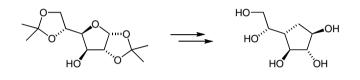


#### Tetrahedron Letters Vol. 48, No. 52, 2007

### Contents

#### COMMUNICATIONS

**First synthesis of 4a-carba-β-D-galactofuranose** Jens Frigell and Ian Cumpstey<sup>\*</sup>



Tandem homolytic addition/substitution sequences and their application to tin-free radical chemistrypp 9077–9079Sofia Lobachevsky, Carl H. Schiesser\* and Vijay GuptaProvide the sequences and the sequences are sequences and the sequences and the sequences are sequences and the sequences are sequences are sequences and the sequences are sequences are sequences and the sequences are sequences are



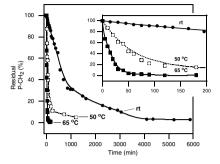
Alkyl pent-4-enyl selenides, pent-4-enylseleno benzoate and phenyl (pent-4-enylseleno)formate act as precursors of alkyl, acyl and oxyacyl radicals by reaction with diethyl 2-phenylselenomalonate under photochemical conditions in a chain mechanism involving tandem homolytic addition/substitution to afford tetrahydroselenophenes and the corresponding phenylselenides.

Asymmetric tosylation of *racemic* 2-hydroxyalkanamides with chiral copper catalyst Osamu Onomura,\* Masaru Mitsuda, My Thi Thuy Nguyen and Yosuke Demizu



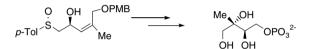
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**Reactivity of trihexyl(tetradecyl)phosphonium chloride, a room-temperature phosphonium ionic liquid** pp 9085–9089 Ming-Chung Tseng, Huang-Chuan Kan and Yen-Ho Chu<sup>\*</sup>



Synthesis of enantiopure 2-C-methyl-D-erythritol-4-phosphate Sadagopan Raghavan<sup>\*</sup> and T. Sreekanth

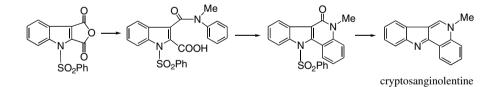




An enantiopure synthesis of 2-C-methyl-D-erythritol phosphate is described.

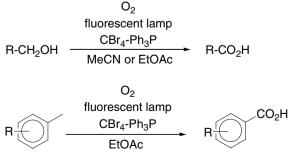
Synthesis of benzo-γ-carboline alkaloid cryptosanginolentine by reaction of indole-2,3-dicarboxylic pp 9093–9095 anhydrides with anilines

Yasuyoshi Miki,\* Makoto Kuromatsu, Hideaki Miyatake and Hiromi Hamamoto



Aerobic oxidation under visible light irradiation of a fluorescent lamp with a combination of carbon pp 9096–9099 tetrabromide and triphenyl phosphine

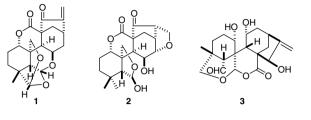
Taichi Sugai and Akichika Itoh\*



#### Sculponins A-C, three new 6,7-seco-ent-kauranoids from Isodon sculponeatus

Li-Mei Li, Guo-You Li, Li-Sheng Ding, Chun Lei, Li-Bin Yang, Yong Zhao, Zhi-Ying Weng, Sheng-Hong Li, Sheng-Xiong Huang, Wei-Lie Xiao, Quan-Bin Han and Han-Dong Sun\*

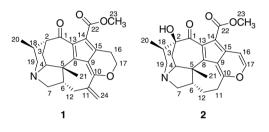
Three new 6,7-*seco-ent*-kauranoids (1–3) were isolated and structures were elucidated from *Isodon sculponeatus*. Diterpenoids 1–3 possessing multicyclic skeletons formed via oxygen atoms are all unprecedented among *ent*-kauranes. Compound 1 displayed significant cytotoxic activity against K562, A549, and HepG2 human tumor cell lines, with  $IC_{50}$  values of 1.4, 2.3, and 2.0  $\mu$ M, respectively, equal to the positive control. Plausible pathways for the biosynthesis of 1 and 2 from one related diterpenoid were also postulated.



#### Paxiphyllines A and B, new alkaloids from Daphniphyllum paxianum

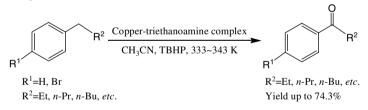
pp 9104-9107

Yu Zhang, Hongping He, Yingtong Di, Shuzhen Mu, Yuehu Wang, Junsong Wang, Chunshun Li, Ningchuan Kong, Suo Gao and Xiaojiang Hao\*



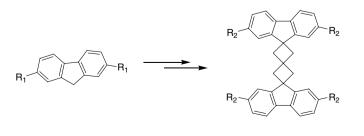
# Copper-triethanolamine complex as efficient and active catalyst for selective oxidation of alkylarenes to pp 9108–9111 phenyl ketones by *tert*-butylhydroperoxide

Mingxia Zhu, Xin Wei, Bodong Li and Youzhu Yuan\*



Several types of alkylarenes were selectively oxidized to the corresponding  $\alpha$ -phenyl ketones in moderate to good selectivities and conversions using *tert*-butylhydroperoxide in the presence of a tetranuclear copper-triethanolamine complex under mild reaction conditions.

**Excellent blue fluorescent trispirobifluorenes: synthesis, optical properties and thermal behaviors** Shuqiang Yu, Haiyao Lin, Zujin Zhao, Zixing Wang and Ping Lu\*





pp 9100–9103

# A practical and enantiospecific conversion of D-galactose to a substituted $\alpha,\beta$ -unsaturated $\delta$ -lactone pp 9116–9119 synthon

Benjamin E. Stephens and Fei Liu\*



A multi-gram synthesis of a substituted  $\alpha,\beta$ -unsaturated  $\delta$ -lactone synthon, 1, was developed from commercially available D-galactose. The use of a Horner–Wadsworth–Emmons reaction was able to furnish, with Z selectivity, the enone ester that spontaneously lactonised to provide enantiomerically pure 1.

**Carbonyl reduction with CaH<sub>2</sub> and R<sub>3</sub>SiCl catalyzed by ZnCl<sub>2</sub>** Akiko Tsuhako, Jing-Qian He, Mariko Mihara, Naoko Saino and Sentaro Okamoto<sup>\*</sup> pp 9120-9123

Ketones and aldehydes were effectively reduced to the corresponding alcohols (or their silyl ethers) by the reaction with  $CaH_2$  and  $R_3SiCl$  in the presence of a catalytic amount of  $ZnCl_2$ . In the absence of the carbonyl substrate, the reagent reduced  $R_3SiCl$  to the corresponding hydrosilane under mild reaction conditions.

Thiol mediated 8-endo-trig radical cyclization: an easy access to medium-sized cyclic ethers K. C. Majumdar,\* P. K. Maji, K. Ray and P. Debnath

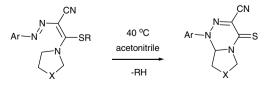
pp 9124-9127

A novel approach to fused 1,2,4-triazines by intramolecular cyclization of 1,2-diaza-1,3-butadienes pp 9128

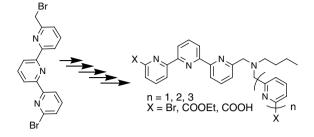
pp 9128–9131

Natalia P. Belskaia,\* Tatyana G. Deryabina, Alexandr V. Koksharov, Mikhail I. Kodess, Wim Dehaen, Albert T. Lebedev and Vasiliy A. Bakulev

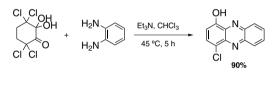
bearing allyl(propargyl)sulfanyl and cyclic tert-amino groups



#### Efficient route to hybrid polypyridine-carboxylate ligands for lanthanide complexation Samir Mameri, Loïc Charbonnière<sup>\*</sup> and Raymond Ziessel<sup>\*</sup>



3,3,6,6-Tetrachloro-2,2-dihydroxycyclohexanone as a synthetic equivalent of unavailable 3-chloro-6hydroxy-1,2-benzoquinone: first synthesis of 4-chloro-1-hydroxyphenazines Antonio Guirado,\* Alfredo Cerezo, José I. López-Sánchez and Delia Bautista



Synthesis of substituted 2-phenylhistamines via a microwave promoted Suzuki coupling Amanda P. Skoumbourdis, Susanna Moore, Marc Landsman and Craig J. Thomas<sup>\*</sup>



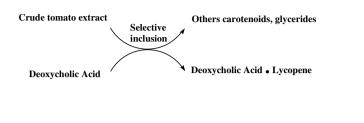
Synthesis and characterization of aryl thioacetyl styrene monomers: towards a new generation of pp 9144–9147 SERS-active polymers

Baker Jawabrah Al-Hourani, Juan P. Bravo-Vasquez, L. R. Hermann High and Hicham Fenniri\*

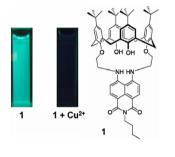


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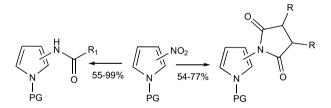
Isolation of lycopene from crude tomato extract via selective inclusion in deoxycholic acid Giancarlo Fantin, Marco Fogagnolo,\* Alessandro Medici and Daniela Perrone



A naphthalimide–calixarene as a two-faced and highly selective fluorescent chemosensor for  $Cu^{2+}$  or  $F^-$  pp 9151–9154 Zhaochao Xu, Suki Kim, Ha Na Kim, Su Jung Han, Chongmok Lee, Jong Seung Kim, Xuhong Qian<sup>\*</sup> and Juyoung Yoon<sup>\*</sup>

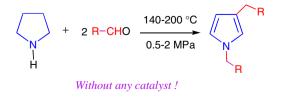


**Reductive acylation of 2- and 3-nitropyrroles**—efficient syntheses of pyrrolylamides and pyrrolylimides pp 9155–9158 Liangfeng Fu and Gordon W. Gribble\*



Both 2- and 3-nitropyrroles are reductively acylated under catalytic hydrogenation conditions in the presence of alicyclic and cyclic carboxylic acid anhydrides to afford the corresponding N-acylated aminopyrroles.

A facile non-oxidative method for synthesizing 1,3-disubstituted pyrroles from pyrrolidine and aldehydes pp 9159–9162 Mitsunori Oda,\* Yosuke Fukuchi, Satoshi Ito, Nguyen Chung Thanh and Shigeyasu Kuroda



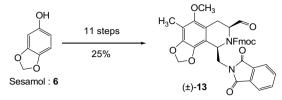
 $(\mathbf{i})^{+}$ 

pp 9148-9150

 $(\mathbf{i})^{+}$ 

#### Synthetic studies towards (±)-phthalascidin 650: synthesis of a fully functionalized N-protected-αamino-aldehyde pp 9163–9166

Sylvain Aubry, Christian R. Razafindrabe, Benjamin Bourdon, Stéphane Pellet-Rostaing and Marc Lemaire\*



Starting from sesamol 6, an efficient synthesis of fully functionalized N-protected  $\alpha$ -amino-aldehyde (±)-13 as a synthetic precursor of the tetrahydroisoquinoline alkaloid phthalascidin 650 is reported.

Synthesis of new-type donor-acceptor  $\pi$ -conjugated benzofuro[2,3-*c*]oxazolo[4,5-*a*]carbazole fluorescent pp 9167–9170 dyes and their photovoltaic performances of dye-sensitized solar cells

3a : n = 1

3b : n = 2

3c : n = 3

34

3f : n = 6

n = 5

TiO<sub>2</sub>

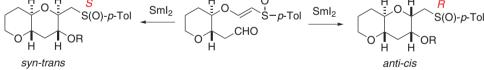
Yousuke Ooyama, Yoshihito Shimada, Yusuke Kagawa, Yuuki Yamada, Ichiro Imae,

Kenji Komaguchi and Yutaka Harima\*

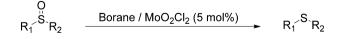
New-type donor-acceptor  $\pi$ -conjugated organic sensitizers for dye-sensitized solar cells, benzofuro[2,3-*c*]-oxazolo[4,5-*a*]carbazole fluorescent dyes with various lengths of non-conjugated alkyl chains containing a carboxyl group at the end position, have been developed.

SmI<sub>2</sub>-induced reductive cyclization of optically active β-alkoxyvinyl sulfoxides with aldehyde Tomohiro Kimura, Mayumi Hagiwara and Tadashi Nakata\*





Reduction of sulfoxides with boranes catalyzed by  $MoO_2Cl_2$ Ana C. Fernandes<sup>\*</sup> and Carlos C. Romão



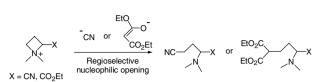
The dioxomolybdenum dichloride, MoO<sub>2</sub>Cl<sub>2</sub>, proved to be an excellent catalyst for the reduction of sulfoxides with boranes.

pp 9176–9179

pp 9171-9175

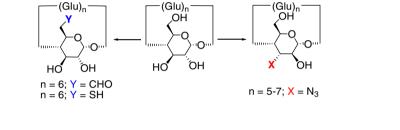
### Opening of azetidinium ions with C-nucleophiles

François Couty,\* Olivier David and Bruno Drouillat



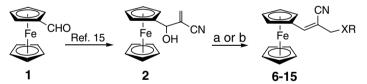
Efficient regioselective functionalizations of cyclodextrins carried out under microwaves or power pp 9185–9189 ultrasound

Katia Martina, Francesco Trotta, Bruna Robaldo, Nikka Belliardi, László Jicsinszky and Giancarlo Cravotto\*



## A facile and efficient stereoselective synthesis of highly functionalised trisubstituted alkene derivatives of pp 9190–9194 ferrocenealdehyde

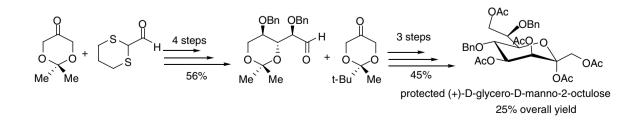
Ponnusamy Shanmugam,\* Vadivel Vaithiyanathan, Baby Viswambharan and Suchithra Madhavan



X= O, C; R= Me, Bn, propargyl, homopropargyl, 2-but-2-yne-1,4-diol a. ROH, 50% w/w Mont.K10, CH<sub>3</sub>CN, reflux; b. ROH, 50% w/w Mont.K10,  $\mu$ w, 10 min

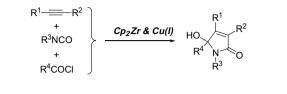
# Building carbohydrates on the dioxanone scaffold: stereoselective synthesis of D-glycero-D-manno-2- pp 9195–9198 octulose

Nagarjuna Palyam, Izabella Niewczas and Marek Majewski\*



pp 9180-9184

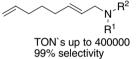
Ken-ichiro Kanno, Shenyong Ren, Yanzhong Li, Kiyohiko Nakajima and Tamotsu Takahashi\*





## Efficient catalysts for telomerization of butadiene with amines pp 9203–9207 Anne Grotevendt, Maribel Bartolome, David J. Nielsen, Anke Spannenberg, Ralf Jackstell, Kingsley J. Cavell, Luis A. Oro and Matthias Beller\* $M^{-H} + R^{-N} + R^{-N$

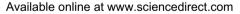
catalyst



Pd/NHC catalysts show unprecedented high catalyst efficiency in telomerization reactions of 1,3-butadiene with amines.

catalyst

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





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