

### Tetrahedron Letters Vol. 47, No. 30, 2006

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Suzuki reaction of cyclopenta[d][1,2]oxazine in aqueous solvent with water-soluble phosphine ligandpp 5237–5240Sung Yun Cho,\* Seung Kyu Kang, Jin Hee Ahn, Jae Du Ha and Joong-Kwon Choipp 5237–5240



**Fluorescent anion sensors based on 4-amino-1,8-naphthalimide that employ the 4-amino N–H** Frederick M. Pfeffer,\* Marianne Seter, Naomi Lewcenko and Neil W. Barnett pp 5241-5245

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# Spirobicyclic diamines. Part 2: Synthesis of homochiral diastereoisomeric proline derived [4.4]-spirolactams

Fintan Kelleher\* and Sinead Kelly



Reductive amination of homochiral primary amines ((R)- or (S)- $\alpha$ -methylbenzylamine, and (R)- or (S)-alanine methyl ester) with a racemic proline derived aldehyde, followed by cyclisation, gave diastereoisomeric [4.4]-spirolactams.

#### Total synthesis of (±)-pentenomycin

Faiz Ahmed Khan\* and Bhimsen Rout



A concise stereoselective route to (±)-pentenomycin 1 in 33% overall yield starting from the readily accessible Diels-Alder adduct 4 is reported. The key reaction involves decarbonylation of a  $\beta$ -methoxy- $\alpha$ ,  $\beta$ -unsaturated aldehyde.

Lewis acid mediated functionalization of β-lactams: mechanistic study and synthesis of C-3 pp 5255-5259 unsymmetrically disubstituted azetidin-2-ones

MeC

PhS ď

Aman Bhalla, Suman Rathee, Sachin Madan, Paloth Venugopalan and Shamsher S. Bari\*

Lewis acid  $Nu^1 = C_6H_5OMe$ 



### pressure-driven flow reactor

Charlotte Wiles, Paul Watts\* and Stephen J. Haswell



Increased demand for efficient and cost effective synthetic techniques remains the driving force behind the development of alternative methodologies. With this in mind, we describe the use of continuous flow reactors for the selective oxidation of primary alcohols to aldehydes or carboxylic acids depending on the flow rates, and hence residence times, employed.

#### Synthesis of covalently bonded nanostructure from two porphyrin molecular wires leading to a molecular tube

Tamao Ishida, Yasuhiro Morisaki and Yoshiki Chujo\*



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Highly stereoselective synthesis of C-(alkynyl)-pseudoglycals from  $\delta$ -hydroxy- $\alpha$ , $\beta$ -unsaturated aldehydes pp 5269–5272 J. S. Yadav,\* A. Krishnam Raju and V. Sunitha



An efficient methodology for the synthesis of C-(alkynyl)-pseudoglycals from  $\delta$ -hydroxy- $\alpha$ , $\beta$ -unsaturated aldehydes and alkynyl silyl acetylenes has been developed.

Enzymatic kinetic resolution of 1,1-dioxo-2,3-dihydro-1H-1 $\lambda^6$ -thiophen-3-ol via temporary derivatisation

Ben S. Morgan, Stanley M. Roberts and Paul Evans\*



## Microwave-assisted asymmetric ring opening of *meso*-epoxides with aromatic amines catalyzed by a Ti-S-(-)-BINOL complex

Rukhsana I. Kureshy,\* Surendra Singh, Noor-ul H. Khan, Sayed H. R. Abdi, Santosh Agrawal, Vishal J. Mayani and Raksh V. Jasra



A chiral iron(II)–*pybox* catalyst stable in aqueous media. Asymmetric Mukaiyama–aldol reaction Joanna Jankowska, Joanna Paradowska and Jacek Mlynarski<sup>\*</sup>



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# Catalytic asymmetric dihydroxylation of olefins using polysulfone-based novel microencapsulated pp 5285–5288 osmium tetroxide

S. Malla Reddy, M. Srinivasulu, Y. Venkat Reddy, M. Narasimhulu and Y. Venkateswarlu\*



### A stereoselective synthesis of the C11–C19 fragment of (+)-peloruside A

Zhen-liang Chen and Wei-shan Zhou\*



A new route to the synthesis of the C11-C19 fragment of peloruside A is described.

Synthetic routes for naturally-occurring arsenic-containing ribosides Pedro Traar and Kevin A. Francesconi\* pp 5293-5296

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Enantioselective olefin epoxidation using homologous amine and iminium catalysts—a direct comparison pp 5297–5301 Maria-Héléna Gonçalves, Alexandre Martinez, Stéphane Grass, Philip C. Bulman Page and Jérôme Lacour\*



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Synthesis of polynuclear aromatic compounds through net [5+5]-cycloaddition of 2-alkynylarylcarbene pp 5303–5306 complexes and enyne–aldehyde derivatives

Yanshi Zhang and James W. Herndon\*



### Nucleophile-assisted Pt-catalyzed cyclization of enynones: an access to synthesis of highly substituted furans

Chang Ho Oh,<sup>\*</sup> V. Raghava Reddy, Ahyun Kim and Chul Yun Rhim



A new and efficient Pt-catalyzed hydroxy- or alkoxy cyclization of 2-(1-alkynyl)-2-alkene-1-ones offers a general synthetic pathway to a wide range of highly substituted furans in good to excellent yields.

## Toward the synthesis of xestocyclamine A: investigation of double Michael reaction and direct aza Diels-Alder reaction

Heedong Yun, Alexandre Gagnon and Samuel J. Danishefsky\*



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José María Andrés, Rafael Pedrosa\* and Alfonso Pérez-Encabo



A new convenient method for the synthesis of  $[2-^{11}C]$ thymine utilizing  $[^{11}C]$ phosgene Kazue Ohkura,\* Ken-ichi Nishijima, Kimihito Sanoki, Yuji Kuge, Nagara Tamaki and Koh-ichi Seki\*

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A novel strategy for oligopeptide synthesis using a polymer-supported ammonium fluoride Michio Kurosu\* and Dean C. Crick



#### Calycilactone A, a novel hexacyclic alkaloid from Daphniphyllum calycillum

Ying-Tong Di, Hong-Ping He, Hai-Yang Liu, Zhi-Zhi Du, Jun-Mian Tian, Xian-Wen Yang, Yue-Hu Wang and Xiao-Jiang Hao\*



Intermolecular palladium-catalyzed coupling of 2-halopyridines and alcohols for the preparation of pyridine ether PPAR agonists

pp 5333-5336

Paul S. Humphries,\* Simon Bailey,\* Quyen-Quyen T. Do, Jack H. Kellum, Guy A. McClellan and David M. Wilhite



### A mild and practical deprotection method for benzyl thioethers

Atsushi Akao,\* Nobuaki Nonoyama and Nobuyoshi Yasuda



### An efficient electrophilic N-amination utilizing in situ generated chloramine under phase transfer pp 5341–5343 conditions

Apurba Bhattacharya,\* Nitin C. Patel, Robert Erik Plata, Michael Peddicord, Qingmei Ye, Luca Parlanti, Venkatapuram A. Palaniswamy and John A. Grosso



An efficient, one-pot, phase transfer N-amination technology was developed. The protocol utilizes chloramine, an inexpensive and safe electrophilic aminating agent potentially viable for commercial manufacturing.

## Molecular iodine in isopropenyl acetate (IPA): a highly efficient catalyst for the acetylation of alcohols, amines and phenols under solvent free conditions

Naseem Ahmed and Johan E. van Lier\*



### $BF_3{\cdot}Et_2O{\text{-induced Beckmann rearrangement of 23-hydroxyiminosapogenins.}}\ A$ shortcut to bisnorcholanic lactones

pp 5351-5353

pp 5345-5349

Martín A. Iglesias-Arteaga\* and Angel A. Alvarado-Nuño



Treatment of different 23-hydroxyiminosapogenins with  $BF_3$ ·Et<sub>2</sub>O in acetic acid produced good yields of the corresponding bisnorcholanic lactones as the sole products.

#### pp 5337-5340

#### An improved synthesis of Lu AA20465

Eva A. Krafft, Emmanuel Pinard and Andrew W. Thomas\*



An improved synthesis of Lu AA20465 is reported where the key steps include a regioselective amination reaction, a chemoselective reduction of an aryl nitro group, a diazotization and iodination sequence under nonaqueous conditions and a copper catalyzed thioarylation reaction.

A mild, one-pot synthesis of disubstituted benzimidazoles from 2-nitroanilines Keith R. Hornberger,\* George M. Adjabeng, Hamilton D. Dickson and Ronda G. Davis-Ward pp 5359-5361

 $\begin{array}{c} NO_{2} \\ NO_{2} \\ N \\ N \\ R^{2} \end{array} \begin{array}{c} H_{2}, Pd/C \\ cat. PPTS \\ HC(OMe)_{3}/EtOAc \\ RT \\ R^{2} \end{array} \begin{array}{c} N \\ N \\ R^{2} \end{array} \begin{array}{c} N \\ R^{2} \end{array}$ 

# N-Substituted C-diethoxyphosphorylated nitrones as useful synthons for the synthesis of $\alpha$ -aminophosphonates

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Dorota G. Piotrowska



Novel recoverable catalysts for asymmetric transfer hydrogenation Wei He, Bang-Le Zhang, Ru Jiang, Peng Liu, Xiao-Li Sun and Sheng-Yong Zhang\*



9-Amino(9-deoxy)epiquinine and 9-amino(9-deoxy)epicinchonine were successfully applied in asymmetric transfer hydrogenation in both iridium and rhodium catalytic systems. Moreover, the Ir complex and Rh complex of 9-amino(9-deoxy)epicinchonine were recovered in high yields with dilute hydrochloric acid.

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# Practical aldol reaction of trimethylsilyl enolate with aldehyde catalyzed by *N*-methylimidazole pp 5371–5373 as a Lewis base catalyst provide the provided statement of the

Hisahiro Hagiwara,\* Hideyuki Inoguchi, Masakazu Fukushima, Takashi Hoshi and Toshio Suzuki



### Detection of a diradical intermediate in the cis–trans isomerization of 5,5'-bis(4,5-diphenyl-2*H*-imidazol-2-ylidene)-5,5'-dihydro- $\Delta^{2,2'}$ -bithiophene

Masatoshi Kozaki, Asuka Isoyama and Keiji Okada\*



# Silyl-enolization-asymmetric Claisen rearrangement of 2-allyloxyindolin-3-one: enantioselective total synthesis of 3a-hydroxypyrrolo[2,3-b]indoline alkaloid alline

pp 5379-5382

pp 5375-5378

Tomomi Kawasaki,\* Wataru Takamiya, Naoki Okamoto, Miyuki Nagaoka and Tetsuya Hirayama



An approach to the Paal–Knorr pyrroles synthesis catalyzed by Sc(OTf)<sub>3</sub> under solvent-free conditions pp 5383–5387 Jiuxi Chen, Huayue Wu, Zhiguo Zheng, Can Jin, Xingxian Zhang and Weike Su<sup>\*</sup>



A facile synthesis of N-substituted pyrroles by the Paal–Knorr condensation has been accomplished using a simple procedure. Among different metal triflates screened, 1 mol %  $Sc(OTf)_3$  efficiently promoted the reaction in excellent yield (89–98%) under mild reaction conditions. Additionally,  $Sc(OTf)_3$  could be recovered easily after the reactions were completed and reused without evident loss of activity.

## A regioselective synthesis of aryl substituted arylacetates through ring transformation by ethyl levulinate

Ramendra Pratap and Vishnu Ji Ram\*



A convenient synthetic route to 2-aryl-N-tosylazetidines and their  $ZnX_2$  (X = I, OTf) mediated regioselective nucleophilic ring opening reactions: synthesis of  $\gamma$ -iodoamines and tetrahydropyrimidines Manas K. Ghorai,\* Kalpataru Das, Amit Kumar and Animesh Das



Copper(II) triflate promoted cycloaddition of  $\alpha$ -alkyl or aryl substituted *N*-tosylaziridines with nitriles: pp 5399–5403 a highly efficient synthesis of substituted imidazolines

Manas K. Ghorai,\* Koena Ghosh and Kalpataru Das

 $( \begin{array}{c} R^{1} \\ R^{2} \end{array} ) = R^{2} \\ R^{1} = Ar, alkyl; R^{2} = H; R^{1}, R^{2} = -(CH_{2})_{4} - R = CH_{3}, Ph, 4-EtC_{6}H_{4} \\ \end{array}$ 

## On the protonation of a macrobicyclic cage: an inert tribenzylamine fragment and three robust aminophosphonium units

Mateo Alajarín,\* Carmen López-Leonardo, José Berná and Jonathan W. Steed\*



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#### Convergent route to the purpuromycin bisphenolic spiroketal: hydrogen bonding control of spiroketalization stereochemistry

Stephen P. Waters, Michael W. Fennie and Marisa C. Kozlowski\*



A mild and efficient [3+2] nitrile oxide/olefin cycloaddition provided a rapid and convergent entry into precursors of bisphenolic spiroketals, a structural type unique to the rubromycin family of natural products. In addition, implementation of the premise that a hydrogen bond from the C4-OH controls the stereochemistry of the purpuromycin core resulted in moderate diastereocontrol in the spiroketalization. Spectroscopic and X-ray data of these systems have provided the first assignment of the relative configuration of purpuromycin.

### The first total synthesis and structural determination of actinopyrone A Seijiro Hosokawa,\* Kazuva Yokota, Keisuke Imamura, Yasuaki Suzuki, Masataka Kawarasaki



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#### Corrigendum

\*Corresponding author

(*i*)<sup>+</sup> Supplementary data available via ScienceDirect

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