

## 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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2005, 347, 6, Pages 725–886

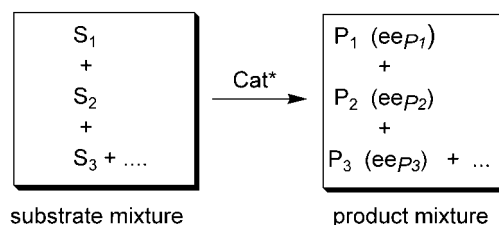
Issue 5/2005 was published online on April 8, 2005

## REVIEW

### The Multi-Substrate Screening of Asymmetric Catalysts

*Adv. Synth. Catal.* **2005**, 347, 737–748

Tummanapalli Satyanarayana, Henri B. Kagan\*



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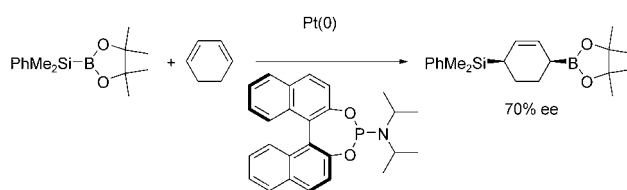
## COMMUNICATIONS

### Enantioselective Platinum-Catalyzed Silicon-Boron Addition to 1,3-Cyclohexadiene

*Adv. Synth. Catal.* **2005**, 347, 749–753



Martin Gerdin, Christina Moberg\*

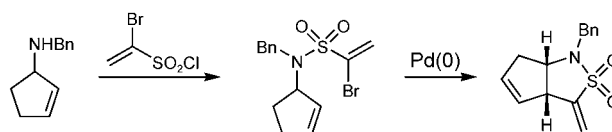


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### Synthesis of Sultams by Intramolecular Heck Reaction

*Adv. Synth. Catal.* **2005**, 347, 754–758

Sandra Merten, Roland Fröhlich, Olga Kataeva, Peter Metz\*

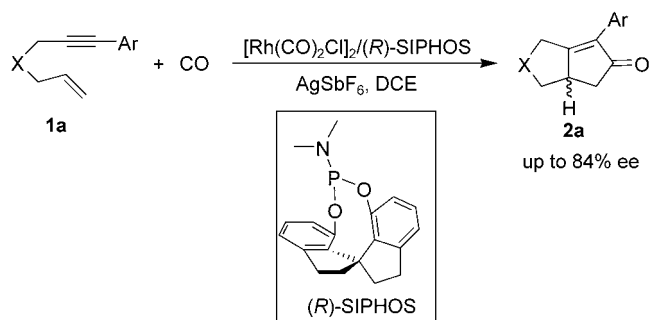


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**759** Rhodium-Catalyzed Asymmetric Pauson–Khand Reaction Using Monophosphoramidite Ligand SIPHOS

*Adv. Synth. Catal.* **2005**, 347, 759–762

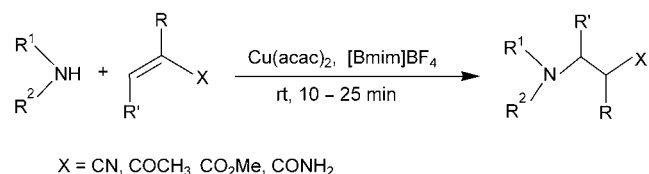
Bao-Min Fan, Jian-Hua Xie, Shen Li, Yong-Qiang Tu, Qi-Lin Zhou\*



**763** Cu(acac)<sub>2</sub> Immobilized in Ionic Liquids: A Recoverable and Reusable Catalytic System for Aza-Michael Reactions

*Adv. Synth. Catal.* **2005**, 347, 763–766

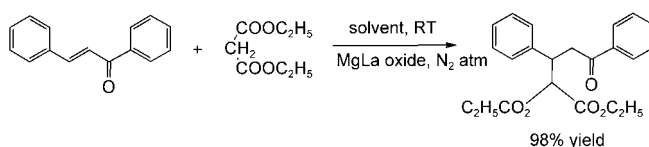
M. Lakshmi Kantam,\* V. Neeraja, B. Kavita, B. Neelima, Mihir K. Chaudhuri,\* Sahid Hussain



**767** Magnesium-Lanthanum Mixed Metal Oxide: a Strong Solid Base for the Michael Addition Reaction

*Adv. Synth. Catal.* **2005**, 347, 767–771

Bhaskar Veldurthy, Jean Marc Clacens, François Figueras\*

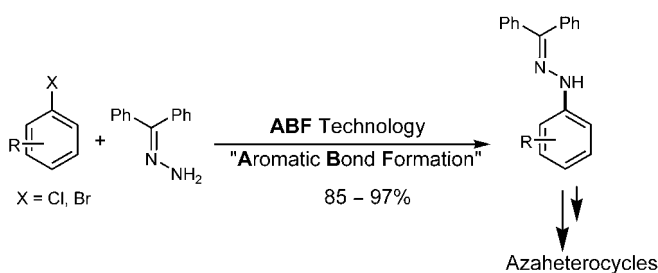


## FULL PAPERS

**773** The Synthesis of Important Pharmaceutical Building Blocks by Palladium-Catalyzed Coupling Reaction: Access to Various Arylhydrazines

*Adv. Synth. Catal.* **2005**, 347, 773–782

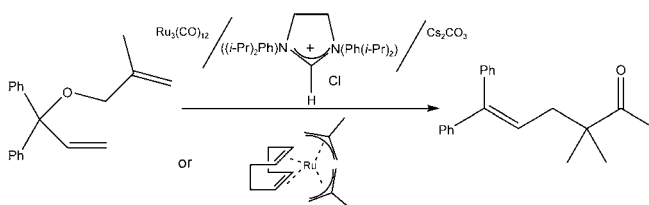
Christelle Mauger,\* Gérard Mignani



**783** Homologation of Monoterpenoids into New Sesquiterpenoids via Tandem Isomerisation/Claisen Rearrangement Reactions with Three-Component Ruthenium Catalysts, and Ru(methallyl)<sub>2</sub>(COD) Revealed by High Throughput Screening Techniques

*Adv. Synth. Catal.* **2005**, 347, 783–791

Jérôme Le Nôtre, Rachid Touzani, Olivier Lavastre, Christian Bruneau,\* Pierre H. Dixneuf\*

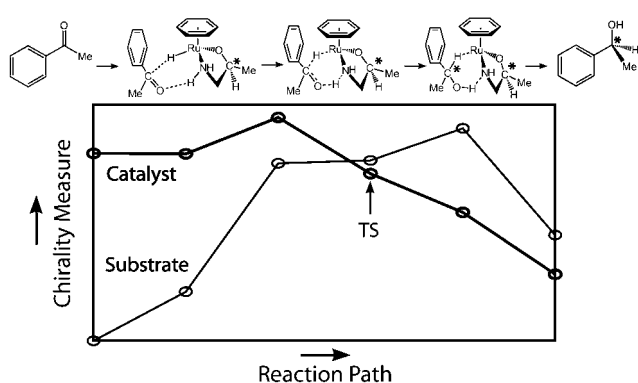


# Continuous Chirality Measure in Reaction Pathways of Ruthenium-Catalyzed Transfer Hydrogenation of Ketones

*Adv. Synth. Catal.* **2005**, 347, 792–802



Jan-Willem Handgraaf, Joost N. H. Reek,\* Luca Bellarosa, Francesco Zerbetto\*

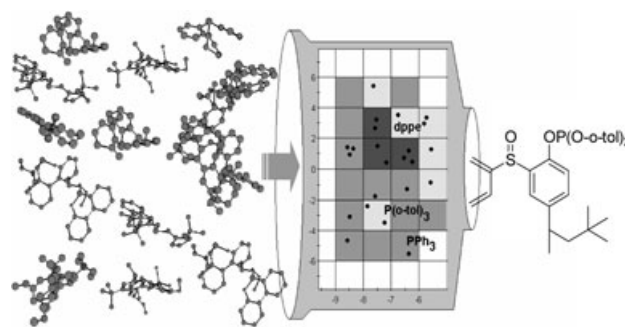


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# Ligand Descriptor Analysis in Nickel-Catalysed Hydrocyanation: A Combined Experimental and Theoretical Study

*Adv. Synth. Catal.* **2005**, 347, 803–810

Enrico Burello, Philippe Marion, Jean-Christophe Galland, Alex Chamard, Gadi Rothenberg\*

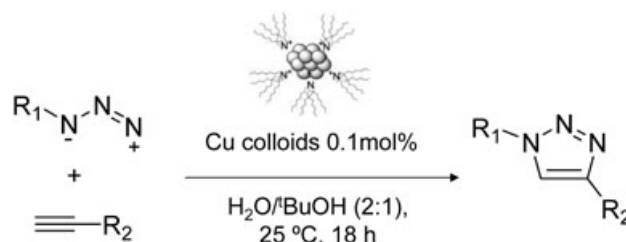


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# Click Chemistry: Copper Clusters Catalyse the Cycloaddition of Azides with Terminal Alkynes

*Adv. Synth. Catal.* **2005**, 347, 811–815

Laura Durán Pachón, Jan H. van Maarseveen, Gadi Rothenberg\*

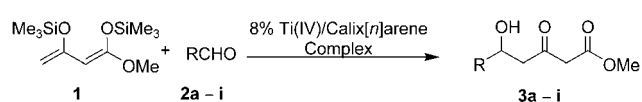


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# Study on an Aldol Reaction Catalyzed by Ti(IV)/Calix[n]arene Complexes

*Adv. Synth. Catal.* **2005**, 347, 816–824

Annunziata Soriente,\* Margherita De Rosa, Marina Fruilo, Laura Lepore, Carmine Gaeta, Placido Neri\*

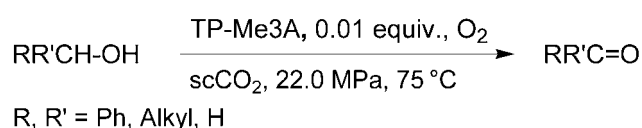


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# A Mechanistic Study on Alcohol Oxidations with Oxygen Catalysed by TPAP-Doped Ormosils in Supercritical Carbon Dioxide

*Adv. Synth. Catal.* **2005**, 347, 825–832

Sandro Campestrini,\* Massimo Carraro, Rosaria Ciriminna, Mario Pagliaro, Umberto Tonellato



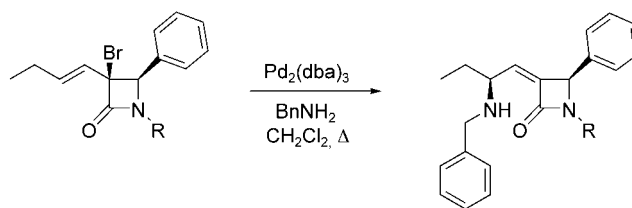
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- 833** Highly Regio- and Diastereoselective Palladium-Catalyzed Allylic Substitution. Synthesis of 3-(2-Aminobutylidene)-4-arylazetidin-2-ones

*Adv. Synth. Catal.* **2005**, 347, 833–838



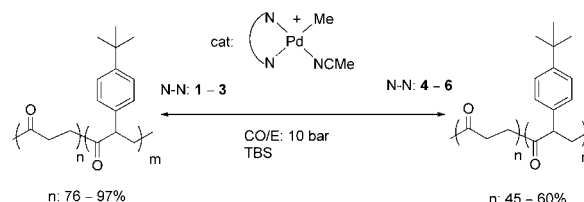
Giuliana Cardillo,\* Serena Fabbroni, Luca Gentilucci, Rossana Perciaccante, Alessandra Tolomelli



- 839** Control of Polymer Composition in Pd-Catalyzed CO/Olefin Terpolymerization Reactions

*Adv. Synth. Catal.* **2005**, 347, 839–846

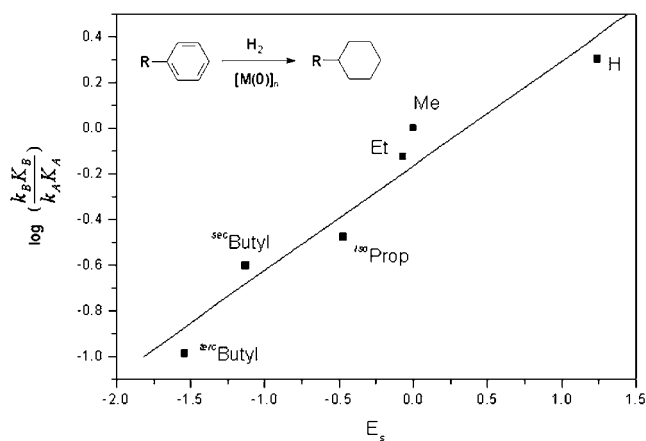
Amaia Bastero,\* Aurora Ruiz, Carmen Claver, Antonio Bella, Barbara Milani,\* Belén Moreno-Lara, Félix A. Jalón, Blanca R. Manzano



- 847** Competitive Hydrogenation of Alkyl-Substituted Arenes by Transition-Metal Nanoparticles: Correlation with the Alkyl-Steric Effect

*Adv. Synth. Catal.* **2005**, 347, 847–853

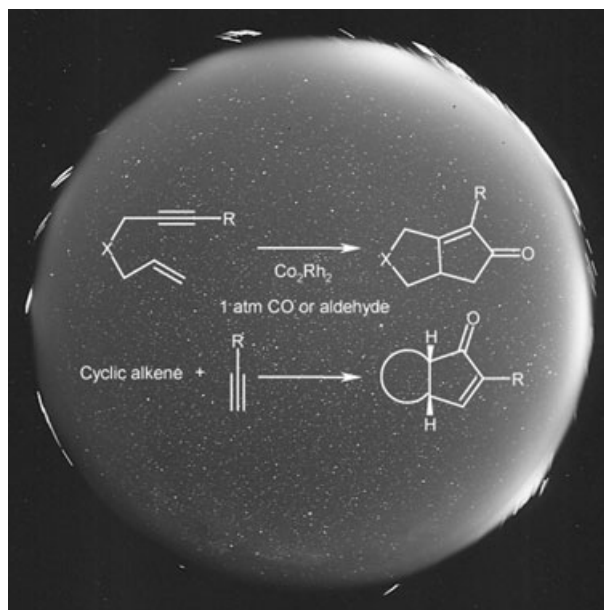
Gledison S. Fonseca, Edson T. Silveira, Marcos A. Gelesky, Jairton Dupont\*



- 854** Immobilized Co/Rh Heterobimetallic Nanoparticle-Catalyzed Pauson–Khand-Type Reaction

*Adv. Synth. Catal.* **2005**, 347, 854–866

Kang Hyun Park, Young Keun Chung\*

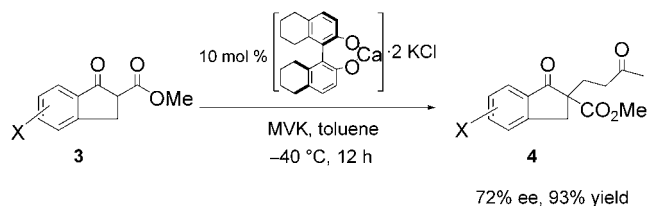


Enantioenriched Calcium-(*R*)-5,5',6,6',7,7',8,8'-Octahydro-BINOL (H<sub>8</sub>-BINOL): An Efficient Catalyst for the Creation of a Quaternary Stereocenter

*Adv. Synth. Catal.* **2005**, 347, 867–871



G. Kumaraswamy,\* Nivedita Jena, M. N. V. Sastry, M. Padmaja, B. Markondaiah



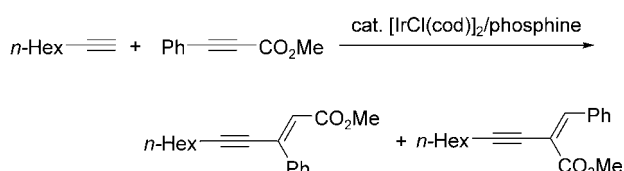
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Iridium Complex-Catalyzed Cross-Coupling Reaction of Terminal Alkynes with Internal Alkynes *via* C–H Activation of Terminal Alkynes

*Adv. Synth. Catal.* **2005**, 347, 872–876



Tomotaka Hirabayashi, Satoshi Sakaguchi, Yasutaka Ishii\*

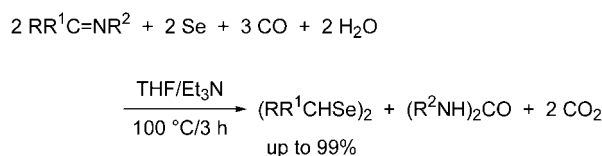


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Highly Efficient Route to Diselenides from the Reactions of Imines and Selenium in the Presence of Carbon Monoxide and Water

*Adv. Synth. Catal.* **2005**, 347, 877–882

Xiaodan Zhao, Zhengkun Yu,\* Fanlong Zeng, Jinzhu Chen, Xiaowei Wu, Sizhong Wu,\* Wen-Jing Xiao,\* Zhaoyan Zheng



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## BOOK REVIEW

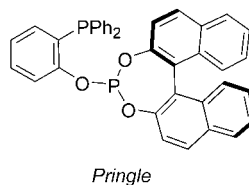
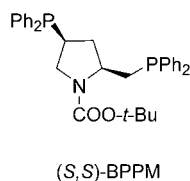
Ruthenium Catalysts and Fine Chemistry  
Edited by C. Bruneau, P. H. Dixneuf

*Adv. Synth. Catal.* **2005**, 347, 883  
Luis A. Oro

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## CORRIGENDUM

In the full paper by Mstislav O. Shulyupin, Giancarlo Franciò, Irina P. Beletskaya,\* and Walter Leitner\* in Issue 5, 2005, pp. 667–672, the structures of two of the ligands in page 669 are incorrect. The correct structures are given below. The authors apologize for this error.



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

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