#### **GRAPHICAL ABSTRACTS**

SYNTHESIS OF 5-(β-D-RIBOFURANOSYL)-PYRIDIN-2-ONE: A "DELETION-MODIFIED" ANALOGUE OF URIDINE

Tetrahedron Letters, 1997, 38, 1669

Jasenka Matulic-Adamic and Leonid Beigelman,

Department of Organic Chemistry, Ribozyme Pharmaceuticals Inc., Boulder, CO 80301

Pyridine-2-one C-nucleoside 2 was prepared using several approaches. The most efficient pathway utilized condensation of 2,3,5-tri-O-benzyl D-ribono-1,4-lactone (4) and 2-(benzyloxy)-5-bromopyridine (5) followed by 1'-deoxygenation and removal of benzyl groups.

# SYNTHESIS AND REACTIVITY OF PYRROLO[3,2-E]INDOLE: REMOVAL OF A N-BOM GROUP FROM AN UNACTIVATED INDOLE

Tetrahedron Letters, 1997, 38, 1673

John E. Macor\*1, James T. Forman, Ronald J. Post and Kevin Ryan, Department of Medicinal Chemistry Central Research Division, Pfizer Inc, Groton, Connecticut 06340

A practical synthesis of pyrrolo[3,2-e]indole (1) is described. Removal of the BOM group was found to be problematic, but could be accomplished in moderate yield. Limited studies on the chemistry of 1 are also presented.

Synthesis of a Fluorinated Analog of 1-Aminocyclopropane Carboxylic Acid. Milton J. Sloan and Kenneth L. Kirk,\*

Carboxylic Acid. Million J. Sloan and Kenneth L. Kirk,\* Laboratory of Bioorganic Chemistry, National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health, Bethesda, Maryland 20892 USA

A convenient synthesis of 2-fluoro-1-aminocyclopropane-1-carboxylic acid is described.

Ar 
$$RO_2C$$
 H  $RO_2C$  H  $RO_2C$  H  $NH_2NHCO$  H  $RO_2NHCO$  H  $RO_2NHCO$   $RO_2N$ 

# CHIRAL 1,3-CYCLOBUTANE AMINO ACIDS: SYNTHESES AND EXTENDED CONFORMATIONS

Tetrahedron Letters, 1997, 38, 1681

Tetrahedron Letters, 1997, 38, 1677

Kevin Burgess\*, Shiming Li, and Joe Rebenspies, Department of Chemistry, Texas A & M University College Station, TX 77843 (email: burgess@chemvx.tamu.edu)

2a X = BOC 2b X = FMOC Amino acids 1 and 2 were prepared in optically active form. Crystallographic studies of derivatives of 1 show that these amino acids have extended conformations, and can pack with intermolecular hydrogen bonds in sheet-like arrays.

#### Reactions of Perfluoro-1-chloro-2-trimethylsilylcyclobutene.

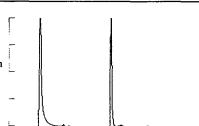
Kenneth B. Wiberg\* and Manuel Marquez, Department of Chemistry, Yale University, New Haven CT 06520-8107

$$F_{4} \xrightarrow{C} t\text{-BuLi} t\text{-Bu} \xrightarrow{F_{2}} t\text{-Bu} \xrightarrow{TMS} F_{2} \xrightarrow{TMS} F_{4} \xrightarrow{TMS} F_{4} \xrightarrow{TMS} F_{4} \xrightarrow{TMS} F_{4} \xrightarrow{TMS} F_{4} \xrightarrow{TMS} F_{4} \xrightarrow{TMS} F_{5} \xrightarrow{TMS} F_$$

# CHEMILUMINESCENT NITROGEN DETECTION FOR HPLC: AN IMPORTANT NEW TOOL IN ORGANIC ANALYTICAL CHEMISTRY William L.

Fitch\* and A. Katrin Szardenings, Affymax Research Institute, 3410 Central Expressway, Santa Clara CA 95051. Eugene M. Fujinari, Antek Instruments, 300 Bammel Westfield Rd., Houston TX 77090

HPLC/CLND is a technique for quantifying yields and purities in organic chemistry, which will be especially useful in solid phase synthesis and combinatorial chemistry



Tetrahedron Letters, 1997, 38, 1689

# AN EFFICIENT FORMAL SYNTHESIS OF BALANOL VIA THE ASYMMETRIC EPOXIDE RING OPENING REACTION

Michael H. Wu and Eric N. Jacobsen\*
Department of Chemistry and Chemical Biology
Harvard University, Cambridge, MA 02138, USA

### AN ACETAL DERIVATIVE OF ILLUDIN S WITH IMPROVED ANTITUMOR ACTIVITY

Trevor C. McMorris\*\*, Jian Yu\*, Peter K. Gantzel\*, Leita A. Estes^ and Michael J. Kelner^

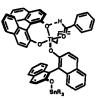
\*Department of Chemistry and Biochemistry, ^ Department of Pathology, University of California, San Diego, La Jolla, CA 92093-0506

Tetrahedron Letters, 1997, 38, 1693

Tetrahedron Letters, 1997, 38, 1697

The Formyl C-H--O Hydrogen Bond As a Key to Transition-State Organization in Enantioselective Allylation, Aldol and Diels-Alder Reactions Catalyzed by Chiral Lewis Acids.

E. J. Corey,\* David Barnes-Seeman and Thomas W. Lee Department of Chemistry and Chemical Biology Harvard University, Cambridge, Massachusetts 02138 Tetrahedron Letters, 1997, 38, 1699



Keck catalytic allylation complex

#### Formal Syntheses of Cryptophycin A and Arenastatin A

Tetrahedron Letters, 1997, 38, 1703

Syed M. Ali and Gunda I. Georg, Department of Medicinal Chemistry, University of Kansas, Lawrence, KS 66045

An efficient synthesis of the key intermediate 2 for the syntheses of cryptophycin A and arenastatin A from  $\beta$ -keto ester 1 is detailed. Asymmetry is introduced through an asymmetric reduction of  $\beta$ -keto ester 1. Frater alkylation and subsequent functional group transformations provided the targeted methyl octadienoate 2.

# AN ENANTIO- AND DIASTEREOCONTROLLED SYNTHESIS OF (-)-NEPLANOCIN A AND ITS 2,3-DI-EPI ISOMER

Tetrahedron Letters, 1997, 38, 1707

Barry M. Trost, Robert Madsen, and Simon D. Guile, Department of Chemistry, Stanford University, Stanford, CA 94305

Catalysis of the Oxidation of Triphenylphosphine and of Trimethyl Phosphite by Hydrogen Peroxide in the Presence of Fe<sup>II</sup> Compounds

Tetrahedron Letters, 1997, 38, 1711

Derek H. R. Barton,\* David R. Hill and Bin Hu, Department of Chemistry, Texas A & M University, College Station, TX 77843-3255

The oxidations of triphenylphosphine and trimethyl phosphite to the corresponding oxides were studied in pyridine by  $^{31}$ P-NMR. They are faster in the presence of Fe<sup>III</sup> compounds.

$$Fe^{III} + H_2O_2 \longrightarrow Fe^{III} OOH \longrightarrow FeV=O$$

#### Nickel-Catalyzed Asymmetric Allylation of Alkyl Grignard Reagents.

Effect of Ligands, Leaving Groups and a Kinetic Resolution with a Hard Nucleophile. Nobuyoshi Nomura and T. V. RajanBabu,\* Department of Chemistry, The Ohio State University, 100 W. 18th Ave., Columbus, Ohio 43210 USA

(racemic)

At 100 % conversion (74 %ee)

At 64 % conversion (74 % ee)

(79 % ee)

Tetrahedron Letters, 1997, 38, 1717

### CONTROLLED REDUCTION OF TERTIARY AMIDES TO THE CORRESPONDING ALDEHYDES OR AMINES USING DIALKYLBORANES

Gayane Godjoian and Bakthan Singaram\*

Department of Chemistry and Biochemistry, University of California, Santa Cruz, California 95064

Reduction of various tertiary amides with two equivalents of 9-BBN gave the corresponding tertiary amine. However, sterically more demanding dialkylboranes, such as dicyclohexylborane(Chx<sub>2</sub>BH) and disiamylborane(Sia<sub>2</sub>BH), reduced tertiary amides to the corresponding aldehydes.

$$R \xrightarrow[R]{R'} \xrightarrow{\text{9-BBN}} R \xrightarrow[R']{\text{O}} R' \xrightarrow{\text{Sia}_2\text{BH or Chx}_2\text{BH}} O \xrightarrow{\text{R}} H$$

#### Tetrahedron Letters, 1997, 38, 1721

### RARE-EARTH (RE) EXCHANGED Nay ZEOLITE PROMOTED KNOEVENAGEL CONDENSATION

T. Indrasena Reddy<sup>1</sup> and Rajender S. Varma<sup>\*1, 2</sup>

<sup>1</sup>Department of Chemistry and <sup>2</sup>Texas Regional Institute for Environmental Studies (TRIES)

Sam Houston State University, Huntsville, TX 77341-2117, U. S. A.

The condensation of aromatic aldehydes with active methylene compounds is promoted by rare-earth cation-exchanged NaY zeolites that affords olefinic products in moderate to good yields.

$$X \longrightarrow CHO + \langle R \xrightarrow{CN} \xrightarrow{catalyst} X \longrightarrow CH = \langle R \rangle$$

where X = H, p-Br, p-NO<sub>2</sub>, p-OH and m-OMe; R = CN,  $CO_2Et$ ,  $CONH_2$ 

## Synthesis of Chiral Phosphine Ligands with Aromatic Backbones and Their Applications in Asymmetric Catalysis

Tetrahedron Letters, 1997, 38, 1725

James M. Longmire, and Xumu Zhang\*

Department of Chemistry, Pennsylvania State University, University Park, PA 16802

A general strategy for the synthesis of new chiral phosphine ligands has been discovered. A common feature of these ligands is that they contain rigid aromatic backbones which can be used to restrict conformational flexibility.

#### A General and Efficient Solid Phase Synthesis of Quinazoline-2,4-diones

Mikhail F. Gordeev,\* Hon C. Hui, Eric M. Gordon, and Dinesh V. Patel Versicor, Inc., 270 East Grand Ave., South San Francisco, CA 94080, U.S.A.

#### Tetrahedron Letters, 1997, 38, 1733

### 2,2'-BIPYRIDINIUM CHLOROCHROMATE/

m-CHLOROPERBENZOIC ACID MEDIATED CLEAVAGE
OF CYCLIC ACETALS TO ESTERS. Frederick A. Luzzio\* and Rhiana A. Bobb, Department of Chemistry, University of Louisville, Louisville, Kentucky 40292.

Benzylidene acetals are converted to hydroxyesters using a reagent system composed of 2,2'-bipyridinium chlorochromate and m-chloroperbenzoic acid.

#### TYPE II INTRAMOLECULAR ANNULATIONS BETWEEN VINYLCARBENOIDS AND FURANS

Tetrahedron Letters, 1997, 38, 1737

Huw M. L. Davies,\* Rebecca Calvo and Gulzar Ahmed

Department of Chemistry, State University of New York at Buffalo, Buffalo, New York 14260-3000

Tetrahedron Letters, 1997, 38, 1741

# RHODIUM(II) (S)-N-(ARYLSULFONYL)PROLINATE CATALYZED ASYMMETRIC INSERTIONS OF VINYLAND PHENYLCARBENOIDS INTO THE SI-H BOND

Huw M. L. Davies, \*a Tore Hansen, a James Rutherg, b and Paul R. Bruzinskia a) Department of Chemistry, State University of New York at Buffalo, Buffalo, NY 14260-3000 b) Department of Chemistry, Wake Forest University, Box 7486, Winston-Salem, NC 27109

### Synthesis of a Novel Chlorin-Quinone System for the Investigation of Light Induced Electron Transfer

Yvonne Abel and Franz-Peter Montforts', Institut für Organische Chemie, FB2, Universität Bremen, Leobener Str. NW2, D-28359 Bremen.

In order to investigate the effect of the molecular symmetry on the light induced electron transfer in chlorin-quinone dyades we aimed at the synthesis of chlorin-quinone models 18a and 18b in which the quinone is situated at ring D adjacent to the reduced pyrrole ring A and thus orientated along the y-axis.

#### Tetrahedron Letters, 1997, 38, 1745

Tetrahedron Letters, 1997, 38, 1749

Tetrahedron Letters, 1997, 38, 1753

# New Multi-Coupling Benzylic Zinc Reagents for the Preparation of Flexible Aromatic Compounds

Mario Rottländer and Paul Knochel\*

Fachbereich Chemie der Philipps-Universität Marburg, 35032 Marburg, Germany

# DERACEMIZATION OF (±)-2,2-DISUBSTITUTED EPOXIDES VIA ENANTIOCONVERGENT CHEMOENZYMATIC HYDROLYSIS USING BACTERIAL EPOXIDE HYDROLASE AND SULFURIC ACID

Romano V. A. Orru, Wolfgang Kroutil, Kurt Faber, Institute of Organic Chemistry, Graz University of Technology, Stremayrgasse 16, A8010 Graz, Austria.

Complete deracemization of 2,2-disubstituted oxiranes was achieved by the combination of biocatalytic (*Nocardia* EH1) and acidic (sulfuric acid) hydrolysis.

R. CO

Nocardia EH1 epoxide hydrolase

H<sub>2</sub>SO<sub>4</sub>, OH dioxane/H<sub>2</sub>O R<sup>VS</sup>

OH sole product
R\*S OH >90% y, >90%ee

Tetrahedron Letters, 1997, 38, 1755

#### Molecular Tectonics IV: Molecular Networks Based on Hydrogen Bonding and Electrostatic Interactions

Olivier Pélix, Mir Wais Hosseini\*, André De Cian, Jean Fischer Institut de Chimie, Université Louis Pasteur, 4, rue Blaise Pascal,

F-67000 Strasbourg, France

Whereas diprotonated 1 (1,2-Bis(2'-tetrahydropyrimidyl)ethane) forms a discrete exobinuclear complex with a dihapto mode of hydrogen bonding with 4-methylbenzoate anion  $2^-$  in the solid state, with 4,4'-biphenyldicarboxylate  $3^{2^-}$  an  $\alpha$ -network composed of 1-2H<sup>+</sup> dication and  $3^{2^-}$  dianion interconnected through strong hydrogen bonds and arranged in an alternating manner was obtained.

#### A NEW SYNTHESIS OF $\alpha$ -TETRALONES.

Annie Liarda, Béatrice Quiclet-Sirea, Radomir N. Saicica, and Samir Z. Zarda,b\*

- a) Institut de Chimie des Substances Naturelles, 91198 Gif-Sur-Yvette, France.
- b) Laboratoire de Synthèse Organique Associé au C. N. R. S., Ecole Polytechnique, F-91128 Palaiseau, France.

# THREE PARTNERS FOR A ONE POT PALLADIUM-MEDIATED SYNTHESIS OF VARIOUS TETRAHYDROFURANS.

Tetrahedron Letters, 1997, 38, 1763

#### M.Cavicchioli, E.Sixdenier, A.Derrey, D.Bouyssi, G.Balme\*

Laboratoire de Chimie Organique 1, associé au CNRS, Université Claude Bernard, CPE, 43 Bd du 11 Novembre 1918, 69622, Villeurbanne Cédex. Fax: 04.72.43.12.14.

#### FURTHER STUDIES IN $\alpha\text{-}C\text{-}MANNOSYLATION$ PROMOTED

Tetrahedron Letters, 1997, 38, 1767

BY SAMARIUM DIIODIDE. Olivier Jarreton, Troels Skrydstrup,\*

and Jean-Marie Beau, \* Laboratoire de Synthèse de Biomolécules associé au CNRS, Université de Paris-Sud, F-91405 Orsay Cedex (France).

The samarium diodide-promoted coupling of mannosyl pyridylsulfone 1 with aldehydes afforded the C-glycoside 2 without any elimination.

# A HIGHLY STEREOSELECTIVE SYNTHESIS OF (2S, 3S)- $\beta$ HYDROXYLEUCINE

Tetrahedron Letters, 1997, 38, 1771

Taoues Laïb, Jacqueline Chastanet, Jieping Zhu\*

Institut de Chimie des Substances Naturelles, CNRS, 91198 Gif-Sur-Yvette, France

de > 95%

Enantiomerically pure (2S, 3S)- $\beta$ -hydroxyleucine was synthesized featuring a diastereoslective nucleophilic addition of Grignard reagent to D-N,N-dibenzyl-O-TBS serinal as a key step.

# Mn(III)-INDUCED MOLECULAR OXYGEN TRAPPING REACTION OF ALKENES WITH 2,3-PYRROLIDINEDIONE

DERIVATIVES. A NOVEL ENTRY TO 1-HYDROXY-8-AZA-2,3-DIOXABICYCLO[4.3.0]NONAN-9-ONES

Van-Ha Nguyen,† Hiroshi Nishino,\* and Kazu Kurosawa

†Department of Environmental Science, Graduate School of Science and Technology, Kumamoto University Department of Chemistry, Faculty of Science, Kumamoto University, Kurokami 2-39-1, Kumamoto 860, Japan

Manganese(III) oxidation of alkenes and 2,3-pyrrolidinediones with molecular oxygen gave bicyclic peroxides in good yield.

# ENZYMATIC COUPLING OF G,G-DIALKYL AMINO ACIDS USING INVERSE SUBSTRATES AS ACYL DONORS

-----

Tetrahedron Letters, 1997, 38, 1777

Haruo Sekizaki, Kunihiko Itoh, Eiko Toyota and Kazutaka Tanizawa\*, Faculty of Pharmaceutical Sciences, Health Sciences University of Hokkaido, Ishikari-Tobetsu, Hokkaido 061-02, Japan.

Streptomyces griseus trypsin was a more efficient catalyst than bovine trypsin.

$$N^{\alpha}$$
-Boc-NH-C-C-L-Ala-pNA  $N^{\alpha}$ -Boc-NH-C-C-C-L-Ala-pNA  $N^{\alpha}$ -Boc-NH-C-C-C-L-Ala-p

#### Synthesis of Cyclopentanoids via Enyne Cycloaddition Reaction Using Methylmanganese Carbonyl Complex,

Tetrahedron Letters, 1997, 38, 1781

Joo Eun Lee, Soon Hyeok Hong, and Young Keun Chung\*, Department of Chemistry and Center for Molecular Catalysis, College of Natural Sciences, Seoul National University, Seoul 151-742, Korea

# A NOVEL APPROACH TO THE SYNTHESIS OF CONJUGATED CARBAZOLE TRIMERS AS MULTIFUNCTIONAL CHROMOPHORES

Tetrahedron Letters, 1997, 38, 1785

FOR PHOTOREFRACTIVE MATERIALS. Yadong Zhang,<sup>†</sup> Tatsuo Wada,<sup>†,‡</sup> Liming Wang<sup>‡</sup> and Hiroyuki Sasabe,<sup>†,‡</sup> <sup>†</sup>Core Research for Evolution Science and Technology (CREST), JST, <sup>‡</sup>Frontier Research Program, The Institute of Physical and Chemical Research (RIKEN), Hirosawa 2-1, Wako, Saitama, 351-01 Japan

Conjugated carbazole trimers for photorefractive Chromophores were synthesized by Pd-catalytic coupling reaction.

### NOVEL TRIENE-ANSAMYCINS, CYTOTRIENINS A AND B, INDUCING APOPTOSIS ON HUMAN LEUKEMIA HL-60 CELLS

H.-p. Zhang, H. Kakeya, H. Osada,\* Antibiotics Laboratory, Institute of Physical and Chemical Research (RIKEN), Hirosawa 2-1, Wako-shi 351-01, Japan

Cytotrienins A (1) and B (2) were two novel triene-ansamycins containing a unique 1-aminocyclopropane carboxylic acid moiety, and exhibited a potent apoptosis-inducing activity on HL-60 cells.

Tetrahedron Letters, 1997, 38, 1793

Polymer-bound Palladium-catalyzed Cross-coupling of Organoboron Compounds with Organic Halides and Organic Triflates Su-Bum Jang\*

\*Research & Development Center, DaeWoong Pharmaceutical Co. Ltd., 223-23Sangdaewon-Dong, Joongwon-Gu, Sungnam 462-120, Kyunggi-Do, Korea

The Polymer-bound palladium-catalyzed cross-coupling reaction of electrophiles(i.e., halides and triflates) with organoboron compounds to form carbon-carbon bonds was achieved at mild conditions with very high activity in the Suzuki coupling reaction. The polymeric catalyst can be easily separated from a reaction mixture and reused more than 10 times with no decrease in activit

# SYNTHESIS OF 2-FLUOROABSCISIC ACID: A POTENTIAL PHOTO-STABLE ANALOG OF ABSCISIC ACID

Bum Tae Kim<sup>a</sup>† Yong Ki Min<sup>a</sup>, Tadao Asami<sup>b</sup>, No Kyun Park<sup>a</sup>,
Oh Young Kwon<sup>c</sup>, Kwang Yun Cho<sup>c</sup> and Shigeo Yoshida<sup>b</sup>

<sup>a</sup>Korea Research Institute of Chemical Technology, P.O.Box 107, Yusong,
Taejon 305-606, Korea; <sup>b</sup>The Institute of Physical and Chemical Research
(RIKEN), 2-1 Hirosawa, Wako 351-01, Japan; <sup>c</sup>Department of Chemistry,
Soong-Sil University, 1-1, Sang Do 5 Dong, Dong Jak Gu, Seoul 156-743, Korea

Tetrahedron Letters, 1997, 38, 1797

Abstract: 2-Fluoroabscisic acid (ABA) was synthesized by introducing fluorine through the Wittig reaction of  $\alpha$ -ionone derivative with triethyl phosphono-2-fluoroacetate. Molecular orbital calculations showed that the introduction of fluorine at the 2 position stabilized the configuration of the side chain.

#### TOTAL SYNTHESIS OF (±)-STEMODINONE

Tetrahedron Letters, 1997, 38, 1801

Tetsuaki Tanaka,<sup>a</sup> Kazuo Murakami,<sup>a</sup> Atsushi Kanda,<sup>a</sup> Debasis Patra,<sup>a</sup> Sachiko Yamamoto,<sup>a</sup> Norifumi Satoh,<sup>a</sup> Sang-Won Kim,<sup>b</sup> Toshimasa Ishida,<sup>c</sup> Yasuko In<sup>c</sup> and Chuzo Iwata<sup>a</sup> \* <sup>a</sup> Faculty of Pharmaceutical Sciences, Osaka University, 1-6 Yamadaoka, Suita, Osaka 565, Japan; <sup>b</sup> Faculty of Pharmaceutical Sciences, Josai University, 1-1 Keyakidai, Sakado, Saitama 350-02, Japan; <sup>c</sup> Osaka University of Pharmaceutical Sciences, 4-20-1 Nasahara, Takatsuki, Osaka 569-11, Japan

#### NEW TOTAL SYNTHESIS OF (±)-CHUANGXINMYCIN

Keisuke Kato, Machiko Ono and Hiroyuki Akita\*

School of Pharmaceutical Science, Toho University, 2-2-1 Miyama, Funabashi, Chiba, 274, Japan

Palladium-catalysed cyclisation of 4'-iodo-thioindolmycenate 3 derived from 4'-iodoindolmycenate 4 with retention of C<sub>2</sub>-stereochemistry gave the (±)-cis methyl ester 2 of chuangxinmycin (1) in high yield.

#### Tetrahedron Letters, 1997, 38, 1809

#### REACTIONS OF ALKYNYLSELENONIUM SALTS WITH

SODIUM BENZENESULFINATE. Tadashi Kataoka,\* Yoshihiro Banno,

Shin-ichi Watanabe, Tatunori Iwamura and Hiroshi Shimizu

Gifu Pharmaceutical University, 6-1, Mitahora-higashi 5-chome, Gifu 502 Japan

The reactions of alkynylselenonium salts 2, 5 with sodium benzenesulfinate and with benzenesulfinic acid afforded the (Z)- $\beta$ -alkoxyvinylsulfones 6 and the  $\beta$ -sulfonylvinylselenonium salts 11, 12, respectively.

#### STEREOCONTROLLED SYNTHESIS OF 2,3-DIAMINOBUTANOIC ACIDS

Tetrahedron Letters, 1997, 38, 1813

P. Merino,\* A. Lanaspa, F.L. Merchan and T. Tejero.

Departamento de Quimica Organica, Facultad de Ciencias. ICMA. Universidad de Zaragoza. E-50009 Zaragoza. Aragon. Spain.

A stereodivergent synthesis of the title compounds is achieved using L-serine as the only starting compound.

#### CHEMOSELECTIVE ADDITION OF GRIGNARD REAGENTS TO ALKOXY-CARBONYLALKYL-N-IMIDAZOLIUM-N-METHYL AMIDES: SYNTHESIS

Tetrahedron Letters, 1997, 38, 1817

OF 4-OXO AND HOMOLOGOUS ESTERS. María A. de las Heras, Juan J. Vaquero, José L. García Navio, Julio Alvarez-Builla.\* Departamento de Química Orgánica, Universidad de Alcalá, 28871-Alcalá de Henares, Madrid. Spain.

The reaction of alkoxycarbonylalkyl-N-imidazolium-N-methyl amides with 1 equiv of LDA followed by addition of 1 equiv of a Grignard reagent provides a general method for the synthesis of 4-oxo and homologous esters.

Me

1. LDA (1 equiv), THF

2. R¹-MgX, -10°C 
$$\longrightarrow$$
 r. t.

R=Me, f-Bu

 $\square \ge 2$ 

### Dibutylboron Triflate Promoted Conjugate Addition of Benzylic and Allylic Organocopper Reagents to Chiral α,β-Unsaturated N-Acyl Imidazolidinones

Pieter S. van Heerden, Barend C.B. Bezuidenhoudt and Daneel Ferreira

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

The organocopper-Lewis acid system, RCu-TMEDA-Bu<sub>2</sub>BOTf, is useful for conjugate addition to highly constrained chiral  $\alpha,\beta$ -unsaturated N-acyl imidazolidinones. Bu<sub>2</sub>BOTf exhibits a dramatic increase in reactivity during 1,4-addition of benzylic and allylic organocopper reagents.

### PALLADIUM CATALYSED TRISCYCLISATION-ANION CAPTURE QUEUING CASCADES

Tetrahedron Letters, 1997, 38, 1825

Ronald Grigg, Rukhsana Rasul and Vladimir Savic Molecular Innovation, Diversity and Automated Synthesis (MIDAS) Centre, School of Chemistry, Leeds University, Leeds LS2 9,JT

Two- and three-component polycyclisation-anion capture processes employing vinyl and allenyl starter species occur regio- and stereo-specifically and in good yield.

ity,
$$EtO_2C$$

$$EtO_2C$$

$$I$$

$$DMF, 70-75^{\circ}C$$

$$HN$$
or  $NaO_2SPh$ 

$$R=$$

$$N$$
or  $SO_2Ph$ 

### CERIC AMMONIUM NITRATE PROMOTED FREE RADICAL CYCLIZATION REACTIONS LEADING TO $\beta$ -LACTAMS

Tetrahedron Letters, 1997, 38, 1829

Andrea D'Annibale, Antonella Pesce, Stefano Resta and Corrado Trogolo.

Centro C.N.R. di Studio per la Chimica delle Sostanze Organiche Naturali, Dipartimento di Chimica. Università "La Sapienza", P.le Aldo Moro 5, 00185 Roma, ITALIA.

A 4-exo-trig radical cyclization of N-alkenyl amides promoted by Ce(IV) affords azetidin-2-ones.

### Isolation and Synthesis of the First Natural 6-Hydroximino 4-en-3-one Steroids from the Sponges Cinachyrella spp.

Tetrahedron Letters, 1997, 38, 1833

Jaime Rodríguez<sup>1</sup>, Lucia Nuñez<sup>1</sup>, Solange Peixinho<sup>1</sup> and Carlos Jiménez<sup>1</sup>\*

<sup>1</sup>Departamento de Química Fundamental e Industrial, Universidade da Coruña, Campus A Zapateira s/n, A Coruña 15071, Spain.

Departamento de Zoologia, Instituto de Biologia, Universidade Federal de Bahia, Campus Universitario de Ondina, 40170-290, Salvador, Bahia, Brazil.

The first natural 6-hydroximino 4-en-3-one steroids (1-2) are described from a mixture of two morphospecies of the brazilian sponges Cinachyrella alloclada and C. apion. Synthetic and spectroscopic methods corroborated the proposed structures.

Tetrahedron Letters, 1997, 38, 1841

# ENANTIOSELECTIVE SYNTHESES OF $\alpha$ -AMINO- $\beta$ -HYDROXY ACIDS, [ $^{15}$ N]-L-ALLOTHREONINE AND [ $^{15}$ N]-L-THREONINE

Andrew Sutherland and Christine L. Willis\*

School of Chemistry, University of Bristol, Cantock's Close, Bristol BS8 1TS, UK.

A chemo-enzymatic approach to the syntheses of  $[^{15}N]$ -L-threonine from methyl (R)-lactate and  $[^{15}N]$ -L-allothreonine from ethyl (S)-lactate is described.

# Diastereoselective Additions Of Organolithium Reagents to the C=N Bond of Protected Erythrulose Oxime Ethers. Synthesis of Enantiopure $\alpha$ , $\alpha$ -Disubstituted $\alpha$ -Aminoacids.

J.A. Marco, \*.a M. Carda, \*.b J. Murga, b F. González, b and E. Falomir.b

aDpt. Q. Orgánica, Univ. Valencia, E-46100 Burjassot. bDpt. Q. Inorg. y Orgánica, Univ. Jaume I, E-12080 Castellón, Spain. The stereoselective addition of organolithium reagents to erythrulose oxime ethers of general formula 1 (either configuration of the C=N bond) has yielded aminopolyols 2. Two of them have been converted into α,α-disubstituted (R)-α-aminoacids 3 (R=Me, Ph).

#### A NOVEL SYNTHESIS OF STEROIDAL HALOMETHYLENES AND THEIR RING OPENING REACTION TO ALKYNES

Tetrahedron Letters, 1997, 38, 1845

Shahadat Ahmed and Romesh Chandra Boruah\*
Organic Chemistry Division, Regional Research Laboratory,
Jorhar-785006, India

Abstract: \( \gamma\)-Formyl conjugated steroidal oximes under Vilsmeier condition afforded (E)-chloromethylene as potential precursor of steroidal alkynes.

$$\begin{array}{c}
\text{Me} \\
\text{N} \\
\text{O}
\end{array}
\longrightarrow$$

N-Cbz-TRIFLUOROPYRUVALDEHYDE N,S-KETAL: ABSOLUTE

Tetrahedron Letters, 1997, 38, 1847

STEREOCHEMISTRY AND ADDITION OF GRIGNARD REAGENTS.
HIGHLY STEREOSELECTIVE ENTRY TO TRIFLUORO ANALOGUES OF EPHEDRA ALKALOIDS. Alessandro Volonterio,
Pierfrancesco Bravo\*, Silvia Capelli, Stefano V. Meille, and Matteo Zanda\*, Dipartimento di Chimica del Politecnico, C.N.R. - C.S.S.O.N.,
Via Mancinelli 7, I-20131 Milano, Italy.

Tetrahedron Letters, 1997, 38, 1853

#### THE PETERSON OLEFINATION OF BENZYL CARBAMATES<sup>1</sup>

L. Frances van Staden, Birgit Bartels-Rahm and Neville D. Emslie,

Department of Chemistry, University of Natal, Private Bag X01, Scottsville, 3209, Republic of South Africa.

The stereoselective synthesis of substituted vinyl carbamates from α-silylbenzyl carbamates is described.

TBS
$$OAm$$
 $OAm$ 
 $RCHO$ 
 $RCHO$ 

### THE FIRST EXAMPLE OF A HIGHLY

STEREOSELECTIVE INTRAMOLECULAR

RADICAL CYCLISATION OF A CYCLOPENTENOL DERIVATIVE. Paul R Jenkins\* and Andrew J Wood, Department of Chemistry, Leicester University, Leicester, UK LE1 7RH.

Silyl methylene radical cyclisation of a β-allylic cyclopentaannulated derivative of glucose leads to a single cis fused tricyclic ring system.

#### IS THE FORMATION OF 1,10-PHENANTHROLINE **DI-N-OXIDE POSSIBLE?**

Tetrahedron Letters, 1997, 38, 1857

Róża Antkowiak and Wiesław Z. Antkowiak\*

Faculty of Chemistry, Adam Mickiewicz University, Grunwaldzka 6, 60-780 Poznań, Poland

Tetrahedron Letters, 1997, 38, 1859

REACTIONS OF DIAZOACETATES WITH PHOSPHORUS TRIESTERS AND THIOPHOSPHATE TRIESTER: >P\*-O-C"< AND >P\*-S-C"<

INTERMEDIACY FORMATION Konstantin A. Popov, Alexander M. Polozov\* and Sergei V. Tcherezov A.M.Butlerov Research Chemical Institute, Kazan State University, Lenin Str. 18, Kazan 420008, Russian Federation.