

Tetrahedron Letters Vol. 46, No. 12, 2005

Contents

COMMUNICATIONS

Regioselective lithiation of aryl benzyl ethers

pp 1963-1965

Jan Chodakowski, Tomasz Kliś and Janusz Serwatowski*

 $R^1 = 3$ -MeO-, 3-F-, 3,5-F₂-; $R^2 = 3$,5-(MeO)₂-, 3-F-

 $Suzuki-Miyaura\ cross-coupling\ reaction\ of\ aryl\ bromides\ and\ chlorides\ with\ phenylboronic\ acid\ under\ aerobic\ conditions\ catalyzed\ by\ palladium\ complexes\ with\ thiosemicarbazone\ ligands$

pp 1967-1970

Ioannis D. Kostas,* Fotini J. Andreadaki, Dimitra Kovala-Demertzi,* Christos Prentjas and Mavroudis A. Demertzis

$$R = \text{Et}, H$$
 $R = \text{Et}, H$
 $R = \text{Et}, H$

Direct synthesis of carbonyl compounds from THP ethers with IBX in the presence of $\beta\mbox{-cyclodextrin}$ in water

pp 1971-1973

M. Narender, M. Somi Reddy, V. Pavan Kumar, Y. V. D. Nageswar and K. Rama Rao*

OTHP
$$R = \frac{1BX}{\beta - CD / H_2O} = R = R$$

Transformations of tetrahydrobenzo[b][1,6]naphthyridines and tetrahydropyrido[4,3-b]pyrimidines under the action of dimethyl acetylene dicarboxylate

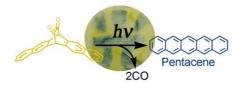
pp 1975-1979

Leonid G. Voskressensky,* Tatiana N. Borisova, Innokenti S. Kostenev, Ilia V. Vorobiev and Alexey V. Varlamov

Photo precursor for pentacene

pp 1981-1983

Hidemitsu Uno,* Yuko Yamashita, Makoto Kikuchi, Hikaru Watanabe, Hiroko Yamada, Tetsuo Okujima, Takuji Ogawa and Noboru Ono*



6,13-Dihydro-6,13-ethanopentacene-15,16-dione decomposed to pentacene by irradiation of light.

Selective transformation reaction of 6,8-dioxabicyclo[3.2.1] octane structure to δ , ϵ -enone and application to the synthesis of Douglas-fir tussock moth pheromone

pp 1985-1987

Dong Gyun Shin, Yun Hee Maeng, Hye Jin Heo and Jong-Gab Jun*

One-pot synthesis of ω -bromoesters from aromatic aldehydes and diols using pyridinium hydrobromide perbromide

pp 1989-1992

Tadashi Aoyama,* Toshio Takido and Mitsuo Kodomari

$$Ar-CHO + HO \xrightarrow{OH} \xrightarrow{PHPB} Ar \xrightarrow{OH} Ar$$

$$Ar \xrightarrow{OH} Ar \xrightarrow{O$$

1,3-Dipolar cycloaddition of azomethine ylide with ethene and 2-butene: a computational study

pp 1993-1995

Fillmore Freeman,* Phuong Dang, Angela C. Huang, Aline Mack and Kara Wald

The cycloaddition reactions of azomethine ylide with ethene, (Z)-2-butene, and (E)-2-butene to afford azacyclopentanes (pyrrolidines) proceed via a synchronous concerted $\pi_s^4 + \pi_s^2$ mechanism.

Synthesis of bis(indole)-1,2,4-triazinones

pp 1997-2000

Neil K. Garg and Brian M. Stoltz*

A facile method for the synthesis of *para-* and *meta-*substituted bis(indole)-1,2,4-triazinones is presented. Our approach to access these triazinones involves a cyclocondensation reaction between amidrazone and ketoester functionalities. The structures of these interesting compounds were established unambiguously by X-ray crystallography.

Ultrasound-assisted synthesis of functionalized arylacetylenes

pp 2001-2003

Hélio A. Stefani,* Rodrigo Cella,* Felipe A. Dörr, Claudio M. P. de Pereira,

Fábio P. Gomes and Gilson Zeni

$$X \longrightarrow H + Li^0 \xrightarrow{\hspace{1cm}))} X \longrightarrow \underline{Li} \xrightarrow{\hspace{1cm} E^{9}} X \longrightarrow E$$

E⁺= RCOR';MeSSMe; I₂; Te/RBr;... X= H, Br, Me



Strategies for protecting and manipulating triazine derivatives

Emily Hollink, Eric E. Simanek* and David E. Bergbreiter*

pp 2005-2008



Sulfolenoporphyrins: synthons for refunctionalization of porphyrins

pp 2009-2013

Sang Hee Lee and Kevin M. Smith*

Methodology for synthesis of masked diene–porphyrins with opposite and adjacent sulfolenopyrrole units is described, along with typical Diels–Alder cycloadditions to give opposite and adjacent di-benzoporphyrins.

Synthesis of Se-arylmethyl selenoformates by reaction of aluminum arylmethaneselenolates with formates

pp 2015-2019

Hajime Maeda,* Taro Tanabe, Kazuhiro Hotta and Kazuhiko Mizuno*

Ar SeSe Ar
$$\xrightarrow{i \cdot Bu_2AlH}$$
 Ar SeAlBu- i_2 \xrightarrow{HCOOPh} Ar Se

Total synthesis of (–)-centrolobine: β-C-glycoside formation via a tandem Grignard addition and stereoselective hemi-ketal reduction

pp 2021-2024

Michael P. Jennings* and Ryan T. Clemens

The antibiotic natural product (-)-centrolobine was synthesized utilizing only five steps with an overall 53% yield.

Diastereoselective Petasis Mannich reactions accelerated by hexafluoroisopropanol: a pyrrolidine-derived arylglycine synthesis

pp 2025-2028

Kausik K. Nanda* and B. Wesley Trotter

HO H
$$\stackrel{B(OH)_2}{\leftarrow}$$
 $\stackrel{HN}{\leftarrow}$ $\stackrel{CH_2Cl_2}{\leftarrow}$ $\stackrel{O}{\leftarrow}$ $\stackrel{N}{\leftarrow}$ $\stackrel{R}{\leftarrow}$ $\stackrel{CH_2Cl_2}{\leftarrow}$ $\stackrel{O}{\leftarrow}$ $\stackrel{N}{\leftarrow}$ $\stackrel{R}{\leftarrow}$ $\stackrel{CH_2Cl_2}{\leftarrow}$ $\stackrel{O}{\leftarrow}$ $\stackrel{N}{\leftarrow}$ $\stackrel{N}{\leftarrow}$ $\stackrel{R}{\leftarrow}$ $\stackrel{CH_2Cl_2}{\leftarrow}$ $\stackrel{O}{\leftarrow}$ $\stackrel{N}{\leftarrow}$ $\stackrel{N}{\leftarrow}$ $\stackrel{R}{\leftarrow}$ $\stackrel{CH_2Cl_2}{\leftarrow}$ $\stackrel{O}{\leftarrow}$ $\stackrel{N}{\leftarrow}$ $\stackrel{N}{\leftarrow}$

Pyrrolidine-derived arylglycines have been synthesized via a diastereoselective Petasis boronic acid Mannich reaction. Use of hexafluoroisopropanol as a co-solvent dramatically reduces reaction times, providing a practical room temperature process.



Mucohalic acid in Lewis acid catalyzed Mukaiyama aldol reaction: a concise method for highly functionalized γ -substituted γ -butenolides

pp 2029-2032

Paul Angell, Ji Zhang,* Daniel Belmont, Timothy Curran and James G. Davidson

The first Mukaiyama aldol type reaction on mucohalic acid (1a/b) has been achieved. Reaction of 1 with various ketene silyl acetals or silyl enol ethers in the presence of a Lewis acid provides the γ -substituted γ -butenolides in good to excellent yield.



Isotope effects and the mechanism of deoxygenation of epoxides with dichlorocarbene

pp 2033-2036

Daniel A. Singleton* and Zhihong Wang

Isotope effects and theoretical calculations support a highly asynchronous deoxygentation, uninfluenced by transition state aromaticity.



Direct synthesis of Stryker's reagent from a Cu(II) salt

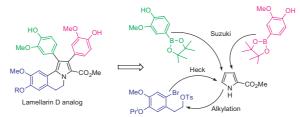
pp 2037-2039

Dong-won Lee and Jaesook Yun*

$\textbf{5,6-Dihydropyrrolo[2,1-}\textit{b}] is oquino lines \ as \ scaffolds \ for \ synthesis \ of \ lamellar in \ analogues$

pp 2041-2044

Christian A. Olsen, Núria Parera, Fernando Albericio* and Mercedes Álvarez*



Efficient modular synthetic routes to open chain marine alkaloids such as analogues of lamellarins have been developed. 5,6-Dihydropyrrolo[2,1-b]isoquinoline scaffolds were prepared, and protocols enabling regioselective bromination followed by Suzuki cross-coupling were established for the introduction of aryl groups onto the 2- and 3-positions.

Cyclizations of 2-alkylthiazolines and 2-alkyloxazolines with α,α -disubstituted diacid chlorides or N-(chlorocarbonyl) isocyanate

pp 2045-2048

Aihua Zhou and Charles U. Pittman, Jr.*



Asymmetric hydrogenation of imines catalyzed by iridium complexes with phosphine-phosphite ligands: pp 2049-2052 importance of backbone flexibility

Sergio Vargas, Miguel Rubio, Andrés Suárez and Antonio Pizzano*

Chiral phosphine-phosphites provide an alternative class of ligands for the iridium catalyzed enantioselective hydrogenation of imines.

Direct organocatalytic asymmetric α -oxidation of ketones with iodosobenzene and N-sulfonyloxaziridines

pp 2053-2057

Magnus Engqvist, Jesús Casas, Henrik Sundén, Ismail Ibrahem and Armando Córdova*

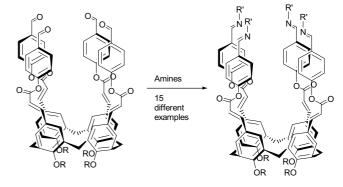
The use of deep cavity tetraformyl calix[4]arenes in the synthesis of static and dynamic macrocyclic libraries

pp 2059-2062

iibi ai ies

Nikolai Kuhnert* and Adam Le-Gresley

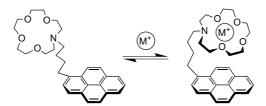
This paper reports the first synthesis of a number of deep cavity calix[4]arene macrocycles and illustrates their potential in the generation of static and dynamic combinatorial libraries based on reversible imine formation.



Pyrene-azacrown ether hybrid: cation- π interaction

pp 2063-2066

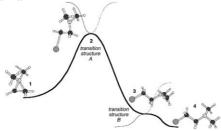
Hiroyuki Takemura,* Hiroaki Nakamichi and Katsuya Sako



Aziridinium ring opening: a simple ionic reaction pathway with sequential transition states

pp 2067-2069

María A. Silva and Jonathan M. Goodman*



Most organic reactions go from a starting material to an intermediate or a product after crossing one transition state. We report calculations that show a simple ionic reaction, aziridinium ring opening, proceeds through sequential transition states without an intervening intermediate.

Direct glycosylation: synthesis of α -indoline ribonucleosides

pp 2071-2074

Tilak Chandra and Kenneth L. Brown*

$$R_1 \\ R_2 \\ R_3 \\ R_1 \\ R_2 \\ R_2 \\ R_2 \\ R_3 \\ R_2 \\ R_3 \\ R_3$$

Efficient cleavage of carboxylic tert-butyl and 1-adamantyl esters, and N-Boc-amines using H_2SO_4 in CH_2Cl_2

pp 2075-2078

Paolo Strazzolini,* Nazareno Misuri and Pierluigi Polese

G-COOR
$$\xrightarrow{\text{H}_2\text{SO}_4}$$
 G-COOH $\xrightarrow{\text{Boc}-N}$ $\xrightarrow{\text{G}^1}$ $\xrightarrow{\text{H}_2\text{SO}_4}$ $\xrightarrow{\text{CH}_2\text{Cl}_2}$ $\xrightarrow{\text{H}-N}$ $\xrightarrow{\text{G}^1}$ $\xrightarrow{\text{G}^2}$ $\xrightarrow{\text{CH}_2\text{Cl}_2}$

Toward a total synthesis of the novel neurotrophic sesquiterpene merrilactone A: a RCM and [2+2]-photocycloaddition based approach to framework construction

pp 2079-2082

Goverdhan Mehta* and S. Robindro Singh

Microwave-induced clay-catalyzed ring opening of N-tosylaziridines: a green approach to achiral and chiral diamines

pp 2083–2086

Upender K. Nadir* and Anamika Singh

$$R^1$$
 N
 T_S
 R^3
 NH_2
 K
 NHR^3
 R^2
 $R^1 = R^2 = R^3 = aryl, alkyl$

Convergent syntheses of carbon-13 labeled midazolam and 1'-hydroxymidazolam

pp 2087-2091

Yinsheng Zhang,* Peter W. K. Woo, Jon Hartman, Norman Colbry, Yun Huang and Che C. Huang



Synthesis of trimethyl (2S,3R)- and (2R,3R)- $[2^{-2}H_1]$ -homocitrates and the corresponding dimethyl ester lactones—towards elucidating the stereochemistry of the reaction catalysed by homocitrate synthase and by the Nif-V protein

pp 2093-2096

Ali Tavassoli, James E. S. Duffy and Douglas W. Young*

$$\begin{array}{c} \text{CO}_2\text{Me} \\ \text{H}_A \\ \text{OH} \\ \end{array} \begin{array}{c} \text{CO}_2\text{Me} \\ \text{H}_A \\ \text{OH} \\ \end{array} \begin{array}{c} \text{HO}_{\text{CO}_2\text{Me}} \\ \text{H}_{\text{A}} \\ \text{OH} \\ \end{array} \begin{array}{c} \text{HO}_{\text{CO}_2\text{Me}} \\ \text{H}_{\text{A}} \\ \text{OH} \\ \end{array} \begin{array}{c} \text{HO}_{\text{CO}_2\text{Me}} \\ \text{H}_{\text{A}} \\ \text{OH} \\ \end{array} \begin{array}{c} \text{CO}_2\text{Me} \\ \text{H}_{\text{A}} \\ \text{OH} \\ \end{array} \begin{array}{c} \text{HO}_{\text{CO}_2\text{Me}} \\ \text{H}_{\text{A}} \\ \text{OH} \\ \end{array} \begin{array}{c} \text{HO}_{\text{CO}_2\text{Me}} \\ \text{H}_{\text{A}} \\ \text{OH} \\ \end{array} \begin{array}{c} \text{HO}_{\text{CO}_2\text{Me}} \\ \text{H}_{\text{B}} \\ \text{CO}_2\text{Me} \\ \end{array} \begin{array}{c} \text{HO}_{\text{CO}_2\text{Me}} \\ \text{H}_{\text{B}} \\ \text{H}_{\text{B}} \\ \text{H}_{\text{B}} \\ \end{array} \begin{array}{c} \text{HO}_{\text{CO}_2\text{Me}} \\ \text{H}_{\text{B}} \\ \text{H}_{\text{B}} \\ \text{H}_{\text{B}} \\ \end{array} \begin{array}{c} \text{HO}_{\text{CO}_2\text{Me}} \\ \text{H}_{\text{B}} \\ \text{H}_{\text{B}} \\ \text{H}_{\text{B}} \\ \end{array} \begin{array}{c} \text{HO}_{\text{CO}_2\text{Me}} \\ \text{H}_{\text{B}} \\ \text{H}_{\text{B}} \\ \text{H}_{\text{B}} \\ \end{array} \begin{array}{c} \text{HO}_{\text{CO}_2\text{Me}} \\ \text{H}_{\text{B}} \\ \text{H}_{\text{B}} \\ \text{H}_{\text{B}} \\ \end{array} \begin{array}{c} \text{HO}_{\text{CO}_2\text{Me}} \\ \text{H}_{\text{B}} \\ \text{H}_{\text{B}} \\ \text{H}_{\text{B}} \\ \end{array} \begin{array}{c} \text{H}_{\text{A}} \\ \text{H}_{\text{B}} \\ \text{H}_{\text{B}} \\ \end{array} \begin{array}{c} \text{H}_{\text{A}} \\ \text{H}_{\text{B}} \\ \text{H}_{\text{B}} \\ \end{array} \begin{array}{c} \text{H}_{\text{A}} \\ \text{H}_{\text{B}} \\ \text{H}_{\text{A}} \\ \text{H}_{\text{B}} \\ \end{array} \begin{array}{c} \text{H}_{\text{A}} \\ \text{H}_{\text{A}} \\ \text{H}_{\text{B}} \\ \text{H}_{\text{A}} \\ \text{H}$$

A room temperature alternative of the Claisen rearrangement route to *ortho* allylated phenols: unique reactivity pattern of allylindium reagents

pp 2097-2100

Dipakranjan Mal,* Pallab Pahari and Bidyut K. Senapati

Phenols can be *ortho* allylated through a formal anti-Michael addition reaction of their quinol ethers or quinone monoketals with allylindium reagents at room temperature.

A new route for the synthesis of indolizidine (–)-209D: excellent diastereoselectivity in the intramolecular hydroamination of alkynes

pp 2101-2103

Nitin T. Patil, Nirmal K. Pahadi and Yoshinori Yamamoto*

A modified procedure for the Dakin–West reaction: an efficient and convenient method for a one-pot synthesis of β -acetamido ketones using silica sulfuric acid as catalyst

pp 2105-2108

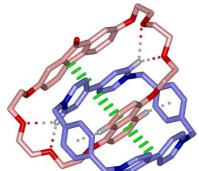
 $Mohammd\ M.\ Khodaei,^*\ Ahmad\ R.\ Khosropour^*\ and\ Peyman\ Fattahpour$

A high yielding template-directed synthesis of the first fluorenone-containing [2]catenane

pp 2109-2112

Nikolay G. Lukyanenko,* Alexander Yu. Lyapunov, Tatiana I. Kirichenko, Mark M. Botoshansky, Yurii A. Simonov and Marina S. Fonari

A new crownophane containing both 2,7-dioxyfluorenone and 1,5-dioxynaphthalene moieties bridged by triethylene glycol units has been synthesized and used as a highly efficient template for the preparation of the first fluorenone-containing [2]catenane incorporating a cyclobis(paraquat-p-phenylene) tetracation as a second macrocyclic component.



Solvent effects in a carbenoid N-H insertion route to triarylamines via 2-diazo-1,3-cyclohexanedione

pp 2113-2116

Peter Livant,* Yuanping Jie and Xing Wang



EPR/spin trapping study of the spontaneous addition of dioxygen on a dienol

pp 2117-2119

Fadia Najjar, Christiane André-Barrès,* Robert Lauricella, Liliane Gorrichon and Béatrice Tuccio*

$$\begin{bmatrix} O & CH_3 & O & CH_$$

EPR/spin trapping experiments produce the first evidence for radical pathway in the spontaneous addition of O₂ on 1.

Preparation of N-protected allylic amines and α -methylene- β -amino acids from vinylalumination/Baylis-Hillman products via tandem S_N2' substitution-Overman rearrangement

pp 2121-2124

P. Veeraraghavan Ramachandran,* Thomas E. Burghardt and M. Venkat Ram Reddy

Biosynthesis of plaunotol in *Croton stellatopilosus* proceeds via the deoxyxylulose phosphate pathway pp 2125–2128 Juraithip Wungsintaweekul and Wanchai De-Eknamkul*

Stereoselective synthesis of (+)-boronolide

pp 2129-2131

S. Vasudeva Naidu, Priti Gupta and Pradeep Kumar*

A convergent route to β -hydroxy δ -lactones through Prins cyclisation as the key step: synthesis of (+)-prelactones B, C and V

pp 2133-2136

J. S. Yaday,* M. Sridhar Reddy and A. R. Prasad

Synthesis of Mannich type products via a three-component coupling reaction

pp 2137-2140

Ghanshyam Pandey, Ravi P. Singh, Ashish Garg and Vinod K. Singh*

Utilisation of 1,3-dialkylimidazolium-2-carboxylates as CO₂-carriers in the presence of Na⁺ and K⁺: pp 2141–2145 application in the synthesis of carboxylates, monomethylcarbonate anions and halogen-free ionic liquids Immacolata Tommasi* and Fabiana Sorrentino

$$R^{1}-N + N-R^{2}$$

$$R^{1}-N + N-R^{2}$$

$$R^{1}-N + N-R^{2} + R^{3}-C + N^{2}$$

$$R^{3}-CH_{3}O$$

$$PhC(O)CH_{2}$$

$$R^{1}-N + N-R^{2}$$

$$R^{1}-N + N-R^{2}$$

$$R^{1}-N + N-R^{2}$$

$$PhC(O)H_{2}$$

$$R^{1}-N + N-R^{2}$$

$$R$$

Mycoediketopiperazine, a novel fungal metabolite from a Papularia sp.

pp 2147-2148

Meijuan Fang, Hua Fang, Yaojian Huang and Yufen Zhao*

Synthesis and fluorescence properties of naphthalimide-containing Tröger's bases

pp 2149-2153

Nicholas R. Deprez, Kristy A. McNitt, Matthew E. Petersen, Robert G. Brown* and David E. Lewis*

(i)+

A novel calix[4]arene fluorescent receptor for selective recognition of acetate anion Ru Miao, Qi-Yu Zheng, Chuan-Feng Chen* and Zhi-Tang Huang*

pp 2155-2158

Synthesis of novel 5-substituted pyrazole derivatives as cannabinoid antagonists

pp 2159-2161

Olga O. Alekseeva, Anu Mahadevan, Jenny L. Wiley, Billy R. Martin and Raj K. Razdan*



A new protecting group for the exocyclic amino groups of nucleosides

pp 2163-2165

Chamakura V. N. S. Varaprasad* and Francis Johnson



OTHER CONTENTS

Contributors to this issue Instructions to contributors

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*Corresponding author

** Supplementary data available via ScienceDirect

COVER

6,13-Dihydro-6,13-ethanopentacene-15,16-dione is proven to be an efficient photo precursor of pentacene. It gives pentacene efficiently both in solid and in solution by irradiation of light. The blue Chinese character 'light' in the yellow circle (diameter: ca. 3 cm) is created on a precursor-deposited glass by irradiation of light with a mask. *Tetrahedron Letters* **2005**, *46*, 1981–1983. © 2005 H. Uno. Published by Elsevier Ltd.



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