

## AIMS AND SCOPE

While 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 catalytic methods based on metal complexes or enzymes 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*  
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2004, 346, 12, Pages 1397–1502

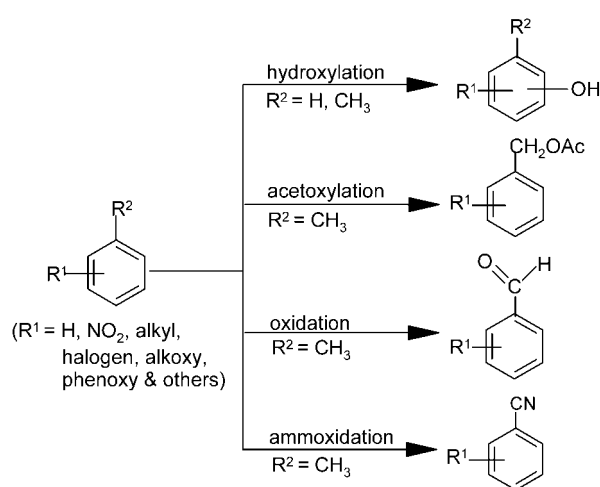
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## REVIEWS

Oxidation and Ammoxidation of Aromatics

*Adv. Synth. Catal.* **2004**, 346, 1407–1424

B. Lücke\*, K. V. Narayana, A. Martin, K. Jähnisch\*

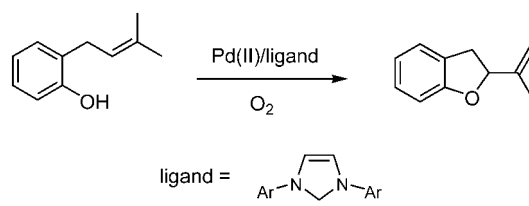


## COMMUNICATIONS

Palladium-Carbene Catalysts for Aerobic, Intramolecular Wacker-Type Cyclisation Reactions

*Adv. Synth. Catal.* **2004**, 346, 1425–1428

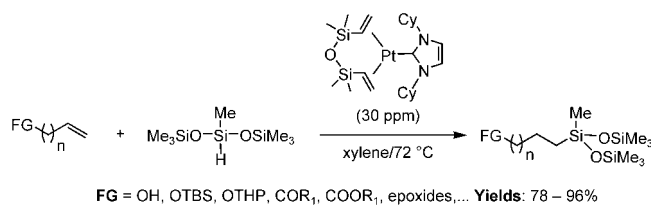
Kilian Muñoz



- 1429** Highly Active and Selective Platinum(0)-Carbene Complexes. Efficient, Catalytic Hydrosilylation of Functionalised Olefins

*Adv. Synth. Catal.* **2004**, 346, 1429–1435

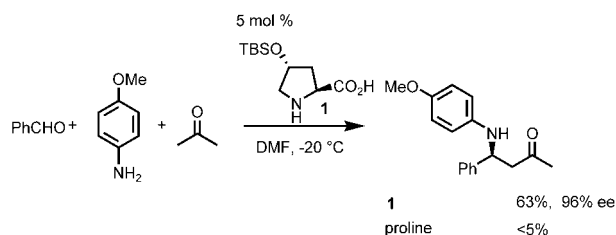
István E. Markó,\* Sébastien Stérin, Olivier Buisine, Guillaume Berthon, Guillaume Michaud, Bernard Tinant, Jean-Paul Declercq



- 1435** A Highly Active 4-Siloxyproline Catalyst for Asymmetric Synthesis

*Adv. Synth. Catal.* **2004**, 346, 1435–1439

Yujiro Hayashi,\* Junichiro Yamaguchi, Kazuhiko Hibino, Tatsunobu Sumiya, Tatsuya Urushima, Mitsuru Shoji, Daisuke Hashizume, Hiroyuki Koshino

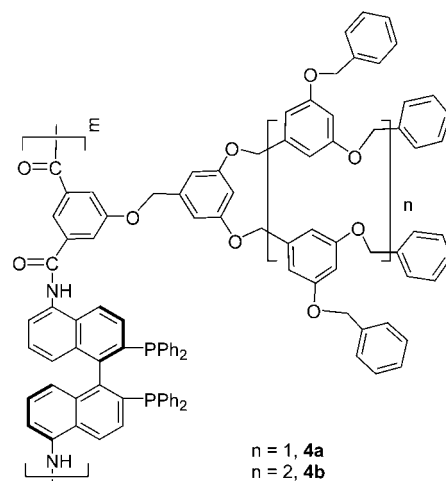


- 1440** Dendronized Poly(Ru-BINAP) Complexes: Highly Effective and Easily Recyclable Catalysts For Asymmetric Hydrogenation

*Adv. Synth. Catal.* **2004**, 346, 1440–1444



Guo-Jun Deng, Bing Yi, Yi-Yong Huang, Wei-Jun Tang, Yan-Mei He, Qing-Hua Fan\*

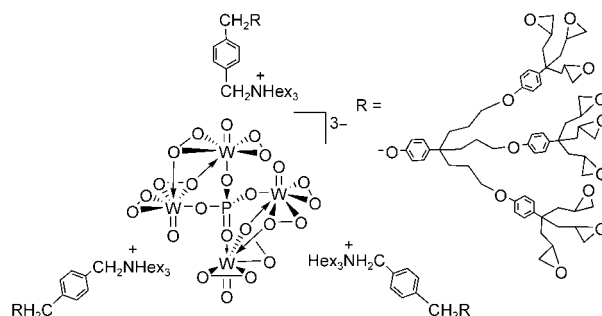


- 1445** Synthesis, Catalytic Activity in Oxidation Reactions, and Recyclability of Stable Polyoxometalate-Centred Dendrimers

*Adv. Synth. Catal.* **2004**, 346, 1445–1448



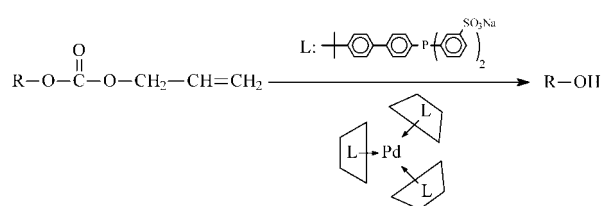
Sylvain Nlate,\* Didier Astruc,\* Ronny Neumann



Molecular Recognition Between a Water-Soluble Organometallic Complex and a  $\beta$ -Cyclodextrin: First Example of Second-Sphere Coordination Adducts Possessing a Catalytic Activity

*Adv. Synth. Catal.* **2004**, 346, 1449–1456

Laurent Caron, Hervé Bricout, Sébastien Tilloy, Anne Ponchel, David Landy, Sophie Fourmentin, Eric Monflier\*



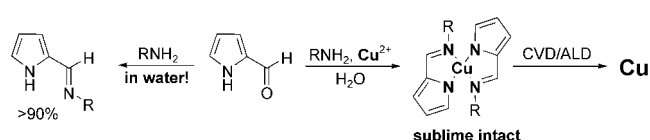
1449

Water as an Ideal Solvent for the Synthesis of Easily Hydrolyzable Compounds: High-Yield Preparation of 2-Pyrrolicarbaldimines and their CVD/ALD-Relevant Cu(II) Derivatives in H<sub>2</sub>O

*Adv. Synth. Catal.* **2004**, 346, 1457–1460



Vladimir V. Grushin,\* William J. Marshall



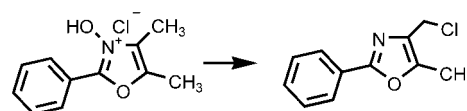
1457

## FULL PAPERS

A Highly Regioselective Preparation of 4-Chloromethyl-5-methyl-2-aryl-1,3-oxazoles

*Adv. Synth. Catal.* **2004**, 346, 1461–1464

George T. Lee, Xinglong Jiang, T. R. Vedananda, Kapa Prasad,\* Oljan Repič

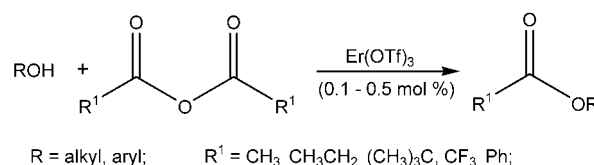


1461

Erbium(III) Triflate as an Extremely Active Acylation Catalyst

*Adv. Synth. Catal.* **2004**, 346, 1465–1470

Antonio Procopio,\* Renato Dalpozzo, Antonio De Nino, Loredana Maiuolo, Beatrice Russo, Giovanni Sindona

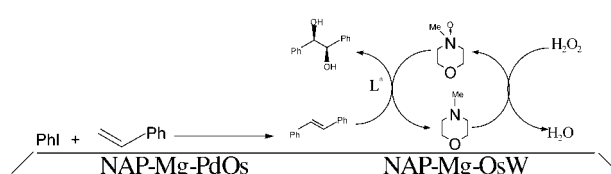


1465

Bifunctional Catalysts Stabilized on Nanocrystalline Magnesium Oxide for One-Pot Synthesis of Chiral Diols

*Adv. Synth. Catal.* **2004**, 346, 1471–1480

Boyapati M. Choudary,\* Karangula Jyothi, Moumita Roy, Mannepalli L. Kantam, Bojja Sreedhar

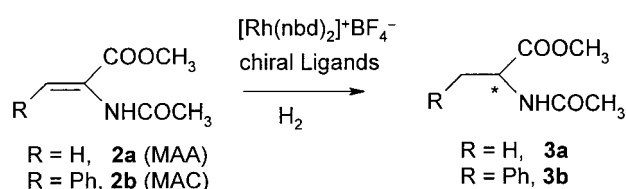


1471

Mixtures of Ionic Liquids and Water as a Medium for Efficient Enantioselective Hydrogenation and Catalyst Recycling

*Adv. Synth. Catal.* **2004**, 346, 1481–1486

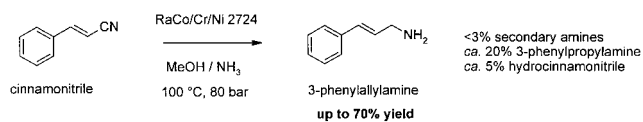
B. Pugin, M. Studer, E. Kuesters, G. Sedelmeier, X. Feng\*



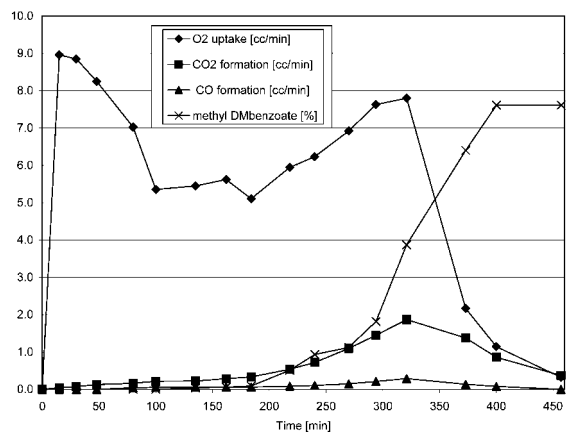
1481

**1487** Chemoselective Hydrogenation of  $\alpha,\beta$ -Unsaturated Nitriles*Adv. Synth. Catal.* **2004**, 346, 1487–1493

Pavel Kukula, Martin Studer, Hans-Ulrich Blaser\*

**UPDATES****1495** The Unusual Characteristics of the Aerobic Oxidation of 3,4-Dimethoxytoluene with Metal/Bromide Catalysts*Adv. Synth. Catal.* **2004**, 346, 1495–1500

Walt Partenheimer

**BOOK REVIEWS****1501** Organometallics in Process Chemistry  
edited by R. D. Larsen*Adv. Synth. Catal.* **2004**, 346, 1501  
Rainer Stürmer

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

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