Solvent directed electrophilic iodination and phenylselenenylation of activated alkyl aryl ketones

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Molecular iodine and phenyliodine(III) bis(trifluoroacetate)(BTI), are able to selectively iodinate the aromatic ring of some activated alkyl aryl ketones. If (PhSe)₂ is used instead of I_2 in CH₃CN aromatic phenylselenenylation occurs. In CH₃OH the formation of α,α -dimethoxy carbonyl compounds is observed.

$$X$$
 CH_2R
 $A: X=I_2, (PhSe)_2 - CH_3CN$
 $B: (PhSe)_2 - CH_3OH$
 CH_2R
 CH_2R
 CH_2R
 CH_2R
 CH_2R

Tetrahedron Letters 44 (2003) 8753

Formal synthesis of (+)-lactacystin based on a novel radical cyclisation of an α -ethynyl substituted serine

Tetrahedron Letters 44 (2003) 8757

Christopher J. Brennan, Gerald Pattenden* and Gwenaëlla Rescourio

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Substituent effects on di- π -methane and aza-di- π -methane rearrangements of dibenzo[f_ih]quinoxalinobarrelenes

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Tetrahedron Letters 44 (2003) 8761

Aza-di-π-methane product(s) (major for **1** and **3**)

Di-π-methane product(s) (major for **2**)

1: $R^1 = R^2 = Pr$; $R^3 = R^4 = R^5 = H$

2: $R^1 = R^2 = Pr$; $R^3 = R^4 = CO_2Me$; $R^5 = H$

3: $R^1 = R^3 = H$; $R^2 = R^4 = R^5 = Bu^t$

Tetrahedron Letters 44 (2003) 8765

Organic synthesis in solid media. Silica gel as an effective and reusable medium for the selective allylation of aldehydes with tetraallyltin

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A pyridine ring-containing ecdysteroid from Diploclisia glaucescens

Lalith Jayasinghe,^a Champika P. Jayasooriya,^a Noriyuki Hara^b and Yoshinori Fujimoto^{b,*}

^aInstitute of Fundamental Studies, Hantana Road, Kandy, Sri Lanka

^bDepartment of Chemistry and Materials Science, Tokyo Institute of Technology, Meguro, Tokyo 152-8551, Japan

An unprecedented ecdysteroid, named diploclidine, was isolated from the title plant and its structure was elucidated by spectral means.

Catalysis of aldehyde and imine silylcyanation by platinum and palladium NCN-pincer complexes

Tetrahedron Letters 44 (2003) 8773

John S. Fossey and Christopher J. Richards*

Department of Chemistry, Queen Mary, University of London, Mile End Road, E1 4NS, UK

Platinum NCN-pincer complex 1a is an efficient catalyst for silylcyanation of both aldehydes and imines.

A highly selective photoinduced selenoperfluoroalkylation of terminal acetylenes by using a novel binary system of perfluoroalkyl iodide and diphenyl diselenide

Tetrahedron Letters 44 (2003) 8777

Kaname Tsuchii and Akiya Ogawa*

Department of Chemistry, Faculty of Science, Nara Women's University, Kitauoyanishi-machi, Nara 630-8506, Japan

Ar
$$\longrightarrow$$
 + ${}^{n}C_{10}F_{21}I$ + $(PhSe)_{2}$ \xrightarrow{hv} (>300 nm) \xrightarrow{Ar} \xrightarrow{PhSe}

Direct and regioselective iodination and bromination of benzene, naphthalene and other activated aromatic compounds using iodine and bromine or their sodium salts in the presence of the $Fe(NO_3)_3 \cdot 1.5N_2O_4/charcoal$ system

Tetrahedron Letters 44 (2003) 8781

H. Firouzabadi,* N. Iranpoor* and M. Shiri

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

R
$$= = \frac{R'}{R}$$

$$= \frac{R'}{R}$$

Macrodasine A, a novel macroline derivative incorporating fused spirocyclic tetrahydrofuran rings containing a spiroacetal moiety

Toh-Seok Kam* and Yeun-Mun Choo

Department of Chemistry, University of Malaya, 50603 Kuala Lumpur, Malaysia

A novel indole alkaloid, macrodasine A, incorporating fused spirocyclic tetrahydrofuran rings onto a macroline-like moiety, was obtained from a Malayan *Alstonia* species. The structure, which is also notable for the presence of an unprecedented spiroacetal moiety in an indole alkaloid, was established by spectroscopic analysis.

Fluorous reverse-phase silica gel-supported Lewis acids as recyclable catalysts in water

Tetrahedron Letters 44 (2003) 8791

Osamu Yamazaki, Xiuhua Hao, Akihiro Yoshida and Joji Nishikido*

The Noguchi Institute, 1-8-1 Kaga, Itabashi-ku, Tokyo 173-0003, Japan

A novel seven-membered carbohydrate phostone

Tetrahedron Letters 44 (2003) 8797

Jitka Moravcova, a,* Helena Heissigerova, a,b Petr Kocalka, a

Anne Imberty,^b David Sykora^c and Miroslav Fris^a

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^bCentre de Recherches sur les Macromolecules Végétales, CNRS, 601 rue de la Chimie, BP 53, 38041 Grenoble cedex 9, France

^cDepartment of Analytical Chemistry, Institute of Chemical Technology, Technicka 5, 166 28 Prague, Czech Republic

$$\begin{array}{c} \text{Ph} \\ \text{O} \\ \text{BnO} \\ \text{OMe} \end{array} \\ \begin{array}{c} \text{P(OEt)}_{3}\text{TMSOTf} \\ \text{CH}_{2}\text{Cl}_{2}, \, 0 \, ^{\circ}\text{C to rt}, \, 2 \, h \\ \end{array} \\ \begin{array}{c} \text{EtO}_{\text{Typ}} \\ \text{O} \\ \text{BnO} \\ \text{ROO} \\ \text{BnO} \\ \end{array} \\ \begin{array}{c} \text{OMe} \\ \text{OMe} \\ \end{array}$$

Synthesis and anion recognition properties of 8,8'-dithioureido-2,2'-binaphthalene

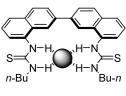
Tetrahedron Letters 44 (2003) 8801

Shin-ichi Kondo,* Masanori Nagamine and Yumihiko Yano

Department of Chemistry, Faculty of Engineering, Gunna University, K

Department of Chemistry, Faculty of Engineering, Gunma University, Kiryu, Gunma 376-8515, Japan

A novel artificial receptor based on 2,2'-binaphthalene skeleton bearing two thiourea groups was prepared via nickel(II)-catalyzed homocoupling of the corresponding bromide. Binding constants for anionic species such as F⁻, AcO⁻, H₂PO₄⁻, and Cl⁻ were simply determined in acetonitrile by UV-vis and fluorescence spectrometry.



= Anionic Guest

Synthetic routes to the stereoisomers of 2,4-dimethylpentane-1,5-diol derivatives

Gemma Mas, Lluïsa González and Jaume Vilarrasa*

Departament de Química Orgànica, Facultat de Química, Av. Diagonal 647, Universitat de Barcelona, 08028 Barcelona, Catalonia, Spain

Synthesis of new C₆₀ based phosphines

Tetrahedron Letters 44 (2003) 8811

Sandrine Ballot and Nicolas Noiret*

Ecole Nationale Supérieure de Chimie de Rennes, Synthèses et Activations de Biomolécules, CNRS UMR 6052, Institut de Chimie de Rennes, Avenue du Général Leclerc, F-35700 Rennes, France

Cr^{III}(salen) impregnated on silica for asymmetric ring opening reactions and its recovery via desorption/re-impregnation

Tetrahedron Letters 44 (2003) 8815

Bart M. L. Dioos and Pierre A. Jacobs*

Centre for Surface Chemistry and Catalysis, K.U. Leuven, Kasteelpark Arenberg 23, 3001 Heverlee, Belgium

Silica impregnated with Cr(salen) was used in an asymmetric ring opening reaction of 1,2-epoxyhexane. In a batch reactor catalyst recycling was possible with good reactivity and selectivity. In the end most of the catalyst was recoverable via a desorption procedure.

$SbCl_5$ -wet acetonitrile: a new system for chemoselective O-desilylation

Tetrahedron Letters 44 (2003) 8819

Paulo M. C. Glória, Sundaresan Prabhakar,* Ana M. Lobo* and Mário J. S. Gomes (in part)

Secção de Química Orgânica Aplicada, Departamento de Química, CQFB-REQUIMTE and SINTOR-UNINOVA, campus FCT-UNL, Quinta da Torre, 2829 Monte de Caparica, Portugal

$$\begin{array}{|c|c|c|c|c|c|} \hline & SbCl_5 \ (0.1 \ eq) \\ \hline & R^2 & \hline \\ R^2 & \hline \\ R^1 = XTBDMS & R^1 = XH \\ X = O, \ NH, \ COO & X = O, \ NH, \ COO \\ R^2 = Br, \ NO_2, \ alkyl & R^2 = Br, \ NO_2, \ alkyl \\ \hline \end{array}$$

Enantioselective monoreduction of 2-alkyl 1,3-diketones using chiral ruthenium catalysts. Synthesis of the C14–C25 fragment of bafilomycin \mathbf{A}_1

Florence Eustache, Peter I. Dalko and Janine Cossy*

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

Synthetic approaches to the southern part of cyclotheonamide C

Tetrahedron Letters 44 (2003) 8827

David J. Aitken,* Sophie Faure and Stéphane Roche

Laboratoire SEESIB-CNRS (UMR 6504), Département de Chimie, Université Blaise Pascal—Clermont-Ferrand II, 24, Avenue des Landais, 63177 Aubière cedex, France

Two efficient complementary routes led to 'south-C', a key synthetic equivalent of the southern fragment C(12)-N(19) of cyclotheonamide C.

Synthesis of (+)-totarol

Tetrahedron Letters 44 (2003) 8831

I. S. Marcos,* M. A. Cubillo, R. F. Moro, D. Díez, P. Basabe,

F. Sanz and J. G. Urones

Departamento de Química Orgánica, Facultad de Ciencias Químicas, Universidad de Salamanca, Plaza de los Caídos 1-5, E-37008 Salamanca, Spain

(+)-Totarol, a tricyclic diterpene, has been synthesised from zamoranic acid. The key step is the cyclisation of a 13,14-secototarane using $SmI_2.$

First synthesis of S,S-dialkyl difluorophosphonodithioates and difluorophosphonotrithioates

Tetrahedron Letters 44 (2003) 8837

Chrystel Lopin, Géraldine Gouhier and Serge R. Piettre*

Laboratoire des Fonctions Azotées et Oxygénées Complexes, UMR 6014 CNRS, Université de Rouen, rue Tesnière, F-76821 Mont Saint Aignan, France

$$R^{1}F_{2}C \xrightarrow{P} OEt \xrightarrow{R^{1}F_{2}C} \xrightarrow{P} CI \xrightarrow{X} R^{1}F_{2}C \xrightarrow{P} SR^{2}$$

Thio Diels-Alder reactions of α,β -unsaturated 1,3-oxathiolanes with aliphatic olefins and 1,3-dienes

Sébastien Kerverdo, a Louisette Lizzani-Cuvelier and Elisabet Duñach Duñ

^aLaboratoire Arômes, Synthèses et Interactions, Université de Nice-Sophia Antipolis, 06108 Nice Cedex 2, France ^bLaboratoire de Chimie Bio-Organique, UMR CNRS 6001, Université de Nice-Sophia Antipolis, 06108 Nice Cedex 2, France

Ph
$$\frac{1. \text{ TiCl}_4}{2. \text{ hydrolysis}}$$
 $\frac{H}{2. \text{ hydrolysis}}$ 77%

Trifluoromethanesulfonyl azide: an efficient reagent for the preparation of α -cyano- α -diazo carbonyls and an α -sulfonyl- α -diazo carbonyl

Tetrahedron Letters 44 (2003) 8845

Ryan P. Wurz, Wei Lin and André B. Charette*

Département de Chimie, Université de Montréal, PO Box 6128, Station Downtown, Montréal, QC, H3C 3J7, Canada

$$\begin{array}{c} \text{EWG} & \xrightarrow{\text{CF}_3\text{SO}_2\text{N}_3} \text{(1.5 equiv)} \\ & \xrightarrow{\text{base (2 equiv)}} \\ & \xrightarrow{\text{CH}_3\text{CN, hexanes}} \\ & 0 \text{ °C to rt.14 h} \end{array} \\ \begin{array}{c} \text{EWG} & = \text{CN, SO}_2\text{Ph, CO}_2\text{Et} \\ \text{R = aryl, cinnamyl, O-aryl, O-alkyl} \\ \\ \hline \end{array}$$

Synthesis of marine bisindole alkaloids, hamacanthins A and B through intramolecular transamidation—cyclization

Tetrahedron Letters 44 (2003) 8849

Tomomi Kawasaki,* Takashi Kouko, Hiromi Totsuka and Kei Hiramatsu

Meiji Pharmaceutical University, 2-522-1 Noshio, Kiyose, Tokyo 204-8588, Japan

(E)-Selective Horner-Wadsworth-Emmons reaction of aryl alkyl ketones with bis(2,2,2-trifluoroethyl)phosphonoacetic acid

Tetrahedron Letters 44 (2003) 8853

Shigeki Sano,* Yuka Takemoto and Yoshimitsu Nagao*

Faculty of Pharmaceutical Sciences, The University of Tokushima, Sho-machi, Tokushima 770-8505, Japan

Total synthesis of macrosphelide A by way of palladium-catalyzed carbonylative esterification

Shin-ichi Kusaka, Suguru Dohi, Takayuki Doi and Takashi Takahashi*

Department of Applied Chemistry, Tokyo Institute of Technology, 2-12-1, Ookayama, Meguro, Tokyo 152-8552, Japan

Novel Petasis boronic acid reactions with 1,3,5-tri-oxygenated benzenes

Tetrahedron Letters 44 (2003) 8861

Dinabandhu Naskar, a,* Amrita Roya and William L. Seibelbachenbiotek Research International, Block BN, Sector-V, Plot 7,

*Chembiotek Research International, Block BIN, Sector-V, Salt Lake Electronic Complex, Kolkata 700 091, India b*Combinatorial Chemistry Section, Procter & Gamble Pharmaceuticals, Health Care Research Center, 8700 Mason Montgomery Road, Mason, OH 45040, USA

$$R^{1}O$$
 OR^{3}
 $R^{4}B(OH)_{2}$
 OR^{2}
 $R^{4}OCO_{2}H$
 OR^{2}
 OR^{2}
 OR^{2}
 OR^{2}
 OR^{2}
 OR^{2}
 OR^{2}
 OR^{2}
 OR^{2}
 OR^{2}

 $R^1, R^2, R^3 = Me, H$

 R^4 = aryl, heterocyclic

Hydroxylamines and sulfinamide as amine components in the Petasis boronic acid–Mannich reaction: synthesis of N-hydroxy or alkoxy-α-aminocarboxylicacids and N-(tert-butyl sulfinyl)-α-amino carboxylicacids

Tetrahedron Letters 44 (2003) 8865

Dinabandhu Naskar, a,* Amrita Roy, William L. Seibelb and David E. Portlockb

^aChembiotek Research International, Block BN, Sector-V, Plot 7, Salt Lake Electronic Complex, Kolkata 700 091, India

b Combinatorial Chemistry Section, Procter & Gamble Pharmaceuticals Health Care Research Center, 8700 Mason Montgomery Road, Mason, OH 45040, USA

$$R^{1}N \xrightarrow{O-R^{2}} R^{3}B(OH)_{2} \xrightarrow{R^{1}N} O-R^{2}$$

$$H \xrightarrow{CO_{2}H} CO_{2}H$$

DCM/RT R^1 = Me, Bn, Bu^t, cyclohexyl R^2 = Me, H R^3 = aryl, heterocyclic

 $\begin{array}{c|c}
O \\
1 & S \\
NH_2
\end{array}$ $\begin{array}{c|c}
R^2B(OH)_2 \\
\hline
O \\
R^1 & S \\
NH
\end{array}$ $\begin{array}{c|c}
R^2R^3 \\
CO_2H
\end{array}$ $\begin{array}{c|c}
R^1 = Bu^t \\
R^2 = aryl, heterocyclic \\
R^2 = Aryl & R^3 = H, Me$

A highly active catalyst system for the heteroarylation of acetone

Tetrahedron Letters 44 (2003) 8869

Ping Liu,* Thomas J. Lanza, Jr., James P. Jewell, Carrie P. Jones, William K. Hagmann and Linus S. Lin

Department of Medicinal Chemistry, Merck Research Laboratories, Merck & Co., Inc., PO Box 2000, Rahway, NJ 07065, USA

$$\begin{array}{c} \text{Ar-X} \\ \text{X = Br, Cl, OTf} \end{array} \\ \begin{array}{c} \text{Bu}_3 \text{SnOMe (1.2 equiv.), CH}_2 = \text{C(CH}_3) \text{OAc (1.2 equiv.)} \\ \hline \text{Pd}_2(\text{dba})_3 \text{ (0.01 equiv.), 1 (0.04 equiv.), PhMe, 100 °C} \end{array} \\ \begin{array}{c} \text{Ar} \\ \text{Ph}_2 \text{P} \\ \text{NMe}_2 \\ \text{1} \end{array}$$

Tetrahedron Letters 44 (2003) 8877

Tetrahedron Letters 44 (2003) 8883

Rapid synthesis of α -ketoamides using microwave irradiation—simultaneous cooling method

Jack J. Chen* and Seema V. Deshpande

Procter & Gamble Pharmaceuticals, 8700 Mason-Montgomery Road, Mason, OH 45040, USA

Synthesis of novel discodermolide analogues with modified hydrogen-bonding donor/acceptor sites

Ian Paterson* and Oscar Delgado

University Chemical Laboratory, Lensfield Road, Cambridge CB2 1EW, UK

A sequential Claisen/ring-closing metathesis approach to the synthesis of spirocyclic cyclopentanes and cyclohexanes

Patrick Beaulieu and William W. Ogilvie*

Department of Chemistry, University of Ottawa, 10 Marie Curie, Ottawa, Ontario, Canada K1N 6N5

Synthesis of an external β -turn based on the GLDV motif of cell adhesion proteins

David E. Davies,^a Paul M. Doyle,^b R. Duncan Farrant,^a

Richard D. Hill, Peter B. Hitchcock,

Paul N. Sanderson^a and Douglas W. Young^{c,*}

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Department of Chemistry, University of Sussex, Falmer, Brighton BN1 9QJ, UK

Tetrahedron Letters 44 (2003) 8887

Conceptually new chiral tertiary C_2 symmetric diamines in asymmetric synthesis

Jean-Claude Kizirian, a Jean-Claude Caille and Alexandre Alexakis a,*

^aUniversité de Genève, Department of Organic Chemistry, 30 quai Ernest Ansermet, CH-1211 Genève 4, Switzerland ^bPPG-SIPSY, Z. I. La croix cadeau B.P. 79. 49242 Avrille Cedex, France

Enantiopure hydroxylactones from D-xylose. A novel approach to the enantiodivergent synthesis of (+)- and (-)-muricatacin suitable for the preparation of 7-oxa analogues

Tetrahedron Letters 44 (2003) 8897

Velimir Popsavin,* Ivana Krstić and Mirjana Popsavin

Department of Chemistry, Faculty of Sciences, University of Novi Sad, Trg D. Obradovića 3, 21000 Novi Sad, Serbia and Montenegro

$$\begin{array}{c} \text{OH} \\ \text{OH} \\$$

Regiocontrolled [3+2] quinone-nitrile oxide entry to type II polyketide building blocks

Tetrahedron Letters 44 (2003) 8901

Joel L. Stevens, Thomas D. Welton, Jay P. Deville and Victor Behar*

Department of Chemistry, Rice University MS 60, Houston, TX 77251, USA

Bromine substitution effectively activates and orients the [3+2] dipolar cycloaddition reaction of naphthoquinones with nitrile oxides to generate regiodefined type II polyketide building blocks.

MeO
$$R_1$$
 + HO R_2 CH_2CI_2 CH_2CI_2 R_2 CH_2CI_2 R_3 R_4 R_5 R_5 R_5 R_6 R_7 R_8 R_9 R_9 R_9 R_9

R₁ = Br, only 1 regioisomer X = halogen

2-Thiazolidinone: a novel thiol protective surrogate of complete atom efficiency, a practical synthesis of (+)-biotin

Tetrahedron Letters 44 (2003) 8905

Masahiko Seki,* Mayumi Kimura, Masanori Hatsuda, Shin-ichi Yoshida and Toshiaki Shimizu Process Chemistry Research Laboratories, Tanabe Seiyaku Co., Ltd., 3-16-89, Kashima, Yodogawa-ku, Osaka 532-8505, Japan

L-Cysteine
$$\longrightarrow$$
 S \xrightarrow{N} X \xrightarrow{N} 1. Transformations at C-4 Substituent 2. S, X- Carbonyl Migration 2 10 steps 31% overall yield

Simple naphthalimide based anion sensors: deprotonation induced colour changes and CO_2 fixation

Thorfinnur Gunnlaugsson,* Paul E. Kruger,* Paul Jensen, Frederick M. Pfeffer* and Gillian M. Hussey Department of Chemistry, Trinity College Dublin, Dublin 2, Ireland