### **AIMS AND SCOPE**

Although total synthesis reached extraordinary levels of sophistication in the last century, the development of practical and efficient synthetic methodologies is still in its infancy. The goal of achieving chemical reactions that are economical, safe, environmentally benign, resource- and energy-saving will demand the highest level of scientific creativity, insight and understanding in a combined effort by academic and industrial chemists.

Advanced Synthesis & Catalysis is designed to stimulate and advance that process by focusing on the development and application of efficient synthetic methodologies and strategies in organic, bioorganic, pharmaceutical, natural product, macromolecular and materials chemistry. The targets of synthetic studies can range from natural products and pharmaceuticals to macromolecules and organic materials. While metal catalysis, biocatalysis and organocatalysis play an ever increasing role in achieving synthetic efficiency, all areas of interest to the practical synthetic chemist fall within the purview of Advanced Synthesis & Catalysis, including synthesis design, reaction techniques, separation science and process development.

Contributions from industrial and governmental laboratories are highly encouraged. It is the goal of the journal to help initiate a new era of chemical science, based on the efforts of synthetic chemists and on interdisciplinary collaboration, so that chemistry will make an even greater contribution to the quality of life than it does now.

Advanced
Synthesis &
Catalysis

succeeding Journal für praktische Chemie (founded in 1828)

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**2007**, *349*, 13, **Pages 2069–2200** 

Issue 11 + 12/2007 was published online on August 6, 2007

## **COMMUNICATIONS**

Polymer-Bound Pyridine-Bis(oxazoline). Preparation through Click Chemistry and Evaluation in Asymmetric Catalysis

Adv. Synth. Catal. 2007, 349, 2079-2084

Mélanie Tilliet, Stina Lundgren, Christina Moberg,\*
Vincent Levacher\*

Tungsten- and Molybdenum-Based Coordination Polymer-Catalyzed N-Oxidation of Primary Aromatic Amines with Aqueous Hydrogen Peroxide

Adv. Synth. Catal. 2007, 349, 2085-2088

 $NH_2 + 30\%$  aq.  $H_2O_2$  [Catalyst] No

Ankur Bordoloi, S. B. Halligudi\*

A Novel (2,2-Diarylvinyl)phosphine/Palladium Catalyst for Effective Aromatic Amination

Adv. Synth. Catal. 2007, 349, 2089-2091

Ken Suzuki,\* Yoji Hori, Takenobu Nishikawa, Tohru Kobayashi

$$R^2$$
 $X + HNR^3R^4$ 
 $Pd/L$ 
 $R^2$ 
 $NR^3R^4$ 
Ligand:
 $Ar$ 
 $PR_2$ 

InterScience®

2079

2085

2089

**2092** Gold-Catalyzed 5- and 6-exo-dig Selective Cyclizations of Alkynyl Silyl Enol Ethers: Efficient Method for [3+2] and [4+2] Annulations onto  $\alpha,\beta$ -Enones

Adv. Synth. Catal. 2007, 349, 2092-2096

☐ Kooyeon Lee, Phil Ho Lee\*

TBSO 
$$\mathbb{R}^2$$
 cat-Ph<sub>3</sub>PAuCl/AgOTf  $\mathbb{R}^2$   $\mathbb{$ 

2097 Copper(II) Triflate-Catalyzed Nucleophilic Substitution of Propargylic Acetates with Enoxysilanes. A Straightforward Synthetic Route to Polysubstituted Furans

Adv. Synth. Catal. 2007, 349, 2097-2102

Zhuang-ping Zhan,\* Shao-pei Wang, Xu-bin Cai, Hui-juan Liu, Jing-liang Yu, Yuan-yuan Cui

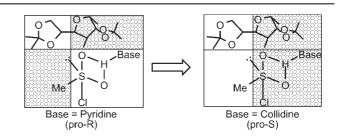
# $\begin{array}{c} \text{OAc} \\ \text{R}^2 \\ \text{R}^1 \\ \text{R}^3 \\ \text{OSiMe}_3 \end{array} \\ \begin{array}{c} \text{OSiMe}_3 \\ \text{OSiMe}_3 \end{array} \\ \begin{array}{c} \text{R}^6 \\ \text{CH}_3\text{CN}, \text{r.t.}, 5 \text{ min} \\ \text{R}^2 \\ \text{R}^1 \\ \text{R}^3 \end{array} \\ \begin{array}{c} \text{R}^4 \\ \text{TsOH} \\ \text{Toluene} \\ \text{reflux}, 0.5 - 2.0 \text{ h} \\ \text{R}^3 \\ \end{array} \\ \begin{array}{c} \text{R}^5 \\ \text{R}^4 \\ \text{TsOH} \\ \text{Toluene} \\ \text{Toluene} \\ \text{R}^4 \\ \text{Toluene} \\$

#### **FULL PAPERS**

2103 How does the Achiral Base Decide the Stereochemical Outcome in the Dynamic Kinetic Resolution of Sulfinyl Chlorides? A Computational Study

Adv. Synth. Catal. 2007, 349, 2103-2110

David Balcells, Gregori Ujaque, Inmaculada Fernández, Noureddine Khiar, Feliu Maseras\*



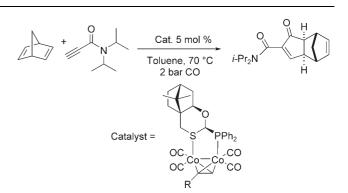
2111 Integrating Catalyst and Co-Catalyst Design in Olefin Polymerization Catalysis: Transferable Dianionic Ligands for the Activation of Late Transition Metal Polymerization Catalysts

Adv. Synth. Catal. 2007, 349, 2111-2120

- Mikaël Brasse, Juan Cámpora,\* Maxwell Davies, Emmanuelle Teuma, Pilar Palma, Eleuterio Álvarez, E. Sanz, Manuel L. Reyes
- > 2000 kg/mol h<sup>-1</sup>
- 2121 PuPHOS and CamPHOS Ligands in the Intermolecular Catalytic Pauson–Khand Reaction

Adv. Synth. Catal. 2007, 349, 2121-2128

Agustí Lledó, Jordi Solà, Xavier Verdaguer,\* Antoni Riera,\* Miguel A. Maestro



Chiral Thiourea-Phosphine Organocatalysts in the Asymmetric Aza-Morita-Baylis-Hillman Reaction

Adv. Synth. Catal. 2007, 349, 2129-2135

Yong-Ling Shi, Min Shi\*

$$R^1$$
CH=NTs +  $R^2$   $PhCO_2H$ ,  $CH_2Cl_2$ , r.t.  $R^1$   $R^2$   $Yield: 61 - 98%$ 

 $R^1$  = cinnamyl and various aryl group.  $R^2$  = H, Me, Et, Ph.

Yield: 61 - 98% ee: up to 97%

Integration of Solventless Reaction in a Multi-Step Process: Application to an Efficient Synthesis of PA-824

Adv. Synth. Catal. 2007, 349, 2136-2144

Akihiro Orita, Kai Miwa, Genta Uehara, Junzo Otera\*

Total amount of solvents reduced to less than 1/3.

Platinum Nanoparticles Supported on Ionic Liquid-Modified Magnetic Nanoparticles: Selective Hydrogenation Catalysts

Adv. Synth. Catal. 2007, 349, 2145-2150

Raed Abu-Reziq, Dashan Wang, Michael Post, Howard Alper\*

Gold(III) Chloride/Silver Triflate: A Highly Efficient Catalyst for Ring-Opening Reaction of Aziridines with Electron-Rich Arenes

Adv. Synth. Catal. 2007, 349, 2151-2155

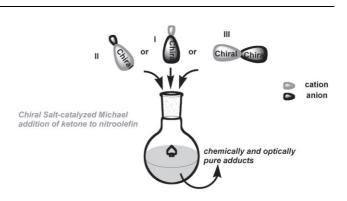
Xiaoyu Sun, Wei Sun, Renhua Fan,\* Jie Wu\*

 $R^{1} \stackrel{\text{Ts}}{\underset{\text{||}}{\text{||}}} + R^{2} \stackrel{\text{||}}{\underset{\text{||}}{\text{||}}} \underbrace{\frac{\text{AuCl}_{3} (1 \text{ mol } \%)}{\text{AgOTf (3 mol } \%)}}_{\text{CH}_{3} \text{NO}_{2}, \text{r.t.}} R^{1} \stackrel{\text{||}}{\underset{\text{||}}{\text{||}}} = NHTs}$ 

A Chiral Functionalized Salt-Catalyzed Asymmetric Michael Addition of Ketones to Nitroolefins

Adv. Synth. Catal. 2007, 349, 2156-2166

Yan Xiong, Yuehong Wen, Fei Wang, Bo Gao, Xiaohua Liu, Xiao Huang, Xiaoming Feng\*



2136

2145

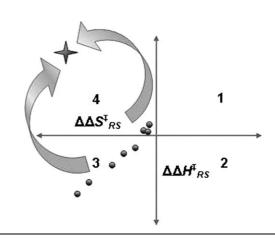
2129

2156

**2167** Cross-Linked Amorphous Nitrilase Aggregates for Enantioselective Nitrile Hydrolysis

Adv. Synth. Catal. 2007, 349, 2167-2176

Praveen Kaul, Andreas Stolz, U. C. Banerjee\*



**2177** Synthesis of β-Lactams by 4-exo-tet Cyclization Process Induced by Electrogenerated Cyanomethyl Anion, Part 2: Stereochemical Implications

Adv. Synth. Catal. 2007, 349, 2177-2181

☐ Marta Feroci\*

# **UPDATES**

2183 Fluorinated Alcohols as Solvents for Enantioselective Hydrogenation with Chiral Self-Assembling Rhodium Catalysts

Adv. Synth. Catal. 2007, 349, 2183-2187

Natalia V. Dubrovina,\* Ivan A. Shuklov, Mandy-Nicole Birkholz, Dirk Michalik, Rocco Paciello, Armin Börner\*

2,3-Disubstituted Benzo[b]thiophenes from Diarylalkynes *via* Electrophilic Addition-Cyclization and Palladium-Catalyzed Cross-Coupling

Adv. Synth. Catal. 2007, 349, 2188-2194

Giuseppe Lamanna, Stefano Menichetti\*

W = OH, F; Z = direct bond, NH, (CH<sub>2</sub>)<sub>2</sub>

# **CORRIGENDUM**

In the paper by Q. Kang, Z.-A. Zhao and S.-L. You in Issue 10, 2007, pp. 1657–1660 (DOI: 10.1002/adsc.200700235), the formulae for Tables 3 and 4 are not correct. The corrected formulae are given below.

For Table 3:

For Table 4:

Supporting information on the WWW (see article for access details).

\*Author to whom correspondence should be addressed.