# A study of conjugate addition to a $\gamma$ , $\delta$ -dioxolanyl- $\alpha$ , $\beta$ -unsaturated ester

Tetrahedron Letters 42 (2001) 4281

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# $\omega$ -Aminooxyalkanesulfonic acids. Novel nucleophilic sulfoalkylation reagents

Tetrahedron Letters 42 (2001) 4285

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Abbott Laboratories, Diagnostics Division, Department of Chemistry D-09NM, Building AP 20, 100 Abbott Park Road, Abbott Park, IL 60064-6016, USA

$$H_2N-O-(CH_2)_nSO_3H$$
 $n = 2-4$ 
 $N-O-(CH_2)_nSO_3H$ 
 $RCR'$ 
 $RCR'$ 

Polyfunctional adducts assembled with the help of a one-pot sequence of three  $Ad_{\rm E}$  reactions as synthetically useful intermediates.

Tetrahedron Letters 42 (2001) 4289

The course of the Lewis acid induced transformations of the 4,6-dialkoxy-7-arylthioheptene moiety

Dimitry S. Chekmarev,<sup>a</sup> Margarita I. Lazareva,<sup>a</sup> Georgy V. Zatonsky,<sup>a</sup> Ron Caple<sup>b,\*</sup> and William Smit<sup>a</sup>
<sup>a</sup>N. D. Zelinsky Institute of Organic Chemistry, Leninsky pr., 47, 117913 Moscow, Russia
<sup>b</sup>Department of Chemistry, University of Minnesota-Duluth, Duluth 55812, USA

Depending on the substrate structure and reaction conditions both types of transformations can be carried out selectively to give the corresponding products in satisfactory to good yields.

## Reaction of quinoxalin-2-ones with TosMIC reagent: synthesis of imidazo[1,5-a]quinoxalin-4-ones

Tetrahedron Letters 42 (2001) 4293

Ping Chen,\* Joel C. Barrish, Edwin Iwanowicz, James Lin, Mark S. Bednarz and Bang-Chi Chen Discovery Chemistry, Bristol-Myers Squibb Pharmaceutical Research Institute, PO Box 4000, Princeton, NJ 08543-4000, USA

Imidazo[1,5-a]quinoxalin-4-ones were prepared from reaction of N-substituted quinoxalin-2-ones with TosMIC (tosylmethyl isocyanide) reagent.

# Synthesis of imidazo[1,5-a]quinoxalin-4(5H)-one template via a novel intramolecular cyclization process

Tetrahedron Letters 42 (2001) 4297

Derek Norris, Ping Chen,\* Joel C. Barrish, Jagabandhu Das, Robert Moquin, Bang-Chi Chen and Peng Guo Discovery Chemistry, Bristol-Myers Squibb Pharmaceutical Research Institute, PO Box 4000, Princeton, NJ 08543-4000, USA

Imidazo[1,5-a]quinoxalin-4(5H)-one template was prepared by an intramolecular cyclization process in excellent yield.

# Studies directed toward the synthesis of viridenomycin. Route 1: assembly of three advanced intermediates

Tetrahedron Letters 42 (2001) 4301

Albert W. Kruger and A. I. Meyers\*

Department of Chemistry, Colorado State University, Fort Collins, CO 80523-1872, USA

## Studies directed toward the synthesis of viridenomycin. Route 2: a second generation approach

Tetrahedron Letters 42 (2001) 4305

Alex G. Waterson, Albert W. Kruger and A. I. Meyers\*

Department of Chemistry, Colorado State University, Fort Collins, CO 80523-1872, USA

## Precipiton strategies applied to the isolation of $\alpha$ -substituted $\beta$ -ketoesters

Tetrahedron Letters 42 (2001) 4309

Todd Bosanac and Craig S. Wilcox\*

Department of Chemistry and The Combinatorial Chemistry Center, University of Pittsburgh, PA 15260, USA

### Synthesis of individual glutamate-containing phosphonamidothionate stereoisomers

Tetrahedron Letters 42 (2001) 4313

Haiyan Lu, Ying Hu, Cindy J. Choy, Jeremy P. Mallari, Alina F. Villanueva, Annamarie F. Arrozal and Clifford E. Berkman\*

San Francisco State University, Department of Chemistry & Biochemistry, 1600 Holloway Ave., San Francisco, CA 94132,

Individual phosphonamidothioic acid diastereomers have been prepared by resolution through fractional crystallization of the intermediate 9-fluorenemethoxy phosphonamidates or through chromatographic resolution of intermediate β-(acylmercapto)ethyl phosphonamidothiolates.

### Synthesis of 7-methoxybenzolactam-V8 using aminomercuration as a key reaction

Tetrahedron Letters 42 (2001) 4317

Sukumar Sakamuri\*

Drug Discovery Program, Georgetown University Medical Center, 3900 Reservoir Road, NW, Washington, DC 20007-2197, USA

7-Methoxybenzolactam-V8 was synthesized using a short synthetic route that employs aminomercuration as a key reaction.

### Colourimetric detection of Hg2+ by a chromogenic reagent based on methyl orange and open-chain polyazaoxaalkanes

Tetrahedron Letters 42 (2001) 4321

Felix Sancenón, Ramón Martínez-Máñez\* and Juan Soto

Departamento de Química, Universidad Politécnica de Valencia, Camino de Vera s/n, 46071 Valencia, Spain

### Aciphyllal—a C<sub>34</sub>-polyacetylene from Aciphylla scott-thomsonii (Apiaceae)

Tetrahedron Letters 42 (2001) 4325

OH

Nigel B. Perry, a Elena M. Span and Christian Zidorn \*\*

<sup>a</sup>Plant Extracts Research Unit, New Zealand Institute for Crop & Food Research Ltd, Department of Chemistry, University of Otago, Dunedin, New Zealand

<sup>b</sup>Institut für Pharmazie, Abteilung Pharmakognosie, Leopold-Franzens-Universität, Innsbruck, Austria

The novel dimeric polyacetylene aciphyllal has been isolated from the New Zealand subalpine plant Aciphylla scott-thomsonii. The structure

has been established by high resolution mass spectrometry and 1D and 2D NMR spectroscopy.

The compound represents the first polyacetylene from a higher plant with a chain-length exceeding C<sub>18</sub>.

HO

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# Efficient synthesis of substituted quinoline-5,8-quinones from 8-hydroxyquinolines by photooxygenation

Tetrahedron Letters 42 (2001) 4329

Janine Cossy\* and Damien Belotti

Laboratoire de Chimie Organique associé au CNRS, ESPCI, 10 rue Vauquelin, 75231 Paris Cedex 05, France

Substituted quinoline-5,8-quinones were obtained in good yield by photooxygenation of substituted 8-hydroxyquinolines.

## Synthesis of the two main urinary tetranor metabolites of $15-F_{2r}$ -isoprostane

Tetrahedron Letters 42 (2001) 4333

Thierry Durand,\* Olivier Henry, Jean-Pierre Vidal and Jean-Claude Rossi

UMR CNRS 5074, Faculté de Pharmacie, Université Montpellier I, 15, Av. Ch. Flahault, F-34060 Montpellier cedex 02, France

Metal complexes of 15-membered triolefinic macrocycles. (E,E,Z)-1,6,11-Tris[(2,4,6-triisopropylphenyl)sulfonyl]-1,6,11-triazacyclopentadeca-3,8,13-triene and its palladium(0), platinum(0), and silver(I) complexes

Tetrahedron Letters 42 (2001) 4337

Jordi Cortès, Marcial Moreno-Mañas\* and Roser Pleixats

Department of Chemistry, Universitat Autònoma de Barcelona, Cerdanyola, 08193 Barcelona, Spain

The macrocycle forms very stable complexes with Pd(0) and Pt(0).

#### Highly diastereoselective photoaddition of methanol to limonene

Tetrahedron Letters 42 (2001) 4341

Dong Suk Kim,<sup>a</sup> Sang Chul Shim,<sup>a,\*</sup> Takehiko Wada<sup>b</sup> and Yoshihisa Inoue<sup>b,\*</sup>

<sup>a</sup>Department of Chemistry, Center for Molecular Design and Synthesis and School of Molecular Science-BK21, Korea Advanced Institute of Science and Technology, Yusung-Gu, Taejon 305-701, South Korea

<sup>b</sup>Inoue Photochirogenesis Project, ERATO, JST and Department of Molecular Chemistry, Osaka University, 2-1 Yamada-oka, Suita, Osaka 565-0871, Japan

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# Synthesis and photochromic properties of 1,2-dicyano[2.*n*]-metacyclophan-1-enes

Tetrahedron Letters 42 (2001) 4345

Michinori Takeshita\* and Takehiko Yamato

Department of Applied Chemistry, Faculty of Science and Engineering, Saga University, Honjo-machi 1, Saga 840-8502, Japan

Preparation and photochromic properties of dicyano[2.n]metacyclophan-1-enes are described.

$$tBu$$
 $NC$ 
 $CN$ 
 $hv$ 
 $Me$ 
 $Me$ 
 $hv$ 
 $tBu$ 
 $Me$ 
 $(CH2)n
 $tBu$ 
 $Me$ 
 $(CH2)n
 $tBu$$$ 

### Heterogeneous Heck reaction catalyzed by Pd/C in ionic liquid

Tetrahedron Letters 42 (2001) 4349

Hisahiro Hagiwara, a,\* Yumiko Shimizu, Takashi Hoshi, Toshio Suzuki,

<sup>b</sup> Masayoshi Ando, <sup>b</sup> Keisuke Ohkubo<sup>c</sup> and Chiaki Yokoyama<sup>c</sup>

<sup>a</sup>Graduate School of Science and Technology, Niigata University, 8050, 2-nocho, Ikarashi, Niigata 950-2181, Japan

<sup>b</sup>Faculty of Engineering, Niigata University, 8050, 2-nocho, Ikarashi, Niigata 950-2181, Japan

<sup>c</sup>Institute for Chemical Reaction Science, Tohoku University, Katahira 2-chome, Aoba-ku, Sendai 980-8577, Japan

## Stereocontrolled synthesis of branched enyne by stepwise cross-coupling reactions of 1,1-dibromo-1-alkenes

Tetrahedron Letters 42 (2001) 4353

Jun'ichi Uenishi\* and Katsuaki Matsui

Kyoto Pharmaceutical University, Misasagi, Yamashina, Kyoto 607-8412, Japan

(A) = alkynyl, alkenyl, or alkyl

# Zeolite-assisted nitration of neat toluene and chlorobenzene with a nitrogen dioxide/molecular oxygen system. Remarkable enhancement of *para*-selectivity

Tetrahedron Letters 42 (2001) 4357

Xinhua Peng,<sup>a</sup> Hitomi Suzuki<sup>a,\*</sup> and Chunxu Lu<sup>b</sup>

a Department of Chemistry, School of Science, Kwansei Gakuin University, Uegahara, Nishinomiya 662-8501, Japan

<sup>b</sup>Department of Chemistry, School of Chemical Engineering, Nanjing University of Science and Technology, Xiao Ling Wei, Nanjing 210094, China

CH<sub>3</sub>

$$NO_2, O_2$$

$$HZSM-5, r.t.$$

$$O + m)/p \sim 0.11$$

# Indium-mediated tandem dimerization and cyclization of nitrones and aldimines to 3-arylaminodihydrobenzofurans under aqueous conditions

Tetrahedron Letters 42 (2001) 4361

Arumugasamy Jeevanandam and Yong-Chien Ling\*

Department of Chemistry, National Tsing Hua University, Hsinchu 300, Taiwan

Deoxygenative reductive coupling and subsequent cyclization of nitrones to 3-arylaminodihydrobenzofurans.

# A novel method for the synthesis of 2-ketomethylquinolines under solvent-free conditions using microwave irradiation

Tetrahedron Letters 42 (2001) 4363

Hossein Loghmani-Khouzani,\* Majid M. Sadeghi, Javad Safari and Alireza Minaeifar Department of Chemistry, Faculty of Sciences, University of Isfahan, Isfahan 81744, IR Iran

Reactions of 2-methylquinoline with acyl chlorides lead to 2-ketomethylquinolines.

#### Addition of secondary amines to alkynylphosphonate

Tetrahedron Letters 42 (2001) 4365

Anna E. Panarina, Alla V. Dogadina, Valentin I. Zakharov and Boris I. Ionin\*

Laboratory of Organophosphorus Chemistry, Organic Chemistry Department, St. Petersburg State Technological Institute (Technical University), 26 Moskovskii Prospect, St. Petersburg 198013, Russia

The Cu(I) salt-catalyzed addition of secondary amines proceeds regio- and stereoselectively, as is proven by the values of vicinal <sup>13</sup>C-<sup>31</sup>P NMR spin-spin coupling constants.

O | (RO)<sub>2</sub>P-C=C-R<sup>1</sup> + R<sub>2</sub><sup>2</sup>NH 
$$\frac{\text{Cu(I)Cl, methanol}}{\text{5-h reflux, yield 60-80\%}}$$
 (RO)<sub>2</sub>P  $\frac{\text{O}}{\text{H}}$   $\frac{\text{R}^{1}}{\text{NR}_{2}^{2}}$  R = Et; R<sup>1</sup> = H, Me, Et, Ph; NR<sub>2</sub><sup>2</sup> = NEt<sub>2</sub>, N(CH<sub>2</sub>)<sub>5</sub>, N[(CH<sub>2</sub>)<sub>2</sub>]O

# High yield preparation of $\alpha$ -ketophosphonates by oxidation of $\alpha$ -hydroxyphosphonates with zinc dichromate trihydrate (ZnCr<sub>2</sub>O<sub>7</sub>·3H<sub>2</sub>O) under solvent-free conditions

Tetrahedron Letters 42 (2001) 4369

Habib Firouzabadi,\* Nasser Iranpoor,\* Sara Sobhani and Ali-Reza Sardarian

Department of Chemistry, College of Sciences, Shiraz University, Shiraz 71454, Iran

Oxidation; α-hydroxyphosphonate; α-ketophosphonate; zinc dichromate trihydrate.

# Assembling monocyclic, spirocyclic and fused carbocycles by ring-closing metathesis on an arene-chromium template

Tetrahedron Letters 42 (2001) 4373

Bikash C. Maity, Vishwanath M. Swamy and Amitabha Sarkar\*

Divisions of Organic Chemistry (Synthesis), National Chemical Laboratory, Pune 411008, India

A variety of diene precursors assembled stereoselectively on an arene-chromium template underwent facile ring-closing metathesis by ruthenium catalysis at ambient temperature to afford cyclic compounds of varying degrees of complexity in high yields.

Studies on the intermolecular free radical addition of thionitrites to

Tetrahedron Letters 42 (2001) 4377

Marta Cavero, a William B. Motherwella, and Pierre Potierb

oximes and related derivatives

alkenes: a convenient method for the preparation of  $\alpha$ -tritylthio

<sup>a</sup>Department of Chemistry, Christopher Ingold Laboratories, University College London, 20 Gordon Street, London WC1H 0AJ, UK

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

#### Palladium-catalyzed reaction of aryl halides with ureas

Tetrahedron Letters 42 (2001) 4381

Galina A. Artamkina, Alexey G. Sergeev and Irina P. Beletskaya\*

Moscow State University, Chemistry Department, 119899, Leniskie Gory, Moscow, Russia

# Arylation of phosphoryl-stabilized carbanions with metal $\pi$ -complexes of aryl chlorides and fluorides

Tetrahedron Letters 42 (2001) 4385

Galina A. Artamkina, Petr K. Sazonov and Irina P. Beletskaya\*

Moscow State University, Chemistry Department, 119899, Leniskie Gory, Moscow, Russia

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# The Pummerer-type reaction mediated ring-opening of 2-alkyl substituted 1-[(2-methoxyethoxy)methoxy]-2-(phenylsulfinyl) cyclopropanes

Tetrahedron Letters 42 (2001) 4389

Manat Pohmakotr,\* Panawan Moosophon, Somchai Pisutjaroenpong, Patoomratana Tuchinda and Vichai Reutrakul

Department of Chemistry, Faculty of Science, Mahidol University, Rama 6 Road, Bangkok 10400, Thailand

### The oxidative amination of 3-nitropyridines

Tetrahedron Letters 42 (2001) 4393

Jan M. Bakke\* and Harald Svensen

Department of Chemistry, The Norwegian University of Science and Technology, Sem Sælandsvei 8, NO-7491 Trondheim, Norway

### A facile route to thiophene-1,1-dioxides bearing electronwithdrawing groups

Tetrahedron Letters 42 (2001) 4397

Valentine G. Nenajdenko,\* Andrew E. Gavryushin and Elizabeth S. Balenkova Department of Chemistry, Moscow State University, 119899 Moscow, Russia

$$R^3$$
 $R^2$ 
 $R^2$ 
 $R^3$ 
 $R^3$ 
 $R^2$ 
 $R^3$ 
 $R^3$ 
 $R^3$ 
 $R^3$ 
 $R^3$ 
 $R^3$ 
 $R^3$ 
 $R^3$ 
 $R^3$ 
 $R^3$ 

# Stereoselective synthesis of the 5'-aminofuranoside part of polyoxins via (3,3)-sigmatropic rearrangement of allylic thiocyanates

Tetrahedron Letters 42 (2001) 4401

Jozef Gonda,<sup>a,\*</sup> Miroslava Martinková,<sup>a</sup> Martin Walko,<sup>a</sup> Eva Zavacká,<sup>a</sup> Miloš Buděšínský<sup>b</sup> and Ivana Císařová<sup>c</sup>

<sup>a</sup>Department of Organic Chemistry, P. J. Šafárik University, Moyzesova 11, 04167 Košice, Slovak Republic <sup>b</sup>Institute of Organic Chemistry and Biochemistry, Academy of Sciences of the Czech Republic, 16610 Prague 6, Czech Republic

Department of Inorganic Chemistry, Charles University, Albertov 2030, 12840 Prague 2, Czech Republic

# Sc(OTf)<sub>3</sub>-catalyzed diastereoselective synthesis of 3,4-dihydro-4-amino-2*H*-1-benzopyrans

Tetrahedron Letters 42 (2001) 4405

J. S. Yadav,\* B. V. Subba Reddy, K. Chandra Sekhar and V. Geetha

Organic Chemistry Division-I, Indian Institute of Chemical Technology, Hyderabad 500 007, India

# Efficient β-lactam synthesis via 4-exo atom transfer radical cyclisation using CuBr(tripyridylamine) complex

Tetrahedron Letters 42 (2001) 4409

Andrew J. Clark, a,\* Gary M. Battlea and Andrew Bridgeb

<sup>a</sup>Department of Chemistry, University of Warwick, Coventry CV4 7AL, UK <sup>b</sup>Aventis Pharma Ltd, Rainham Road South, Dagenham, Essex RM10 7XS, UK

### 9-(Guanidinomethyl)-10-vinylanthracene: a suitable fluorescent monomer for MIPs

Tetrahedron Letters 42 (2001) 4413

Huigi Zhang, Willem Verboom\* and David N. Reinhoudt

Laboratory of Supramolecular Chemistry and Technology, Mesa<sup>+</sup> Research Institute, University of Twente, PO Box 217, 7500 AE Enschede, The Netherlands

9-(Guanidinomethyl)-10-vinylanthracene, showing high affinity for the complexation of carboxylates, is a promising fluorescent monomer for molecularly imprinted polymers (MIPs).

# On the cycloaddition of arylphosphine oxides with dimethyl acetylenedicarboxylate

Tetrahedron Letters 42 (2001) 4417

György Keglevich,<sup>a,\*</sup> Tamás Körtvélyesi,<sup>b</sup> Henrietta Forintos,<sup>a</sup> Annamária Tamás,<sup>a</sup> Krisztina Ludányi,<sup>c</sup> Vladiszlav Izvekov<sup>a</sup> and László Töke<sup>a</sup>

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<sup>b</sup>Department of Physical Chemistry, University of Szeged, 6701 Szeged, Hungary

<sup>c</sup>Hungarian Academy of Sciences, Chemical Research Center, 1525 Budapest, Hungary

[2+2] Cycloaddition of the title compounds is general affording oxaphosphetes with a highly strained ring.

$$R^{1} \longrightarrow R^{2} + \iiint_{CO_{2}Me} \frac{154 \text{ °C}}{Ar} \longrightarrow R^{1} \longrightarrow R^{2} \longrightarrow R^{3}$$

$$Ar = \longrightarrow R^{3} \longrightarrow R^{3}$$

ΧV