

pp 4545-4548

#### Tetrahedron Letters Vol. 47, No. 27, 2006

### **Contents**

#### COMMUNICATIONS

Mingyi Liao, Suwei Dong, Guisheng Deng and Jianbo Wang\*



Lactones from lactones: regio and diastereoselective double dinucleophilic additions of bis(OTMS) pp 4541–4544 ketene acetals to pyridines

Yiming Xu, Henri Rudler,\* Bernard Denise, Andrée Parlier, Patrick Chaquin and Patrick Herson



# $First\ synthesis\ of\ (+)-8-methoxygoniodiol\ and\ its\ analogue,\ 8-deoxygoniodiol,\ using\ a\ three\ component\ strategy$

François Carreaux,\* Annaick Favre, Bertrand Carboni, Isabelle Rouaud and Joel Boustie



#### **Anti-Markovnikov addition to alkenes with a neighbouring thioacetal function** Tim Bongardt, Sylvia Dreeßen, Ralf Tiedemann and Ernst Schaumann\*

pp 4549-4551



The acid-induced cyclisation of unsaturated thioacetals gives pyrans as anti-Markovnikov products, apparently involving sulfur elimination and readdition.

Selective functionalizations of 2-phenylpyridine: lactones upon organic versus organometallic activations pp 4553–4556 Yiming Xu, Eugenia Aldeco-Pérez, Henri Rudler,\* Andrée Parlier and Cecilio Alvarez



Lactones fused to either of the two aromatic rings are formed in a high diastereoselective way.

### Homologation of α-hydroxy acids to α-unsubstituted β-hydroxy carboxamides via Arndt–Eistert pp 4557–4560 reaction

Jan Spengler,\* Javier Ruíz-Rodríguez, Klaus Burger and Fernando Albericio\*



An olefin cross metathesis approach to C-disaccharide analogs of the  $\alpha$ -D-arabinofuranosyl-(1 $\rightarrow$ 5)- $\alpha$ -D-arabinofuranoside motif found in the mycobacterial cell wall

Grace X. Chang and Todd L. Lowary\*



Young Ku Kang and Dae Young Kim\*



Pyrazine-*N*,*N*-dioxide/tetracyanoethylene electron donor–acceptor bonding and the effect of donor pp 4569–4572 steric demand and symmetry on the cocrystal assembly

Timothy J. Kucharski, Jerry R. Oxsher and Silas C. Blackstock\*

Diethyldimethylpyrazine-N,N'-dioxide (DEDMPDO) assembles with tetracyanoethylene (TCNE) into a 1:1 purple cocrystal giving layered networks cohered by DEDMPDO–TCNE donor–acceptor (DA) bonds. The NO–C intermolecular contacts are 2.81–3.02 Å and the two-dimensional DA bonded network is built from two unique donors and two unique acceptors within the assembly.

### Selective oxidation of sulfides to sulfoxides and sulfones at room temperature using $H_2O_2$ and a Mo(VI) salt as catalyst

Kandasamy Jeyakumar and Dillip Kumar Chand\*



 $\begin{array}{l} (a)\ MoO_2Cl_2\ (1.5\ mol\%),\ 30\%\ H_2O_2\ (1.05\ equiv),\ acetone:water\ (1.5:1),\ rt; \\ (b)\ MoO_2Cl_2\ (15\ mol\%),\ 30\%\ H_2O_2\ (4\ equiv),\ acetonitrile,\ rt. \end{array}$ 

# Unique blue shift due to the formation of static pyrene excimer: highly selective fluorescent chemosensor for ${\rm Cu}^{2+}$

Eun Jin Jun, Han Na Won, Jong Seung Kim, Keun-Hyeung Lee and Juyoung Yoon\*



pp 4565-4568



pp 4577-4580

pp 4573-4576

## Site directed nuclear bromination of aromatic compounds by an electrochemical method T. Raju,\* K. Kulangiappar, M. Anbu Kulandainathan, U. Uma, R. Malini and A. Muthukumaran



### Tandem enlargement of the tetrahydropyridine ring in 1-aryl-tetrahydroisoquinolines using activated pp 4585–4589 alkynes—a new and effective synthesis of benzoazocines

Leonid G. Voskressensky,\* Tatiana N. Borisova, Anna V. Listratova, Larisa N. Kulikova, Alexander A. Titov and Alexey V. Varlamov



#### **Development of a scalable synthesis of a nonbasic inhibitor of the serine protease tryptase** Jeffrey M. Dener,\* Colin O'Bryan, Robert Yee, Emma J. Shelton, David Sperandio, Tania Mahajan, James T. Palmer, Jeffrey R. Spencer and Zhiwei Tong



## Reduction of mononitroarenes by hydroxide ion in water catalyzed by β-cyclodextrin: enhanced pp 4597–4599 reactivity of hydroxide ion

Yun Lu,\* Jiancheng Liu, Garry Diffee, Diansheng Liu and Bo Liu\*



G = *m*-Cl, *p*-Cl, *p*-Br, *p*-*I*, *m*-CH<sub>3</sub>, *m*-OCH<sub>3</sub>

pp 4581-4584

pp 4591-4595

Athula Attygalle,\* Josef Ruzicka, Deepu Varughese and Jafri Saved



A mass spectrometric peak for a carboxylate anion was observed in collision-induced dissociation (CID) mass spectra of negative ions derived from ortho isomers of hydroxyphenyl carbaldehydes and ketones.

Microwave promoted energy-efficient N-formylation with aqueous formic acid Ajay K. Bose,\* Subhendu N. Ganguly, Maghar S. Manhas, Atri Guha and Esteban Pombo-Villars

pp 4605-4607

N — H + НСООН <u>МW</u> P' 2-5 min

Formic acid (80%) under MW irradiation converts primary and secondary amines to N-formyl compounds in 80-90% yield.

#### Improved solubility and stability of trialkylammonium selenocarboxylate in organic solvents for pp 4609-4613 efficient amidation with azides

Prathima Surabhi, Xinghua Wu and Longqin Hu\*

$$Ph \underbrace{Se_{2}}_{Se_{2}} Ph \underbrace{MeCN}_{Se_{2}} Ph \underbrace{MeCN}_{Se_{2}} Ph \underbrace{Ph}_{N} \underbrace{Ph}_{Se_{2}} Ph \underbrace{Ph}_{N} \underbrace{Ph}_{Se_{2}} Ph \underbrace{Ph}_{N} \underbrace{Ph}_{N} \underbrace{Ph}_{Se_{2}} \underbrace{Ph}_{Se_{2}} \underbrace{Ph}_{N} \underbrace{Ph}_{N} \underbrace{Ph}_{Se_{2}} \underbrace{Ph}_{Se_{2}} \underbrace{Ph}_{N} \underbrace{Ph}_{N} \underbrace{Ph}_{N} \underbrace{Ph}_{Se_{2}} \underbrace{Ph}_{Se_{2}} \underbrace{Ph}_{N} \underbrace{P$$

Trialkylammonium selenocarboxylate has good solubility and stability in organic solvents and reacts readily with azides to form amides.

Highly efficient trialkylsilylcyanation of aldehydes, ketones and imines catalyzed by a nucleophilic pp 4615-4618 N-heterocyclic carbene

Taichi Kano, Kouji Sasaki, Teppei Konishi, Haruka Mii and Keiji Maruoka\*



pp 4601-4603

pp 4619-4622

An effective method to use ionic liquids as reaction media for asymmetric reduction by





A chiron approach starting with D-glucose, using a Grignard reaction and a Mitsunobu stereoinversion followed by stereoselective 1,2-syn reduction of the  $\beta$ -ketoester has been applied to execute the total synthesis.

# Synthesis and characterization of Boc-protected 4-amino- and 5-amino-pyrrole-2-carboxylic acid pp 4631–4634 methyl esters

Tushar Kanti Chakraborty,\* Sandip P. Udawant, Saumya Roy, Bajjuri Krishna Mohan, Kolla Srinivasa Rao, Samit Kumar Dutta and Ajit Chand Kunwar\*



Efficient route for the synthesis of 3,4-cycloalkoxy-2,5-diethoxycarbonyl-thiophenes obtained with bulky alkyl dibromides using trialkylamines as base-solvent

Bernardo A. Frontana-Uribe\* and Jürgen Heinze\*



Structure–biodistribution relation of neutral <sup>99m</sup>Tc(CO)<sub>3</sub>-complexes with tridentate N-substituted pp 4641–4645 derivatives of aminoethylglycine and phenylenediamine

Dirk Rattat, Jan Cleynhens, Christelle Terwinghe, An-Elisabeth De Greve and Alfons Verbruggen\*

The <sup>99m</sup>Tc-tricarbonyl complexes [<sup>99m</sup>Tc(CO)<sub>3</sub>(DBu)] (DBu = N,N'-dibutyl-ethylenediamine-N-acetic acid), [<sup>99m</sup>Tc(CO)<sub>3</sub>(PDAA)] (PDAA = *ortho*-phenylenediamine-N-acetic acid) and [<sup>99m</sup>Tc(CO)<sub>3</sub>(MPDAA)] (MPDAA = N-methyl-*ortho*-phenylenediamine-N-acetic acid) showed brain uptake in mice. With these compounds as examples, <sup>99m</sup>Tc-tricarbonyl complexes may also be considered as potential brain imaging agents.

Unsymmetrically substituted four-armed tolanes: new multichromophoric molecules Juan Tolosa, Enrique Díez-Barra, Prado Sánchez-Verdú and Julián Rodríguez-López\*



A convenient method for N-1 arylation of uracil derivatives Andrzej Gondela and Krzysztof Walczak\*



1-(4-Nitrophenyl)- and 1-(2,4-dinitrophenyl)uracil derivatives were prepared by direct arylation of uracil and its 5-substituted derivatives using 1-fluoro-4-nitrobenzene or 1-fluoro-2,4-dinitrobenzene. The application of 1-(2,4-dinitrophenyl)-5-nitrouracil in ANRORC type reactions is also presented.

pp 4647-4651

pp 4653-4657

A route to 1,2-diols by enantioselective organocatalytic  $\alpha$ -oxidation with molecular oxygen Ismail Ibrahem, Gui-Ling Zhao, Henrik Sundén and Armando Córdova<sup>\*</sup>

#### pp 4659-4663

 $1_{O_2} + H_R + H_R + \frac{(20 \text{ mol}\%)}{CHCl_3, 0 \circ C, 6 \text{ h}} + \frac{NaBH_4}{MeOH} + \frac{HO_{,,}}{R} + H_2O_{,,} + H$ 

#### Efficient and simple synthesis of 3-aryl-1*H*-pyrazoles

#### pp 4665-4669

Anne-Laure Gérard, Alexandre Bouillon, Clément Mahatsekake, Valérie Collot and Sylvain Rault\*



Mild generation of *o*-quinodimethanes via fluoride induced 1,4-elimination of  $\alpha$ -(*o*-trimethylsilylmethyl)- pp 4671–4675 benzylesters: stereoselective synthesis of 19-nor steroids and RU486 precursors Marc Port and Robert Lett<sup>\*</sup>



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pp 4677-4681

Reappraisal of the diastereoselectivity of intramolecular Diels-Alder reactions of some *o*-quinodimethanes generated by benzocyclobutene thermolysis: some complementary results and an improvement





Step-controlled synthesis of platinum(II) acetylide frameworks from conjugated polyaromatic modules pp 4687–4692 Raymond Ziessel\* and Stéphane Diring



### Novel diapocarotenoid dications with VIS/NIR absorption

pp 4693-4696

Geir Kildahl-Andersen, Thorleif Anthonsen and Synnøve Liaaen-Jensen\*



 $C_{10}$ -,  $C_{20}$ - and  $C_{24}$  carbodications with 6, 14 and 18  $\pi$  electrons were prepared and characterized.

**Ytterbium triflate catalyzed synthesis of β-keto enol ethers** Massimo Curini,\* Francesco Epifano and Salvatore Genovese



pp 4697-4700

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4532

A simple and stereodivergent strategy for the synthesis of 3'-C-branched 2',3'-dideoxynucleosides exploiting (Z)-but-2-en-1,4-diol and (R)-2,3-cyclohexylideneglyceraldehyde Angshuman Chattopadhyay,\* Dibakar Goswami and Bhaskar Dhotare



Directed regioselectivity of bromination of ketones with NBS: solvent-free conditions versus water pp 4707–4710 Igor Pravst, Marko Zupan and Stojan Stavber\*



#### Synthesis of electrochemically active pyrazine based dendrimers Perumal Rajakumar<sup>\*</sup> and Kilivelu Ganesan



### Synthesis and characterization of spin-coatable *tert*-amine molecules for hole-transport in organic pp 4715–4719 light-emitting diodes

A. Mishra,\* P. K. Nayak, D. Ray, M. P. Patankar, K. L. Narasimhan and N. Periasamy\*



pp 4711-4714

#### Syntheses of 2-arylated 1-benzazocines via Beckmann rearrangement Zhibo Ma, Shengjun Dai and Dequan Yu\*



### Stereochemistry of a cubane-like photodimer of methyl 2-naphthoate

Lei Lei, Li-Zhu Wu,\* Xiao-Ling Wu, Gui-Hong Liao, Lin Luo, Li-Ping Zhang, Chen-Ho Tung\* and Kui-Ling Ding



A novel type of  $C_2$ -symmetric-chiral ligand, based on a cubane-like photodimer 1 of methyl 2-naphthoate, is reported. Crystal analysis reveals that the methyl carboxylate functionality is in an *anti*-head-to-head conformation and 1 is highly rigid. The racemic mixture of 1 has been successfully resolved into its optically pure enantiomers simply by HPLC.

### Hg(OTf)<sub>2</sub>-catalyzed glycosylation using alkynoate as the leaving group

Hiroshi Imagawa,\* Atsushi Kinoshita, Takashi Fukuyama, Hirofumi Yamamoto and Mugio Nishizawa\*



Synthesis of tunable phosphinite-pyridine ligands and their applications in asymmetric hydrogenationpp 4733-4736Qi-Bin Liu, Chang-Bin Yu and Yong-Gui Zhou\*



A new class of modular conformationally rigid N,P ligands is conveniently synthesized from readily available starting material. Iridium complexes with these ligands have demonstrated excellent enantioselectivity (up to 99% ee) in the asymmetric hydrogenation of aryl alkenes.

pp 4725-4727

4533

Highly efficient synthesis of 4-trifluoromethylfuran derivatives via a sequential deprotection-annulation pp 4737–4739 reaction

Jiming Zhang, Xiaoming Zhao, Youhua Li and Long Lu\*







(R = alkyl, aryl; R' = alkyl, H; R" = THP, MOM, MEM, BOM)



We synthesized amphiphilic polymer-supported *N*-heterocyclic carbene (NHC) precursor resins by loading polyethylene glycol (PEG) containing imidazolium groups on Merrifield resin. These PS–PEG–NHC precursor resins were compatible with water and readily formed a stable complex with palladium. These PS–PEG–NHC–Pd catalysts showed excellent catalytic activity for Suzuki cross-coupling reactions of various aryl iodides and bromides with phenylboronic acid in water than the previously described polystyrene based catalysts. In addition, the PS–PEG–NHC–Pd catalysts continued to provide excellent catalytic activity in Suzuki cross-coupling reactions after five consecutive recycles.

**Gold-catalyzed intramolecular hydroamination of allenes: a case of chirality transfer** Nitin T. Patil, Léopold Mpaka Lutete, Naoko Nishina and Yoshinori Yamamoto\* pp 4749-4751

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### Samarium dienolate mediated stereoselective synthesis of *anti*-1,3-diol monoesters via aldol-Tishchenko reaction

Vichai Reutrakul,\* Jaray Jaratjaroonphong, Patoomratana Tuchinda, Chutima Kuhakarn, Palangpon Kongsaeree, Samran Prabpai and Manat Pohmakotr\*



Chloride based ionic liquids as promoting agents for Meerwein reaction in solventless conditions pp 4759–4762 Piero Mastrorilli, Cosimo F. Nobile<sup>\*</sup> and Nicola Taccardi

$$(Ar-N_2)_2$$
 ZnCl<sub>4</sub> +  $(Ar-N_2)_2$  ZnCl<sub>4</sub> +  $(Ar-R')_2$  (dbim)Cl  $(Ar-N_2)_2$  ZnCl<sub>4</sub> +  $(Ar-R')_2$  (dbim)Cl  $(Ar-N_2)_2$  (dbim)C

The Meerwein reaction was carried out in solventless conditions using 1,3-dibutylimidazolium chloride in the presence of a bimetallic Zn/Cu catalyst.

Skeletal diversity by allylation/RCM on Ugi four-component coupling reaction products Masato Oikawa,\* Shinya Naito and Makoto Sasaki



A diversity-oriented synthetic process toward structurally diverse peptidomimetics has been developed.

Design and synthesis of a 1,5-diazabicyclo[6,3,0] dodecane amino acid derivative as a novel dipeptide pp 4769–4770 reverse-turn mimetic

Yuefeng Peng, Haiying Sun and Shaomeng Wang\*



pp 4753-4757

pp 4763-4767

### Facile preparation of bis(thiocarbonyl)disulfides via elimination

Wolfgang G. Weber, James B. McLeary\* and Ron D. Sanderson

pp 4771-4774



The preparation of disulfides of thiocarbonyl compounds is currently of great importance for the preparation of free radical polymerization mediating agents. An efficient elimination approach to these species is presented.

## 2,4,6-Trichloro-1,3,5-triazine catalyzed synthesis of thiiranes from oxiranes under solvent-free pp 4775–4777 and mild conditions

B. P. Bandgar,\* Neeta S. Joshi and V. T. Kamble



#### **OTHER CONTENTS**

#### Corrigendum

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