

### Tetrahedron Letters Vol. 49, No. 20, 2008

### **Contents**

#### COMMUNICATIONS

Acceleration of bromide mediated benzoylperoxide oxidations of secondary alcohols in aqueous organic pp 3199–3203 solvents

Jennessa Ji Youn Youm, Marcel Schlaf, Matthias Bierenstiel \*



The combination of commercially available wet benzoylperoxide with  $NiBr_2$  provides a fast and convenient oxidation reagent for 2° alcohols.

Comparison of monomode and multimode microwave equipment in Suzuki–Miyaura reactions—*en route* to pp 3204–3207 high throughput parallel synthesis under microwave conditions

Uwe Schön \*, Josef Messinger, Simone Eichner, Andreas Kirschning



#### Ugi/Smiles access to pyrazine scaffolds

Anaelle Barthelon, Aurélie Dos Santos, Laurent El Kaïm \*, Laurence Grimaud \*



New pyrazine and quinoxaline scaffolds were obtained through Ugi-Smiles coupling of pyrazinones or quinoxalinones with isocyanides, aldehydes, and primary amines.



A new synthesis of pyrrolidines via imino-aldol reaction of (2-trimethylsilylmethyl)cyclopropyl ketones with pp 3212–3215 imines

Veejendra K. Yadav \*, Archana Gupta



A highly diastereoselective preparation of 2,3,5-trisubstituted pyrrolidines from the imino-aldols formed via reaction of (2-trimethylsilylmethyl)cyclopropyl ketones with the benzylimines of aromatic aldehydes is described.

Stereoselective synthesis of  $\alpha$ -hydroxy- $\beta$ -amino acid derivatives from  $\beta$ -hydroxy- $\gamma$ , $\delta$ -unsaturated sulfilimine pp 3216–3220 Sadagopan Raghavan \*, Shaik Mustafa



The synthesis of *N*-Cbz sulfilimines from the corresponding sulfoxide with modest stereoselectivity and their utility as intramolecular nucleophiles is demonstrated by the synthesis of AHDA and AHPBA.

## First examples of gold nanoparticles catalyzed silane alcoholysis and silylative pinacol coupling of carbonyl pp 3221–3224 compounds

Patrizio Raffa \*, Claudio Evangelisti, Giovanni Vitulli, Piero Salvadori



Synthesis of a  $\pi$ -extended TTF-perylenediimide donor-acceptor dyad Rafael Gómez \*, Carmen Coya, José L. Segura \*

The synthesis, electrochemical and preliminar photophysical investigation of an electron donor-acceptor dyad containing perylenediimide and exTTF is described in this Letter.

pp 3225-3228

#### Chemoenzymatic synthesis of L-tyrosine derivative for a transketolase assay Franck Charmantray, Virgil Hélaine, Angelika Làsikovà, Bertrand Legeret, Laurence Hecquet \*

## William M. Koppes, Jesse S. Moran, Jimmie C. Oxley \*, James L. Smith

Hydrogenation of azo bonds with hydrazine, mono-substituted hydrazine, and hydrazobenzene was studied with selected diazene compounds under oxygen-free conditions. The reactions proceed rapidly and in high yield in several solvents, utilizing all N-H protons. While the reduction process is accompanied by the evolution of nitrogen gas in the case of N<sub>2</sub>H<sub>4</sub>, the intermediacy of diimide could not be confirmed by standard trapping experiments.

### Biginelli reactions catalyzed by hydrazine type organocatalyst

Ichiro Suzuki \*, Yukari Iwata, Kei Takeda



Takahiro Katagiri, Kenshu Fujiwara \*, Hidetoshi Kawai, Takanori Suzuki





R-CHO



Ambient. Inert Atmosphere

HN-NH•2HCI (5 - 10 mol%)

> *i*-PrOH or DMSO



3191

pp 3238-3241

pp 3234-3237

The first successful intermolecular Heck reaction of Baylis–Hillman adducts: synthesis of β-aryl substituted pp 3248–3251 Baylis–Hillman adducts

Jeong Mi Kim, Ko Hoon Kim, Taek Hyeon Kim, Jae Nyoung Kim \*



Synthesis of  $\omega$ -hydroxy- $\alpha$ -alkyl/aryl- $\gamma$ -organo-selenium and  $\gamma$ -organo-tellurium: a new class of organochalcogen compounds with antinociceptive activity pp 3252–3256

Afamefuna E. Okoronkwo, Alisson R. Rosário, Diego Alves, Lucielli Savegnago, Cristina W. Nogueira, Gilson Zeni \*

$$R \xrightarrow{\qquad} H \xrightarrow{1) \text{ n-BuLi/THF (-78 °C)}} [R \xrightarrow{\qquad} Li] \xrightarrow{\text{Br}} R \xrightarrow{\text{OH}} R \xrightarrow{\text{OH}} M$$

$$R \xrightarrow{\qquad} H \xrightarrow{1} Y \xrightarrow{0} Y \xrightarrow{0$$

011

Microwave-assisted synthesis of pyrazolo[3,4-*d*]pyrimidines from 2-amino-4,6-dichloropyrimidine-5carbaldehyde under solvent-free conditions

Jairo Quiroga \*, Jorge Trilleras, Braulio Insuasty, Rodrigo Abonía, Manuel Nogueras \*, Antonio Marchal, Justo Cobo



A convenient method to reduce hydroxyl-substituted aromatic carboxylic acid with NaBH<sub>4</sub>/Me<sub>2</sub>SO<sub>4</sub>/ pp 3260–3263 B(OMe)<sub>3</sub>

Yuhan Zhou, Guchao Gao, Hui Li, Jingping Qu \*

HO-Ar-COOH <u>NaBH<sub>4/</sub>Me<sub>2</sub>SO<sub>4</sub>/B(OMe)<sub>3</sub></u> THF, R.T., 1.5~6 h <u>one-pot</u> <u>Yield</u> 74%~98% Synthesis of 4-trimethylammonio-2,2,6,6-tetramethylpiperidine-1-yloxyl with various anions for investigation pp 3264-3267 of ionic liquids

Veronika Strehmel \*, Hans Rexhausen, Peter Strauch



Anion metathesis of 4-trimethylammonio-2,2,6,6-tetramethylpiperidine-1-yloxyl iodide using silver salts gives the new 4-trimethylammonio-2,2,6,6-tetramethylpiperidine-1-yloxyl bis(trifluoromethylsulfonylimide) and further spin probes with tetrafluoroborate or hexafluorophosphate as anions.

Revised structures of phenylphenalene derivatives from Eichhornia crassipes Marina DellaGreca \*, Lucio Previtera, Armando Zarrelli

pp 3268-3272

MeO .OMe MeO MeO

The structures of two phenylphenalenes and three dimeric phenylphenalenes have been revised by 2D-NMR spectroscopy.

Synthesis of nucleoside derivatives via heterocyclocondensation reactions Vincent Kikelj, Paul Setzer, Karine Julienne, Jean-Claude Meslin, David Deniaud \*



The synthesis of new, selected analogues of the pro-apoptotic and anticancer molecule HA 14-1 Danielle Grée, Samuel Vorin, Vijay L. Manthati, Frédéric Caijo, Guillaume Viault, Florence Manero, Philippe Juin, René Grée \*

> EtO<sub>2</sub>C. .CO<sub>2</sub>Et Br HA 14-1 New Analogues

A new and versatile strategy has been developed towards HA 14-1 analogues selectively modified on position 4 and/or on the primary amine function.

pp 3273-3275

pp 3276-3278

**Benzoazabicyclo**[4.3.1] derivatives by intramolecular Michael addition of piperidinone enolates to enoates pp 3279–3282 Gedu Satyanarayana, Sven Müller, Martin E. Maier \*



A novel synthesis of 2,6-methano-4H-4-benzazonines is described.

Efficient one-pot synthetic approaches for cannabinoid analogues and their application to biologically interesting (-)-hexahydrocannabinol and (+)-hexahydrocannabinol





Deoxygenation of 5-*O*-benzoyl-1,2-isopropylidene-3-*O*-imidazolylthiocarbonyl-α-D-xylofuranose using dimethyl phosphite: an efficient alternate method towards a 3'-deoxynucleoside glycosyl donor Ivan Zlatev, Jean-Jacques Vasseur, François Morvan \*



Selective and mild oxidation of thiols to sulfonic acids by hydrogen peroxide catalyzed by methyltrioxorhenium

pp 3291-3293

Francesco P. Ballistreri \*, Gaetano A. Tomaselli, Rosa M. Toscano

 $\begin{array}{l} \text{R-SH} + 3\text{H}_2\text{O}_2 & \overbrace{\text{CH}_3\text{CN}, 20\ ^\circ\text{C}}^{\text{MTO}} > & \text{R-SO}_3\text{H} + \text{H}_2\text{O} \\ \hline \\ \text{R} = \text{p-X-C}_6\text{H}_4 \ (\text{X} = \text{H}, \text{CH}_3, \text{OCH}_3, \text{CI}, \text{NO}_2); \ \text{C}_6\text{H}_5\text{CH}_2; \ 2\text{-Naph; } \text{C}_{12}\text{H}_{25}; \ \text{C}_{18}\text{H}_{37}. \end{array}$ 

Several types of thiols were selectively oxidized to the corresponding sulfonic acids using hydrogen peroxide in the presence of catalytic amount of MTO under mild reaction conditions.

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pp 3283-3287

pp 3288-3290

**4-Ketoantheraxanthin, a novel carotenoid produced by the combination of the bacterial enzyme β-carotene** pp 3294–3296 ketolase CrtW and endogenous carotenoid biosynthetic enzymes in higher plants Kazutoshi Shindo \*, Tomohisa Hasunuma, Emiko Asagi, Aya Sano, Eri Hotta, Noriko Minemura,

Chikahiro Miyake, Takashi Maoka, Norihiko Misawa



A concise synthesis of protected (2*S*,4*R*)-4-hydroxyornithine Satyendra Kumar Pandey, Menaka Pandey, Pradeep Kumar \*



**First synthesis and electronic properties of cyano(oligo)phenothiazines** Adam W. Franz, Larisa N. Popa, Thomas J. J. Müller \*



Blue to green daylight fluorescent and electroactive (oligo)phenothiazinyl nitriles can be obtained in good to very good yields via Beller cyanation either under conductive or dielectric heating.

Phenyl-EDOTn derivatives as super acid labile carboxylic acid protecting groups for peptide synthesis Albert Isidro-Llobet, Mercedes Álvarez, Fernando Albericio \*



A series of new 3,4-ethylenedioxy-2-thenyl (EDOTn) derived alcohols have been synthesized and evaluated as super acid labile carboxylic acid protecting groups. All the derivatives are labile to very low concentrations of trifluoroacetic acid (0.01–0.5%).

pp 3297-3299



pp 3304-3307

**Regioselective [3+4] cycloaddition of an azomethine ylide to** *meso–meso*,  $\beta$ – $\beta$ ,  $\beta'$ – $\beta'$  **triply linked diporphyrins** pp 3308–3311 Takayuki Tanaka, Yasuyuki Nakamura, Naoki Aratani, Atsuhiro Osuka \*



Photo-induced DNA cleavage by (heterocyclo)carbonyl oxime esters of anthraquinonepp 3312–3315Jih Ru Hwu \*, Jhih-Ren Yang, Shwu-Chen Tsay, Ming-Hua Hsu, Yi-Chieh Chen, Shang-Shing P. Chou \*\*



Various (heterocyclo)carbonyl mono-oxime esters of anthraquinone were synthesized, which produced radical species and exhibited ability for DNA cleavage upon UV irradiation.

## Towards the biotechnological isomerization of branched sugars: D-tagatose-3-epimerase equilibrates both pp 3316–3321 enantiomers of 4-C-methyl-ribulose with both enantiomers of 4-C-methyl-xylulose

Devendar Rao, Akihide Yoshihara, Pushpakiran Gullapalli, Kenji Morimoto, Goro Takata, Filipa P. da Cruz, Sarah F. Jenkinson, Mark R. Wormald, Raymond A. Dwek, George W. J. Fleet \*, Ken Izumori \*



# A tandem palladium-catalyzed Heck-lactonization through the reaction of *ortho*-iodophenols with $\beta$ -substituted acrylates: synthesis of 4,6-substituted coumarins

pp 3322-3325

Talita de A. Fernandes, Rita de C. C. Carvalho, Tatiana M. D. Gonçalves, Alcides J. M. da Silva \*, Paulo R. R. Costa \*



Stereoinduced cyclization of acyloxyalkenes using iodosylbenzene via a 1,3-dioxan-2-yl cation Morifumi Fujita \*, Hiroshi Suzawa, Takashi Sugimura, Tadashi Okuyama



Gallium iodide/iodine as a versatile reagent for the aza-Prins cyclization: an expeditious synthesis of pp 3330–3334 4-iodopiperidines

J. S. Yadav \*, B. V. Subba Reddy, D. N. Chaya, G. G. K. S. Narayana Kumar, S. Aravind, A. C. Kunwar, C. Madavi



An expeditious and environmentally benign methodology for the synthesis of substituted indoles from cyclic pp 3335–3340 enol ethers and enol lactones

Pankajkumar R. Singh \*, Mandar P. Surpur, Sachin B. Patil



A novel biomimetic condensation of 2-deoxyribose, aryl amine and acetyl acetone to bicyclic aminols pp 3341–3345 catalyzed by InCl<sub>3</sub>

J. S. Yadav \*, B. V. Subba Reddy, G. Satheesh, G. Narasimhulu, Y. Portier, C. Madhavi, A. C. Kunwar

$$HO \longrightarrow OH + MEO \longrightarrow HO^{2} + OME \longrightarrow ME + OME \longrightarrow HO^{2} + OME \longrightarrow HO^{2}$$

pp 3326-3329

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\*Corresponding author (*J*)<sup>+</sup> Supplementary data available via ScienceDirect

Available online at www.sciencedirect.com



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