTIONS OF ACYL KETENES WITH ENOL ETHERS: A GENERAL SYNTHESIS OF 2-ALKOXY-2,3-DIHYDRO-4H-PYRAN-4-ONES.
Tetrahedron Lett. 1990, 31, 3677

Robert S. Coleman* and Eugene B. Grant

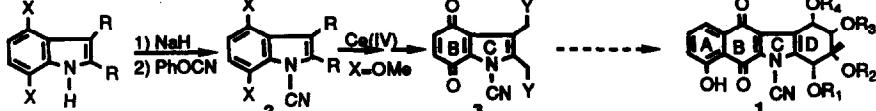
Department of Chemistry, University of South Carolina, Columbia, South Carolina 29208

A detailed description of the hetero Diels-Alder reactions of acyl ketenes with electron-rich dienophiles for the facile synthesis of 2-alkoxy-2,3-dihydro-4H-pyran-4-ones is presented.


N-CYANOINDOLES AND N-CYANOINDOLE-4,7-DIONES: CONSTRUCTION OF A BC RING SYNTHON FOR THE KINAMYCINS.
Tetrahedron Lett. 1990, 31, 3681

Gary I. Dmitrienko*, Kent E. Nielsen, Christopher Steingart, Ngai Sai Ming, Jennifer M. Willson and Gaminie Weeratunga, (Guelph-Waterloo Centre for Graduate Work in Chemistry, Waterloo Campus, Department of Chemistry, University of Waterloo, Waterloo, Ontario, Canada, N2L 3G1)

N-Cyanoindoles 2, prepared as shown, can be oxidized to the diones 3 which are potential precursors to the kinamycins 1.



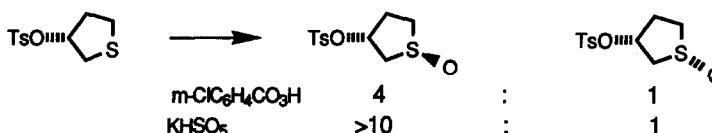
DIASTEREOSELECTIVE OXIDATION OF SULFIDES TO SULFOXIDES

BIS(2-CHLOROETHYL)CARBONATE OXIDATION WITH POTASSIUM PEROXYMONOSULFATE

WILFRED J. QUALLICH AND J. WILLIAM LACEY

Pfizer Central Research, Process Research and Development, Groton, CT 06340

Potassium peroxymonosulfate oxidation of sulfides occurs with high diastereoselectivity.

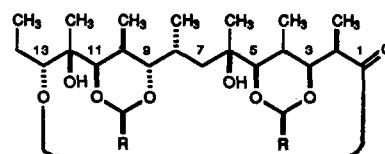


ALKALINE HYDROLYSIS OF SOME ERYTHRONOLIDE A DERIVATIVES

ERYTHROMYCINE A DERIVATIVES
Kunio Sakan, Stefan A. Babirad*, Douglas A. Smith, and K.N. Houk*
Department of Chemistry, Carnegie-Mellon University, Pittsburgh, PA 15213

*Department of Chemistry, Carnegie Mellon University, Pittsburgh, PA
15213 and
Department of Chemistry and Biochemistry, University of California, Los
Angeles
Los Angeles, CA 90024-1569*

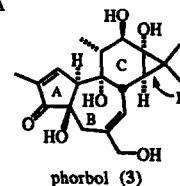
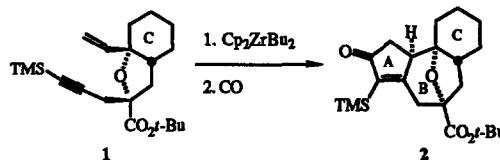
The saponification of certain protected benzylidene C.3-C.5, C.9-C.11 erythronolide-A derivatives is described. The use of aprotic solvents such as tetrahydrofuran, eliminates the formation of side-products during the alkaline hydrolysis.



STUDIES ON TUMOR PROMOTERS. 10. SYNTHESIS OF THE ABC RING SYSTEM OF THE TIGLIANES AND DAPHNANES BY A ZIRCONIUM-MEDIATED INTRAMOLECULAR ENYNE CARBOCYCLIZATION.

Paul A. Wender* and **Frank E. McDonald**, Department of Chemistry, Stanford University, Stanford, CA 94305 USA

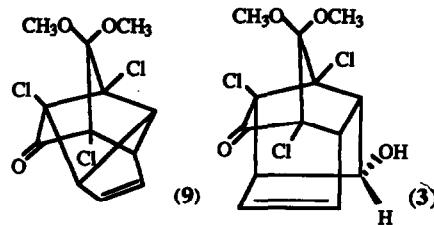
A synthetic approach to phorbol (3) is described, featuring formation of the A and B rings by zirconium-based enyne carbocyclization (1 → 2).



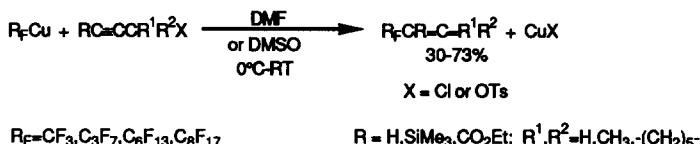
BASE-PROMOTED ELIMINATIVE CYCLIZATION: NOVEL SYNTHESIS OF FUNCTIONALIZED TETRACYCLO[6.2.1.0^{2,7}]UNDECANE AND TETRACYCLO[5.3.0.0^{2,6}]IDECA-5,9-ENE SYSTEMS

**Suresh Chander Suri, University of Dayton Research Institute
C/O Air Force Astronautics Laboratory/L SX, Edwards Air Force Base, CA 93523**

Two new tetracyclic systems **3** and **9** are synthesized from 1,8,9,10-tetrachloro-3 α ,6 α -dihydroxy-11,11-dimethoxytricyclo-[6.2.1.0^{2,7}]undec-4,9-diene (**2**) and 1,7,8,9-tetrachloro-3 α -hydroxy-10,10-dimethoxytricyclo[5.2.1.0^{2,6}]dec-4,8-diene (**8**) via base induced eliminative cyclization.



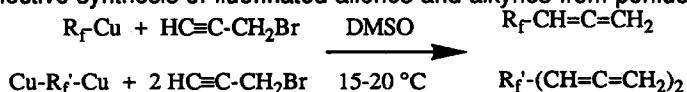
A FACILE, GENERAL ROUTE TO PERFLUOROALKYL ALLENES
 Donald J. Burton*, Greg A. Hartgraves and Jeffrey Hsu
 Department of Chemistry, The University of Iowa
 Iowa City, Iowa 52242, U.S.A.



FLUORINATED ALLENES AND ALKYNES

Ming-H. Hung, Central Research & Development Department,
 E. I. du Pont de Nemours & Company, Experimental Station,
 P. O. Box 80328, Wilmington, DE 19880-0328

Selective synthesis of fluorinated alenes and alkynes from perfluoro-copper and propargyl system.



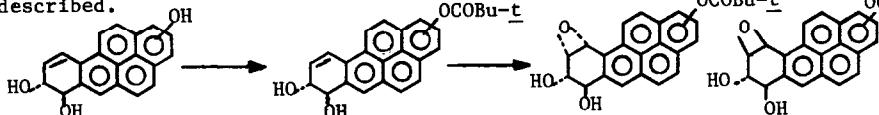
SYNTHESIS OF THE PHENOLIC ESTERS OF 1-HYDROXY- AND 3-

3-HYDROXY-7,8-DIOL-9,10-EPOXIDES OF BENZO[a]PYRENE

Panna L. Kole and Subodh Kumar*

Division of Environmental Toxicology and Chemistry, Center for Environmental Research and Education, State University of New York College at Buffalo, 1300 Elmwood Ave, Buffalo, N.Y. 14222

A chemical synthesis of the phenolic ester of the triol epoxide derivatives of carcinogenic benzo[a]pyrene is described.

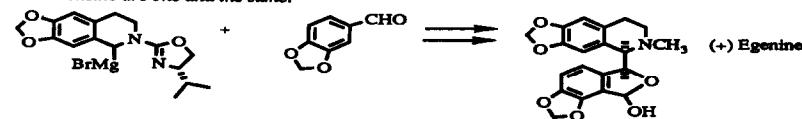


SYNTHESIS OF (-)EGENINE (DECUMBENSINE) BY ASYMMETRIC CARBONYL ADDITION

Kathleen S. Rein and Robert E. Gawley*

Department of Chemistry, University of Miami, Coral Gables, Florida 33124 USA

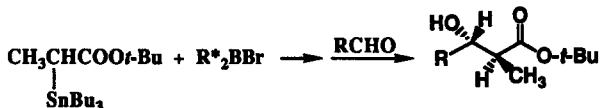
The first synthesis of the phthalideisoquinoline egenine is reported, along with spectral data suggesting that egenine and decumbensine are one and the same.



NEW PROCESS FOR ENANTIOSELECTIVE
NUCLEOPHILIC ADDITION TO ALDEHYDES
TO FORM SECONDARY ALCOHOLS

E. J. Corey and Sung Soo Kim

Department of Chemistry
Harvard University, Cambridge, MA 02138

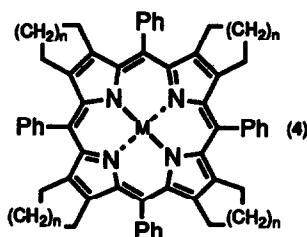


TETRACYCLOALKENYL-MESO-TETRAPHENYLPORPHYRINS
AS MODELS FOR THE EFFECT OF NON-PLANARITY ON THE
LIGHT ABSORPTION PROPERTIES OF PHOTOSYNTHETIC
CHROMOPHORES

Craig J. Medforth, M. Dolores Berber, and Kevin M. Smith,*

Department of Chemistry, University of California,
Davis, CA 95616, and John A. Sheinrott,* Fuel Science
Division 6211, Sandia National Laboratories, Albuquerque,
NM 87185.

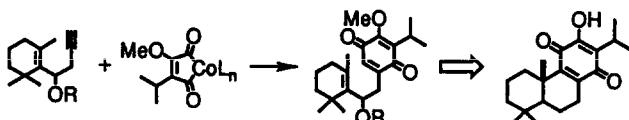
Optical, NMR, and resonance Raman studies show that as the ring size in C₅-C₇ tetracycloalkenyl-meso-tetraphenylporphyrine [e.g. (4)] increases, the porphyrin ring core changes from planar [e.g. (4) n=1] to non planar [(4) n=3].



A SYNTHESIS OF THE ABIETANE DITERPENOID QUINONE (\pm)-ROYLEAN-ONE VIA MALEOYLCOBALT TECHNOLOGY

Lanny S. Liebeskind,* Ramakrishnan Chidambaram, Sanjay Nimkar,
and Dennis Liotta

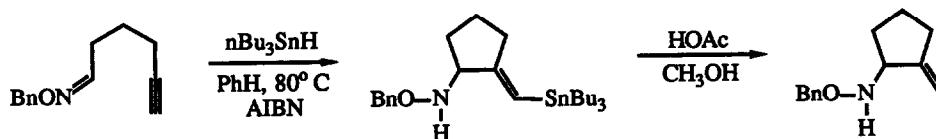
(\pm)-Royleanone has been synthesized by rapid construction of a highly substituted quinone using maleoylcobalt complex technology.



FREE RADICAL CYCLIZATIONS OF TERMINAL ALKYNES
WITH OXIME ETHERS

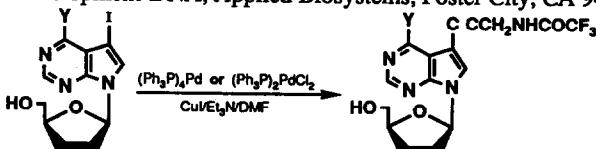
Eric J. Enholm,* J. A. Burroff and Luz M. Jaramillo

Department of Chemistry, University of Florida, Gainesville, Florida 32611



SOLVENT, NOT PALLADIUM OXIDATION STATE, IS THE PRIMARY DETERMINANT FOR SUCCESSFUL COUPLING

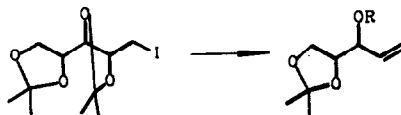
OF TERMINAL ALKYNES WITH IODO-NUCLEOSIDES; Morris J. Robins,* Ravi S. Vinayak, and Steven G. Wood; Department of Chemistry, Brigham Young University, Provo, UT 84602, U.S.A.* and Process Development-DNA, Applied Biosystems, Foster City, CA 94494, U.S.A.



METAL-GRAPHITE REAGENTS IN CARBOHYDRATE CHEMISTRY, IX.
FRAGMENTATIONS OF 1-DEOXY-1-IODO-2,3;4,5-DI-O-ISO-
PROPYLIDENE PENTITOLS.

Alois Fürstner, Institute of Organic Chemistry, Technical University, A-8010 Graz,
Austria

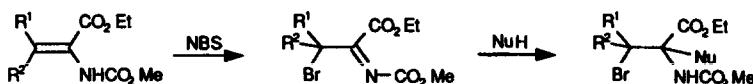
By means of Zn/Ag-graphite and C₆₀K a full set of stereoisomeric 3-O-protected or -unprotected 1,2-O-isopropylidene-pent-4-enitols is prepared from the title compounds.



**SYNTHESIS AND REACTIVITY OF PROTECTED
β-BROMO α-IMINOACIDS : A CONVENIENT ROUTE
TO STRUCTURALLY DIVERSIFIED AMINOACIDS.**

R. Danion-Bougot, D. Danion and G. Francis.

Groupe de Recherches de Physicochimie structurale, U.R.A. C.N.R.S. 704, Université de Rennes I, 35042 Rennes Cedex, France.



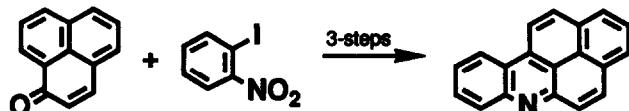
Nucleophiles : NaBH₄, CH₂=CHMgBr, H₂O, HOCH₂CH₂OH, PhCH₂NH₂, (CH₃)₂S

SYNTHESIS OF 6-AZABENZO[a]PYRENE

Kiyoshi Fukuhara,* Naoki Miyata and Shozo Kamiya

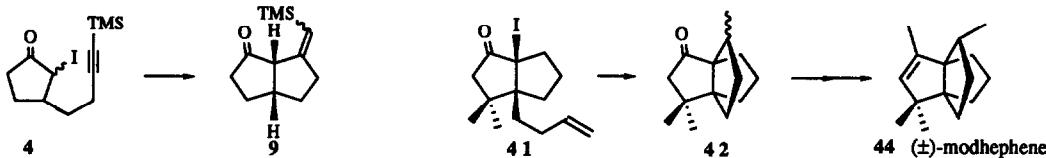
Division of Organic Chemistry, National Institute of Hygienic Sciences, Kamiyoga, Setagaya, Tokyo 158, Japan

6-AzaBaP was synthesized by 1,4-addition of 1-iodo-2-nitrobenzene to perinaphthenone followed by intramolecular schiff base formation.



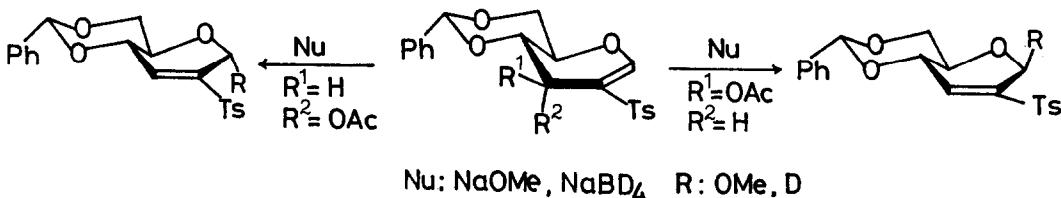
INTRAMOLECULAR RADICAL CYCLIZATION OF SILYL-ACETYLENIC OR OLEFINIC α -IODO KETONES: APPLICATION TO THE TOTAL SYNTHESIS OF (\pm)-MODHEPHENE

Chin-Kang Sha,* Tsong-Shin Jean and Deh-Chi Wang, Department of Chemistry, National Tsing Hua University, Hsinchu, Taiwan 30043, Republic of China



REACTIONS OF 3-O-ACETYL-2-C-p-TOLYSULFONYL-D-ARABINO- AND -D-RIBO-HEX-1-ENITOL DERIVATIVES WITH NUCLEOPHILES; THE S_N^2 MECHANISM IS PROVED FIRSTLY IN GLYCAL DERIVATIVES

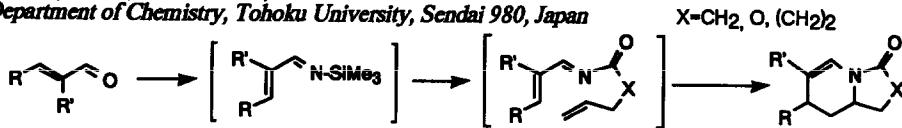
Tohru Sakakibara,* Izumi Takai, Azuma Yamamoto, Hiroyuki Iizuka, Kohji Hirasawa, and Yoshiharu Ishido; Department of Chemistry, Yokohama City University, Seto, Kanazawa-ku, Yokohama 236, Japan



A NEW METHOD FOR GENERATION AND INTRAMOLECULAR DIELS-ALDER REACTION OF *N*-ACYL AND *N*-ALKOXYCARBONYL-1-AZA-1,3-BUTADIENES. A ONE-POT SYNTHESIS OF 1,7,8a-TETRAHYDRO-3(2*H*)-INDOLIZINONES AND 1,2,3,8,9,9a-HEXAHYDRO-4(4*H*)-QUINOLIZINONES FROM α,β -UNSATURATED ALDEHYDES

Tadao Uyehara*, Ichiro Suzuki, and Yoshinori Yamamoto*

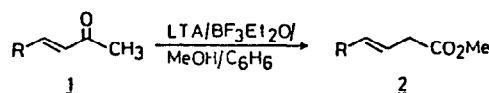
Department of Chemistry, Tohoku University, Sendai 980, Japan



A FACILE ONE-STEP SYNTHESIS OF β,γ -UNSATURATED CARBOXYLIC ACID ESTERS VIA 1,2-CARBONYL TRANS-POSITIONS OF α,β -UNSATURATED KETONES

Felix Mathew and B. Myrboh*

Department of Chemistry, North-Eastern Hill University
Shillong 793 003, Meghalaya, India

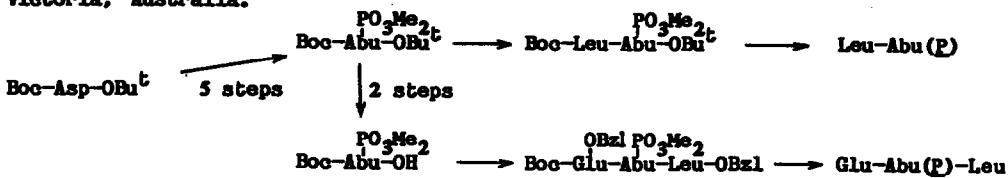


Reaction of α,β -unsaturated ketone, 1, with lead(IV) acetate, borontrifluoride etherate and methanol yielded the β,γ -unsaturated esters, 2.

**SYNTHESIS OF Leu-Abu(P) AND Glu-Abu(P)-Leu.
ISOSTERES OF Ser(P)-PEPTIDES.**

G. Tong, J. W. Perich and R. B. Johns*

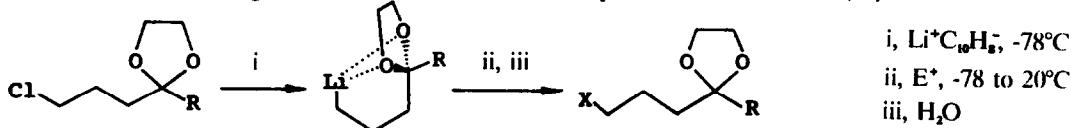
Department of Organic Chemistry, The University of Melbourne, Parkville, 3052, Victoria, Australia.



**2-(3-LITHIOPROPYL)- AND 2-(3-LITHIOPROPYL)-
2-METHYL-1,3-DIOXOLANE: NEW MASKED LITHIUM
BISHOMOENOLATES IN THE SYNTHESIS OF BIFUNCTIONALIZED COMPOUNDS**

Diego J. Ramón, and Miguel Yus*

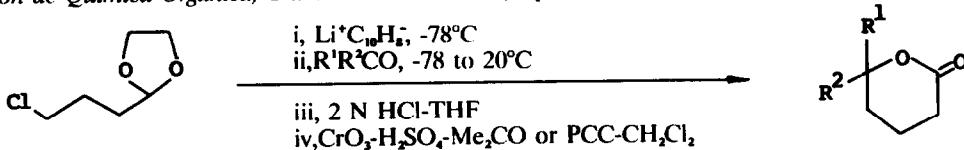
División de Química Orgánica, Universidad de Alicante, Aptdo. 99, 03690 Alicante, Spain.



**DIRECT SYNTHESIS OF δ-LACTONES FROM
2-(3-LITHIOPROPYL)-1,3-DIOXOLANE AND CARBONYL
COMPOUNDS**

Diego J. Ramón, and Miguel Yus*

División de Química Orgánica, Universidad de Alicante, Aptdo. 99, 03690 Alicante, Spain.

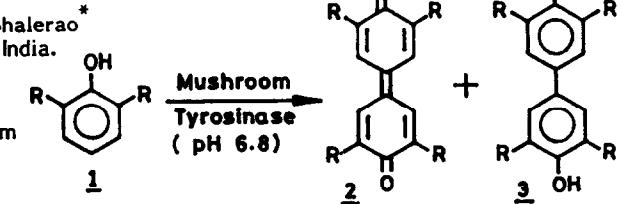


**MUSHROOM TYROSINASE CATALYSED COUPLING OF HINDERED
PHENOLS : A NOVEL APPROACH FOR THE SYNTHESIS OF
DIPHENOQUINONES AND BISPHENOLS**

Ganesh Pandey, C. Muralikrishna and U.T. Bhalerao*

Organic Division, IICT, Hyderabad, India.

An efficient oxidative carbon-carbon coupling of hindered phenols leading to diphenoquinones and bisphenols by mushroom tyrosinase is reported.



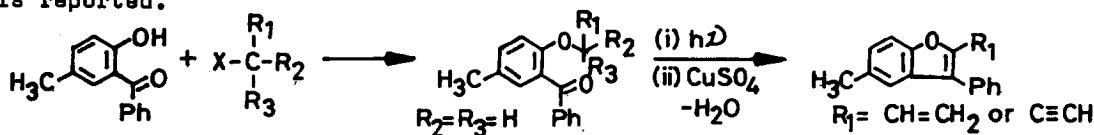
A PHOTOCHEMICAL ROUTE TO 2-ALKENYL AND 2-ETHYNYL BENZOFURANS.

Tetrahedron Lett. 1990, 31, 3775

T. Sumathi and K.K. Balasubramanian⁺,

Department of Chemistry, Indian Institute of Technology, Madras 600036. INDIA.

Synthesis of 2-alkenyl- and 2-ethynylbenzofurans by photochemical cyclisation is reported.

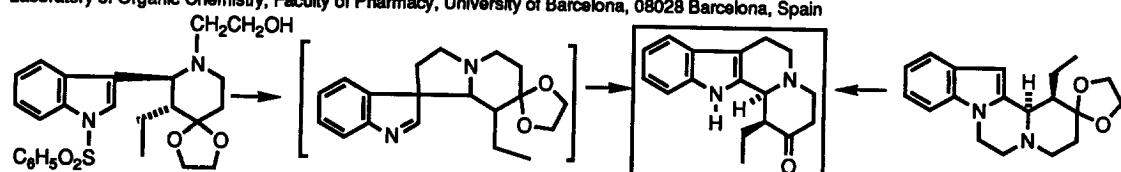


SYNTHETIC STUDIES ON INDOLE ALKALOIDS. III.
SYNTHESIS OF 1-ETHYLINDOLO[3,2-a]QUINOLIZIDIN-2-ONE

Tetrahedron Lett. 1990, 31, 3779

Mario Rubiralta*, Anna Diez, and Cristina Vila

Laboratory of Organic Chemistry, Faculty of Pharmacy, University of Barcelona, 08028 Barcelona, Spain



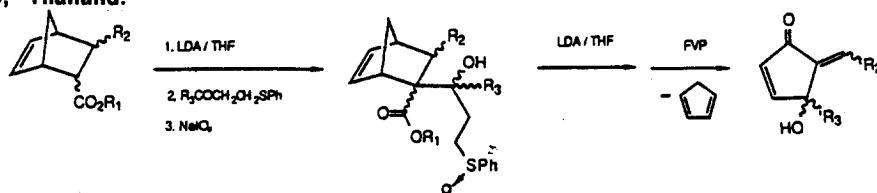
The synthesis of 1-ethylindolo[2,3-a]quinolizidin-2-one is reported by two alternative routes

A general synthesis of 5-alkyldene-4-hydroxy-2-cyclopentenones

Tetrahedron Lett. 1990, 31, 3783

Manat Pohmakotr* and Supatara Popuang

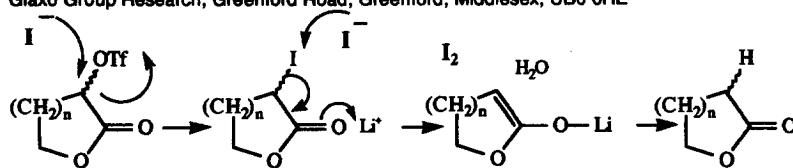
Department of Chemistry, Faculty of Science, Mahidol University, Rama VI Road, Bangkok 10400, Thailand.



HIGH YIELD REDUCTION OF 2-O-TRIFLUOROMETHANESULPHONATE ESTERS OF α -HYDROXYLACTONES TO THE CORRESPONDING 2-DEOXYLACTONES BY LITHIUM IODIDE TRIHYDRATE

Tetrahedron Lett. 1990, 31, 3785

Russell P. Elliott, George W. J. Fleet, Young Soo Gyoung, Nigel G. Ramsden and Colin Smith
Dyson Perrins Laboratory, Oxford University, South Parks Road, Oxford, OX1 3QY
Glaxo Group Research, Greenford Road, Greenford, Middlesex, UB6 0HE



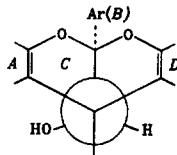
ASSESSMENT OF 3,4-*trans* AND 3,4-*cis* RELATIVE CONFIGURATIONS IN THE A-SERIES OF (4,8)-LINKED PROANTHOCYANIDINS.

Tetrahedron Lett. 1990, 31, 3789

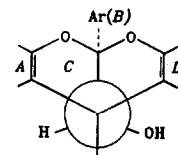
*Annemarie Cronjé, Johann F.W. Burger, E. Vincent Brandt, Herbert Kolodziej, and Daneel Ferreira.**

Department of Chemistry, University of the Orange Free State, P.O. Box 339, Bloemfontein, 9300 South Africa.

Proanthocyanidins of the A-type exhibit identical ^1H NMR coupling constants ($J_{3,4} = 3.5$ Hz) irrespective of the relative configurations of their C-rings. The selective ^1H NOE association of 3-H(C-ring) to either 6-H(D) or 8-H(A) permits unequivocal differentiation of (4,8)-linked analogues with respectively 3,4-*trans* 5 or 3,4-*cis* 6 configurations of these heterocyclic rings.



5



6

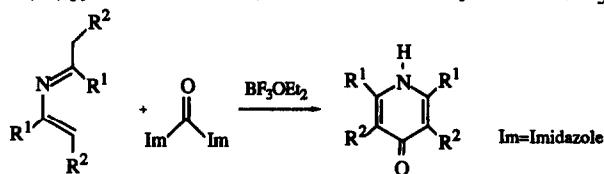
Tetrahedron Lett. 1990, 31, 3793

SYNTHESIS OF 4(1*H*)-PYRIDONES BY CARBONYLATION OF 2-AZA-1,3-DIENES.

José Barluenga, Raquel Pérez Carlón, Francisco J. González, and Santos Fustero

Dep. de Química Organometálica, Facultad de Química, Universidad de Oviedo, 33071-Oviedo, Spain.

A synthesis of 4(1*H*)-pyridones from 2-aza-1,3-dienes and *N,N'*-carbonyldiimidazole/BF₃OEt₂ is described.



Tetrahedron Lett. 1990, 31, 3797

STEREOSELECTIVE ADDITION OF FURYLLITHIUM

TO VARIOUSLY *N,N*-DIPROTECTED D-ALANINALS

*Jerzy Raczko, Adam Gołębiowski, Janusz Krajewski, Przemysław Gluziński and Janusz Jurczak**

Institute of Organic Chemistry, Polish Academy of Sciences, ul. Kasprzaka 44, 01-224 Warsaw

