

### Tetrahedron Letters Vol. 48, No. 36, 2007

### **Contents**

#### **COMMUNICATIONS**

### TMSCl-promoted isocyanide-based MCR of ethylenediamines: an efficient assembling of 2-aminopyrazine core

pp 6239-6244

Volodymyr Kysil,\* Sergey Tkachenko, Alexander Khvat, Caroline Williams, Sergey Tsirulnikov, Marina Churakova and Alexandre Ivachtchenko

New trimethylchlorosilane (TMSCI) promoted multicomponent reaction (MCR) of ethylenediamine(s), diverse carbonyl compounds, and isocyanides is proposed for the synthesis of a variety of highly substituted 3,4,5,6-tetrahydropyrazin-2-amines including corresponding spirocyclic compounds.

#### Facile synthesis of acetylene-substituted terthiophenes

pp 6245-6248

Pawel Wagner,\* Ashton C. Partridge, Kenneth W. Jolley and David L. Officer

A modified Horner-Emmons condensation reaction has been employed for the synthesis of acetylene modified substituted terthiophenes in excellent yields.

### A mild and efficient synthesis of $\beta$ -amino alcohols from epoxides using a mesoporous aluminosilicate pp catalyst

pp 6249-6251

Mathew W. C. Robinson, David A. Timms, Sarah M. Williams and Andrew E. Graham\*

## Organocatalytic asymmetric multi-component [C+NC+CC] synthesis of highly functionalized pyrrolidine derivatives

pp 6252-6257

Ismail Ibrahem, Ramon Rios, Jan Vesely and Armando Córdova\*

high chemo- and enantioselectivity 3:1->10:1 dr; 90-98% ee

### An efficient stereoselective synthesis of (+)-deoxoprosophylline

pp 6258-6261

In Su Kim, Chae Baek Ryu, Qing Ri Li, Ok Pyo Zee and Young Hoon Jung\*

MeO 
$$OBn$$
  $CSI$   $OBn$   $OBn$ 



### Synthesis of pyrazolo[1,5-a]indoles via copper(I)-catalyzed intramolecular amination

pp 6262-6266

Yong-Ming Zhu,\* Lie-Na Qin, Rui Liu, Shun-Jun Ji and Hajime Katayama

#### Total synthesis of (+)-galanthamine starting from p-glucose

pp 6267-6270

Hiroki Tanimoto, Tomoaki Kato and Noritaka Chida\*

(+)-galanthamine

The stereoselective total synthesis of (+)-galanthamine 1 starting from p-glucose is described. The quaternary carbon in 1 was stereoselectively generated via chirality transfer based on the Claisen rearrangement of a cyclohexenol, prepared from p-glucose using Ferrier's carbocyclization reaction. The dibenzofuran skeleton was constructed by the bromonium ion-mediated intramolecular cyclization.

Intramolecular  $\alpha$ -acylamino radical cyclizations with acylsilanes in the preparation of polyhydroxylated pp 6271–6274 alkaloids: (+)-lentiginosine, (+)-1,8a-di-epi-lentiginosine, and (+)-1,2-di-epi-swainsonine

Ming-Jen Chen and Yeun-Min Tsai\*

Efficient one-pot *trans*-dihydroxylation of 2*H*-pyrans using dimethyldioxirane (DMD): synthesis of *trans*-3,4-dihydroxy-3,4-dihydroxy-3,4-dihydroxy-3,4-dihydromollugin natural products

pp 6275-6280

Xue Wang and Yong Rok Lee\*

Intramolecular rearrangement of 1,3-bistriflate ester of thiacalix[4]arene to 1,2-counterpart: an efficient pp 6281–6285 di-O-protection method for the stereoselective synthesis of *anti*-1,2-diethers

Ryuichi Serizawa, Shinya Tanaka, Naoya Morohashi, Fumitaka Narumi and Tetsutaro Hattori\*

Reagents: i, Pri2EtN, DMSO; ii, PhCH2Br, K2CO3, acetone; iii, BuOH, PPh3, DEAD, THF; iv, NaOH, THF-EtOH-H2O.

A simple and efficient synthesis of *gem*-dihydroperoxides from ketones using aqueous hydrogen peroxide pp 6286–6289 and catalytic ceric ammonium nitrate

Biswanath Das,\* Maddeboina Krishnaiah, Boyapati Veeranjaneyulu and Bommena Ravikanth

### Photo-labeling of C<sub>60</sub> with 3-trifluoromethyl-3-phenyldiazirine

pp 6290-6293

Satoru Sato, Michio Yamada, Takatsugu Wakahara, Takahiro Tsuchiya, Midori O. Ishitsuka, Takeshi Akasaka\* and Michael T. H. Liu\*

**(i)**+

Cephalimysin A, a potent cytotoxic metabolite from an Aspergillus species separated from a marine fish pp 6294–6296 Takeshi Yamada,\* Eiji Imai, Kazuyo Nakatuji, Atsushi Numata and Reiko Tanaka

Cephalimysin A (1) was isolated from a fungal strain originally separated from the marine fish, and its absolute stereostructure was elucidated by NMR techniques and some chemical transformations.

# Stereoselective hetero-Diels–Alder reaction of 3-(trifluoroacetyl)chromones with cyclic enol ethers: synthesis of 3-aroyl-2-(trifluoromethyl)pyridines with $\omega$ -hydroxyalkyl groups

pp 6297-6300

Vyacheslav Ya. Sosnovskikh,\* Roman A. Irgashev, Igor A. Khalymbadzha and Pavel A. Slepukhin

#### Selenofonsartan analogues: novel selenium-containing antihypertensive compounds

pp 6301-6303

Rebecca L. Grange, James Ziogas, James A. Angus and Carl H. Schiesser\*

Two selenium-containing analogues of the antihypertensive compound fonsartan have been prepared and tested for  $AT_1$  receptor antagonist properties. Both compounds proved to be potent  $AT_1$  receptor antagonists, with  $pK_b$  estimates indicating that these selenides are at least as effective as other known sartans at blocking  $AT_1$  receptor mediated responses.

### Pd-catalyzed enantioselective synthesis of quaternary $\alpha$ -amino acid derivatives using a phenylalanine-derived P-chirogenic diaminophosphine oxide

pp 6304-6307

Tetsuhiro Nemoto, Teisuke Harada, Takayoshi Matsumoto and Yasumasa Hamada\*



N-(6-Methyl-2-pyridyl)acrylamide: a case of amide hydrolysis without the assistance of acid or base in pp 6308-6311 the synthesis of water-driven H-bonded polymeric chains

Kumaresh Ghosh,\* Tanushree Sen and Roland Fröhlich

Amide hydrolysis of N-(6-methyl-2-pyridyl)acrylamide without the assistance of either acid or base produces the aminopyridinium carboxylate salt at low or room temperature. The carboxylate ion and the free amine functionalities are cooperatively involved in hydrogen bonding with lattice water to form a new hydrogen-bonded polymeric chain.

A novel palladium(0)-catalyzed addition of diphenyl disulfide to allenes leading to vicinal disulfides and its pp 6312–6317 application to carbonylation with carbon monoxide

Shintaro Kodama, Etsuyo Nishinaka, Akihiro Nomoto, Motohiro Sonoda and Akiya Ogawa\*

### Acetyltrimethylsilane mediated synthesis of dihydrophenanthrenes

pp 6318-6320

Ramendra Pratap and Vishnu Ji Ram\*

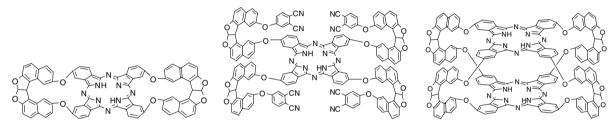
### An isoselective and visual inclusion host system using charge-transfer complexes of 3,3'-disubstituted-pp 6321–6325 1,1'-bi-2-naphthol and methylviologen

Yoshitane Imai,\* Kensaku Kamon, Takafumi Kinuta, Tajima Nobuo, Tomohiro Sato, Reiko Kuroda and Yoshio Matsubara\*

# Synthesis, characterization and electrical properties of novel mono- and cofacial bisphthalocyanines bridged with four [1a,8b-dihydronaphtho[b]naphthofuro[3,2-d]furan-7,10-diyl] units

pp 6326-6329

Zafer Odabaş, Ahmet Altındal, Bekir Salih, Mustafa Bulut and Özer Bekaroğlu\*



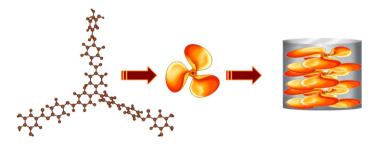
Novel mono phthalocyanines and cofacial bisphthalocyanines were synthesized from 4,4'-(1a,8b-dihydronaphtho[b]-naphthofuro-[3,2-d]furan-7,10-diyl)bis(oxy)diphthalonitrile.



### A columnar mesophase from a disc-shaped molecule derived from triphenylamine: synthesis, mesomorphic behaviour and optical properties

pp 6330-6333

K. C. Majumdar,\* Nilasish Pal, Pradip Debnath and Nandiraju V. S. Rao



#### Microwave-enhanced ruthenium-catalysed atom transfer radical additions

pp 6334-6338

Yannick Borguet, Aurore Richel, Sébastien Delfosse, Alain Leclerc, Lionel Delaude and Albert Demonceau\*



#### Novel biomimetic iron-catalysts for environmentally benign epoxidations of olefins

pp 6339-6342

Kristin Schröder, Xiaofeng Tong, Bianca Bitterlich, Man Kin Tse, Feyissa Gadissa Gelalcha, Angelika Brückner and Matthias Beller\*

$$Ar_1 \xrightarrow{R_2} \frac{5 \text{ mol \% FeCl }_3 \cdot 6H_2O, \quad Cl}{3 \text{ equiv. } H_2O_2, \text{ r.t., 1h addition}} Ar_1 \xrightarrow{O} R_2$$

$$R_3 = 24-87\% \text{ yield}$$

$$24-87\% \text{ yield}$$

$$11 \text{ examples}$$

### Practical and efficient method for amino acid derivatives containing $\beta$ -quaternary center: application toward synthesis of hepatitis C virus NS3 serine protease inhibitors

pp 6343-6347

Ashok Arasappan,\* Srikanth Venkatraman, Angela I. Padilla, Wanli Wu, Tao Meng, Yan Jin, Jesse Wong, Andrew Prongay, Viyyoor Girijavallabhan and F. George Njoroge

A practical and efficient route toward synthesis of amino acid derivatives containing  $\beta$ -quaternary center has been developed using diastereoselective Strecker reaction. The method was employed for preparation of >100 g of  $\beta$ -methylcyclohexyl glycine derivative, 21. Incorporation of some of the hindered amino acid derivatives at the P3 position resulted in potent HCV NS3 serine protease inhibitors.

### An efficient of Grignard-type procedure for the preparation of gem-diallylated compound

pp 6348-6351

Kao-Hsien Shen, Chun-Wei Kuo and Ching-Fa Yao\*

### Regioselective synthesis of novel polyfunctionally substituted pyrazolo[1,5-a]pyrimidines under solvent-free conditions

pp 6352-6355

Jairo Quiroga,\* Jaime Portilla, Rodrigo Abonía, Braulio Insuasty, Manuel Nogueras and Justo Cobo

### Effective thermal oxidation of isopropanol by an NAD+ model

pp 6356-6359

Yun Lu,\* Donald Endicott and William Kuester

$$+ \begin{array}{c} H \\ OH \\ dark \text{ and } O_2\text{-free} \end{array} \begin{array}{c} H \\ OH \\ CH_3 \end{array} + H^+$$



## Regiochemistry of addition of aminoheterocycles to $\alpha$ -cyanocinnamonitriles: formation of aza-bridged bi- and tricycles

pp 6360-6363

Michael D. Wendt,\* Aaron Kunzer, Rodger F. Henry, Jeffrey Cross and Thomas G. Pagano

#### Studies towards the synthesis of the marine alkaloid chartelline C

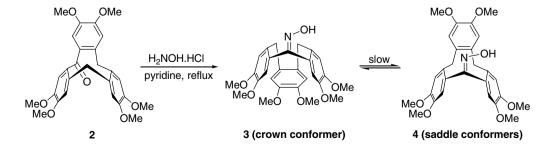
pp 6364–6367

Phillip J. Black, Evan A. Hecker and Philip Magnus\*

### Isolation of the saddle and crown conformers of cyclotriveratrylene (CTV) oxime

pp 6368-6371

Marlon R. Lutz, Jr., David C. French, Peter Rehage and Daniel P. Becker\*





### Microwave-assisted preparation of trifluoroacetaldehyde (fluoral): isolation and applications

pp 6372-6376

Shainaz M. Landge, Dmitry A. Borkin and Béla Török\*

A novel method for the preparation of trifluoroacetaldehyde (fluoral, TFAc,  $CF_3CHO$ ) from commercially available trifluoroacetaldehyde ethylhemiacetal (TFAE) by microwave irradiation is described. The isolation, characterization and reaction of fluoral with various nucleophiles are studied to verify the diverse applicability of this new method.

### Synthesis of the sex pheromone of the obscure mealybug, the first example of a new class of monoterpenoids

pp 6377-6379

Jocelyn G. Millar\* and Sharon L. Midland

The title compound was synthesized using a PPA-catalyzed cyclization, and diastereoselective quenching of a key intermediate to set up the relative stereochemistry of the methyl groups.



### Michael addition-electrophilic quenching chemistry of maleimides using dialkylzinc reagents

pp 6380-6383

Emmanuel Dardennes, Stefania Labano, Nigel S. Simpkins\* and Claire Wilson

Michael addition–electrophilic quench reactions of N-alkyl maleimides are possible using dialkylzincs in combination with a copper catalyst and a phosphoramidite ligand. Up to 55% ee has been achieved for one example (E = H) using a chiral ligand.

# Intramolecular 1,5-hydrogen atom transfer reaction promoted by phosphoramidyl and carbamoyl radicals: synthesis of 2-amino-C-glycosides

pp 6384-6388

Cosme G. Francisco, Antonio J. Herrera, Ángeles Martín, Inés Pérez-Martín and Ernesto Suárez\*



# Studies on radical cyclization of 2,3-epoxy alcohols containing a $\beta\text{-}(alkoxy)acrylate$ moiety using $Cp_2TiCl$

pp 6389-6392

Tushar Kanti Chakraborty,\* Rajarshi Samanta and Krishnan Ravikumar

$$CO_2Et$$
  $Cp_2TiCI, THF$   $CO_2Et$   $CP_2TICI,$ 

### Synthesis of pyrrolidine-substituted benzamides via iodocyclization of \beta-enaminoesters

pp 6393-6396

Eliseu O. De Oliveira,\* Carlos A. Brandt, Maria A. B. Da Silveira and Richard A. Glennon

### Tandem Heck-Suzuki-Miyaura reaction: Application to the synthesis of constrained analogues of combretastatin A-4

pp 6397-6400

Martin Arthuis, Renée Pontikis\* and Jean-Claude Florent

An efficient synthesis of (E)-3-arylmethyleneoxindoles (type I) and (EE)-3-alkylideneoxindoles (type II) have been developed from various anilides.

#### A practical highly selective oxybromination of phenols with dioxygen

pp 6401-6404

Luciano Menini, Luciana A. Parreira and Elena V. Gusevskaya\*

OH
$$R^{1} + \frac{1/2}{1} O_{2} + H^{+} + Br^{-} \frac{Cu(OAc)_{2}(cat)}{HOAc, 80 °C}$$

$$R^{2} Br$$

A simple, low cost, and highly selective method for the synthesis of mono-bromophenols has been developed. Bromide ions are used as halogenating agents, dioxygen as a final oxidant, and  $Cu(OAc)_2$  as a catalyst.



#### Lanthanum metal-assisted cyclopropanation of alkenes with gem-dihaloalkanes

pp 6405-6407

Yutaka Nishiyama,\* Hana Tanimizu and Tsuyoshi Tomita

#### **OTHER CONTENT**

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\*Corresponding author

\*\*D+ Supplementary data available via ScienceDirect

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