

#### Tetrahedron Letters Vol. 49, No. 11, 2008

#### **Contents**

#### **COMMUNICATIONS**

Highly efficient synthesis of fused bicyclic 2,3-diaryl-pyrimidin-4(3*H*)-ones via Lewis acid assisted cyclization pp 1725–1728 reaction

Kunyong Yang \*, Xiaohui He, Ha-soon Choi, Zhicheng Wang, David H. Woodmansee, Hong Liu

$$Ar^{1}-NH_{2}+Ar^{2}-COCI \longrightarrow Ar^{1} \underbrace{NH}_{Ar^{2}} \underbrace{SOCI_{2}}_{80 \text{ °C}, 2 \text{ h}} \underbrace{H_{2}N}_{Lewis \text{ acid, DCE, MW, Ar}^{2}} \underbrace{Ar^{1}}_{Ar^{2}} \underbrace{N}_{N}$$

An expedient one-pot synthesis of fused bicyclic 2,3-diaryl-pyrimidin-4(3H)-ones is described. The key step is a Lewis acid assisted cyclization reaction.

Regioselective bromination of activated aromatic substrates with a ZrBr<sub>4</sub>/diazene mixture

pp 1729-1733

Tadej Stropnik, Sergeja Bombek, Marijan Kočevar, Slovenko Polanc \*

$$\begin{array}{c|c} X & X \\ \hline \\ R & \hline \\ X = OH, OR^1, NH_2, NMe_2 \end{array}$$

A regioselective method for the bromination of phenols, ethers and anilines using a ZrBr<sub>4</sub>/diazene mixture is described.

#### The microwave-assisted synthesis of a 2-carboxyphosphole

pp 1734-1737

Steven van Zutphen \*, Guilhem Mora, Vicente J. Margarit, Xavier F. Le Goff, Duncan Carmichael,

Pascal Le Floch

The synthesis and coordination chemistry of a 2-carboxyphosphole, suitable for introduction in a polypeptide, is described.





#### The first two ecdysteroids containing a furan ring from Serratula wolffii

pp 1738-1740

Erika Liktor-Busa, András Simon, Gábor Tóth, Mária Báthori \*

The isolation and structure elucidation of serfurosterone A (1) and serfurosterone B (2), novel ecdysteroids from *Serratula wolffii*, are described.

Acid-promoted sequential cationic cyclizations for the synthesis of ( $\pm$ )-taiwaniaquinol B Shuoliang Li, Pauline Chiu \*

pp 1741-1744

Sequential treatment of dienone 3 with Lewis then Brønsted acid promoted cyclizations resulting in a synthesis of taiwaniaquinol B.



Highly efficient synthesis of  $\alpha$ -amino amidines from ynamides by the Cu-catalyzed three-component coupling pp 1745–1749 reactions

Ji Young Kim, Seok Hwan Kim, Sukbok Chang \*

 $\alpha$ -Amino amidines were efficiently prepared by the Cu-catalyzed three-component coupling of ynamides, sulfonyl or phosphory azides, and amines under mild conditions.



Novel~1, 3-dipolar~cycloaddition~reactions~of~calix [4] bis (spirodienones):~synthesis~of~isoxazolidine~derived~macrocycles

pp 1750-1752

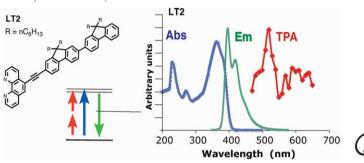
V. B. Ganga, E. Suresh, R. Luxmi Varma \*

## Novel 5-(oligofluorenyl)-1,10-phenanthroline type ligands: synthesis, linear and two-photon absorption properties

pp 1753-1758

C. Girardot, G. Lemercier \*, J.-C. Mulatier, C. Andraud \*, J. Chauvin, P. L. Baldeck

Synthesis, linear and nonlinear (TPA) optical properties of fluorenyl substituted-1,10-phenanthroline ligands are described.



Synthesis and antimicrobial characterization of novel L-lysine gemini surfactants pended with reactive groups pp 1759–1761 Hong Tan, Huining Xiao \*

A series of novel quaternary ammonium gemini surfactants of L-lysine containing ester group were synthesized with N,N'-bisbromoacetyl-L-lysine ethyl ester and fluorinated or hydrocarbon fatty acid (3-dimethyl amino-propyl) amides. The pended ester group provides a reactive site for incorporating the surfactant into polymers.



#### Base controlled (1,1)- and (1,2)-hydrophosphination of functionalized alkynes

pp 1762-1767

Yi Zhang, Lulu Tang, Yi Ding, Jia-Hui Chua, Yongxin Li, Mingjun Yuan, Pak-Hing Leung \*

## A mild preparation of substituted indolizines and indole from simple aromatic precursors using (trimethylsilyl)diazomethane

pp 1768-1770

Liusheng Zhu, Marc Vimolratana, Sean P. Brown, Julio C. Medina \*

A mild and convenient synthesis of substituted indolizines from readily available 2-(pyridin-2-yl)acetyl derivatives using (trimethylsilyl)diazomethane is described. The extension of this methodology to the synthesis of indole from 2-aminobenzaldehyde is also reported.

#### Simple and convenient one-pot synthesis of cyclooctatetraene

pp 1771-1772

Supriyo Majumder, Aaron L. Odom

Cyclooctatetraene is readily synthesized by the oxidation of in situ generated  $[Li(TMEDA)]_2[C_8H_8]$  with 1,2-dibromoethane. The product is readily isolated and produced without the use of hazardous or toxic reagents.

## Pd-Mediated synthesis of 7*H*-benzo[3,4]azepino[1,2-*a*]indole-6-carboxylic acid derivatives from indole-containing Baylis–Hillman adducts

pp 1773-1776

Hyun Seung Lee, Sung Hwan Kim, Taek Hyeon Kim, Jae Nyoung Kim \*

EWG
$$R_1 = Me$$

$$R_1 = Me$$

$$R_1 = R_2$$

$$R_2$$

$$R_3$$

$$R_3$$

## Facile and efficient synthesis of a new class of bis(3'-indolyl)pyridine derivatives via one-pot multicomponent pp 1777–1781 reactions

Song-Lei Zhu, Shun-Jun Ji \*, Xiao-Ming Su, Chang Sun, Yu Liu

#### Synthesis of deacetyl-1,10-didehydrosalvinorin G

pp 1782-1785

Zhongze Ma, David Y. W. Lee \*



#### O-Alkylation of oxime with N-vinyl lactams induced by radical cation

pp 1786-1789

Xiao-dong Jia \*, Yu-xia Da, Cai-xia Yang, Li Yang, Zhong-li Liu

Radical cation promoted O-alkylation of oxime with N-vinyllactam was achieved under base free condition by using catalytic tris(4-bromophenyl)aminium cation radical (TBPA $^+$ SbCl $_6^-$ ) as an initiator to produce the corresponding oxime ether in high yields.

## Hydrogen-bonded architecture based on p-sulfonatothiacalix[6]arene complex with dysprosium(III) cations pp 1790–1794 and water molecules

Manabu Yamada, Yoshihiko Kondo, Fumio Hamada \*

$$\begin{array}{c|c}
SO_3^{-} & & DyCl_3, H_2O \\
\hline
OH & & pH < 3
\end{array}$$
[1\*Dy<sub>2</sub>(H<sub>2</sub>O)<sub>16</sub>\*15H<sub>2</sub>O]

*p*-Sulfonatothiacalix[6]arene (1) complex with two octa-aqua dysprosium metal cations and 15 water molecules was examined by single-crystal X-ray diffraction studies. The complex showed a supramolecular assembly because there are  $\pi$ - $\pi$  stacking and hydrogen bonding interactions among host 1, aquated dysprosium cations and water molecules.



## Regioselective ring-opening of epoxides with amines using $Zn(ClO_4)_2$ - $Al_2O_3$ as a heterogeneous and recyclable catalyst

pp 1795-1800

Muchchintala Maheswara, Kummari Subba Venkata Krishna Rao, Jung Yun Do \*

## Synthesis and decarboxylation of N-acyl- $\alpha$ -triphenylphosphonio- $\alpha$ -amino acids: a new synthesis of $\alpha$ -(N-acylamino)alkyltriphenylphosphonium salts

pp 1801-1803

Roman Mazurkiewicz \*, Agnieszka Październiok-Holewa, Mirosława Grymel

#### Contrasteric Diels-Alder reactions of 5-methyl-5-phenylcyclopentadiene

pp 1804-1807

Masaru Ishida \*, Makoto Itakura, Hiroshi Tashiro

# Dienophiles 100%

Contrasteric Diels—Alder reaction of 5-phenylcyclopentadiene was predicted on the basis of the orbital mixing rule. The prediction was substantiated experimentally by the reactions of 5-methyl-5-phenylcyclopentadiene.

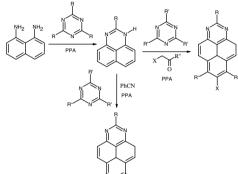
## Novel three-component *peri*-annelation reactions of carbocyclic and pyridine rings with perimidines—synthesis of 1,3-diazapyrenes and 1,3,7-triazapyrenes

pp 1808-1811

Alexander V. Aksenov \*, Alexander S. Lyahovnenko, Inna V. Aksenova, Oleg N. Nadein

 $R^1 = R^2 = Me$ 

A new synthetic method for 1,3-diazapyrenes and 1,3,7- triazapyrenes is developed based on the three-component reaction of perimidines or 1,8-diaminonaphthalene with 1,3,5-triazines and carbonyl compounds or benzonitrile in polyphosphoric acid (PPA).



An expedient microwave-assisted, solvent-free, solid-supported synthesis of pyrrolo[2,3-d]pyrimidine-pyrano[5,6-c]coumarin/[6,5-c]chromone derivatives by intramolecular hetero Diels-Alder reaction Ekambaram Ramesh, Raghavachary Raghunathan \*

pp 1812-1817

Clay entrapped nickel nanoparticles as efficient and recyclable catalysts for hydrogenation of olefins Amarajothi Dhakshinamoorthy, Kasi Pitchumani \*

pp 1818-1823

## A facile route to N-acetyl $\alpha$ , $\beta$ -unsaturated $\gamma$ -lactam derivatives using ethyl acetamidocyanoacetate and dialkyl acetylenedicarboxylate in the presence of triphenylphosphine

pp 1824-1827

Sakineh Asghari \*, Mahmood Tajbakhsh, Vali Taghipour

Synthesis of azo compounds by nanosized iron-promoted reductive coupling of aromatic nitro compounds Yanina Moglie, Cristian Vitale, Gabriel Radivoy \*

pp 1828-1831

$$R = CH_3, OH, NH_2, Br, CI, COCH_3$$
FeCl<sub>2.4</sub>H<sub>2</sub>O, Li, DTBB
$$R = CH_3, OH, NH_2, Br, CI, COCH_3$$

$$R = CH_3, OH, NH_2, Br, CI, COCH_3$$

## Novel syntheses of 3-anilino-pyrazin-2(1H)-ones and 3-anilino-quinoxalin-2-(1H)-ones via microwave-mediated Smiles rearrangement

pp 1832-1835

F. Christopher Bi \*, Gary E. Aspnes, Angel Guzman-Perez, Daniel P. Walker

#### Efficient preparation of 4-methoxy-5,6-dihydro-2*H*-pyran

pp 1836-1838

Nitesh Panchal, Arantxa Fernandez-Yarza, Paul Free, Piers R. J. Gaffney \*

Methoxydihydropyran (MDHP) is efficiently prepared permiting ready access to 4-methoxytetrahydropyran-4-yl (MTHP) acetal protection for alcohols.



#### [4+2] Cycloaddition of 1-phosphono-1,3-butadiene with azo- and nitroso-heterodienophiles Jean-Christophe Monbaliu, Jacqueline Marchand-Brynaert \*

pp 1839-1842

PO<sub>3</sub>Et<sub>2</sub>

$$R_1^{1/N} PO_3Et_2$$

$$\mu W$$

$$R^1 = o\text{-Tolyl}, XR^2 = O, X = N, R^1 = R^2 = CO_2 fBu$$

$$R^{1/N} R_1^{1/N} PO_3Et_2$$

$$XR^2 = O$$

$$HO_{1/N} PO_3Et_2$$

$$XR^2 = O$$

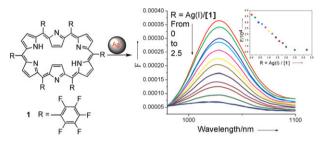
$$HO_{1/N} R_1$$

### A near-infrared fluorescent chemodosimeter for silver(I) ion based on an expanded porphyrin

pp 1843-1846

Xunjin Zhu, Shitao Fu, Wai-Kwok Wong \*, Wai-Yeung Wong \*

An expanded porphyrin 1 can act as a chemodosimeter for Ag<sup>+</sup> ions via near-infrared luminescence above 900 nm, a region that is free from optical interference in the visible range.



## Bis-1,2,4-triazolo[4,3-a:3',4'-c]quinoxalines of pharmaceutical interest from 1,3-dipolar cycloaddition

pp 1847-1850

Antonino Lauria \*, Annalisa Guarcello, Gaetano Dattolo, Anna Maria Almerico

New derivatives of the heterocyclic system 1,12,12a,12b-tetrahydrobis-1,2,4-triazolo[4,3-a:3',4'-c]quinoxaline of pharmaceutical interest have been synthesized by 1,3-dipolar cycloaddition of arylnitrilimines to quinoxalines.



#### Bio-inspired copper catalysts for the formation of diaryl ethers

pp 1851-1855

Thomas Schareina, Alexander Zapf, Alain Cotté, Nikolaus Müller, Matthias Beller \*

A novel Cu(I)/1-alkylimidazole catalyst system and its application in the C-O coupling reaction of aryl bromides with substituted phenols is described.

#### Synthesis and electronic structures of $D_{2h}$ -symmetry tetrabenzoporphyrins

pp 1856-1859

Atsuya Muranaka, Osamu Matsushita, Masaharu Numao, Yayoi Kobayashi, Nagao Kobayashi \*

#### Synthesis of fluorescent rhodamine dyes using an extension of the Heck reaction

pp 1860-1864

Emilie David, Johan Lejeune, Stéphane Pellet-Rostaing \*, Jürgen Schulz, Marc Lemaire \*, Jérome Chauvin, Alain Deronzier

Benzo[b]thiophene and indole containing rhodamine dyes were synthesized using a Heck-type coupling and a Pictet-Spengler reaction.

 $Synthesis \ of \ a \ new \ estradiol-iron \ metalloporphyrin \ conjugate \ used \ to \ build \ up \ a \ new \ hybrid \ biocatalyst \ for \\ pp \ 1865-1869 \\ selective \ oxidations \ by \ the \ 'Trojan \ horse' \ strategy$ 

Quentin Raffy, Rémy Ricoux, Jean-Pierre Mahy \*

Protection of the carbonyl groups in 1,2-indanedione: propellane versus acetal formation

pp 1870-1876

Joseph Almog \*, Nikolay Stepanov, Faina Dubnikova

## Copper-catalyzed enantioselective conjugate addition of Grignard reagents to acyclic enones using monodentate phosphoramidite ligands

pp 1877-1880

Beatriz Maciá, M. Ángeles Fernández-Ibáñez, Nataša Mršić, Adriaan J. Minnaard \*, Ben L. Feringa \*

#### Radical fluoroarylation in radiochemical synthesis

pp 1881-1883

Christina Hultsch, Olga Blank, Hans-Jürgen Wester, Markus R. Heinrich \*

Radical [<sup>18</sup>F]fluoroarylation of bromostyrene **4b** with 4-[<sup>18</sup>F]fluorobenzenediazonium salt **1** provides a new, highly efficient access to stilbene **7**, which is an important lead structure of probes for Alzheimer plaque imaging by positron emission tomography (PET).



One-pot synthesis of diaryl ketones from aldehydes via palladium-catalyzed reaction with aryl boronic acids pp 1884–1888 Changming Qin, Jiuxi Chen, Huayue Wu \*, Jiang Cheng \*, Qiang Zhang, Bing Zuo, Weike Su, Jinchang Ding



\*Corresponding author

(1) Supplementary data available via ScienceDirect

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