

pp 2675-2678

#### Tetrahedron Letters Vol. 47, No. 16, 2006

#### Contents

#### COMMUNICATIONS

Synthesis of 7- and 10-spermine conjugates of paclitaxel and 10-deacetyl-paclitaxel as potentialpp 2667–2670prodrugsArturo Battaglia,\* Andrea Guerrini,\* Eleonora Baldelli, Gabriele Fontana, Greta Varchi,Cristian Samorì and Ezio Bombardelli



Two conjugates at the 7- and 10-positions of paclitaxel and 10-deacetyl-paclitaxel with polyamine spermine have been synthesized. The low cytotoxicity evaluated in MCF7 and MCF7-R cell lines suggests that these conjugates could act as potential prodrugs.

Solid-phase synthesis of palmitoylated and farnesylated lipopeptides employing the fluoride-labile pp 2671–2674 PTMSEL linker

Maria Lumbierres, Jose M. Palomo, Goran Kragol and Herbert Waldmann\*



Synthesis of novel cyclopropylic sulfones and sulfonamides acting as glucokinase activators Stefan Heuser,\* David G. Barrett, Martina Berg, Benjamin Bonnier, Astrid Kahl, Maria Luz De La Puente, Niall Oram, Rainer Riedl, Ulrike Roettig, Gema Sanz Gil, Erich Seger, David J. Steggles, Jutta Wanner and Andreas G. Weichert



#### The effect of pressure on pseudorotaxane formation by using the slipping method

Yuji Tokunaga,\* Nanae Wakamatsu, Akihiro Ohbayashi, Koichiro Akasaka, Susumu Saeki, Kenji Hisada, Tatsuhiro Goda and Youji Shimomura



### Synthesis of azide-functionalized PAMAM dendrons at the focal point and their application for synthesis of PAMAM-like dendrimers

Jae Wook Lee,\* Jung Hwan Kim and Byung-Ku Kim



#### **Design of neutral, mono- or di-cationic water-soluble trihydrazidophosphoradamantanes** Maria Zabłocka\* and Carine Duhayon

pp 2687-2690



A trihydrazidophosphoradamantane was used as the starting reagent for the preparation of a variety of unique water-soluble cagelike compounds.

### Synthesis of macrocycles containing two pyridine and two polyamine moieties via Pd-catalyzed amination

pp 2691-2694

Alexei D. Averin,\* Olesya A. Ulanovskaya, Anatolii A. Borisenko, Marina V. Serebryakova and Irina P. Beletskaya\*



pp 2679–2682

pp 2683-2686

Formation of water-soluble vitamin derivatives from lipophilic vitamins by cultured plant cells Kei Shimoda, Yoko Kondo, Koichi Abe, Hatsuyuki Hamada and Hiroki Hamada\* pp 2695-2698





(,ĊH₂)<sub>n</sub>

6a

**b** 3 51

**c** 4 80 **d** 5 61

~0

A new class of chiral calix[4]arene-based [2]catenanes was synthesized in excellent yields of 51–80%. The enantiomeric pure catenane was also obtained in excellent yield of 66% and assigned (+)-isomer.

Synthesis and characterization of chiral catenanes based on rigid calix[4]arene

Yukihiro Okada,\* Zhihui Miao, Miwa Akiba and Jun Nishimura\*

High throughput evaluation of the production of substituted acetylenes by the Sonogashira reactionpp 2703–2706followed by the Mizoroki–Heck reaction in ionic liquids, in situ, using a novel array reactorph 2703–2706Md. Taifur Rahman, Takahide Fukuyama, Ilhyong Ryu, Kanae Suzuki, Koichi Yonemura,philip F. Hughes and Kiyoshi Nokihara\*

$$ArI + R = \underbrace{\frac{Pd\text{-cat } \textbf{A} (5.0 \text{ mol}\%)}{\text{piperidine}}}_{\text{lonic Liquid, 80 °C, 2h}} Ar = R \xrightarrow{Ar-I + \land X} \underbrace{\frac{\text{Recycled Pd-IL}}{\text{n}_{Pr_3N, 100 °C}}}_{Ar = Ph, 4-CH_3COC_6H_5, 4-MeOC_6H_5} Ar \checkmark X$$

New cavitand derivatives bearing four coumarin groups as fluorescent chemosensors for  $Cu^{2+}$  and recognition of dicarboxylates utilizing  $Cu^{2+}$  complex

pp 2707-2710

Yun Jung Jang, Byung-Sik Moon, Min Sun Park, Bong-Gu Kang, Ji Young Kwon, Jay Sung Joong Hong, Yeo Joon Yoon, Kap Duk Lee<sup>\*</sup> and Juyoung Yoon<sup>\*</sup>

New cavitand derivative bearing four coumarin groups effectively senses  $\mathrm{Cu}^{2+}.$ 



### Synthesis and properties of several isomers of the cardioactive steroid ouabain

Bor-Cherng Hong, Seongkon Kim, Tae-Seong Kim and E. J. Corey\*



An efficient and novel method for the synthesis of sulfinate esters under solvent-free conditions pp 2717-2719 Abdol R. Hajipour,\* Ali R. Falahati and Arnold E. Ruoho

+ ROH

DCC

Solvent-free

OR

The use of an ionic liquid in asymmetric catalytic allylic amination Sergey E. Lyubimov,\* Vadim A. Davankov and Konstantin N. Gavrilov

OAc



+ (C<sub>3</sub>H<sub>7</sub>)<sub>2</sub>NH, cat

Silica gel supported TaBr<sub>5</sub>: new catalyst for the facile and rapid cyclization of 2'-aminochalcones to the corresponding 2-aryl-2,3-dihydroquinolin-4(1H)-ones under solvent-free conditions Naseem Ahmed and Johan E. van Lier\*

Me



pp 2721-2723

pp 2725-2729

pp 2711-2715

pp 2731-2734

### Oligo(phenylene vinylene)-poly(methylstyrene) hybrids: controlled step-wise molecular wiring of oligo(phenylene vinylene)

Rethi Madathil,\* Raman Parkesh and Sylvia M. Draper



Oligo(phenylene vinylene) grafted polymers known as oligo(phenylene vinylene)-poly(methylstyrene) hybrids have been developed using a step-wise synthetic protocol.

**Effective synthesis of** *ortho***-substituted triphenol amines via reductive amination** Leonard J. Prins, Myriam Mba Blázquez, Andrej Kolarović and Giulia Licini<sup>\*</sup> pp 2735-2738

pp 2743-2746



# Investigation of the asymmetric Birch reduction–alkylation of a chiral 5-arylbenzamide containing pp 2739–2742 a carbamate group

Agustin Casimiro-Garcia\* and Arthur G. Schultz



# Asymmetric synthesis of $\alpha$ -amino aldehydes from sulfinimine (*N*-sulfinyl imine)-derived $\alpha$ -amino 1,3-dithianes. Formal synthesis of (-)-2,3-*trans*-3,4-*cis*-dihydroxyproline

Franklin A. Davis,\* Tokala Ramachandar, Jing Chai and Eduardas Skucas



Anne-Sophie Chapelon, Cyril Ollivier\* and Maurice Santelli\*



A mild and environmentally acceptable synthetic protocol for chemoselective  $\alpha$ -bromination of  $\beta$ -keto esters and 1,3-diketones

Abu T. Khan,\* Papori Goswami and Lokman H. Choudhury



#### Novel Lewis-base ionic liquids replacing typical anions

Masahiro Yoshizawa-Fujita,\* Katarina Johansson, Peter Newman, Douglas R. MacFarlane and Maria Forsyth



**Protonation and rearrangement of the tricyclo**[4.2.2.2<sup>2,5</sup>]dodeca-3,7,9,11-tetraene scaffold Derong Cao,\* Sheyang Xu, Chunmei Gao and Herbert Meier\*



pp 2747-2750



2660

Synthesis of fused polycyclic nitrogen-containing heterocycles via cascade cyclization Biswajit Saha, Rishi Kumar, Prakash R. Maulik and Bijoy Kundu\*



Nanozipper formation in the solid state from a self-assembling tripeptide with a single tryptophan pp 2771-2774 residue

Sudipta Ray, Michael G. B. Drew, Apurba K. Das, Debasish Haldar and Arindam Banerjee\*

Cu(I)-Catalyzed cycloaddition of constrained azido-alkynes: access to 12- to 17-membered monomeric pp 2775-2778 triazolophanes incorporating furanoside rings

> Cul or Cu<sub>2</sub>SO<sub>4</sub> solvent, 25 °C

Ankur Ray, K. Manoj, Mohan M. Bhadbhade, Ranjan Mukhopadhyay and Anup Bhattacharjya\*

Furanoside ring- and peptide-appended azido-alkynes afforded monomeric 12- to 17-membered triazolophanes fused to furanoside rings via Cu(I)-catalyzed cycloaddition.

A mild access to silver acetylides from trimethylsilyl acetylenes Aurélien Vitérisi, Alban Orsini, Jean-Marc Weibel and Patrick Pale\*

1-Trimethylsilyl-1-alkynes are selectively converted to the corresponding silver acetylides. Silver nitrate or triflate are used under neutral conditions, allowing other functional groups to remain unaffected.

$$R \longrightarrow SiMe_3 \xrightarrow{AgX} R \longrightarrow Ag$$

$$rt, 2-10 min \qquad X=OTf, NO_3$$





2661





pp 2765-2769

2, quant.

THF -78°C -50°C

SO<sub>2</sub> CH<sub>2</sub>Cl<sub>2</sub>

The bora-ene reaction of sulfur dioxide and prop-2-ene-1-boronic esters. New route to sulfoxides Māris Turks, Adrien K. Lawrence and Pierre Vogel\*

Efficient synthesis of enantiomeric pairs of thiolactomycin and its 3-demethyl derivative Kohei Ohata\* and Shiro Terashima





Synthetic utilities of ionic liquid-supported NHPI complex Shinichi Koguchi and Tomoya Kitazume\*



deconiugative asymmetric α-sulfenylation 2 steps Me 4 steps OMe (R)-(+)-thiolactomycin : R = Me (R)-(+)-3-demethylthiolactomycin : R = H MeC

Synthesis of polysubstituted tetrahydrofurans via Pd-catalyzed carboetherification reactions Michael B. Hay and John P. Wolfe\*

OH  

$$4-t-BuC_6H_4Br$$
  
 $Pd_2(dba)_3/P(o-tol)_3$   
 $NaOtBu, Tol., 110 °C$   
 $74 \%, 3:1 dr$   
 $Ar$   
 $H , 0$   
 $Ar$   
 $H , 0$   
 $Ph$   
 $Ar$   
 $Ar$   

pp 2797-2801







pp 2783-2786



pp 2793-2796



# Stereoselective synthesis of 3,4-*trans*-disubstituted pyrrolidines and cyclopentanes via intramolecular pp 2803–2806 radical cyclizations mediated by CAN

Vijay Nair,\* Kishor Mohanan, T. D. Suja and Eringathodi Suresh



TMSI mediated Prins-type cyclization of ketones with homoallylic and homopropargylic alcohol: synthesis of 2,2-disubstituted-, spirocyclic-4-iodo-tetrahydropyrans and 5,6-dihydro-2*H*-pyrans

Gowravaram Sabitha,\* K. Bhaskar Reddy, M. Bhikshapathi and J. S. Yadav



# Intramolecular amidation: synthesis of novel imidazo[2,1-*b*][1,3,4]thiadiazole and imidazo[2,1-*b*][1,3]thiazole fused diazepinones

Gundurao Kolavi, Vinayak Hegde and Imtiyaz Ahmed Khazi\*



Novel heterocyclic systems 5 and 10 have been synthesized by an interesting intramolecular amidation reaction.

# Out-of-plane deformation of the azulene ring in crystal structures of simply substituted azulene derivatives

Akira Ohta, Nguyen Chung Thanh, Kouhei Terasawa, Kunihide Fujimori, Shigeyasu Kuroda and Mitsunori Oda\*



pp 2811-2814

pp 2815-2819

pp 2807-2810

Asymmetric reduction of perfluoroalkyl ketones with chiral lithium alkoxides Yasser Samir Sokeirik, Kazuyuki Sato, Masaaki Omote, Akira Ando<sup>\*</sup> and Itsumaro Kumadaki<sup>\*</sup>

pp 2821–2824



Aryl perfluoroalkyl ketones are reduced with chiral lithium alkoxide with high ee. The chirality of the products depends on the bulkiness of the perfluoroalkyl groups.

On the rapid synthesis of highly substituted proline analogues by 5-endo-trig iodocyclisation pp 2825–2828 Muhammad Amjad and David W. Knight\*



Iodocyclisations of highly substituted  $\alpha$ -sulfonylamino esters give excellent yields of proline analogues, with fair to good levels of stereocontrol.

#### New p-n diblock and triblock oligomers: effective tuning of HOMO/LUMO energy levels

Jun-Hua Wan, Jia-Chun Feng, Gui-An Wen, Hong-Yu Wang, Qu-Li Fan, Wei Wei,\* Chun-Hui Huang and Wei Huang\* <sup>CoH17</sup> <sup>CoH17</sup> <sup>CoH17</sup>



Changing the number of thiophene and oxadiazole units can modulate redox behavior and emission wavelength of the diblock oligomers. Furthermore, the electronic properties can also be significantly modulated by changing the molecular regiochemistry.

A novel route to fully substituted cyanoallenes from three components, ketones, chloromethyl *p*-tolyl sulfoxide, and nitriles, via  $\alpha$ -bromocyclopropyl *p*-tolyl sulfoxides

Tsuyoshi Satoh\* and Youhei Gouda

$$\underset{R^{2}}{\overset{R^{1}}{\longrightarrow}} \underset{R^{2}}{\overset{R^{2}}{\longrightarrow}} \underset{Cl}{\overset{S(O)Tol}{\longrightarrow}} \underset{Cl}{\overset{R^{3}CH(Li)CN}{\longrightarrow}} \underset{R^{2}}{\overset{R^{1}}{\longrightarrow}} \underset{R^{2}}{\overset{CN}{\longrightarrow}} \underset{S(O)Tol}{\overset{(CH_{3})_{2}C(Li)CN}{\longrightarrow}} \underset{R^{2}}{\overset{R^{1}}{\longrightarrow}} \underset{CN}{\overset{R^{3}}{\longrightarrow}} \underset{R^{2}}{\overset{R^{3}}{\longrightarrow}} \underset{CN}{\overset{(CH_{3})_{2}C(Li)CN}{\longrightarrow}} \underset{R^{2}}{\overset{R^{3}}{\longrightarrow}} \underset{CN}{\overset{(CH_{3})_{2}C(Li)CN}{\longrightarrow}} \underset{R^{2}}{\overset{R^{3}}{\longrightarrow}} \underset{CN}{\overset{(CH_{3})_{2}C(Li)CN}{\longrightarrow}} \underset{R^{2}}{\overset{(CH_{3})_{2}C(Li)CN}{\longrightarrow}} \underset{R^{2}}{\overset$$

#### pp 2829-2833

pp 2839-2843

Stereocontrol in ene-dimerisation and trimerisation of 1-trimethylsilyl-3-phenylcyclopropene Andrey E. Sheshenev, Mark S. Baird,\* Anna K. Croft, Zoya A. Starikova, Alexandre S. Shashkov, Alexey L. Zhuze and Ivan G. Bolesov



1-Trimethylsilyl-3-phenylcyclopropene undergoes a highly stereocontrolled ene-reaction to give a dimer and further reaction leads to one or more trimers derived through two ene-reactions.

Full text of this journal is available, on-line from ScienceDirect. Visit www.sciencedirect.com for more information.

Indexed/Abstracted in: AGRICOLA, Beilstein, BIOSIS Previews, CAB Abstracts, Chemical Abstracts, Chemical Engineering and Biotechnology Abstracts, Current Biotechnology Abstracts, Current Contents: Life Sciences, Current Contents: Physical, Chemical and Earth Sciences, Current Contents Search, Derwent Drug File, Ei Compendex, EMBASE/Excerpta Medica, Medline, PASCAL, Research Alert, Science Citation Index, SciSearch

