#### Synthesis of benzo[b]thiophenes by electrophilic cyclization

Tetrahedron Letters 42 (2001) 6011

Richard C. Larock\* and Dawei Yue

Department of Chemistry, Iowa State University, Ames, IA 50011, USA

2,3-Disubstituted benzo[b]thiophenes are readily prepared in excellent yields under very mild reaction conditions by the Pd/Cu-catalyzed cross-coupling of commercially available o-iodothioanisole and terminal alkynes, followed by electrophilic cyclization by I<sub>2</sub>, Br<sub>2</sub>, NBS, p-O<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>SCl or PhSeCl.

 $E^+ = I_2$ ,  $Br_2$ , NBS,  $p-O_2NC_6H_4SCI$ , PhSeCI

# Preparation of 'carba' dipeptides bearing a basic side-chain at the C-terminus: synthesis of enantiopure Boc-D-Phe-Ψ[CH<sub>2</sub>CH<sub>2</sub>]-L-Arg(NO<sub>2</sub>)-OH and Boc-D-Phe-Ψ[CH<sub>2</sub>CH<sub>2</sub>]-D-Arg(NO<sub>2</sub>)-OH

Tetrahedron Letters 42 (2001) 6015

Andrew S. Kende, a,\* Han-Qing Dong, Adam W. Mazurb and Frank H. Ebetinob

<sup>a</sup>Chemistry Department, University of Rochester, Rochester, NY 14627-0216, USA

<sup>b</sup>Procter & Gamble Pharmaceuticals, Health Care Research Center, Mason, OH 45040-8006, USA

A new approach to synthesize 'carba' Ψ[CH<sub>2</sub>CH<sub>2</sub>] dipeptides is described.

#### Convenient annulation of bicyclo[6.3.0]undecanes

Tetrahedron Letters 42 (2001) 6019

Kwangho Lee and Jin Kun Cha\*

Department of Chemistry, University of Alabama, Tuscaloosa, AL 35487, USA

A facile, albeit nonstereoselective, method for the construction of a bicyclo[6.3.0]undecane skeleton has been developed by sequential application of the Suárez cleavage and 5-exo radical cyclization on the readily available [4+3] cycloadducts of cyclic oxyallyls.

### An efficient one-pot synthesis of N-alkyl carbamates from primary amines using $Cs_2CO_3$

Tetrahedron Letters 42 (2001) 6023

Ralph Nicholas Salvatore, Jeremy A. Ledger and Kyung Woon Jung\*

Department of Chemistry, University of South Florida, 4202 E. Fowler Avenue, Tampa, FL 33620-5250, USA

Carbamation of primary amines was in situ followed by N-alkylation in the presence of cesium carbonate to afford the fully substituted carbamates.

#### A versatile synthesis of polysubstituted pyrroles

Bharat Lagu,\* Meng Pan and Michael P. Wachter

The R. W. Johnson Pharmaceutical Research Institute, Route 202, PO Box 300, Raritan, NJ 08869, USA

The aldol products formed by reaction between  $\alpha$ -(N-benzyl or N-Cbz)amino aldehydes and lithium enolates of various ketones were subjected to hydrogenolysis to give polysubstituted pyrroles in good yield (50–91%). The scope and limitations of this reaction are explored.

### 1,6-C-H insertion of alkylidenecarbenes in 1-naphthol and 1-anthrol derivatives

Tetrahedron Letters 42 (2001) 6031

Tetrahedron Letters 42 (2001) 6027

Ken S. Feldman\* and Angela L. Perkins

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

1,6-C-H insertion of naphthol- and anthrol-derived alkylidenecarbenes has been observed in modest yield with substrates that have the more common 1,5-C-H insertion option blocked.

## Studies directed toward the total synthesis of azaspiracid. Construction of the $C_1$ – $C_{19}$ carbon backbone and synthesis of the $C_{10}$ , $C_{13}$ nonnatural transoidal bisspirocyclic ring system

Tetrahedron Letters 42 (2001) 6035

Rich G. Carter\* and David E. Graves

Department of Chemistry and Biochemistry, University of Mississippi, University, MS 38677, USA

$$\begin{array}{c|c} \text{OTBDPS} & \text{SO}_2\text{Ph} \\ \hline 1 & \text{O}_{\text{OMe}} & \text{H} \\ \hline 1 & \text{OMe} & \text{I}_{\text{OMe}} & \text{TESO} & \text{H} \\ \hline 1 & \text{OMe} & \text{I}_{\text{OMe}} & \text{I}_{\text{OHC}} \\ \hline \end{array}$$

### Influence of N-substituted lactams on acyclic free radical based hydrogen transfer

Tetrahedron Letters 42 (2001) 6041

Yvan Guindon<sup>a,b,\*</sup> and Mohammed Benchegroun<sup>a</sup>

<sup>a</sup>Institut de recherches cliniques de Montréal (IRCM), Bio-organic Chemistry Laboratory, 110, avenue des Pins Ouest, Montréal, Québec, Canada H2W 1R7

<sup>b</sup>Department of Chemistry and Department of Pharmacology, Université de Montréal, C.P. 6128, succursale Centre-Ville, Montréal, Québec, Canada H3C 3J7

X

#### The 1,2-diphenylethyl cation via carbene fragmentation

Tetrahedron Letters 42 (2001) 6045

Robert A. Moss\* and Yan Ma

Department of Chemistry, Rutgers, The State University of New Jersey, New Brunswick, NJ 08903, USA

2,2-Diphenylethoxychlorocarbene fragments with  $k_{\rm frag} = 2.1 \times 10^6 \ {\rm s}^{-1}$  in MeCN, largely with 1,2-phenyl migration and the formation of (mainly) rearranged products.

# A novel route to 2-(dialkylaminomethyl)benzo[b]furans via a microwave-enhanced, solventless Mannich condensation—cyclization on cuprous iodide doped alumina

Tetrahedron Letters 42 (2001) 6049

George W. Kabalka,\* Lei Wang and Richard M. Pagni

Departments of Chemistry and Radiology, The University of Tennessee, Knoxville, TN 37996-1600, USA

## Base-promoted reactions in ionic liquid solvents. The Knoevenagel and Robinson annulation reactions

Tetrahedron Letters 42 (2001) 6053

Doug W. Morrison, a David C. Forbesa, and James H. Davis, Jr. a,b,\*

<sup>a</sup>Department of Chemistry, University of South Alabama, Mobile, AL 36688, USA

<sup>b</sup>Center for Green Manufacturing, University of Alabama, Tuscaloosa, AL 35487, USA

#### Total synthesis of aspirin-triggered 15-epi-lipoxin A<sub>4</sub>

Tetrahedron Letters 42 (2001) 6057

Ana R. Rodríguez and Bernd W. Spur\*

Department of Cell Biology, University of Medicine and Dentistry of New Jersey, SOM, Stratford, NJ 08084, USA

### Alternative synthesis and thermal atropisomerism of a fully functionalized DEFG ring system of teicoplanin

Tetrahedron Letters 42 (2001) 6061

Yoshiki Mori, J. Jeffrey McAtee, Olivier Rogel and Dale L. Boger\*

Department of Chemistry and The Skaggs Institute for Chemical Biology, The Scripps Research Institute,

10550 North Torrey Pines Road, La Jolla, CA 92037, USA

### Synthesis of 5-( $\omega$ -sulfhydrylalkyl)salicylaldehydes as precursors for the preparation of alkanethiol-modified metal salens

Tetrahedron Letters 42 (2001) 6065

Chang Ji and Dennis G. Peters\*

Department of Chemistry, Indiana University, Bloomington, IN 47405, USA

A convenient synthesis of 5-(ω-sulfhydrylalkyl)salicylaldehydes was achieved in multiple steps with relatively high yields.

$$OCH_3$$
 $+ X(CH_2)_nCOX$ 
 $OCH_3$ 
 $+ OCH_2)_nSH$ 

### Regioselective ring-closing metathesis on terpenoid acrylates and acrylamides

Tetrahedron Letters 42 (2001) 6069

Yanming Du and David F. Wiemer\*

Department of Chemistry, University of Iowa, Iowa City, IA 52242, USA

$$\begin{array}{c|c} O & & \\ \hline \\ O & \\ \hline \\ 2 & \\ \end{array}$$

### A convenient approach for solution-phase synthesis of water-soluble galactoside libraries

Tetrahedron Letters 42 (2001) 6073

Feng Hong and Erkang Fan\*

Department of Biological Structure and Biomolecular Structure Center, University of Washington, Box 357742, Seattle, WA 98195, USA

### Study of the lorazepam: cyclodextrin inclusion complexes using electrospray ionization mass spectrometry

Tetrahedron Letters 42 (2001) 6077

Renata Kobetić, a Branko S. Jursic, b,\* Sidney Bonnette, Jane S.-C. Tsai and Salamone J. Salvatore

<sup>a</sup>Roche Diagnostics Corporation, R&D Department, 9115 Hague Road, Indianapolis, IN 46250, USA

<sup>b</sup>Department of Chemistry, University of New Orleans, New Orleans, LA 70148, USA

The cyclodextrin inclusion complexes with lorazepam were studied by electrospray ionization mass spectroscopy (ES-MS). It was concluded that in highly concentrated aqueous media the higher order inclusion complexes with an elimination of formaldehyde were formed.

## A short synthetic route to nordihydroguaiaretic acid (NDGA) and its stereoisomer using Ti-induced carbonyl-coupling reaction

Tetrahedron Letters 42 (2001) 6083

Mikail H. Gezginci and Barbara N. Timmermann\*

Department of Pharmacology and Toxicology, Division of Medicinal and Natural Products Chemistry, College of Pharmacy, University of Arizona, Tucson, AZ 85721, USA

### The reactivity of N-tosylphenylaziridine versus N-tosylphenylazetidine in heterocyclization reactions

Tetrahedron Letters 42 (2001) 6087

Ioana Ungureanu, Philippe Klotz, Angèle Schoenfelder and André Mann\*

Laboratoire de Pharmacochimie de la Communication Cellulaire, Faculté de Pharmacie, 74 route du Rhin, BP 24, F-67401 Illkirch, France

## Highly stereoselective titanium-mediated addition of organocerium reagents to $\beta$ -keto amides: an efficient synthesis of stereodefined $\beta$ -hydroxy amides having a tertiary alcoholic fragment

Tetrahedron Letters 42 (2001) 6093

Giuseppe Bartoli, <sup>a,\*</sup> Marcella Bosco, <sup>a</sup> Enrico Marcantoni, <sup>b</sup> Massimo Massaccesi, <sup>a</sup> Samuele Rinaldi <sup>a</sup> and Letizia Sambri <sup>a</sup>

<sup>a</sup>Dipartimento di Chimica Organica 'A. Mangini', Università di Bologna, v. le Risorgimento 4, 40136 Bologna, Italy <sup>b</sup>Dipartimento di Scienze Chimiche, Università di Camerino, v. S. Agostino 1, 62032 Camerino (MC), Italy

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### Grafted ionic liquid-phase-supported synthesis of small organic molecules

Tetrahedron Letters 42 (2001) 6097

Joan Fraga-Dubreuil and Jean Pierre Bazureau\*

Université Rennes 1, Institut de Chimie, Synthèse & Electrosynthèse Organiques 3, UMR 6510, Bât. 10A, Campus de Beaulieu, Avenue du Général Leclerc, CS 74205, 35042 Rennes Cedex, France

$$\mathsf{R}^{\mathsf{L}} \mathsf{N} \bigoplus_{\mathsf{S}} \mathsf{N} \overset{\mathsf{O}}{\longrightarrow} \mathsf{O} \overset{\mathsf{O}}{\longrightarrow} \mathsf{$$

7(a-d): R1 = Me, Et, Bu; X = BF4, PF6

Grafted ionic liquid phase

### Easy one-pot access to substituted 2-phenylpyrrolines from 2-pyrrolidinone

Tetrahedron Letters 42 (2001) 6101

Cécile Coindet, Alain Comel and Gilbert Kirsch\*

Laboratoire d'Ingénierie Moléculaire et Biochimie Pharmacologique, Faculté des Sciences, Université de Metz, Ile du saulcy, 57045 Metz Cedex 1, France

$$O = \begin{pmatrix} 1 & (Me)_3 SiCl \\ 2 & ArLi \text{ or } ArMgX \end{pmatrix} Ar \begin{pmatrix} Ar & N \\ 1 & 1 \end{pmatrix}$$

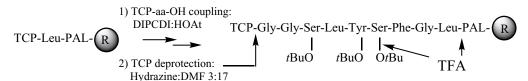
## Solid-phase synthesis of C-terminal peptide amides from N-tetrachlorophthaloyl protected amino acids

Tetrahedron Letters 42 (2001) 6105

Esther Cros, Marta Planas, Xavier Mejías and Eduard Bardají\*

Department of Chemistry, University of Girona, 17071 Girona, Spain

A new strategy for solid-phase synthesis of C-terminal peptide amides based on the use of N-tetrachlorophthaloyl protected amino acids with acid-labile side-chain protection is described.



### An enantioselective synthesis of isoquinuclidines from 3-substituted chiral pyridinium salts

Tetrahedron Letters 42 (2001) 6109

Daniela Cristina dos Santos, a Rossimiriam P. de Freitas Gil, a.\* Laurent Gilb.\* and Christian Marazanoc

<sup>a</sup>Departamento de Química, ICEx, UFMG, Av. Antônio Carlos 6627, Belo Horizonte, MG, Brazil

<sup>b</sup>Departamento de Química, ICEB, UFOP, Campus Morro do Cruzeiro, Ouro Preto, MG, Brazil

<sup>c</sup>Institut de Chimie des Substances Naturelles, CNRS, 91198 Gif-sur-Yvette, France

#### Synthesis of bisfunctionalized-oligopyridines bearing an ester group

Tetrahedron Letters 42 (2001) 6113

Gilles Ulrich,\* Sébastien Bedel, Claude Picard and Pierre Tisnès

Laboratoire de Synthèse et Physico-chimie de Molécules d'Intérêt Biologique, UMR 5068, Université Paul Sabatier, 118 rte de Narbonne 31062 Cedex 4, Toulouse, France

COOEt
$$R = CH_2Br$$

$$R = CH_2Br$$

$$R = CH_2Br$$

$$R = CH_2Br$$

#### Supported phase-transfer catalysts as selective agents in biphenyl synthesis from haloaryls

Tetrahedron Letters 42 (2001) 6117

Sudip Mukhopadhyay, a Gadi Rothenberg, Nida Qafishehc and Yoel Sassonc,\*

<sup>a</sup>Chemical Engineering Department, University of California at Berkeley, Berkeley, CA 94720, USA

<sup>b</sup> York Green Chemistry Group, Chemistry Department, The University of York, Heslington, York YO10 5DD, UK

<sup>c</sup>Casali Institute of Applied Chemistry, Hebrew University of Jerusalem, Jerusalem 91904, Israel

#### One-pot synthesis of unsymmetrical aryl methylphosphinates by insertion of dichlorophosphines into the O-Me bond of anisoles

Tetrahedron Letters 42 (2001) 6121

Graziano Baccolini\* and Carla Boga

Dipartimento di Chimica Organica, Università, Viale Risorgimento 4, I-40136 Bologna, Italy

#### First enantioselective total synthesis of both enantiomers of lancifolol. Correlation: absolute configuration/specific rotation

Tetrahedron Letters 42 (2001) 6125

Jean-Marie Galano, Gérard Audran and Honoré Monti\*

Laboratoire de Réactivité Organique Sélective UMR 6516 Faculté des Sciences de St-Jérôme (case 551), Avenue Escadrille Normandie-Niemen, 13397 Marseille Cedex 20, France

Enantioselective synthesis of the target molecule allowed us to correlate the relationship between absolute configuration and specific rotation, to date both unknown.

abs. config. : 1R, 3R

specific rotation :  $[\alpha]^{25}_D = -13$  (c 1.0, CHCl<sub>3</sub>)

#### Novel synthesis of ketocyanine dyes Tetrahedron Letters 42 (2001) 6129

Serguei Miltsov, Cristina Encinas and Julián Alonso\*

Grup deSensors i Biosensors, Unitat de Química Analítica, Facultat de Ciències, Universitat Autònoma de Barcelona, 08193 Bellaterra, Spain

$$X_2$$
 $X_1$ 
 $X_2$ 
 $X_3$ 
 $X_4$ 
 $X_5$ 
 $X_5$ 
 $X_7$ 
 $X_8$ 
 $X_8$ 

### The first direct observation of an allylic [3,3] sigmatropic cyanate-isocyanate rearrangement

Tetrahedron Letters 42 (2001) 6133

Klaus Banert\* and Antje Melzer

Chemnitz University of Technology, Institute of Chemistry, Strasse der Nationen 62, D-09111 Chemnitz, Germany

After isolation of the substituted allyl cyanate 1, the activation parameters of the irreversible isomerization  $1\rightarrow 2$  were determined.

### Ruthenium(I)-catalyzed cyclopropanation reactions with (trimethylsilyl)diazomethane and aryldiazomethanes

Tetrahedron Letters 42 (2001) 6137

Gerhard Maas\* and Jürgen Seitz

Division of Organic Chemistry I, Albert-Einstein-Allee 11, D-89081 Ulm, Germany

$$N_2 = \begin{matrix} H \\ Z \end{matrix} + \begin{matrix} R^1 \\ R^3 \end{matrix} = \begin{matrix} R^2 \\ H \end{matrix} \xrightarrow{cat. 1} \begin{matrix} R^1 \\ R^3 \end{matrix} = \begin{matrix} R^2 \\ R^3 \end{matrix}$$

 $Z = Me_3Si$ , Ar 1:  $[Ru_2(CO)_4(\mu-OAc)_2]_n$ 

### Solid-phase lipid synthesis (SPLS)-2: incidental discovery of organogelators based on artificial glycolipids

Tetrahedron Letters 42 (2001) 6141

Itaru Hamachi,\* Shigeki Kiyonaka and Seiji Shinkai

Department of Chemistry and Biochemistry, Graduate School of Engineering, Kyushu University, Fukuoka, 812-8581, Japan

#### One-pot synthesis of trans-\beta-alkylstyrenes

Tetrahedron Letters 42 (2001) 6147

Ju-Tsung Liu and Ching-Fa Yao\*

Department of Chemistry, National Taiwan Normal University, 88, Sec. 4, Tingchow Road, Taipei, Taiwan 116, ROC

ArCHO + 
$$CH_3NO_2$$
 HOAc- $NH_4OAc$   $Ar$  H  $NO_2$   $Et_2O-H_2O$   $Ar$  H  $Et$   $TO$   $C$ , overnight

## Synthesis, structure, and reactivity of iminosulfonium ylides bearing an $\alpha$ -carbonyl group

Tetrahedron Letters 42 (2001) 6151

Takayoshi Fujii,<sup>a,\*</sup> Tetsuya Suzuki,<sup>a</sup> Takashi Sato,<sup>a</sup> Ernst Horn<sup>b</sup> and Toshiaki Yoshimura<sup>a,\*</sup>

<sup>a</sup>Department of Material Systems Engineering and Life Science, Faculty of Engineering, Toyama University, Gofuku, Toyama 930-8555, Japan

<sup>b</sup>Department of Chemistry, Rikkyo University, 3-34-1 Nishi-Ikebukuro, Toshima-ku, Tokyo 171-8501, Japan

### A novel synthesis of substituted naphthalenes via Claisen rearrangement and RCM reaction

Tetrahedron Letters 42 (2001) 6155

Keng-Shiang Huang and Eng-Chi Wang\*

School of Chemistry, Kaohsiung Medical University, Kaohsiung City 807, Taiwan

$$R_2O$$
  $R_1$   $R_2O$   $R_1$   $R_2O$   $R_2O$   $R_3O$   $R_2O$   $R_3O$   $R_$ 

### An efficient method for preparing fully *O*-silylated pyranoses conformationally restricted in the unusual <sup>1</sup>C<sub>4</sub>-form

Tetrahedron Letters 42 (2001) 6159

Hiroshi Abe, Satoshi Shuto,\* Satoru Tamura and Akira Matsuda

Graduate School of Pharmaceutical Sciences, Hokkaido University, Kita-12, Nishi-6, Kita-ku, Sapporo 060-0812, Japan

$$(HO)_{n} \qquad R = SePh \\ n = 3, 4 \qquad {}^{4}C_{1} \qquad {}^{NaH \text{ then XOTf}} \qquad {}^{OX)_{n} \\ THF} \qquad {}^{I}C_{4} \qquad X = TIPS \\ TBS$$

# Facile synthesis of polyhydroxycoumaronochromones with quinones: synthesis of alkylpolyhydroxy- and alkoxycoumaronochromones from 2'-hydroxyisoflavones

Tetrahedron Letters 42 (2001) 6163

Masao Tsukayama,\* Akihiro Oda, Yasuhiko Kawamura, Masaki Nishiuchi and Kazuyo Yamashita

Department of Chemical Science and Technology, Faculty of Engineering, The University of Tokushima, Minamijosanjima, Tokushima 770-8506, Japan

### Regioselective monohalogenation of 3,3-disubstituted bornane-2-thiones via thione-dihalogen complexes

Tetrahedron Letters 42 (2001) 6167

Kazuaki Shimada, a,\* Takashi Nanae, Shigenobu Aoyagi, Yuji Takikawa and Chizuko Kabutob

<sup>a</sup>Department of Chemical Engineering, Faculty of Engineering, Iwate University, Morioka, Iwate 020-8551, Japan <sup>b</sup>Instrumental Analysis Center for Chemistry, Graduate School of Science, Tohoku University, Sendai, Miyagi 980-8578, Japan

Reaction of 3,3-disubstituted bornane-2-thiones  $\bf A$  with 1 molar amount of  $Br_2$  afforded 10-bromobornane-2-thiones  $\bf C$  in almost quantitative yields. The regioselective bromination of  $\bf A$  was assumed to proceed through intermediary dibromosulfuranes  $\bf B$ .

$$\begin{array}{c|c}
R^1 & Br_2 \\
\hline
 & R^1 \\$$

## Synthesis of $C_2$ -symmetrical bis- $\beta$ -amino alcohols and their application in the enantioselective addition of diethylzinc to aldehydes

Tetrahedron Letters 42 (2001) 6171

Qianyong Xu,<sup>a</sup> Hui Wang,<sup>a</sup> Xinfu Pan,<sup>a,\*</sup> Albert S. C. Chan<sup>b</sup> and Teng-kuei Yang<sup>c</sup>

<sup>a</sup>Department of Chemistry, National Laboratory of Applied Organic Chemistry, Lanzhou University, Lanzhou 730000, PR China <sup>b</sup>Open Laboratory of Chirotechnology and Department of Applied Biology and Chemical Technology, The Hong Kong Polytechnic University, Hong Kong

<sup>c</sup>Department of Chemistry, National Chung-Hsing University, Taichung, Taiwan

OR H 
$$\xrightarrow{\text{Cat. 1-6 (2.5\% mol)}}$$
 OH up to 95.4% e.e.  $\xrightarrow{\text{Cat. 1-6}}$  OH HO  $\xrightarrow{\text{Ar}}$  OH HO  $\xrightarrow{\text{Ar}}$ 

### N-Aroyloxynaphthalimides as novel highly efficient DNA photocleavers: substituent effects

Tetrahedron Letters 42 (2001) 6175

Xuhong Qian, a,\* Wei Yao, Gang Chen, Xiayu Huang and Ping Mao

<sup>a</sup>State Key Laboratory of Fine Chemicals, Dalian University of Technology, Dalian 116012, China

<sup>b</sup>Institute of Pesticides & Pharmaceuticals, East China University of Science and Technology, Shanghai 200237, China

## The self-assembly of calix[4]arene derivatives based on an A-T base pairing

Tetrahedron Letters 42 (2001) 6179

Cheng-Chu Zeng, Ya-Ling Tang, Qi-Yu Zheng, Li-Jun Huang, Bin Xin and Zhi-Tang Huang\*

Center for Molecular Science, Institute of Chemistry, Chinese Academy of Sciences, Beijing 100080, China

#### Radical-mediated stereoselective synthesis of (+)-dihydrocanadensolide and (-)-3-epi-dihydrocanadensolide from D-xylose

Tetrahedron Letters 42 (2001) 6183

G. V. M. Sharma\* and T. Gopinath

D-211, Discovery Laboratory, Organic Chemistry Division III, Indian Institute of Chemical Technology, Hyderabad 500 007, India

The synthesis of dihydrocanadensolide and its C-3 epimer, through an intramolecular radical cyclisation protocol, is described.

# Probing the mechanism of the anomalous intramolecular C-H insertion reaction of rhodium carbenoids by analysis of kinetic isotope effects

Tetrahedron Letters 42 (2001) 6187

J. Stephen Clark,\* Yung-Sing Wong and Robert J. Townsend School of Chemistry, University of Nottingham, University Park, Nottingham NG7 2RD, UK

### Palladium-catalysed synthesis of imidates, thioimidates and amidines from aryl halides

Tetrahedron Letters 42 (2001) 6191

C. Gustaf Saluste, a Richard J. Whitbya, and Mark Furberb

<sup>a</sup>Department of Chemistry, Southampton University, Southampton, Hants. SO17 1BJ, UK

<sup>b</sup>AstraZeneca Charnwood, Department of Medicinal Chemistry, Bakewell Road, Loughborough, Leics. LE11 5RH, UK

ArBr + PdCl<sub>2</sub> / dppf 
$$R^1$$
ONa or  $R^1$ SNa +  $R^2$   $Ar^3$   $R^3$   $R^4$   $R^3$   $R^4$   $R^4$   $R^3$ 

### Synthetic studies towards gambierol. Part 1: Synthesis of the AB ring segment

Tetrahedron Letters 42 (2001) 6195

Isao Kadota, a Choul-Hong Park, b Kumi Satob and Yoshinori Yamamotob,\*

<sup>a</sup>Research Center for Sustainable Materials Engineering, Institute of Multidisciplinary Research for Advanced Materials, Tohoku University, Sendai 980-8578, Japan

<sup>b</sup>Department of Chemistry, Graduate School of Science, Tohoku University, Sendai 980-8578, Japan

### Synthetic studies towards gambierol. Part 2: Synthesis of the EFGH ring segment

Tetrahedron Letters 42 (2001) 6199

Isao Kadota, a Chie Kadowaki, h Hiroyoshi Takamura and Yoshinori Yamamoto \*\*

<sup>a</sup>Research Center for Sustainable Materials Engineering, Institute of Multidisciplinary Research for Advanced Materials, Tohoku University, Sendai 980-8578, Japan

<sup>b</sup>Department of Chemistry, Graduate School of Science, Tohoku University, Sendai 980-8578, Japan

## Palladium-catalyzed [3+2] cycloaddition of alkylidenecyclopropanes with imines

Tetrahedron Letters 42 (2001) 6203

Byoung Ho Oh, Itaru Nakamura, Shinichi Saito and Yoshinori Yamamoto\*

Department of Chemistry, Graduate School of Science, and Research Center for Organic Resources and Material Chemistry, Institute for Chemical Reaction Science, Tohoku University, Sendai 980-8578, Japan

#### Palladium/benzoic acid-catalyzed hydroalkoxylation of alkynes

Tetrahedron Letters 42 (2001) 6207

Isao Kadota, a Leopold Mpaka Lutete, b Akinori Shibuya and Yoshinori Yamamoto \*\*,\*

<sup>a</sup>Research Center for Sustainable Materials Engineering, Institute of Multidisciplinary Research for Advanced Materials, Tohoku University, Sendai 980-8578, Japan

<sup>b</sup>Department of Chemistry, Graduate School of Science, Tohoku University, Sendai 980-8578, Japan

### A new bio-compatible pH cleavable linker for solid-phase synthesis of a squalamine analogue

Tetrahedron Letters 42 (2001) 6211

Bordin Chitkul, Butrus Atrash and Mark Bradley\*

Department of Chemistry, University of Southampton, Southampton SO17 1BJ, UK

SPS 
$$\xrightarrow{\text{OAc}}$$
  $\xrightarrow{\text{Boc}}$   $\xrightarrow{\text{Boc}}$   $\xrightarrow{\text{N}}$   $\xrightarrow{\text{$ 

## Direct synthesis of calixarenes with extended arms: *p*-phenylcalix-[4,5,6,8]arenes and their water-soluble sulfonated derivatives

Tetrahedron Letters 42 (2001) 6215

ŞO₃H

Mohamed Makha<sup>a</sup> and Colin L. Raston<sup>b,\*</sup>

<sup>a</sup>School of Chemistry, Monash University, Clayton, Victoria 3800, Australia

<sup>b</sup>School of Chemistry, University of Leeds, Leeds LS2 9JT, UK

*p*-Phenylcalix[4,5,6,8]arenes have been isolated from the base-catalysed condensation of *p*-phenylphenol with formaldehyde in tetralin and converted to the corresponding sulfonated derivatives using sulfuric or chlorosulfonic acids.

$$\begin{array}{c|c} & & \\ & &$$

### Convergent synthesis of the EFGH ring fragment of ciguatoxin CTX3C

Tetrahedron Letters 42 (2001) 6219

Hiroto Imai, Hisatoshi Uehara, Masayuki Inoue, Hiroki Oguri, Tohru Oishi and Masahiro Hirama\* Department of Chemistry, Graduate School of Science, Tohoku University, and CREST, Japan Science and Technology Corporation (JST), Sendai 980-8578, Japan