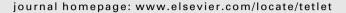


Contents lists available at ScienceDirect

### **Tetrahedron Letters**





### Tetrahedron Letters Vol. 50, No. 52, 2009

### **Contents**

#### COMMUNICATIONS

Synthesis of cyclopropanes by Pd-catalyzed activation of alkyl C-H bonds

pp 7235-7238

Qinhua Huang, Richard C. Larock

A novel synthesis of cyclopropanes has been developed via palladium-catalyzed C-H activation in which two new carbon-carbon bonds are formed in a single step. This method involves palladium-catalyzed activation of normally unreactive secondary alkyl C-H bonds and provides an efficient way to access cyclopropapyrrolo[1,2-a]indoles, analogues of mitomycin and cyclopropamitosenes.

### Thiazolinium salt: an efficient catalyst for the Mukaiyama reaction

pp 7239-7241

Guillaume Mercey, Delphine Brégeon, Christine Baudequin, Frédéric Guillen, Jocelyne Levillain \*, Mihaela Gulea, Jean-Christophe Plaquevent, Annie-Claude Gaumont \*

### Inorganic ammonium salts as catalysts for direct aldol reactions in the presence of water

pp 7242-7245

Pawel Dziedzic, Agnieszka Bartoszewicz, Armando Córdova

$$R^1$$
 +  $H$   $R$   $H_2O$   $R^1$   $R^2$  up to 93% yield



# Reaction between isocyanides and nitrostyrenes in water: a novel and efficient synthesis of 5-(alkylamino)-4-aryl-3-isoxazolecarboxamides

pp 7246-7248

Mehdi Adib \*, Mohammad Mahdavi, Samira Ansari, Farzad Malihi, Long-Guan Zhu, Hamid Reza Bijanzadeh

$$2 R - \stackrel{+}{N} = \stackrel{-}{C} + \stackrel{Ar}{\longrightarrow} NO_2 \xrightarrow{water} R \xrightarrow{N} \stackrel{Ar}{\longrightarrow} N$$

### Trimethylchlorosilane-promoted aza-Mannich reaction of enecarbamates and aldimines

pp 7249-7251

Pengcheng Wu, Deqin Lin, Xiaoxia Lu<sup>\*</sup>, Li Zhou, Jian Sun<sup>\*</sup>

HN PG 
$$Ar$$
 H  $Ar$  H  $A$ 

# Palladium/acetic acid-catalyzed fluoroalkylation of alkynes with monofluorinated sulfones as pronucleophiles Chuanfa Ni. linbo Hu $^{\circ}$

pp 7252-7255

$$(R^1 = aryl; R^2 = H, OCH_3, OBn; EWG = PhSO_2, COPh)$$

A facile palladium-catalyzed fluoroalkylation of alkynes with monofluorinated sulfones in the presence of acetic acid has been achieved. By using different  $\alpha$ -substituted fluoro(phenylsulfonyl)methane derivatives, a variety of allylated monofluoromethyl compounds were obtained with high regio- and stereoselectivity.



# A highly efficient and reusable mesoporous supported Co(II) catalyst for chemoselective deprotection of aryl acetates

pp 7256-7258

Fatemeh Rajabi



#### The synthesis of single enantiomers of trans-alkene-containing mycolic acids

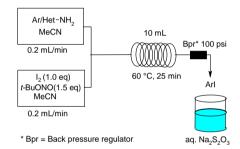
pp 7259-7262

Gani Koza, Richard Rowles, Cornelia Theunissen, Juma'a R. Al-Dulayymi, Mark S. Baird \*

### A safe and reliable procedure for the iododeamination of aromatic and heteroaromatic amines in a continuous flow reactor

pp 7263-7267

Laia Malet-Sanz \*, Julia Madrzak, Rhian S. Holvey, Toby Underwood



# **(i)**+

### Benzosceptrin C, a new dimeric bromopyrrole alkaloid from sponge Agelas sp.

pp 7268-7270

Takaaki Kubota, Atsushi Araki, Tetsuro Yasuda, Masashi Tsuda, Jane Fromont, Kazuki Aoyama, Yuzuru Mikami, Markus R. Wälchli, Jun'ichi Kobayashi \*



### A concise and efficient synthesis of flumazenil and its precursor for radiolabeling with fluorine-18

pp 7271-7273

Sean R. Donohue \*, Robert F. Dannals



## An intramolecular journey of a carboxyl group around 1,2-dihydropyridines: multisite $\delta$ - versus $\gamma$ -lactonization reactions

pp 7274-7279

Andrée Parlier, Catherine Kadouri-Puchot, Sandra Beaupierre, Nathalie Jarosz, Henri Rudler <sup>\*</sup>, Louis Hamon, Patrick Herson, Jean-Claude Daran

Whereas alkylacetic acid-substituted 1,4-dihydropyridines gave upon electrophile-induced lactonization reactions, regio- and stereoselectively  $\delta$ -lactones, the corresponding 1,2-dihydropyridines led, depending on the reaction conditions, to multisite lactonization products,  $\gamma$ - and  $\delta$ -lactones.



#### First synthesis of 2,6-diazabicyclo[3.2.0]heptane derivatives

pp 7280-7282

Carmela Napolitano, Manuela Borriello, Francesca Cardullo <sup>\*</sup>, Daniele Donati, Alfredo Paio, Stefano Manfredini <sup>\*</sup>

### Mechanistic studies of rearrangements during the ring expansions of cyclopropanated carbohydrates

pp 7283-7285

Rhys Batchelor, Joanne E. Harvey, Paul Teesdale-Spittle, John O. Hoberg



#### Synthesis of 4,5-disubstituted-3-trihalomethylisothiazoles

pp 7286-7287

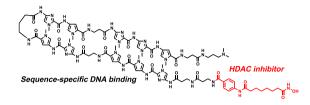
Michael P. Zawistoski, Shannon M. Decker, David A. Griffith \*



#### Synthesis and properties of PI polyamide-SAHA conjugate

pp 7288-7292

Akimichi Ohtsuki, Makoto T. Kimura, Masafumi Minoshima, Tsukasa Suzuki, Maki Ikeda, Toshikazu Bando, Hiroki Nagase, Ken-ichi Shinohara, Hiroshi Sugiyama \*





### Copper-catalyzed C-N coupling of amides and nitrogen-containing heterocycles in the presence of cesium fluoride

pp 7293-7296

Dean P. Phillips \*, Xue-Feng Zhu, Thomas L. Lau, Xiaohui He, Kunyong Yang, Hong Liu

$$R \cdot N \cdot R^{1} + Ar - X \xrightarrow{\text{Cul, L, CsF}} R \cdot N - Ar$$
heterocycles, amides
$$L = \text{MeHN} \xrightarrow{\text{NHMe}} \text{Or} \qquad N + \text{NHMe}$$

$$OH$$

$$R \cdot N - Ar$$

$$R \cdot N -$$



Cesium fluoride as the base efficiently enables the copper-catalyzed N-arylation of amides and nitrogen heterocycles.

### Asymmetric Michael addition of malonates to enones catalyzed by a siloxy amino acid lithium salt

pp 7297-7299

Masanori Yoshida \*, Mao Narita, Keisuke Hirama, Shoji Hara

TBDPSO 
$$CO_2Li$$
 $R^1$   $O$ 
 $R^2$   $+ CH_2(CO_2R^3)_2$ 
 $R^2$   $CH(CO_2R^3)_2$ 

Siloxy amino acid lithium salt, *O-tert*-butyldiphenylsilyl L-serine lithium salt, was found to be an effective catalyst for the asymmetric Michael addition reaction of malonates to enones.



## Efficient one-pot syntheses of 2H-indazolo[2,1-b] phthalazine-triones by catalytic $H_2SO_4$ in water-ethanol or ionic liquid

pp 7300-7303

Jitender M. Khurana \*, Devanshi Magoo

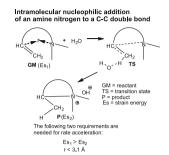
Ar-CHO + 
$$\begin{pmatrix} O \\ NH \\ NH \end{pmatrix}$$
 +  $\begin{pmatrix} O \\ R \\ R \end{pmatrix}$   $\begin{pmatrix} [bmim]BF_4/H_2O\text{-EtOH} \\ H_2SO_4 \end{pmatrix}$   $\begin{pmatrix} O \\ N \\ N \end{pmatrix}$   $\begin{pmatrix} Ar \\ N \\ R \end{pmatrix}$ 

Efficient and environmentally benign protocols for the synthesis of 2H-indazolo[2,1-b] phthalazine-triones are described.

### Analyzing Kirby's amine olefin—a model for amino acid ammonia lyases

pp 7304-7309

Rafik Karaman

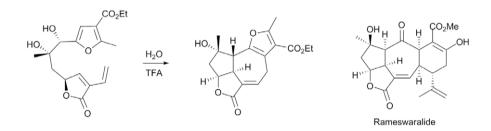




### $An intramolecular \ [4+3]-cycload dition \ approach \ to \ rames war a lide \ inspired \ by \ biosynthesis \ speculation$

pp 7310-7313

Gerald Pattenden \*, Johan M. Winne





#### Synthesis of phosphonate derivatives of 2,3-dihydroindene

pp 7314-7317

Monika Prokopowicz, Piotr Młynarz \*, Paweł Kafarski

# Synthesis of $\beta$ -hydroxymalonates: the direct aldol addition of malonates to aldehydes in the presence of SiCl<sub>4</sub> and i-Pr<sub>2</sub>EtN

pp 7318-7321

Antonio Massa \*, Arrigo Scettri, Rosanna Filosa, Laura Capozzolo

$$\begin{array}{c} O \\ R \\ \end{array} \begin{array}{c} O \\ H \end{array} + \begin{array}{c} CH_2(CO_2R')_2 \end{array} & \begin{array}{c} O \\ CH_2Cl_2, -20 \text{ °C} \\ \hline 2) \text{ NaHCO}_3, H_2O \end{array} \\ \end{array} \begin{array}{c} O \\ R \\ \end{array} \begin{array}{c} O \\ CO_2R' \end{array} \\ \end{array} \begin{array}{c} O \\ DIPEA, -20 \text{ °C}, 2h \\ \hline 2) \text{ NaHCO}_3, H_2O \end{array} \\ \end{array} \begin{array}{c} CO_2R' \\ \end{array} \\ \end{array} \begin{array}{c} OSiMe_3 \\ CO_2R' \\ \end{array}$$



## Copper(II) bromide as an efficient catalyst for the selective protection and deprotection of alcohols as bis(4-methoxyphenyl)methyl ethers

pp 7322-7326

Rofia Mezaache, Yénimégué Albert Dembelé, Yann Bikard, Jean-Marc Weibel, Aurélien Blanc, Patrick Pale

#### Microwave-assisted stereoselective $\alpha$ -2-deoxyglycosylation of hex-1-en-3-uloses

pp 7327-7329

Hui-Chang Lin \*, Hsu-Hsuan Wu, Zi-Ping Lin, Chih-Yuan Lin, Chun-Hung Lin, Kun-Lung Chen, Fung Fuh Wong

ROOR
$$R = Ac, Bz$$

$$R^{1} = benzyl, cyclohexyl, isopropyl, n-hexyl, sugar$$

$$R = Ac, Bz$$

$$R^{1} = benzyl, cyclohexyl, sugar$$

# **(j**)+

# A novel and efficient method for the catalytic direct oxidative carbonylation of 1,2- and 1,3-diols to 5-membered and 6-membered cyclic carbonates

pp 7330-7332

Bartolo Gabriele\*, Raffaella Mancuso, Giuseppe Salerno, Giuseppe Ruffolo, Mirco Costa, Angela Dibenedetto

## Reactivity of asymmetric benzo-condensed diazines with nitrilimine dipoles in the 1,3-dipolar cycloaddition reactions

pp 7333-7336

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

$$\begin{array}{c} A_{1} \\ N \\ R \\ CI \end{array} + \begin{array}{c} R_{1} \\ N \\ N \\ R_{2} \end{array} \begin{array}{c} R_{1} \\ N \\ N \\ R_{2} \end{array} \begin{array}{c} R_{1} \\ N \\ N \\ N \\ R \end{array} \begin{array}{c} N \\ N \\ N \\ N \end{array}$$

The reactivity of asymmetric benzo-condensed diazines in the 1,3-dipolar cycloaddition reactions with nitrilimines was investigated. The results demonstrated that, at variance with the symmetric quinoxaline, a certain grade of diastereoselectivity emerged.

#### Hetero-Diels-Alder reaction of [60]fullerene with nitrosoalkene

pp 7337-7339

Hai-tao Yang \*, Xiao-Jiao Ruan, Chun-bao Miao, Hai-tao Xi, Yan Jiang, Qi Meng, Xiao-qiang Sun \*

$$\begin{array}{c|c}
 & \text{NOH} \\
 & \text{R} & \text{Na}_2\text{CO}_3 \\
 & \text{R} & \text{R}'
\end{array}$$

A new type of stable  $C_{60}$ -fused dihydrooxazine derivatives was successfully prepared through the hetero-Diels-Alder reaction of  $C_{60}$  with nitrosoalkenes generated in situ from the corresponding  $\alpha$ -bromooxime by treatment with  $Na_2CO_3$ .



pp 7340-7342

#### Synthesis of diaryl disulfides via the reductive coupling of arylsulfonyl chlorides

George W. Kabalka \*, Marepally Srinivasa Reddy, Min-Liang Yao

$$Z$$
  $SO_2CI$   $Ph_3P$   $Z$   $S-S-S$   $Z$  +  $Ph_3PO$ 

Z = Me, OMe, Br, CN, NO<sub>2</sub> etc

A facile synthesis of diaryl disulfides from arylsulfonyl chlorides in the presence of triphenylphosphine has been developed.

#### Synthesis of palau'amide and its diastereomers: confirmation of its stereostructure

pp 7343-7345

Hirokazu Sugiyama, Atsushi Watanabe, Toshiaki Teruya, Kiyotake Suenaga

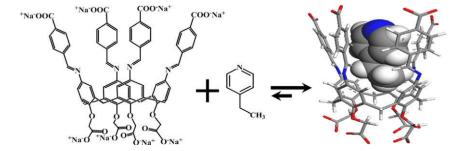
Four diastereomers of palau'amide (1–4), a cytotoxic cyclodepsipeptide, were synthesized. The <sup>1</sup>H NMR spectrum of 1 was identical to that of natural palau'amide. This established the complete stereostructure of palau'amide.



### New water-soluble iminecalix[4] arene with a deep hydrophobic cavity

pp 7346-7350

Satish Balasaheb Nimse, Junghoon Kim, Van-Thao Ta, Hyung-Sup Kim, Keum-Soo Song, Chan-Yong Jung, Van-Thuan Nguyen, Taisun Kim $\dot{}^*$ 

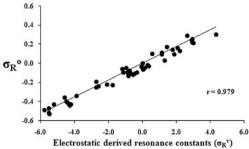




#### An electrostatic scale of substituent resonance effect

pp 7351-7354

Fareed Bhasha Sayyed, Cherumuttathu H. Suresh



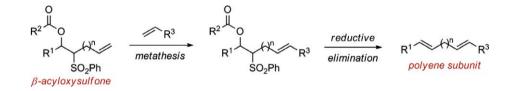
An electrostatic scale to substituent resonance effects is proposed using molecular electrostatic potential and the reliability of electrostatic resonance constants ( $\sigma_{\mathbf{x}}^{\mathbf{y}}$ ) is corroborated by three sets of isodesmic reactions.



pp 7355-7357

#### Metathesis reactions of $\beta$ -acyloxysulfones: synthesis of 1,6- and 1,7-dienes

Gregory W. O'Neil\*, Daniel J. Moser, Erasmus O. Volz





# Rapid amidic hydrolysis: a competitive reaction pathway under basic conditions for N-(hydroxymethyl)benzamide derivatives bearing electron-donating groups

pp 7358-7361

John L. Murphy, William J. Tenn III, Joseph J. Labuda, Richard W. Nagorski



### $Immobilized\ microorganisms\ in\ the\ reduction\ of\ ethyl\ benzoylace tate$

pp 7362-7364

Aline de Souza Ramos, Joyce Benzaquem Ribeiro <sup>\*</sup>, Leonardo Vazquez, Sorele Batista Fiaux, Selma Gomes Ferreira Leite, Maria da Conceição Klaus V. Ramos, Francisco Radler de Aquino Neto, O. A. C. Antunes

### The rhodium-catalysed 1,2-addition of arylboronic acids to aldehydes and ketones with sulfonated S-Phos

pp 7365-7368

James R. White, Gareth J. Price, Pawel K. Plucinski, Christopher G. Frost \*

The rhodium-catalysed 1,2-addition of arylboronic acids to aryl aldehydes and ketones has been accomplished in high yield using sulfonated S-Phos, a water-soluble biaryl phosphine ligand which allows for catalyst recycling.



pp 7369-7373

### Tetranitroresorcin[4]arene: synthesis and structure of a new stereoisomer

N. Kodiah Beyeh, Kari Rissanen

A unique and unprecedented rcct-boat conformation of tetranitro-C<sub>1</sub>-resorcin[4]arene was isolated from the reaction of 2-nitroresorcinol and acetaldehyde.

## Microwave-assisted McMurry polymerization utilizing low-valent titanium for the synthesis of poly 2,6-[1,5-bis(dodecyloxy)naphthylene vinylene] (PNV)

pp 7374-7378

Henrik Thomas, Nicolai Stuhr-Hansen \*, Fredrik Westerlund, Bo W. Laursen, Magnus Magnussen, Henning O. Sørensen, Thomas Bjørnholm, Jørn B. Christensen

OH OC 
$$_{12}H_{25}$$
 CHO  $_{\mu W,\ 20\ min,\ 130\ ^{\circ}C}$  OC  $_{12}H_{25}$  OC  $_{12}H_{25}$ 



### A one-pot, four-component synthesis of $\alpha$ -carboline derivatives

Ramin Ghahremanzadeh, Somayeh Ahadi, Ayoob Bazgir

pp 7379-7381

$$\begin{array}{c} O \\ N \\ H \end{array} + \begin{array}{c} O \\ Ph \end{array} + \begin{array}{c} O \\ + \\ N \\ H \end{array} + \begin{array}{c} N \\ N \\ H \end{array} + \begin{array}{c} N \\ N \\ N \\ N \end{array} + \begin{array}{c} N \\ N \\ N \\ N \end{array} + \begin{array}{c} N \\ N \\ N \\ N \end{array} + \begin{array}{c} N \\ N \\ N \\ N \end{array}$$



# Study of incidence of DiPAMP ligand modification on the rhodium(I)-catalyzed asymmetric hydrogenation of $\alpha$ -acetamidostyrene

pp 7382-7384

Borut Zupančič, Barbara Mohar \*, Michel Stephan \*

Ar 
$$P$$
  $P$   $Ar$   $Ar$  = various substituted anisyls



pp 7385-7387

#### Vanadium-catalyzed oxidative aromatization of 2-cyclohexenones under molecular oxygen

Toshiyuki Moriuchi \*, Kotaro Kikushima, Tomomi Kajikawa, Toshikazu Hirao '

An efficient catalytic oxidative aromatization of 2-cyclohexenones was achieved by using a commercially available inexpensive ligand-free vanadium catalyst, an acid, and a bromide source under atmospheric oxygen.



#### C<sub>2</sub>-Symmetric bipyrrolidines as organocatalysts for asymmetric Diels-Alder reactions

Yuanhui Ma, Yong Jian Zhang \*, Shangbin Jin, Qiqi Li, Chenguang Li, Junseong Lee, Wanbin Zhang \*

### Reactions of alkylidenepyrrolidines with $\alpha\text{-chlorooximes}$ and $\alpha\text{-chlorohydrazones}$

Cevher Altuğ, Yasar Dürüst, Mark C. Elliott

pp 7388-7391

pp 7392-7394

A mild oxidative method for the preparation of  $\gamma$ -hydroxy- $\alpha$ -nitroolefins from  $\alpha$ , $\beta$ -epoxyketoximes using IBX Alba Souto, Jaime Rodríguez  $^*$ , Carlos Jiménez  $^*$ 

pp 7395-7398

An efficient method for the preparation of  $\gamma$ -hydroxy- $\alpha$ -nitroolefins from  $\alpha$ , $\beta$ -epoxyketoximes has been developed using IBX.

\*Corresponding author

(p)+ Supplementary data available via ScienceDirect

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