

## 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, 1, Pages 1–92

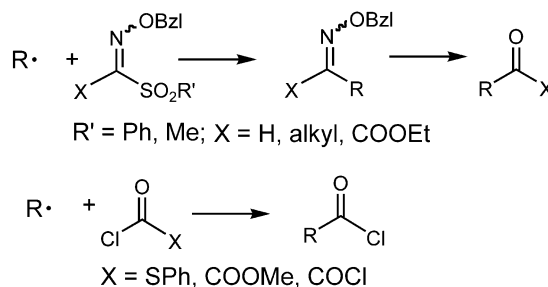
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## REVIEW

Free Radical-Mediated Acylation and Carboxylation Reactions

*Adv. Synth. Catal.* **2004**, 346, 19–32

Sunggak Kim



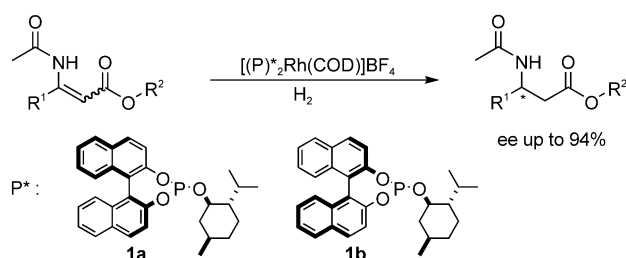
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## COMMUNICATIONS

Enantioselective Hydrogenation of  $\beta$ -Acylamino Acrylates Catalyzed by Rhodium(I)-Monophosphite Complexes

*Adv. Synth. Catal.* **2004**, 346, 33–36

Thomas Jerphagnon, Jean-Luc Renaud, Patrice Demonchaux, Amadéo Ferreira, Christian Bruneau\*



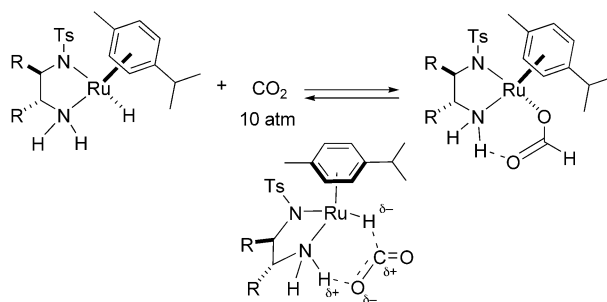
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- 37** Mechanistic Aspects of Formation of Chiral Ruthenium Hydride Complexes from 16-Electron Ruthenium Amide Complexes and Formic Acid: Facile Reversible Decarboxylation and Carboxylation

*Adv. Synth. Catal.* **2004**, 346, 37–41



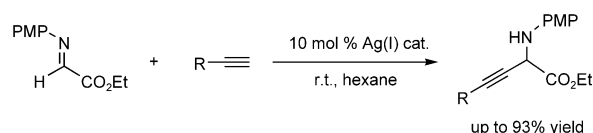
Takashi Koike, Takao Ikariya\*



- 42** Efficient Synthesis of  $\beta,\gamma$ -Alkynyl  $\alpha$ -Amino Acid Derivatives by Ag(I)-Catalyzed Alkynylation of  $\alpha$ -Imino Esters

*Adv. Synth. Catal.* **2004**, 346, 42–44

Jian-Xin Ji, Terry T.-L. Au-Yeung, Jing Wu, Chiu Wing Yip, Albert S. C. Chan\*

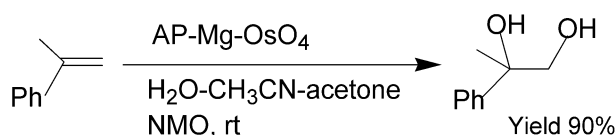


- 45** Achiral Dihydroxylation of Olefins by Osmate ( $\text{OsO}_4^{2-}$ ) Stabilised on Nanocrystalline Magnesium Oxide

*Adv. Synth. Catal.* **2004**, 346, 45–48



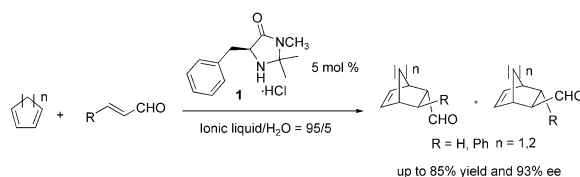
Boyapati M. Choudary,\* Karangula Jyothi, Mannepalli L. Kantam, B. Sreedhar



- 49** Recycling Chiral Imidazolidin-4-one Catalyst for Asymmetric Diels–Alder Reactions: Screening of Various Ionic Liquids

*Adv. Synth. Catal.* **2004**, 346, 49–52

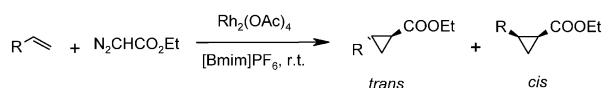
Jin Kyoong Park, Pentlavalli Sreekanth, B. Moon Kim\*



- 53** Rhodium Acetate Dimer Immobilized in 1-Butyl-3-methylimidazolium Hexafluorophosphate Ionic Liquid: a Novel and Recyclable Catalytic System for the Cyclopropanation of Alkenes

*Adv. Synth. Catal.* **2004**, 346, 53–56

J. S. Yadav,\* B. V. S. Reddy, P. Narayana Reddy



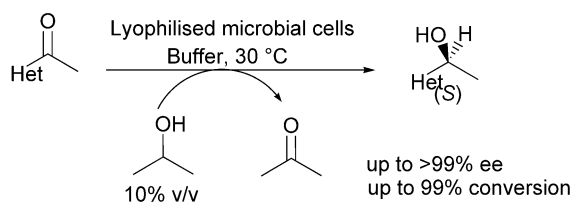
## FULL PAPERS

- 57** Simple Biocatalytic Access to Enantiopure (*S*)-1-Heteroarylethanol Employing a Microbial Hydrogen Transfer Reaction

*Adv. Synth. Catal.* **2004**, 346, 57–62



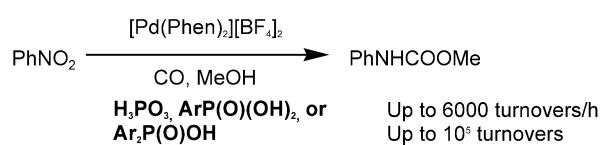
Wolfgang Stampfer, Klaus Edegger, Birgit Kosjek, Kurt Faber, Wolfgang Kroutil\*



Phosphorus Acids as Highly Efficient Promoters for the Palladium-Phenanthroline Catalyzed Carbonylation of Nitrobenzene to Methyl Phenylcarbamate

*Adv. Synth. Catal.* **2004**, 346, 63–71

Fabio Ragaini,\* Michela Gasperini, Sergio Cenini

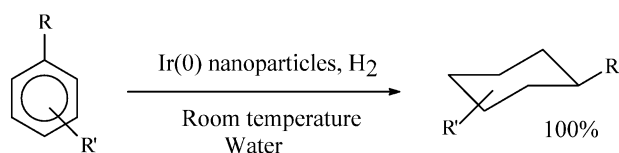


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Surfactant-Stabilized Aqueous Iridium(0) Colloidal Suspension: An Efficient Reusable Catalyst for Hydrogenation of Arenes in Biphasic Media

*Adv. Synth. Catal.* **2004**, 346, 72–76

Vincent M  vellec, Alain Roucoux,\* Esther Ramirez, Karine Philippot, Bruno Chaudret

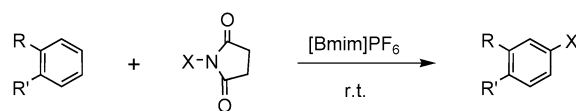


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Efficient Halogenation of Aromatic Systems Using *N*-Halosuccinimides in Ionic Liquids

*Adv. Synth. Catal.* **2004**, 346, 77–82

J. S. Yadav,\* B. V. S. Reddy, P. S. R. Reddy, A. K. Basak, A. V. Narsaiah

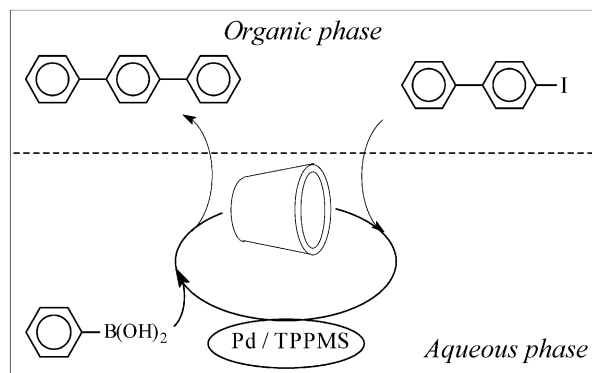


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Cyclodextrins or Calixarenes: What is the Best Mass Transfer Promoter for Suzuki Cross-Coupling Reactions in Water?

*Adv. Synth. Catal.* **2004**, 346, 83–89

F. Hapiot, J. Lyskawa, H. Bricout, S. Tilloy, E. Monflier\*



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## BOOK REVIEW

Name Reactions – A Collection of Detailed Reaction Mechanisms  
by Jie Jack Li

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Siegfried R. Waldvogel

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

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