

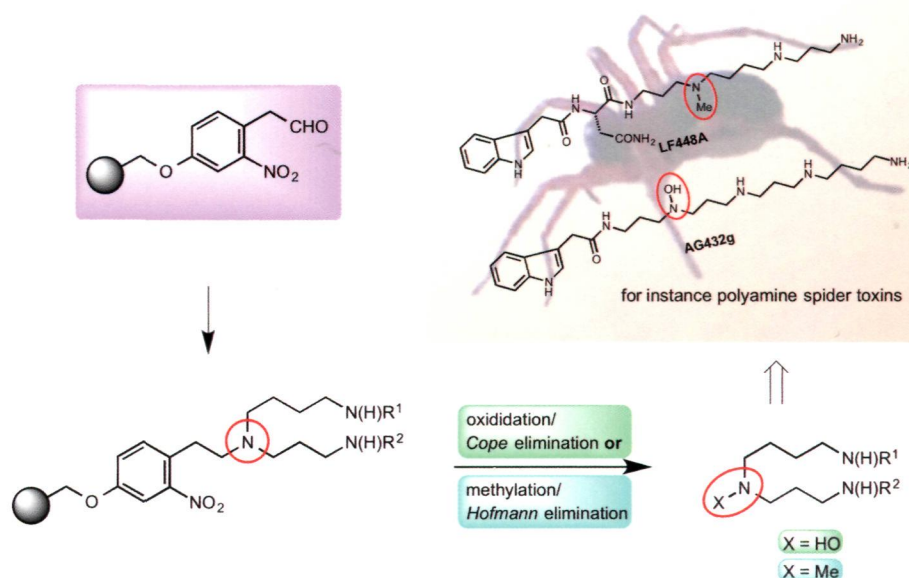


# Tetrahedron

THE INTERNATIONAL JOURNAL FOR THE RAPID PUBLICATION OF FULL ORIGINAL RESEARCH PAPERS AND CRITICAL REVIEWS IN ORGANIC CHEMISTRY

## IN THIS ISSUE

### A New Linker for the Divergent Solid-Phase Synthesis of *N*-Hydroxylated and *N*-Methylated Amines





## Tetrahedron Vol. 70, Issue 6, 2014

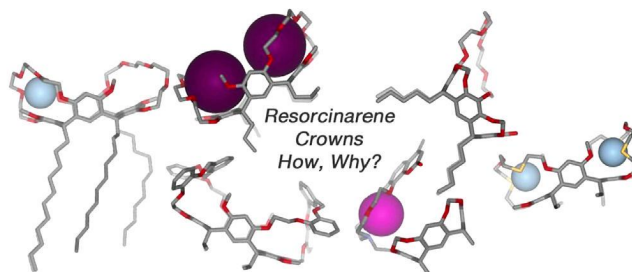
## Contents

## REPORT

## A perspective to resorcinarene crowns

Tiia-Riikka Tero, Maija Nissinen\*

pp 1111–1123

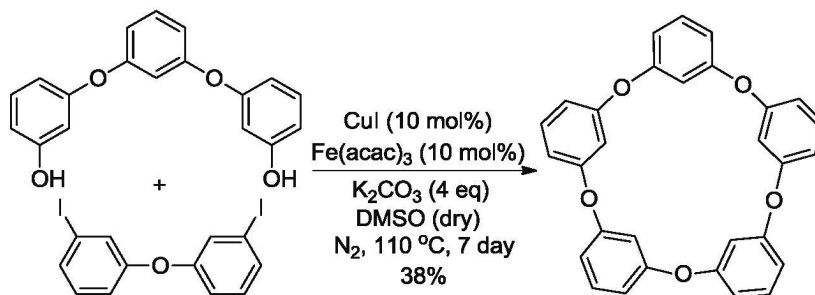


## ARTICLES

## Copper/iron-catalyzed Ullmann coupling of diiodo- and dibromoarenes and diphenols for the synthesis of aryl ether macrocycles

Qizhong Zhou\*, Liangjun Su, Tiansheng Jiang, Bin Zhang, Renner Chen\*, Huajiang Jiang\*, Yuyuan Ye, Mengqing Zhu, Deman Han, Jianfen Shen, Guoliang Dai, Zhanting Li

pp 1125–1132



**Highly diastereoselective 1,2-dichlorination of glycols using NCS/PPh<sub>3</sub>: study of substituent and solvent effects**

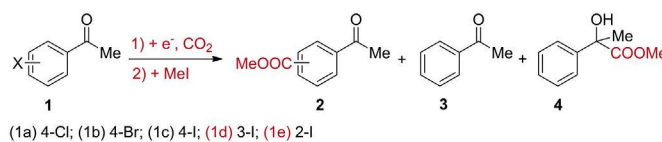
pp 1133–1139

Altaf Hussain, Debaraj Mukherjee\*

**Electrocarboxylation of haloacetophenones at silver electrode**

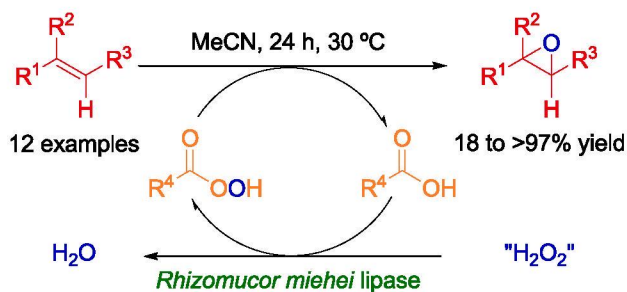
pp 1140–1143

Huan Wang, Xiao-Ming Xu, Yang-Chun Lan, Hui-Mei Wang, Jia-Xing Lu\*

**Chemoenzymatic epoxidation of alkenes based on peracid formation by a *Rhizomucor miehei* lipase-catalyzed perhydrolysis reaction**

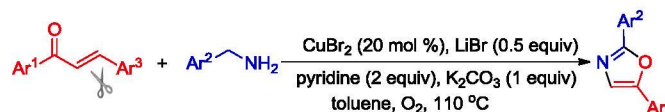
pp 1144–1148

Daniel Méndez-Sánchez, Nicolás Ríos-Lombardía, Vicente Gotor, Vicente Gotor-Fernández\*

**Copper-catalyzed oxidative cyclization of chalcone and benzylic amine leading to 2,5-diaryl oxazoles via carbon-carbon double bond cleavage**

pp 1149–1153

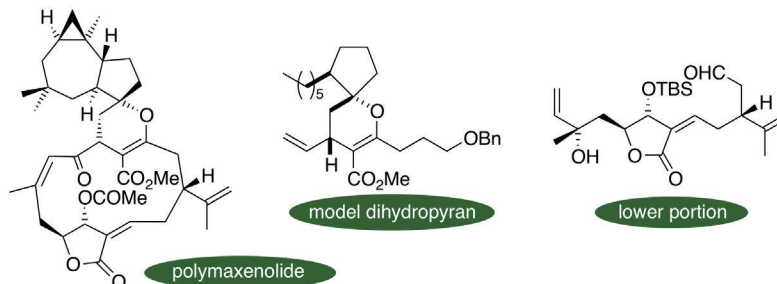
Dongfang Liu, Jintao Yu, Jiang Cheng\*



**Synthetic studies on polyaxenolides: model studies for constructing dihydropyran portion and synthesis of lower portion**

pp 1154–1168

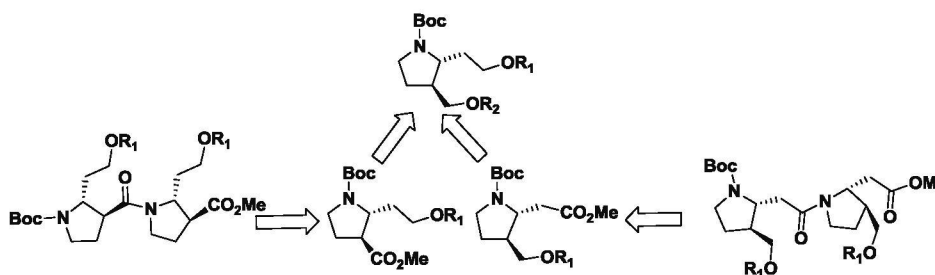
Yutaka Matsuda, Masaya Kato, Tomonori Kawaguchi, Takayuki Koyama, Yoko Saikawa, Masaya Nakata\*



**Peptidomimetics with tunable tertiary amide bond containing substituted β-proline and β-homoproline**

pp 1169–1175

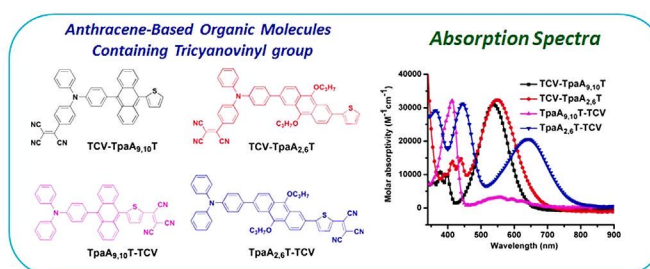
Sandip Basu, Pancham Singh Kandiyal, Venkata Suresh Kumar Neelamraju, Harjinder Singh\*, Ravi Sankar Ampapathi\*, Tushar Kanti Chakraborty\*



**Linkage position influences of anthracene and tricyanovinyl groups on the opto-electrical and photovoltaic properties of anthracene-based organic small molecules**

pp 1176–1186

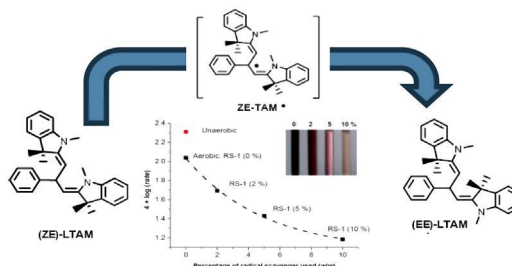
Vellaiappillai Tamilavan, Myungkwan Song, Rajalingam Agneeswari, Myung Ho Hyun\*



**Diastereomeric isomerization of Fischer's base analogs of LTAM molecules in organic solvents: mechanistic investigation**

pp 1187–1192

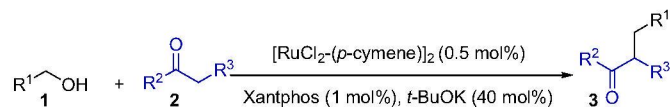
Sam-Rok Keum\*, So-Young Ma



**Efficient ruthenium-catalyzed  $\alpha$ -alkylation of ketones using pyridyl methanols**

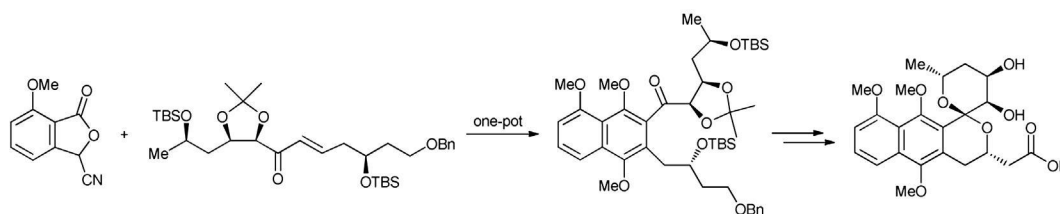
pp 1193–1198

Feng-Xia Yan, Min Zhang\*, Xiao-Ting Wang, Feng Xie, Meng-Meng Chen, Huanfeng Jiang

**Synthesis of highly substituted pyranonaphthalene spiroketals related to the griseusins using a Hauser–Kraus annulation strategy**

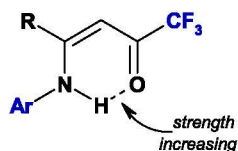
pp 1199–1206

Briar J. Naysmith, Daniel Furkert, Margaret A. Brimble\*

**Intramolecular hydrogen bond in the push–pull  $\text{CF}_3$ -aminoenones: DFT and FTIR study, NBO analysis**

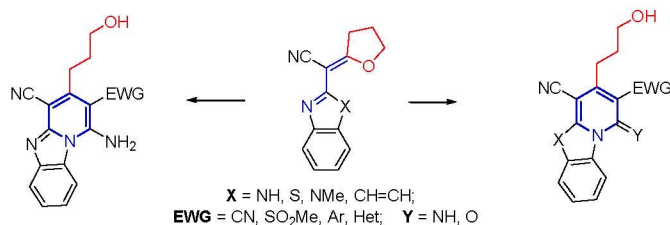
pp 1207–1213

N.N. Chipanina\*, L.P. Oznobikhina, T.N. Aksamentova, A.R. Romanov, A.Yu. Rulev

**Hydroxypropyl substituted nitrogen bridgehead fused cyanopyridines**

pp 1214–1222

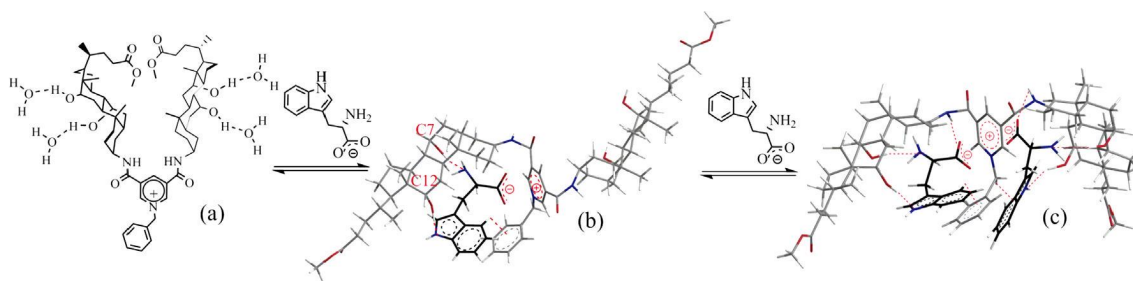
Demyd S. Milokhov\*, Olga V. Khilya\*, Alexander V. Turov, Volodymyr V. Medvediev, Oleg V. Shishkin, Yulian M. Volovenko



**Synthesis of cholate-based pyridinium receptor and its recognition toward L-tryptophan**

pp 1223–1229

Dazhi Li, Yunxu Yang\*, Chao Yang, Biwei Hu, Baolong Huo, Lingwei Xue, Aizhi Wang, Feifei Yu

**Synthesis and self-assembly of oligomers containing cruciform 9,10-bis(arylethynyl)anthracene unit: formation of supramolecular nanostructures based on rod-length-dependent organization**

pp 1230–1235

Jikai Zhu, Keli Zhong, Yongri Liang, Zhuoshi Wang, Tie Chen\*, Long Yi Jin\*

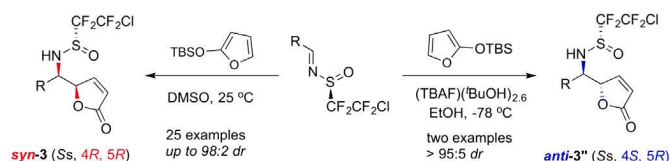


Conjugated coil-rod-coil oligomers containing cruciform 9,10-bis(arylethynyl)anthracene units with different molecular lengths, but identical rod to coil volume ratios, were synthesized. An investigation of the supramolecular nanostructures of these molecules revealed that the rod length of coil-rod-coil molecules with identical rod to coil volume ratios, dramatically influences the self-assembly behavior in the bulk state.

**2-Chlorotetrafluoroethanesulfonamide induced asymmetric vinylogous Mannich reaction**

pp 1236–1245

Li-Juan Liu, Jin-Tao Liu\*

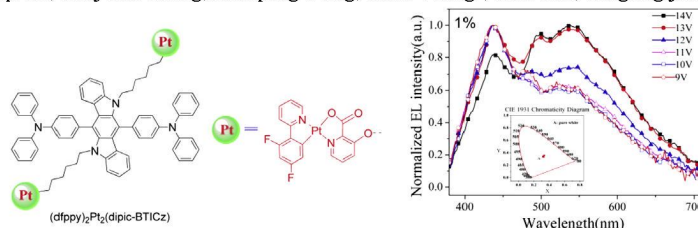


(S)-2-Chlorotetrafluoroethanesulfonamide induced 2-(tert-butyl(dimethyl)silyloxy) furan-based asymmetric vinylogous Mannich reaction was studied. The reaction gave the corresponding adduct in *syn*-configuration in good yield with high stereoselectivity in DMSO. However, *anti*-isomer was obtained as the major product in the presence of (TBAF)(*t*BuOH)<sub>2.6</sub>.

**Synthesis and optoelectronic properties of a novel dinuclear cyclometalated platinum(II) complex containing triphenylamine-substituted indolo[3,2-*b*]carbazole derivative in the single-emissive-layer WPLEDs**

pp 1246–1251

Junting Yu, Jian Luo, Qing Chen, Keqi He, Fanyuan Meng, Xianping Deng, Yafei Wang\*, Hua Tan, Haigang Jiang, Weiguo Zhu\*



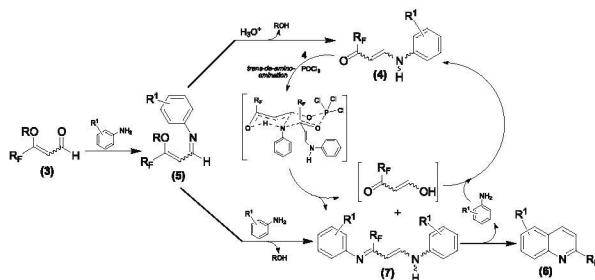
A novel heterodinuclear cyclometalated Pt(II) complex of (dfppy)<sub>2</sub>Pt<sub>2</sub>(dipic-BTICz), containing blue-emitting fluorophore (BTICz) via non-conjugatedly inserted into the dual picolinic acid derivative, was synthesized successfully. Using this novel dinuclear platinum complex as a single-component emitter, stable white emission with a maximum brightness of 208 cd/m<sup>2</sup> was achieved in the single-emissive-layer PLEDs at the doping concentration of 1 wt % and different applied voltages from 9 to 14 V.



### Synthesis of substituted 1-trifluoromethyl and 1-perfluoroalkyl-3-(arylamino)prop-2-en-1-one: advances in the mechanism of Combes 2-trifluoromethyl and 2-perfluoroalkyl quinolines synthesis

pp 1252–1266

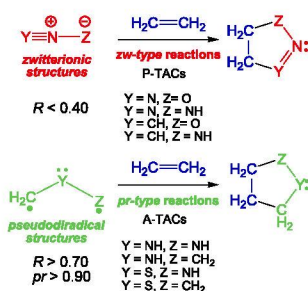
Salem El Kharrat\*, Philippe Laurent, Hubert Blancou



### Understanding the mechanisms of [3 + 2] cycloaddition reactions. The pseudoradical versus the zwitterionic mechanism

pp 1267–1273

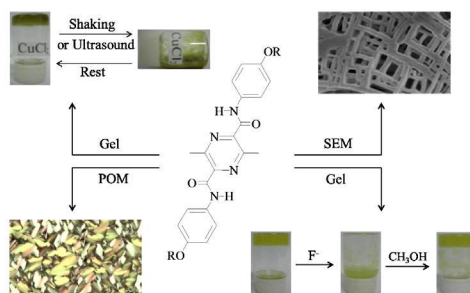
Luis R. Domingo\*, Saeed R. Emamian

Classification of 32CA reactions into *zw-type* and *pr-type* reactions.

### Novel organogelators based on pyrazine-2,5-dicarboxylic acid derivatives and their mesomorphic behaviors

pp 1274–1282

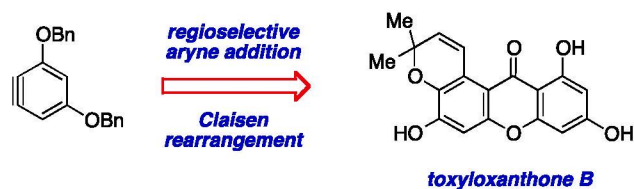
Yao-Dong Huang\*, Wei Tu, Yu-Qin Yuan, Dong-Li Fan



### Synthesis of toxylloxanthone B

pp 1283–1288

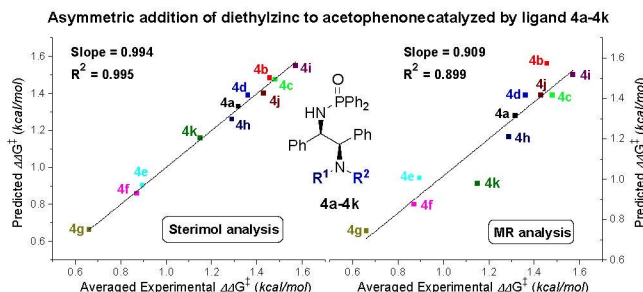
Daniele Giallombardo, Adam C. Nevin, William Lewis, Christopher C. Nawrat, Russell R.A. Kitson, Christopher J. Moody\*



**QSAR analysis of the catalytic asymmetric ethylation of ketone using physical steric parameters of chiral ligand substituents**

pp 1289–1297

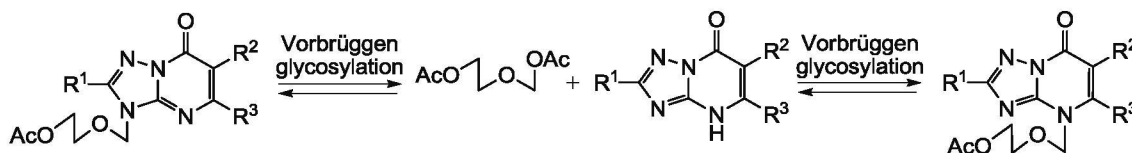
Huayin Huang, Hua Zong, Bin Shen, Huifeng Yue, Guangling Bian, Ling Song\*



**Synthesis of acyclic nucleoside analogues based on 1,2,4-triazolo[1,5-a]pyrimidin-7-ones by one-step Vorbrüggen glycosylation**

pp 1298–1305

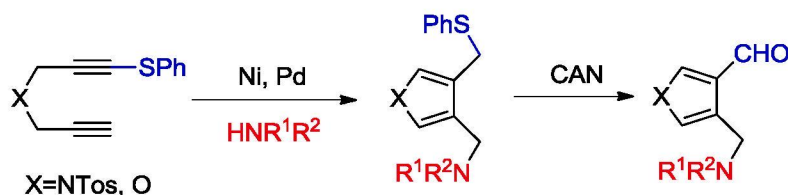
Igor A. Khalymbadzha, Tatyana S. Shestakova, Julia O. Subbotina, Oleg S. Eltsov, Alexandra A. Musikhina, Vladimir L. Rusinov, Oleg N. Chupakhin, Inna L. Karpenko, Maxim V. Jasko, Marina K. Kukhanova, Sergey L. Deev\*



**Nickel–palladium-catalyzed hydroamination/cyclization of sulfur-substituted 1,6-diynes with secondary amines**

pp 1306–1316

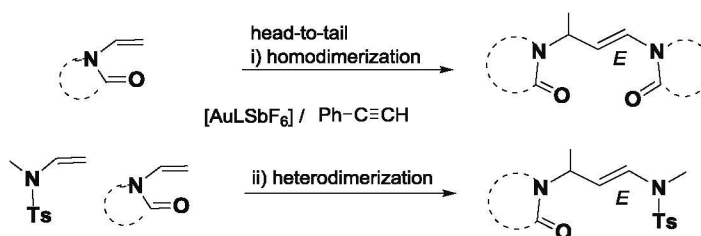
Hayami Nagata, Yuko Sugimoto, Yukiteru Ito, Miki Tanaka, Mitsuhiro Yoshimatsu\*



**Head-to-tail homo- and heterodimerization of vinylamides by hidden proton catalysis**

pp 1317–1325

Naseem Iqbal, Guro Blakstad, Anne Fiksdahl\*

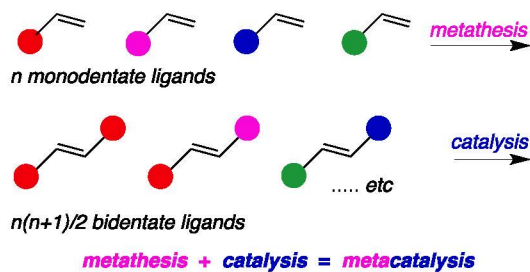




**Metathesis for catalyst design: metacatalysis**

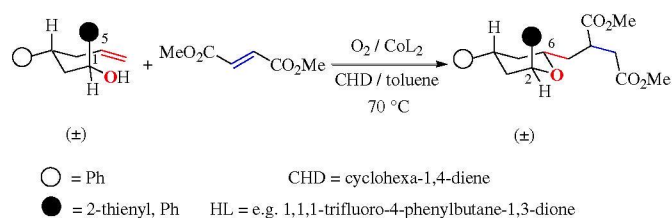
Sakunchai Khumsubdee, Kevin Burgess\*

pp 1326–1335

**Stereoselective synthesis of side chain-functionalized tetrahydropyrans from 5-hexenols**

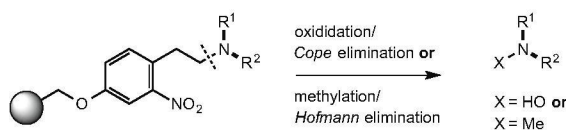
Patrick Fries, Melanie Kim Müller, Jens Hartung\*

pp 1336–1347

**Development of a new linker for the solid-phase synthesis of *N*-hydroxylated and *N*-methylated secondary amines**

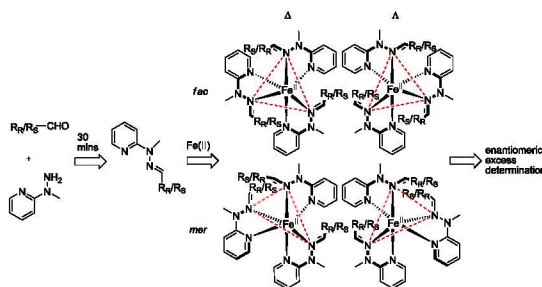
Denise Pauli, Stefan Bienz\*

pp 1348–1356

**Rapid determination of enantiomeric excess of  $\alpha$ -chiral aldehydes using circular dichroism spectroscopy**

Sanmitra Barman, Eric V. Anslyn\*

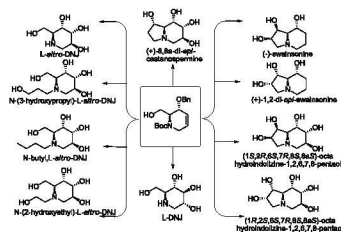
pp 1357–1362



**Synthesis of polyhydroxylated indolizidines and piperidines from Garner's aldehyde: total synthesis of (–)-swainsonine, (+)-1,2-di-*epi*-swainsonine, (+)-8,8a-di-*epi*-castanospermine, pentahydroxy indolizidines, (–)-1-deoxynojirimycin, (–)-1-deoxy-*altro*-nojirimycin, and related diversity**

pp 1363–1374

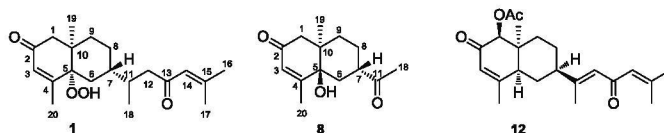
Priyanka Singh, Sudipta Kumar Manna, Gautam Panda\*



**Preneleudesmanes, rare natural diterpenoids from *Dysoxylum densiflorum***

pp 1375–1382

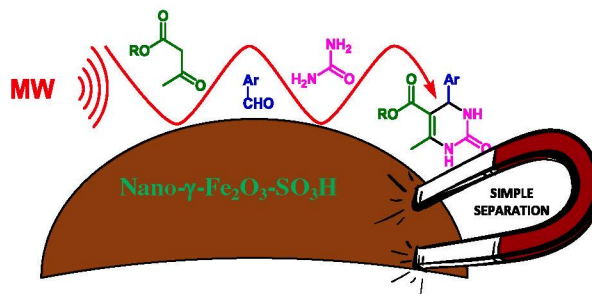
Ji Gu, Sheng-Yan Qian, Yun-Li Zhao, Gui-Guang Cheng, Dong-Bao Hu, Bao-Hong Zhang, Yan Li, Ya-Ping Liu\*, Xiao-Dong Luo\*



**A simple and efficient synthesis of 3,4-dihydropyrimidin-2-(1*H*)-ones via Biginelli reaction catalyzed by nanomagnetic-supported sulfonic acid**

pp 1383–1386

Eskandar Kolvari\*, Nadiya Koukabi\* Ozra Armandpour



**CORRIGENDUM**

**Corrigendum to “Asymmetric oxaziridination catalyzed by *cinchona* alkaloid derivatives containing sulfide”**

p 1387


[Tetrahedron 69 (2013) 7416–7422]

Tianyi Zhang, Wei He, Xingyu Zhao, Ying Jin\*

**COVER**

A new *ortho*-nitro phenethyl linker for the divergent solid-phase synthesis of *N*-hydroxylated and *N*-methylated secondary amines was developed. The robust linker allows a variety of chemical manipulations to be performed with secondary amines attached to the resin, and the desired *N*-modified final products are liberated from the solid support likewise by either an oxidation/*Cope* or a methylation/*Hofmann* elimination sequence.

\*Corresponding author

+ Supplementary data available via ScienceDirect

---

Available online at [www.sciencedirect.com](http://www.sciencedirect.com)

**ScienceDirect**

Full text of this journal is available, on-line from **ScienceDirect**. Visit [www.sciencedirect.com](http://www.sciencedirect.com) for more information.

---

Abstracted/indexed in: AGRICOLA, Beilstein, BIOSIS Previews, CAB Abstracts, Chemical Abstracts, Current Contents: Life Sciences, Current Contents: Physical, Chemical and Earth Sciences, Current Contents Search, Derwent Drug File, Ei compendex, EMBASE/Excerpta Medline, PASCAL, Research Alert, Science Citation Index, SciSearch. Also covered in the abstract and citation database SCOPUS®. Full text available on ScienceDirect®

---



ELSEVIER

ISSN 0040-4020