

## 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

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2004, 346, 4, Pages 377–486

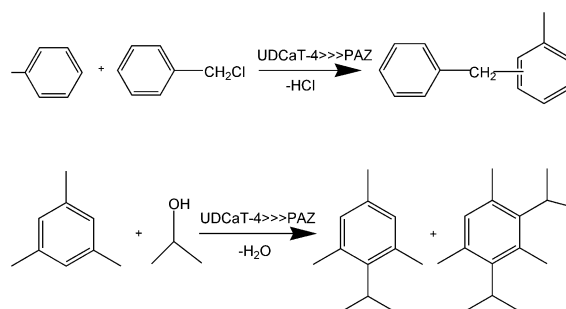
Issue 2 + 3/2004 was published online on March 29, 2004

## COMMUNICATIONS

Preparation of the Novel Mesoporous Solid Acid Catalyst UDCaT-4 via Synergism of Persulfated Alumina and Zirconia into Hexagonal Mesoporous Silica for Alkylation Reactions

*Adv. Synth. Catal.* **2004**, 346, 389–394

Ganapati D. Yadav,\* Ambareesh D. Murkute

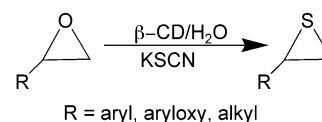


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Synthesis of Thiiranes from Oxiranes in the Presence of  $\beta$ -Cyclodextrin in Water

*Adv. Synth. Catal.* **2004**, 346, 395–397

N. Srilakshmi Krishnaveni, K. Surendra, M. Somi Reddy,  
Y. V. D. Nageswar, K. Rama Rao\*



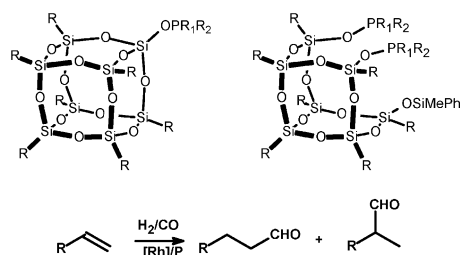
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## FULL PAPERS

- 399** Versatile Phosphite Ligands Based on Silsesquioxane Backbones

*Adv. Synth. Catal.* **2004**, 346, 399–412

Jarl Ivar van der Vlugt, Jens Ackerstaff, Tessa W. Dijkstra, Allison M. Mills, Huub Kooijman, Anthony L. Spek, Auke Meetsma, Hendrikus C. L. Abbenhuis, Dieter Vogt\*

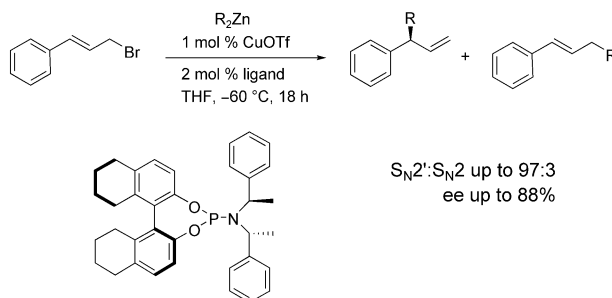


- 413** Highly Enantioselective Copper-Catalyzed Allylic Alkylation with Phosphoramidite Ligands

*Adv. Synth. Catal.* **2004**, 346, 413–420



Anthoni W. van Zijl, Leggy A. Arnold, Adriaan J. Minnaard, Ben L. Feringa\*

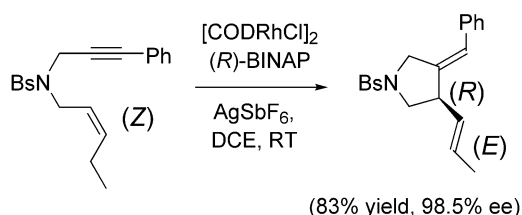


- 421** The Absolute Configuration of the Products of the Enantioselective Rhodium(I)/BINAP-Catalyzed Enyne Cyclization

*Adv. Synth. Catal.* **2004**, 346, 421–424



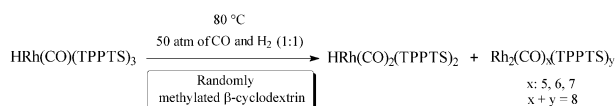
A. Stephen K. Hashmi,\* Patrick Haufe, Andreas Rivas Nass, Jan W. Bats



- 425** High-Pressure  $^{31}\text{P}\{^1\text{H}\}$  NMR Studies of  $\text{RhH}(\text{CO})(\text{TPPTS})_3$  in the Presence of Methylated Cyclodextrins: New Light on Rhodium-Catalyzed Hydroformylation Reaction Assisted by Cyclodextrins

*Adv. Synth. Catal.* **2004**, 346, 425–431

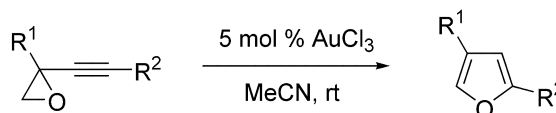
E. Monflier,\* H. Bricout, F. Hapiot, S. Tilloy, A. Aghmiz, A. M. Masdeu-Bultó



- 432** Gold Catalysis: Mild Conditions for the Transformation of Alkynyl Epoxides to Furans

*Adv. Synth. Catal.* **2004**, 346, 432–438

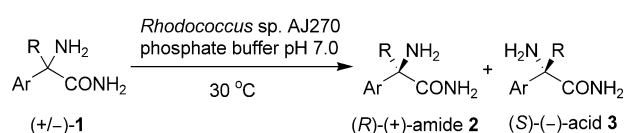
A. Stephen K. Hashmi,\* Pradipta Sinha



# Efficient Biocatalytic Synthesis of Highly Enantiopure $\alpha$ -Alkylated Arylglycines and Amides

*Adv. Synth. Catal.* **2004**, 346, 439–445

Mei-Xiang Wang,\* Shuan-Jun Lin, Jun Liu, Qi-Yu Zheng

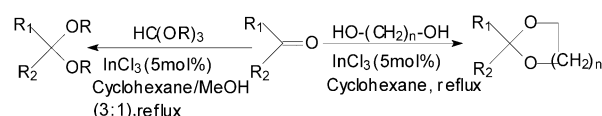


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# A Simple, Efficient and General Procedure for Acetalization of Carbonyl Compounds and Deprotection of Acetals under the Catalysis of Indium(III) Chloride

*Adv. Synth. Catal.* **2004**, 346, 446–450

Brindaban C. Ranu,\* Ranjan Jana, Sampak Samanta



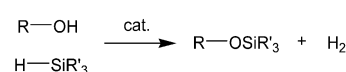
$\text{R}_1 = \text{alkyl / aryl}; \text{R}_2 = \text{H / alkyl / aryl}; \text{R} = \text{Me / Et}; n = 1/2$

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# Solventless Silane Alcoholysis Catalyzed by Recoverable Dirhodium(II) Perfluorocarboxylates

*Adv. Synth. Catal.* **2004**, 346, 451–458

Andrea Biffis,\* Mirko Braga, Marino Basato

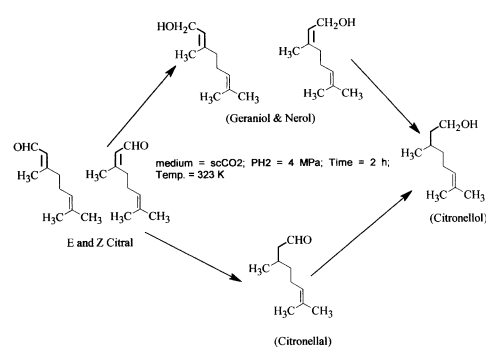


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# Hydrogenation of Citral using Monometallic Pt and Bimetallic Pt-Ru Catalysts on a Mesoporous Support in Supercritical Carbon Dioxide Medium

*Adv. Synth. Catal.* **2004**, 346, 459–466

M. Chatterjee, F. Y. Zhao, Y. Ikushima\*

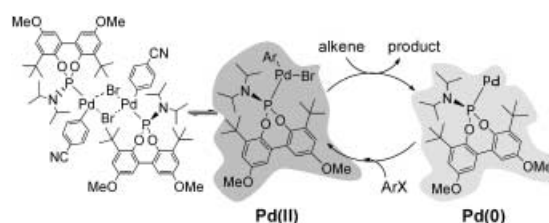


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# Detailed Mechanistic Studies using *in situ* Spectroscopic Analysis: A Look at Little-Known Regions of the Heck Reaction

*Adv. Synth. Catal.* **2004**, 346, 467–473

Gadi Rothenberg,\* Susana C. Cruz, Gino P. F. van Strijdonck, Huub C. J. Hoefsloot

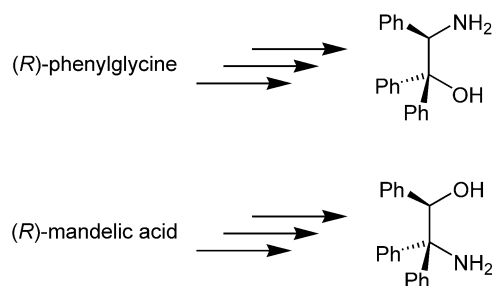


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- 474** The Regioisomeric Triphenylaminoethanols – Comparison of their Efficiency in Enantioselective Catalysis

*Adv. Synth. Catal.* **2004**, 346, 474–482

Manfred Braun,\* Ralf Fleischer, Brigitte Mai, Marc-André Schneider, Stefan Lachenicht

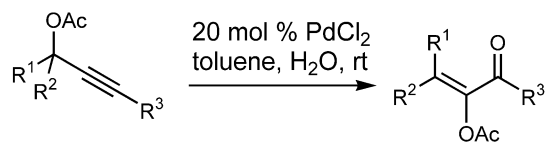


## UPDATE

- 483** On the Palladium(II)-Catalysed Oxidative Rearrangement of Propargylic Acetates

*Adv. Synth. Catal.* **2004**, 346, 483–485

A. Bartels, R. Mahrwald,\* K. Müller



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

\*Author to whom correspondence should be addressed.