

## 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, 8, Pages 873–1004

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## COMMENTARY

The New Impact Factor of 3.783 and Immediacy Index of 1.135 for *Advanced Synthesis & Catalysis* Surpass Even the Most Optimistic Predictions

*Adv. Synth. Catal.* **2004**, 346, 887–888

Joe P. Richmond

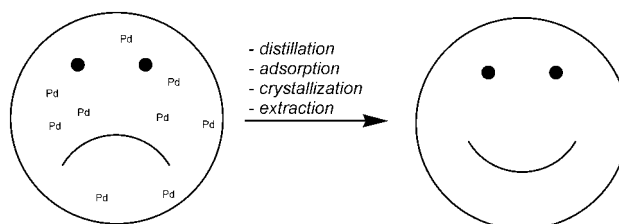
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## REVIEW

The Art of Meeting Palladium Specifications in Active Pharmaceutical Ingredients Produced by Pd-Catalyzed Reactions

*Adv. Synth. Catal.* **2004**, 346, 889–900

Christine E. Garrett, Kapa Prasad\*



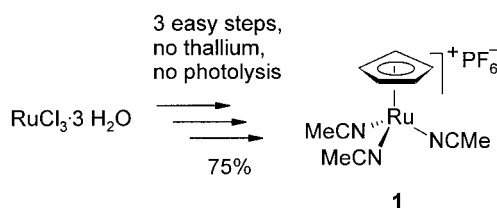
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## COMMUNICATIONS

- 901** Efficient Synthesis of Tris(acetonitrile)-(η<sup>5</sup>-cyclopentadienyl)ruthenium(II) Hexafluorophosphate *via* Ruthenocene

*Adv. Synth. Catal.* **2004**, 346, 901–904

E. Peter Kündig\*, Florian R. Monnier

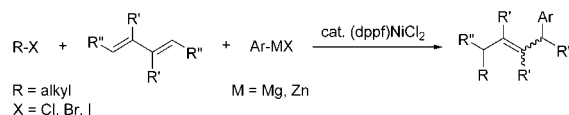


- 905** Nickel-Catalyzed Regioselective Three Component Coupling Reaction of Alkyl Halides, Butadienes, and Ar-M (M = MgX, ZnX)

*Adv. Synth. Catal.* **2004**, 346, 905–908



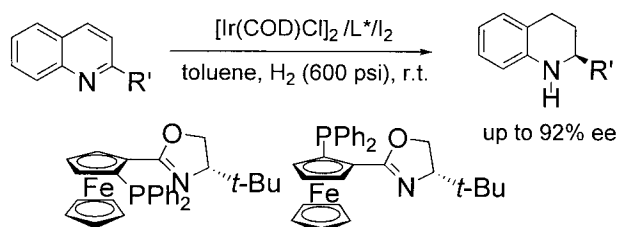
Jun Terao, Shinsuke Nii, Firoz A. Chowdhury, Akifumi Nakamura, Nobuaki Kambe\*



- 909** Asymmetric Hydrogenation of Quinolines Catalyzed by Iridium with Chiral Ferrocenyloxazoline Derived N,P Ligands

*Adv. Synth. Catal.* **2004**, 346, 909–912

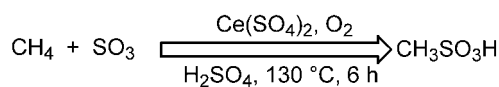
Sheng-Mei Lu, Xiu-Wen Han, Yong-Gui Zhou\*



- 913** Direct Sulfonation of Methane to Methanesulfonic Acid by Sulfur Trioxide Catalyzed by Cerium(IV) Sulfate in the Presence of Molecular Oxygen

*Adv. Synth. Catal.* **2004**, 346, 913–916

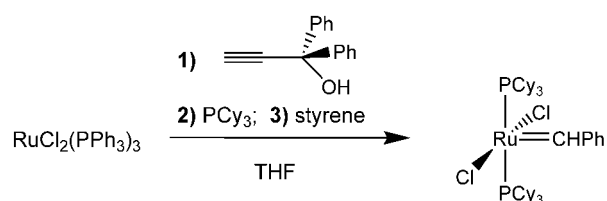
Sudip Mukhopadhyay, Alexis T. Bell\*



- 917** Cross Metathesis Allowing the Conversion of a Ruthenium Indenylidene Complex into Grubbs' Catalyst

*Adv. Synth. Catal.* **2004**, 346, 917–920

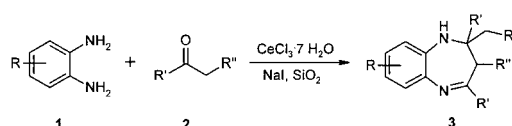
Reto Dorta, Roy A. Kelly III, Steven P. Nolan\*



- 921** A New, Efficient and Environmentally Benign Protocol for the Synthesis of 1,5-Benzodiazepines using Cerium(III) Chloride/Sodium Iodide Supported on Silica Gel

*Adv. Synth. Catal.* **2004**, 346, 921–923

Gowravaram Sabitha\*, G. S. Kiran Kumar Reddy, K. Bhaskar Reddy, N. Mallikarjuna Reddy, J. S. Yadav

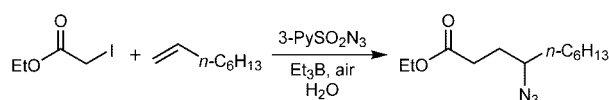


## UPDATES

### 3-Pyridinesulfonyl Azide: A Useful Reagent for Radical Azidation

*Adv. Synth. Catal.* **2004**, 346, 925–928

Philippe Panchaud, Philippe Renaud\*

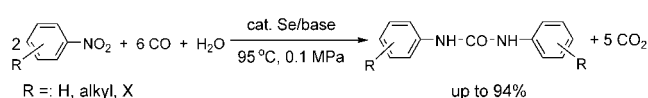


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### Selenium-Catalyzed Carbonylation of Nitroarenes to Symmetrical 1,3-Diarylcureas under Atmospheric Pressure

*Adv. Synth. Catal.* **2004**, 346, 929–932

Xiaofang Wang, Shiwei Lu,\* Zhengkun Yu\*



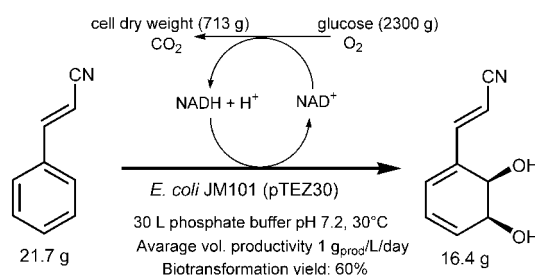
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## FULL PAPERS

### Asymmetric Dihydroxylation of Cinnamitrile to *trans*-3-[(5*S*,6*R*)-5,6-Dihydroxycyclohexa-1,3-dienyl]-acrylonitrile using Chlorobenzene Dioxygenase in *Escherichia coli* (pTEZ30)

*Adv. Synth. Catal.* **2004**, 346, 933–942

Selcuk Yildirim, Josef Zetzl, Tomas Hudlicky, Bernard Witholt, Andreas Schmid\*

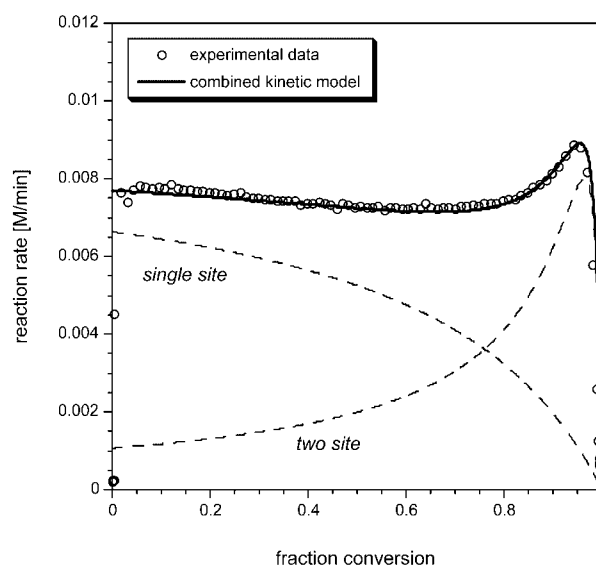


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### Mechanistic Insights into Anomalous Kinetic Behaviour in the Hydrogenation of a Substituted Nitrobenzene

*Adv. Synth. Catal.* **2004**, 346, 943–946

Joel LeBars, Stefano Dini, Joel M. Hawkins\*  
Donna G. Blackmond\*

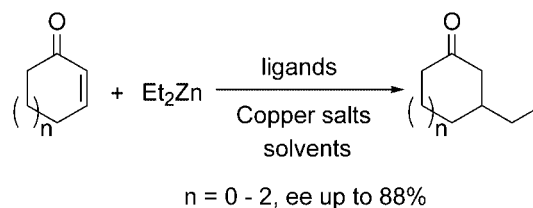


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- 947** Synthesis of New Chiral Aryl Diphosphite Ligands Derived from Pyranoside Backbone of Monosaccharides and Their Application in Copper-Catalyzed Asymmetric Conjugate Addition of Diethylzinc to Cyclic Enones

*Adv. Synth. Catal.* **2004**, 346, 947–953

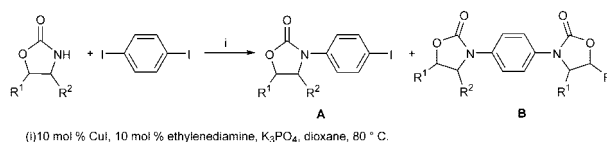
Lailai Wang, Yue-Ming Li, Chiu-wing Yip,\* Liqin Qiu, Zhongyuan Zhou, Albert S. C. Chan\*



- 954** A Short and Efficient Methodology for the Synthesis of Novel 3-Aryloxazolidin-2-one Derivatives

*Adv. Synth. Catal.* **2004**, 346, 954–958

Mecheril V. Nandakumar

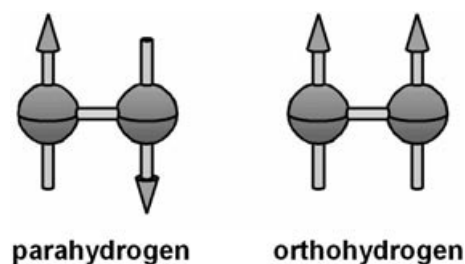


## DEDICATED CLUSTER – FULL PAPERS

- 960** Hydrogen Induced Polarization–Nuclear-Spin Hyperpolarization in Catalytic Hydrogenations without the Enrichment of Para- or Orthohydrogen

*Adv. Synth. Catal.* **2004**, 346, 960–969

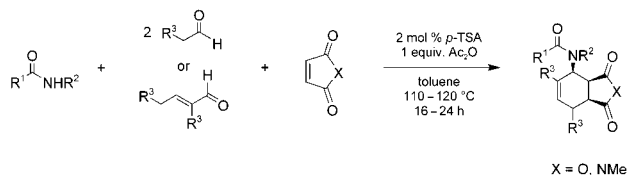
Thorsten Jonischkeit, Klaus Woelk\*



- 970** Second Generation Protocol for Multicomponent Coupling Reactions of Aldehydes, Amides and Dienophiles

*Adv. Synth. Catal.* **2004**, 346, 970–978

Stefan Klaus, Sandra Hübner, Helfried Neumann, Dirk Strübing, Axel Jacobi von Wangelin, Dirk Gördes, Matthias Beller\*

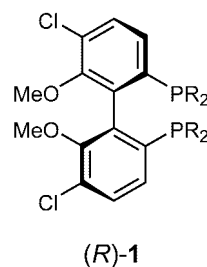


- 979** New Route to Biaryl Phosphanes with Axial Chirality as Ligands for Enantioselective Hydrogenations

*Adv. Synth. Catal.* **2004**, 346, 979–982



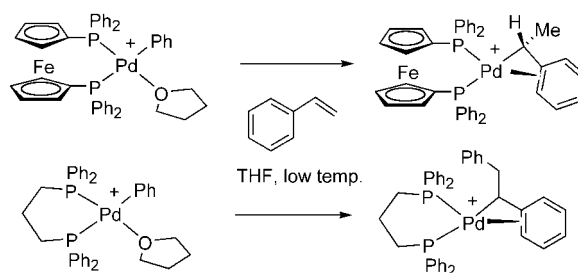
Birgit Drießen-Hölscher,\* Joachim Kralik, Friederike Agel, Christian Steffens, Chunhua Hu



### Conformationally Restricted Arene Intermediates in the Intermolecular Heck Arylation of Vinylarenes

*Adv. Synth. Catal.* **2004**, 346, 983–988

King Kuok (Mimi) Hii,\* Timothy D. W. Claridge,  
Ralf Giernoth, John M. Brown\*

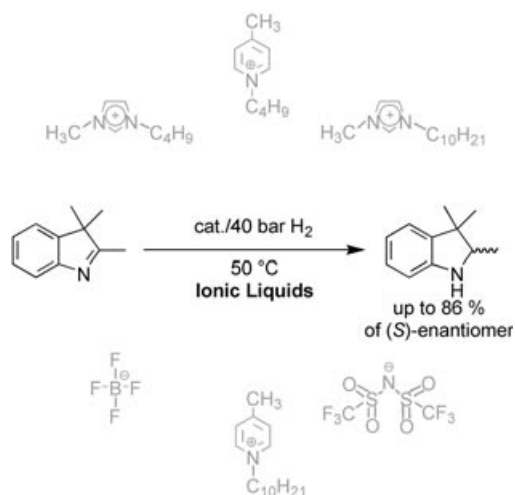


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### Enantioselective Hydrogenation of Trimethylindolenine in Ionic Liquids

*Adv. Synth. Catal.* **2004**, 346, 989–992

Ralf Giernoth,\* Matthias S. Krumm

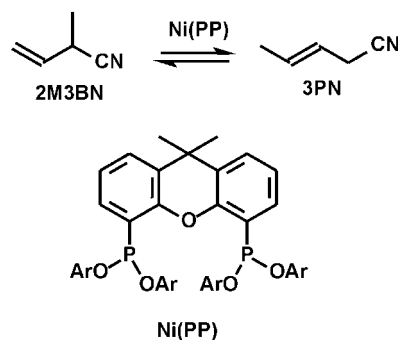


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### Sterically Demanding Diphosphonite Ligands – Synthesis and Application in Nickel-Catalyzed Isomerization of 2-Methyl-3-Butenenitrile

*Adv. Synth. Catal.* **2004**, 346, 993–1003

Jarl Ivar van der Vlugt, Alison C. Hewat, Samuel Neto,  
Rafael Sablong, Allison M. Mills, Martin Lutz,  
Anthony L. Spek, Christian Müller, Dieter Vogt\*



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\*Author to whom correspondence should be addressed.