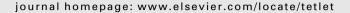


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## **Tetrahedron Letters**





## Tetrahedron Letters Vol. 50, No. 40, 2009

## **Contents**

### COMMUNICATIONS

Benzimidazole-based ratiometric fluorescent receptor exhibiting molecular logic gate for Cu<sup>2+</sup> and Fe<sup>3+</sup> Hee Jung Jung, Narinder Singh, Doo Youn Lee, Doo Ok Jang \*

pp 5555-5558

INPUTS		OUTPUT
Cu <sup>2+</sup>	Fe <sup>3+</sup>	EMISSION
0	0	0
0	1	1
1	0	1
1	1	1



### A multicomponent synthesis of gem- $(\beta$ -dicarbonyl)arylmethanes

Giovanni Appendino, Lavinia Cicione, Alberto Minassi

pp 5559-5561

# Formation of dihydroxy acids from Z-monounsaturated alkenoic acids and their use as biomarkers for the processing of marine commodities in archaeological pottery vessels

pp 5562-5564

Fabricio A. Hansel, Richard P. Evershed \*

$$R^{1}$$
 $R^{2}$ 
 $R^{1} = CH_{3}(CH_{2})_{y}$ 
 $R^{2} = (CH_{2})_{x}COOH$ 
 $R^{2}$ 
 $R^{2}$ 

Vicinal diols formed via oxidative degradation of Z-monounsaturated alkenoic acids preserved in polymerised forms in pottery vessels provide unique biomarkers for the processing of marine commodities.

### Controlling thiiranium intermediates—a new route to an iNOS inhibitor

pp 5565-5568

Geracimos Rassias \*, Stephen A. Hermitage

An equilibrium between **A** and **C** exists presumably via thiiranium ion **B**. The dynamics of this equilibrium are dominated by the leaving group ability/nucleophilicity of X and this is exploited in defining a new route to an iNOS (inducible isoform of nitric oxide synthase) inhibitor. A new amidination method is also described.

### Total synthesis of (±)-dihydroactinidiolide using selenium-stabilized carbenium ion

pp 5569-5571

Miguel J. Dabdoub <sup>\*</sup>, Claudio C. Silveira, Eder J. Lenardão, Palimécio G. Guerrero Jr., Luiz H. Viana, Cristiane Y. Kawasoko, Adriano C. M. Baroni <sup>\*</sup>

## Highly stereoselective aziridine ring-opening with phenylselenide anion and selective intramolecular aldol closure for the enantiopure synthesis of $\gamma$ -aminocyclopentene derivatives

pp 5572-5574

José Alvano Pérez-Bautista, Martha Sosa-Rivadeneyra, Leticia Quintero, Herbert Höpfl, Farid Andrés Tejeda-Dominguez, Fernando Sartillo-Piscil  $^{*}$ 

A practical and enantiopure synthesis for the preparation of key intermediates of conformationally locked  $\gamma$ -amino acid and nucleoside analogues is described via an intramolecular selective aldol-condensation catalyzed by an internal base.

# Highly regioselective hydroformylation of 1,5-hexadiene to linear dialdehyde catalyzed by rhodium complexes with tetraphosphorus ligands

pp 5575-5577

Shichao Yu, Yu-ming Chie, Xiaowei Zhang, Liyan Dai, Xumu Zhang

The reaction of terminal alkynes with PhI(OAc)<sub>2</sub>: a convenient procedure for the preparation of  $\alpha$ -acyloxy ketones Dong-Liang Mo, Li-Xin Dai, Xue-Long Hou  $^{*}$ 

pp 5578-5581

$$R = \frac{\text{Phl(OAc)}_2}{\text{AcOH, 70°C}} \xrightarrow{Q} \text{OAc}$$

Treatment of terminal alkynes with PhI(OAc)<sub>2</sub> in different acids at 70 °C provided the corresponding  $\alpha$ -acyloxy ketones in good to excellent yields. A plausible mechanism has been proposed based on the experimental results.



## Ultrasound promoted Staudinger-Aza-Wittig tandem reaction on a monoazido-O-peracetylated- $\beta$ -cyclodextrin: effect of ultrasound power

pp 5582-5584

Alexandre Scondo, Florence Dumarçay-Charbonnier, Danielle Barth, Alain Marsura

$$(AcO)_{6} \longrightarrow N_{3} \xrightarrow{(AcO)_{6}} N=C=O \xrightarrow{(AcO)_{6}} NHCONH-CH_{2}-PHONH_{2}$$

$$(OAc)_{14} \xrightarrow{(OAc)_{14}} OAc)_{14} \xrightarrow{(OAc)_{14}} OAc)_{14}$$

$$1 \qquad 2 \qquad 4$$

Ultrasound promoted Staudinger-Aza-Wittig tandem reaction.

## An improved practical synthesis of protected $\alpha$ -amino selenocarboxylates and its application to the synthesis of N-( $\alpha$ -aminoacyl)sulfonamides

pp 5585-5588

Xinghua Wu, Yu Chen, Longqin Hu

$$\begin{array}{c|c}
O & & \\
R & & \\
OH & & \\
\end{array} \begin{array}{c}
O & & \\
R & & \\
\end{array} \begin{array}{c}
NaHSe & O \\
Se & \\
\end{array} \begin{array}{c}
N_3-SO_2-R' & O \\
R & & \\
\end{array} \begin{array}{c}
O & O & O \\
R & & \\
\end{array} \begin{array}{c}
N & S' & R' \\
\end{array}$$
(90-95% for the two steps)

Protected  $\alpha$ -amino selenocarboxylates were prepared by reaction of the corresponding amino acid-activated esters with NaHSe and then reacted readily with sulfonyl azide to form N-( $\alpha$ -aminoacyl)sulfonamides in high yields.

### Synthesis of $\alpha,\beta$ -unsaturated aryl esters via Heck reaction of unsymmetrical aryl tellurides

pp 5589-5595

Hélio A. Stefani<sup>\*</sup>, Jesus M. Pena, Kemilla Gueogjian, Nicola Petragnani, Boniek G. Vaz, Marcos N. Eberlin

### Benzene triradicals: stabilization or destabilization?

Ilie Fishtik

pp 5596-5598



pp 5599-5601

### A novel P,O-type phosphorinane ligand for the Suzuki-Miyaura cross-coupling of aryl chlorides

Ehsan Ullah, James McNulty \*, Al Robertson

# **Friedel-Crafts-type alkylation in aqueous media using resin-supported peptide catalyst having polyleucine** Kengo Akagawa, Takuhiro Yamashita, Seiji Sakamoto, Kazuaki Kudo \*

pp 5602-5604



# Synthesis of substituted nortrop-2-enes and 3-vinylpyridin-2-ones via reaction of 1,2,3,4,5,6,7-heptamethoxycarbonylcycloheptatriene with primary amines

 $E = CO_2Me$ , R = alkyl

pp 5605-5608

Yury V. Tomilov \*, Dmitry N. Platonov, Galina P. Okonnishnikova



#### 1,4-Aryl migration under copper(I) atom transfer conditions

pp 5609-5612

Andrew J. Clark \*, Stuart R. Coles, Alana Collis, Thomas Debure, Collette Guy, Nicholas P. Murphy, Paul Wilson

Trichlorosulfonamides undergo reaction with CuCl/amines to furnish either reduced dichlorosulfonamides or amides via a 1,4-aryl shift with loss of SO<sub>2</sub> depending upon the reaction conditions. Along with amide hydrolysis these reactions may compete when carrying out relatively slow atom transfer radical cyclisation reactions.

### A tetrathiafulvalene-perylene diimide conjugate prepared via click chemistry

pp 5613-5616

Katrine Qvortrup, Michael Åxman Petersen, Tue Hassenkam, Mogens Brøndsted Nielsen

$$\begin{array}{c} \text{MeS} \\ \text{MeS} \\ \text{S} \\ \text{S} \\ \text{S} \\ \text{N}_{3} \\ \text{C}_{6}\text{H}_{13} \\ \text{C}_{6}\text$$

'Click chemistry' provides a method for preparing tetrathiafulvalene (TTF)-perylene diimide (PDI) conjugates.

### A new synthesis of 2,8-disubstituted pyrazolo[4,3-e][1,2,4]triazolo[1,5-c]pyrimidines

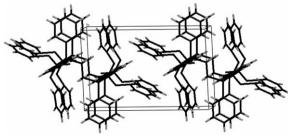
pp 5617-5621

Anton V. Dolzhenko \*, Giorgia Pastorin, Anna V. Dolzhenko, Wai Keung Chui

### A versatile synthesis of a new bisiminophosphorane

pp 5622-5624

Andreea Micle, Natalia Miklášova, Richard A. Varga, Aurelia Pascariu \*, Nicoleta Pleşu, Mihaela Petric, Gheorghe Ilia \*



The iminophosphorane  $CH_2CH_2[P{=NP(=0)(OPh)_2}Ph_2]_2$  is synthesized in high yields (80–97%) via a very convenient procedure using diphenylphosphoryl azide (DPPA) and 1,2-bis(diphenylphosphino)ethane.



# A novel three-component reaction of a secondary amine and a 2-hydroxybenzaldehyde derivative with an isocyanide in the presence of silica gel: an efficient one-pot synthesis of benzo[b]furan derivatives

pp 5625-5627

Ali Ramazani \*, Amir Tofangchi Mahyari, Morteza Rouhani, Aram Rezaei

Addition of an isocyanide to an iminium ion intermediate, formed by reaction between an electron-poor 2-hydroxybenzaldehyde derivative and a secondary amine, in the presence of silica gel at room temperature leads to benzo[b]furans in high yields.



pp 5628-5630

### A versatile synthetic route to 11H-indolo[3,2-c]isoquinolines

Ji Qu, Naresh Kumar, Mahiuddin Alamgir, David StC. Black <sup>\*</sup>

# Synthesis of a new isomer of creatinine and its use in the preparation of the food mutagen 2-amino-1-methyl-6-phenyl-1H-imidazo[4,5-b]pyridine (PHIP)

pp 5631-5632

Jan Bergman

### Acid-catalyzed N-alkylation of tosylhydrazones using benzylic alcohols

pp 5633-5635

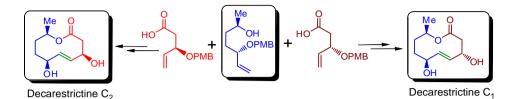
Ch. Raji Reddy \*, E. Jithender

Ar 
$$= \text{aryl } (1\mathbf{a} - 1\mathbf{c})$$
Ar  $= \text{aryl } (\mathbf{R} = \mathbf{aryl})$ ,  $\mathbf{R} = \mathbf{R} = \mathbf{R}$ 

### Total syntheses and absolute stereochemistry of decarestrictines C<sub>1</sub> and C<sub>2</sub>

pp 5636-5639

Debendra K. Mohapatra \*, Gokarneswar Sahoo, Dhondi K. Ramesh, J. Srinivasa Rao, G. Narahari Sastry





## Synthesis of fulleropyrrolidines through the reaction of [60] fullerene with quaternary ammonium salts and amino acids

pp 5640-5643

Bo Jin \*, Ru-Fang Peng \*, Juan Shen, Shi-Jin Chu

$$C_{60} + (R^{1}CH_{2})_{4}NCI + R^{2}NHCHR^{3}COOH \xrightarrow{\Delta} R^{3} N-R_{2} + R^{3}$$



# Nickel-catalyzed cross-coupling of unactivated alkyl halides and tosylate carrying a functional group with alkyl and phenyl Grignard reagents

pp 5644-5646

Surya Prakash Singh, Jun Terao, Nobuaki Kambe \*

FG-(CH<sub>2</sub>)<sub>n</sub>-X + R-MgX 
$$\xrightarrow{\text{NiCl}_2}$$
 FG-(CH<sub>2</sub>)<sub>n</sub>-R + MgX<sub>2</sub>  
X = Br, I, OTs R = alkyl, aryl or isoprene THE 0 °C FG = carbamoyl, oxycarbonyl, acyl etc.

### ${\bf 5\text{-}Bromomethyl\text{--}4,} {\bf 5\text{-}dihydroisoxazoles}$

pp 5647-5648

Michael D. Mosher \*, Amber L. Norman, Khriesto A. Shurrush

NOH
$$R = \text{Br}_{2}$$

$$R = \text{alkyl, aryl}$$

$$35-84\%$$



## Brønsted acidic ionic liquid as an efficient and reusable catalyst for one-pot synthesis of 1-amidoalkyl 2-naphthols pp 5649–5651 under solvent-free conditions

Abdol R. Hajipour \*, Yosof Ghayeb, Nafisehsadat Sheikhan, Arnold E. Ruoho

OH 
$$+$$
 R<sup>1</sup>CHO  $+$  R<sup>2</sup>CONH<sub>2</sub>  $\frac{5 \text{ mol}\% \text{ IL}}{120 \text{ °C, solvent-free, } 10 \text{ min}}$   $\frac{1}{4}$   $\frac$ 

# Highly enantioselective Diels-Alder reaction of Danishefsky-type diene and electron-deficient olefins catalyzed by an Yb(III)/chiral bis-urea complex

pp 5652-5655

Shinji Harada, Nozomi Toudou, Shiharu Hiraoka, Atsushi Nishida <sup>\*</sup>

The synthesis and utility of the novel axially chiral bis-urea ligand BINUREA are described. A complex of this urea ligand with ytterbium triflate and DBU can be used in the catalytic enantioselective Diels-Alder reaction of Danishefsky-type diene and electron-deficient olefins to give the adducts in good to excellent yield and enantiomeric excess (ee).

### C-Glucosylflavonoid biosynthesis from 2-hydroxynaringenin by Desmodium uncinatum (Jacq.) (Fabaceae)

pp 5656-5659

Mary L. Hamilton, John C. Caulfield, John A. Pickett, Antony M. Hooper

2-Hydroxynaringenin is C-glucosylated by UDP-glucose and a protein extract from *Desmodium uncinatum* leaves to afford vitexin and isovitexin. This is the first committed step to C-glucosylflavonoids, a biologically active class of natural compounds.

### $Facile\ and\ convenient\ strategy\ towards\ synthesis\ of\ 4-substituted\ 2-aminothiazolo[4,5-d] pyridazinones$

pp 5660-5663

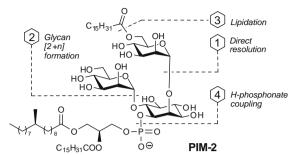
Amol A. Thorave, Pinkal N. Prajapati, Jignesh P. Pethani, Krunal C. Kothari, Mukul R. Jain, Pankaj R. Patel, Rajendra K. Kharul  $^{\ast}$ 



## Total synthesis of a fully lipidated form of phosphatidyl-myo-inositol dimannoside (PIM-2) of Mycobacterium tuberculosis

pp 5664-5666

Asif Ali, Markus R. Wenk, Martin J. Lear \*





## Stabilizing N-tosyl-2-lithioindoles with bis(N,N-dimethylaminoethyl) ether—a non-cryogenic procedure for lithiation of N-tosylindoles and subsequent addition to ketones

pp 5667-5669

Jiang-Ping Wu<sup>\*</sup>, Sanjit Sanyal, Zhi-Hui Lu, Chris H. Senanayake

$$\begin{array}{c}
\begin{array}{c}
\begin{array}{c}
 & \text{Br} \\
 & \text{LDA, } \\
 & \text{N} \\
\end{array}
\end{array}
\begin{array}{c}
\begin{array}{c}
 & \text{Li} \\
 & \text{N}
\end{array}
\end{array}
\begin{array}{c}
 & \text{Br} \\
\end{array}
\begin{array}{c}
 & \text{R1} \\
 & \text{R2}
\end{array}
\begin{array}{c}
 & \text{R1} \\
 & \text{HO} \\
\end{array}
\begin{array}{c}
 & \text{N}
\end{array}$$

$$\begin{array}{c}
 & \text{1A}
\end{array}$$

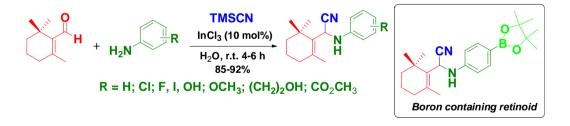
A practical procedure suitable for large scale lithiation of N-tosylindoles and subsequent addition to ketones is described. Bis(N, N-dimethylaminoethyl) ether was found to stabilize 2-lithio-N-tosylindole 1A at -25 °C [The temperatures cited are internal temperatures unless otherwise stated]. Addition of this reagent allows the lithiation of N-tosyl indoles and subsequent addition to ketones to operate at -25 °C, a temperature suitable for large scale reactions.



### Design and synthesis of $\alpha$ -aminonitrile-functionalized novel retinoids

pp 5670-5672

Bhaskar C. Das \*, Jaime Anguiano, Sakkarapalayam M. Mahalingam

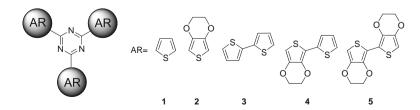




## Star-shaped triazine-thiophene conjugated systems

pp 5673-5676

Philippe Leriche \*, Flavia Piron, Emilie Ripaud, Pierre Frère, Magali Allain, Jean Roncali



A series of triazine derivatives substituted with thiophenic pendant groups have been synthesized by Stille coupling, their spectroscopic and electrochemical properties are presented and discussed.



### Cyclic oligomers (macroaldonolactones) from a protected ${\tt D\text{-}galactonic}$ acid monomer

pp 5677-5680

C. Lorena Romero Zaliz, Oscar Varela

Macrocyclic lactones **4** and **5** were prepared by cyclization of the respective dimer and trimer linear precursors obtained by self-condensation of the p-galactonic acid derivative **3**.



pp 5681-5685

### Anomerically glycosylated zinc(II) naphthalocyanines

Zafar Iqbal, Alexey Lyubimtsev, Michael Hanack \*, Thomas Ziegler \*

### Enantioselective synthesis of (-)-lasubine II

pp 5686-5688

S. Chandrasekhar \*, R. V. N. S. Murali, Ch. Raji Reddy

## $Bis (2\text{-}t\text{-}butylphenyl) phosphonoacetamides \ for \ the \ highly \ cis-selective \ synthesis \ of \ \alpha, \beta\text{-}unsaturated \ amides$

pp 5689-5691

Kaori Ando \*, Shigeo Nagaya, Yuko Tarumi

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p5692 **Retraction notice** Calendar pΙ

\*Corresponding author

(1)+ Supplementary data available via ScienceDirect

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