

#### Tetrahedron Vol. 60, No. 9, 2004

#### **Contents**

#### **REPORT**

### Indium- and gallium-mediated carbon-carbon bond-forming reactions in organic synthesis

pp 1959-1982

Vijay Nair,\* Sindu Ros, C. N. Jayan and Bindu S. Pillai

i. In, NaI, DMF, 5 min, 97% ii. Ga, KI, LiBr, THF, 70 °C, 6 h, 62%

The carbon-carbon bond forming reactions mediated by indium as well as gallium are reviewed.

#### **ARTICLES**

#### The first total synthesis and determination of the absolute configuration of chapecoderin A, B and C

pp 1983-1989

Hisahiro Hagiwara,\* Fumihide Takeuchi, Masato Nozawa, Takashi Hoshi and Toshio Suzuki

#### The azaphilic addition of organometallic reagents on tetrazines: scope and limitations

pp 1991-1996

János Faragó, Zoltán Novák, Gitta Schlosser, Antal Csámpai and András Kotschy\*



### Pyrazino-tetracyanonaphthoquinodimethanes: sterically deformed electron acceptors affording zwitterionic radicals

pp 1997-2003

Takanori Suzuki,\* Setsuko Miyanari, Hidetoshi Kawai, Kenshu Fujiwara, Takanori Fukushima, Tsutomu Miyashi and Yoshiro Yamashita

# Dynamic NMR investigation of two new interconvertible diasteriomeric epimers of natural 2-benzyl-2-hydroxybenzofuranone derivative from *Pterocarpus marsupium*

pp 2005-2010

Rajesh K. Grover, Rakesh Maurya\* and Raja Roy\*

#### (i)<sup>+</sup>

#### Synthesis of phenylethyne-linked porphyrin dyads

pp 2011-2023

Kin-ya Tomizaki, Andrey B. Lysenko, Masahiko Taniguchi and Jonathan S. Lindsey\*

## Total synthesis of apigenin 7,4'-di-O- $\beta$ -glucopyranoside, a component of blue flower pigment of Salvia patens, and seven chiral analogues

pp 2025-2034

Kin-ichi Oyama and Tadao Kondo\*

#### Synthesis of $\beta\text{-lactams}$ and $\beta\text{-aminoesters}$ via high intensity ultrasound-promoted Reformatsky reactions

pp 2035-2041

Nathan A. Ross, Robert R. MacGregor and Richard A. Bartsch\*

$$R = OMe, CI, R' = Ph, p-MeOC_6H_4, p-CIC_6H_4,$$

$$R' = Ph, p-MeOC_6H_4, p-CIC_6H_4,$$

 $\begin{array}{ll} \text{R = OMe, CI,} & \text{R' = Ph, $\rho$-MeOC}_6\text{H}_4$, $\rho$-CIC}_6\text{H}_4$, \\ \text{CF}_3$, $\text{NMe}_2$ & $\rho$-CF}_3\text{C}_6\text{H}_4$, $o$-MeOC}_6\text{H}_4$, $o$-EtC}_6\text{H}_4$, \\ \text{Me, Bn, $t$-Bu, $SO}_2\text{C}_6\text{H}_4$ & \\ \end{array}$ 



### Complexing properties of two benzocrown-ether moieties arranged at a cyclobutane ring system

pp 2043-2050

Seiichi Inokuma, Takashi Funaki, Shin-ichi Kondo and Jun Nishimura\*

### Facile synthesis of bis(indolyl)methanes using catalytic amount of iodine at room temperature under solvent-free conditions

pp 2051-2055

Shun-Jun Ji,\* Shun-Yi Wang, Yong Zhang and Teck-Peng Loh\*

#### Ring-opening reaction of methylenecyclopropanes with LiCl, LiBr or NaI in acetic acid

pp 2057-2062

Jin-Wen Huang and Min Shi\*

$$R^{1}$$
  $R^{2}$   $R^{2$ 

The reactions of MCPs 1 with LiCl, LiBr or NaI in acetic acid at 80 °C produce the corresponding homoallylic halides in good to excellent yields.

### Novel multiply hydrogen-bonded heterodimers based on heterocyclic ureas. Folding and stability

pp 2063-2069

Xiao-Qiang Li, Xi-Kui Jiang, Xiao-Zhong Wang and Zhan-Ting Li\*

### An auxiliary induced asymmetric synthesis of functionalized cyclobutanes by means of catalytic (2+2)-cycloaddition reaction

pp 2071-2078

Kiyosei Takasu,\* Satoshi Nagao, Megumi Ueno and Masataka Ihara\*

$$R^{1} = 8-\text{phenylmenthyl}$$

$$R^{2} = 8-\text{phenylmenthyl}$$

$$R^{2} = 8-\text{phenylmenthyl}$$

$$R^{3} = 8-\text{phenylmenthyl}$$

### Improved synthesis of 6-amino-6-deoxy-D-galactono-1,6-lactam and D-mannono-1,6-lactam from corresponding unprotected D-hexono-1,4-lactones

pp 2079-2081

Ludovic Chaveriat, Imane Stasik,\* Gilles Demailly and Daniel Beaupère

# Aza-Baylis-Hillman reactions of diisopropyl azodicarboxylate or diethyl azodicarboxylate with acrylates and acrylonitrile

pp 2083-2089

Min Shi\* and Gui-Ling Zhao

The aza-Baylis-Hillman reaction of DIAD or DEAD with various acrylates and acrylonitrile proceeds smoothly in the presence of DABCO in THF or DMF to give the corresponding adducts in moderate to good yields.

# Asymmetric aldol reactions using catalytic D(+)-proline: a new, economic and practical approach to a commonly employed C1–C6 keto-acid synthon of the epothilones

pp 2091-2095

Yansong Zheng and Mitchell A. Avery\*

#### Highly diastereoselective conjugate additions of monoorganocopper reagents to chiral imides

pp 2097-2110

Jesse Dambacher, Robert Anness, Patrick Pollock and Mikael Bergdahl\*

Presence of TMSI in the conjugate additions of Li[RCuI] to various chiral imides are described. TMSI is crucial for the conjugate additions, but only in THF or when 12-crown-4 is used. The reaction is thought not to involve any halosilane in any critical steps in ether. The CuI/DMS complex plays an instrumental role for high yield as well as stereoselectivity.

### Synthesis of enantiomeric-pure cyclohexenyl nucleoside building blocks for oligonucleotide synthesis

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D- and L-series

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Niklas Wahlström, Birgitta Stensland and Jan Bergman\*

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Suresh Iyer,\* Girish M. Kulkarni and C. Ramesh

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(1) Supplementary data available via ScienceDirect



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