

## 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. Achieving chemical reactions that are highly selective, economical, safe, resource- and energy-efficient, and environmentally benign is a primary challenge to chemistry in this century. Realizing this goal will demand the highest level of scientific creativity, insight and understanding in a combined effort by academic, government and industrial chemists and engineers.

*Advanced Synthesis & Catalysis* promotes that process by publishing high-impact research results reporting the development and application of efficient synthetic methodologies and strategies for organic targets that range from pharmaceuticals to organic materials. Homogeneous catalysis, biocatalysis, organocatalysis and heterogeneous catalysis directed towards organic synthesis are playing an ever increasing role in achieving synthetic efficiency. Asymmetric catalysis remains a topic of central importance. In addition, *Advanced Synthesis & Catalysis* includes other areas that are making a contribution to green synthesis, such as synthesis design, reaction techniques, flow chemistry and continuous processing, multi-phase catalysis, green solvents, catalyst immobilization and recycling, separation science and process development.

Practical processes involve development of effective integrated strategies, from an elegant synthetic route based on mechanistic and structural insights at the molecular level through to process optimization at larger scales. These endeavors often entail a multidisciplinary approach that spans the broad fields chemistry, biology, and engineering and involve contributions from academic, government, and industrial laboratories.

The unique focus of *Advanced Synthesis & Catalysis* has rapidly made it a leading organic chemistry and catalysis journal. The goal of *Advanced Synthesis & Catalysis* is to help inspire 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)

New Impact Factor  
**4.977**  
N° 1 in Organic Chemistry  
for the 4<sup>th</sup> straight year

**2009, 351, 3, Pages 289–476**

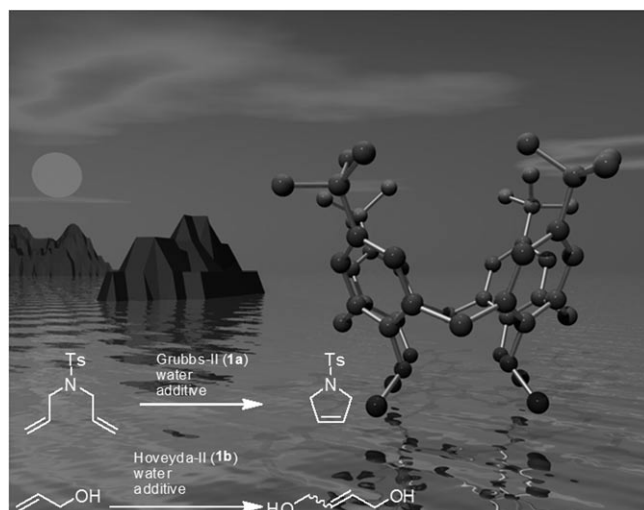
Issue 1+2/2009 was published online  
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## COMMUNICATIONS

### Metathesis in Pure Water Mediated by Supramolecular Additives

*Adv. Synth. Catal.* **2009**, 351, 303–307


Thomas Brendgen, Tilmann Fahlbusch, Markus Frank,  
Daniel T. Schühle, Miriam Seßler, Jürgen Schatz\*

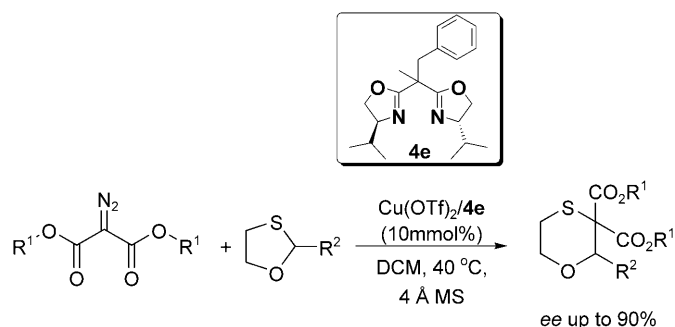


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- 308** Ligand-Accelerated Asymmetric [1,2]-Stevens Rearrangement of Sulfur Ylides *via* Decomposition of Diazomalonates Catalyzed by Chiral Bisoxazoline/Copper Complex


*Adv. Synth. Catal.* **2009**, 351, 308–312

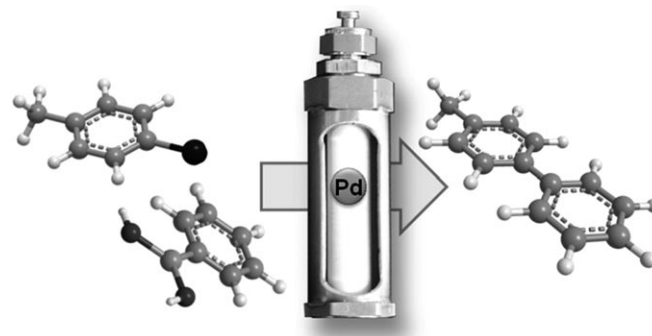
 Jian-Ping Qu, Zheng-Hu Xu, Jian Zhou, Chun-Li Cao, Xiu-Li Sun, Li-Xin Dai, Yong Tang\*



- 313** ‘Click’ Dendritic Phosphines: Design, Synthesis, Application in Suzuki Coupling, and Recycling by Nanofiltration


*Adv. Synth. Catal.* **2009**, 351, 313–318

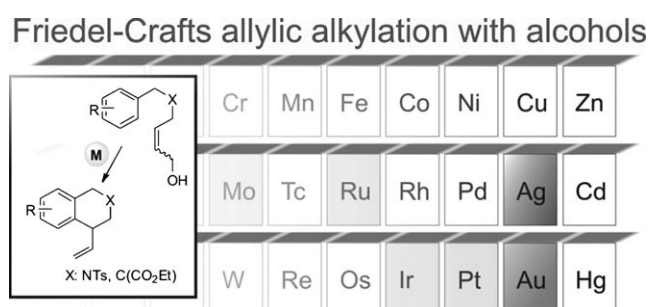
 Michèle Janssen, Christian Müller, Dieter Vogt\*



- 319** Ligand-Free Silver(I)-Catalyzed Intramolecular Friedel–Crafts Alkylation of Arenes with Allylic Alcohols


*Adv. Synth. Catal.* **2009**, 351, 319–324

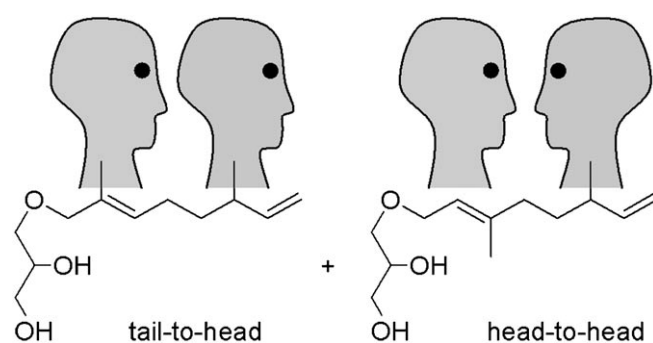
 Marco Bandini,\* Astrid Eichholzer, Peter Kotrusz, Michele Tragni, Stefano Troisi, Achille Umani-Ronchi\*



- 325** Palladium-Catalysed Telomerisation of Isoprene with Glycerol and Polyethylene Glycol: A Facile Route to New Terpene Derivatives

*Adv. Synth. Catal.* **2009**, 351, 325–330

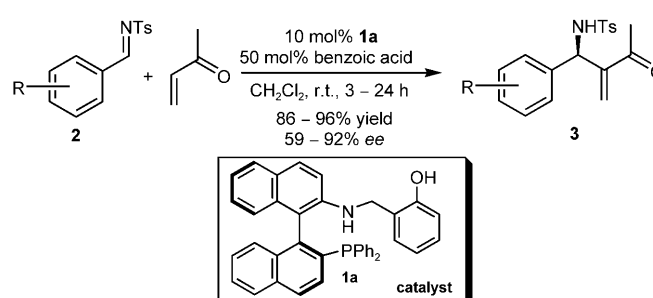
 Alvaro Gordillo, Laura Durán Pachón, Ernesto de Jesus, Gadi Rothenberg\*



- 331** Enantioselective Trifunctional Organocatalysts for Rate-Enhanced Aza–Morita–Baylis–Hillman Reactions at Room Temperature

*Adv. Synth. Catal.* **2009**, 351, 331–338

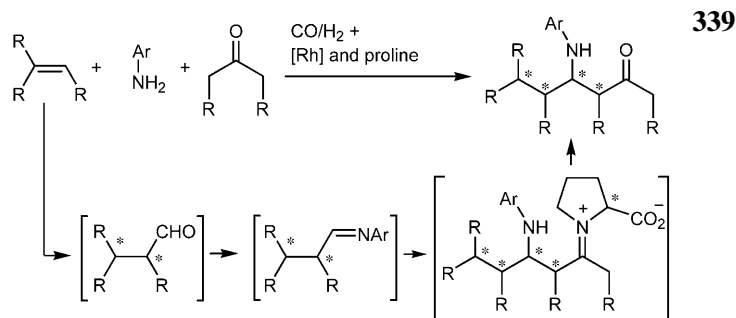
 Jean-Marc Garnier, Christopher Anstiss, Fei Liu\*



### Tandem Metal and Organocatalysis in Sequential Hydroformylation and Enantioselective Mannich Reactions

*Adv. Synth. Catal.* **2009**, 351, 339–344

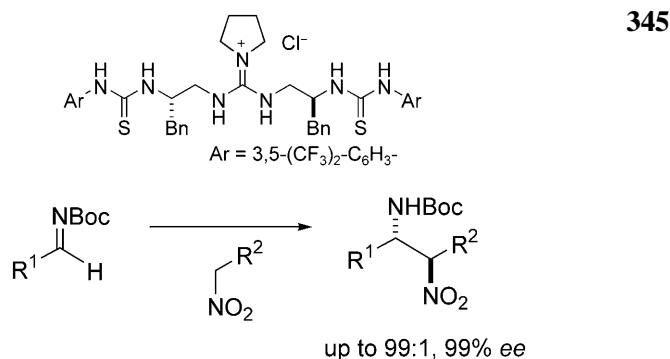
Serghei Chercheja, Thomas Rothenbücher, Peter Eilbracht\*



### Enantioselective Aza-Henry Reaction with Acyclic Guanidine-Thiourea Bifunctional Organocatalyst

*Adv. Synth. Catal.* **2009**, 351, 345–347

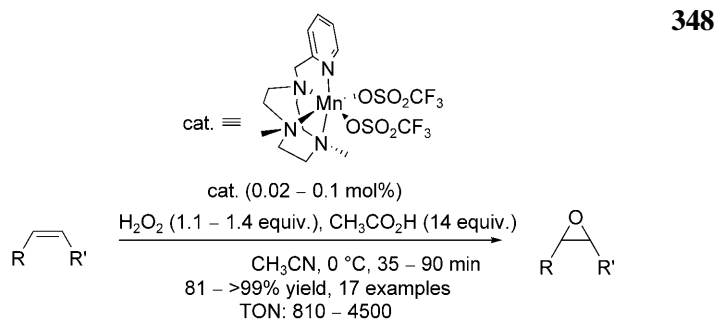
Keisuke Takada, Kazuo Nagasawa\*



### A Broad Substrate-Scope Method for Fast, Efficient and Selective Hydrogen Peroxide-Epoxidation

*Adv. Synth. Catal.* **2009**, 351, 348–352

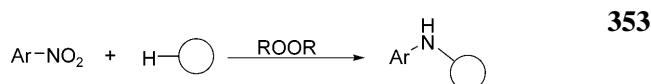
Isaac Garcia-Bosch, Xavi Ribas,\* Miquel Costas\*



### An Unusual Peroxide-Mediated Amination of Cycloalkanes with Nitroarenes

*Adv. Synth. Catal.* **2009**, 351, 353–356

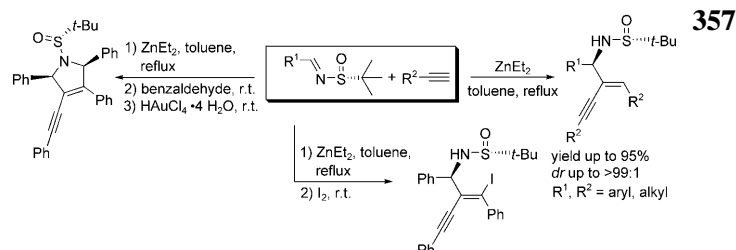
Guojun Deng, Wenwen Chen, Chao-Jun Li\*



### Development and Application of a New General Method for the Asymmetric Synthesis of (*E*)-(2-En-3-ynyl)-amines

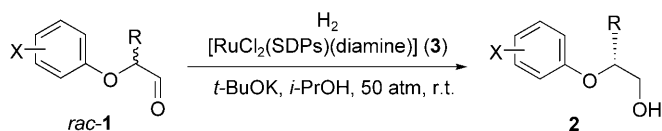
*Adv. Synth. Catal.* **2009**, 351, 357–362

Chao Yin, Xin-Ping Hui,\* Peng-Fei Xu,\* Liang-Feng Niu, Yong-Fei Chen, Binghe Wang



- 363** Enantioselective Synthesis of Chiral  $\beta$ -Aryloxy Alcohols by Asymmetric Hydrogenation of  $\alpha$ -Aryloxy Aldehydes *via* Dynamic Kinetic Resolution

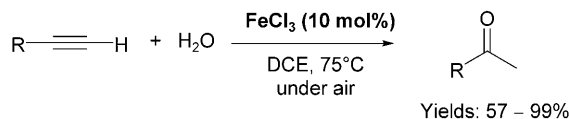
*Adv. Synth. Catal.* **2009**, 351, 363–366



Zhang-Tao Zhou, Jian-Hua Xie, Qi-Lin Zhou\*

- 367** Development of the First Iron Chloride-Catalyzed Hydration of Terminal Alkynes

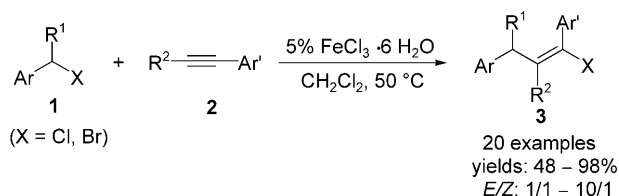
*Adv. Synth. Catal.* **2009**, 351, 367–370



Xiao-Feng Wu, David Bezier, Christophe Darcel\*

- 371** A Mild and Efficient Iron-Catalyzed Synthesis of Alkenyl Halides *via* Direct Addition of Benzyl Halides to Arylalkynes

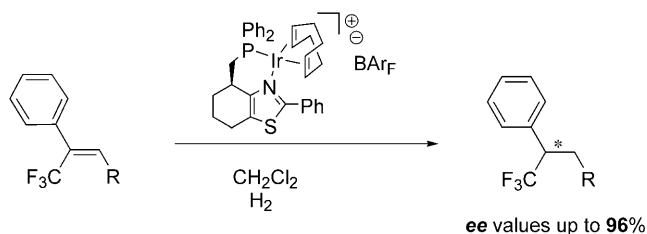
*Adv. Synth. Catal.* **2009**, 351, 371–374



Zhongquan Liu,\* Jianguo Wang, Yankai Zhao, Bo Zhou

- 375** Highly Selective Iridium-Catalyzed Asymmetric Hydrogenation of Trifluoromethyl Olefins: A New Route to Trifluoromethyl-Bearing Stereocenters

*Adv. Synth. Catal.* **2009**, 351, 375–378

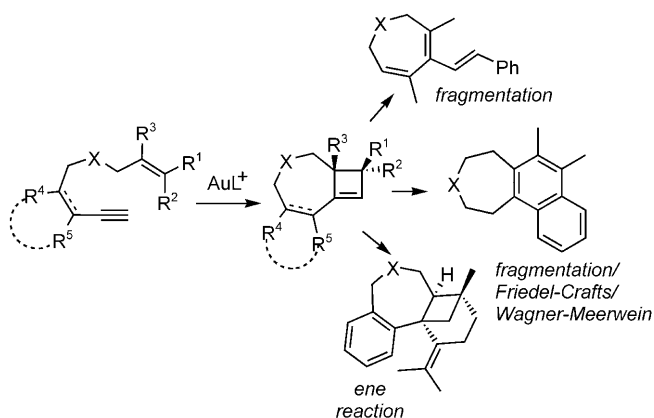


Mattias Engman, Pradeep Cheruku, Päivi Tolstoy, Jonas Bergquist, Sebastian F. Völker, Pher G. Andersson\*

- 379** Cyclobutenes as Isolable Intermediates in the Gold(I)-Catalysed Cycloisomerisation of 1,8-Enynes

*Adv. Synth. Catal.* **2009**, 351, 379–386

Yann Odabachian, Fabien Gagosz\*

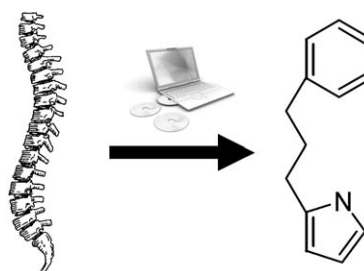


## FULL PAPERS

## Backbone Diversity Analysis in Catalyst Design

*Adv. Synth. Catal.* **2009**, 351, 387–396

Ana G. Maldonado, Jos A. Hageman, Sergio Mastroianni,  
Gadi Rothenberg\*

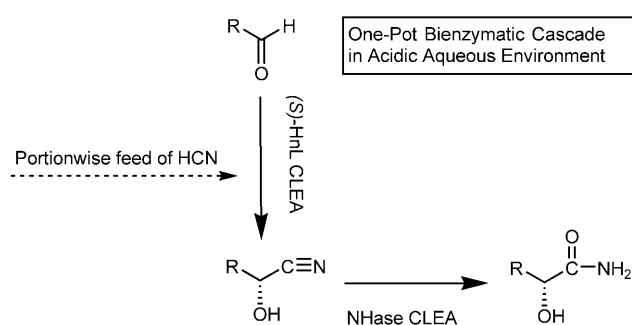


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Synthesis of Aliphatic (*S*)- $\alpha$ -Hydroxycarboxylic Amides using a One-Pot Bienzymatic Cascade of Immobilised Oxynitrilase and Nitrile Hydratase

*Adv. Synth. Catal.* **2009**, 351, 397–404

Sander van Pelt, Fred van Rantwijk, Roger A. Sheldon\*

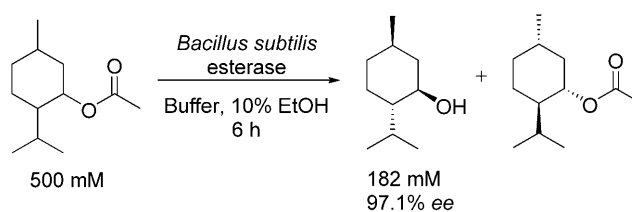


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Enzymatic Production of *l*-Menthol by a High Substrate Concentration Tolerable Esterase from Newly Isolated *Bacillus subtilis* ECU0554

*Adv. Synth. Catal.* **2009**, 351, 405–414

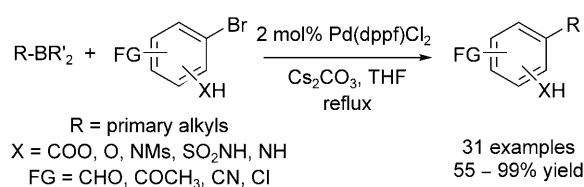
Gao-Wei Zheng, Hui-Lei Yu, Jian-Dong Zhang, Jian-He Xu\*



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Direct *B*-Alkyl Suzuki–Miyaura Cross-Coupling of Trialkylboranes with Aryl Bromides in the Presence of Unmasked Acidic or Basic Functions and Base-Labile Protections under Mild Non-Aqueous Conditions

*Adv. Synth. Catal.* **2009**, 351, 415–422



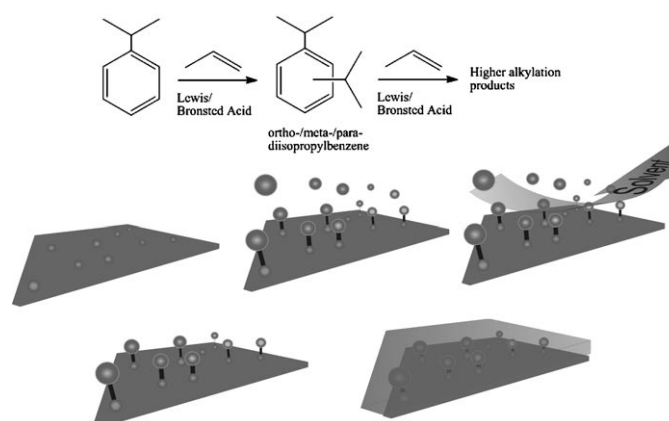
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Bing Wang,\* Hui-Xia Sun, Zhi-Hua Sun,\* Guo-Qiang Lin

Development of a Supported Ionic Liquid Phase (SILP) Catalyst for Slurry-Phase Friedel–Crafts Alkylations of Cumene

*Adv. Synth. Catal.* **2009**, 351, 423–431


J. Joni, M. Haumann, P. Wasserscheid\*

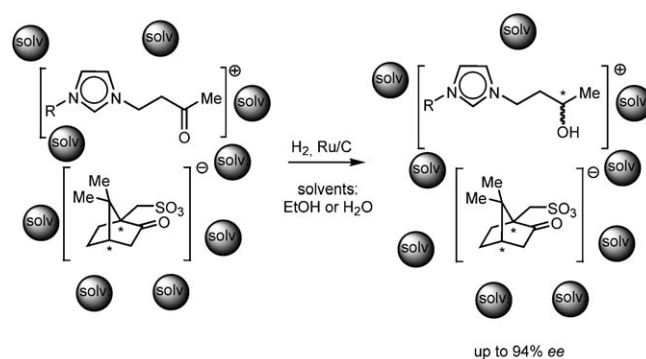


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- 432** Chirality Transfer in Imidazolium Camphorsulfonate Ionic Liquids through Ion Pairing Effects

*Adv. Synth. Catal.* **2009**, 351, 432–440

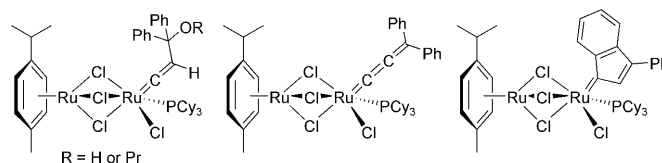
 Karola Schneiders, Andreas Bösmann, Peter S. Schulz,\*  
Peter Wasserscheid\*



- 441** Homobimetallic Ruthenium Vinylidene, Allenylidene, and Indenylidene Complexes: Synthesis, Characterization, and Catalytic Studies

*Adv. Synth. Catal.* **2009**, 351, 441–455

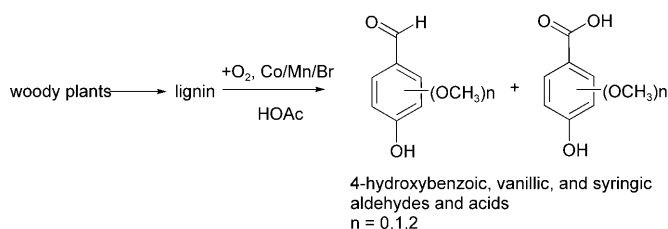
Xavier Sauvage, Yannick Borguet, Guillermo Zaragoza,  
Albert Demonceau, Lionel Delaude\*



- 456** The Aerobic Oxidative Cleavage of Lignin to Produce Hydroxyaromatic Benzaldehydes and Carboxylic Acids *via* Metal/Bromide Catalysts in Acetic Acid/Water Mixtures

*Adv. Synth. Catal.* **2009**, 351, 456–466


Walt Partenheimer\*

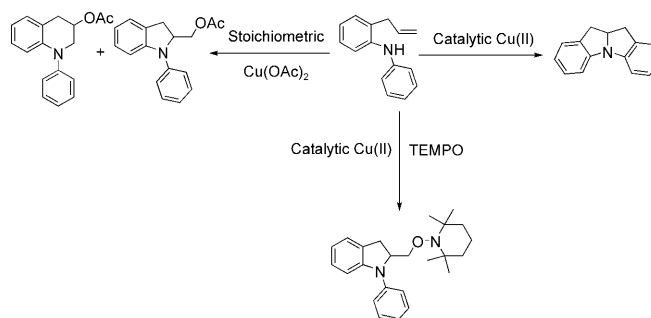


## UPDATES

- 467** Copper(II)-Catalyzed Aminooxygenation and Carboamination of *N*-Aryl-2-allylanilines

*Adv. Synth. Catal.* **2009**, 351, 467–471

 Eric S. Sherman, Sherry R. Chemler\*



## CORRIGENDUM

In the commentary by Joe P. Richmond in Issue 1+2, 2009, pp. 25–31 (DOI: 10.1002/adsc.200900007), in Figure 13 on page 30, the entry on the left between Mexico and Poland should be “Netherlands; 16” and not “Switzerland; 3”.