

## 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*  
(founded in 1828)

New! Online Submission  
now available at  
<http://asc.wiley-vch.de>

2005, 347, 15, Pages 1877–2046

Issue 14/2005 was published online on November 15, 2005



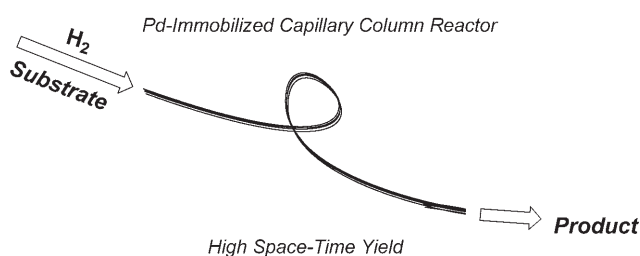
The editorial staff and the publishers thank all readers, authors, referees, and advertisers for their interest and support over the past year and wish them all a happy new year.

## COMMUNICATIONS

Triphase Hydrogenation Reactions Utilizing Palladium-Immobilized Capillary Column Reactors and a Demonstration of Suitability for Large Scale Synthesis

*Adv. Synth. Catal.* **2005**, 347, 1889–1892

Juta Kobayashi, Yuichiro Mori, Shū Kobayashi\*

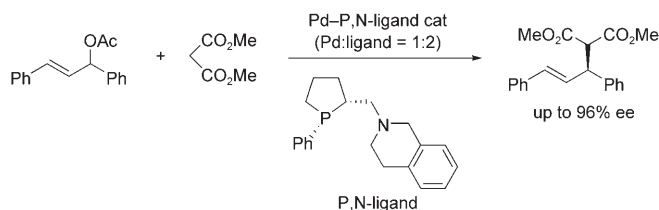


1889

- 1893** A New Chiral P,N-Ligand Derived from 1-Phenylphospholane-2-carboxylic Acid (Phenyl-P-proline) for Palladium-Catalyzed Asymmetric Allylic Substitution Reactions

*Adv. Synth. Catal.* **2005**, 347, 1893–1898

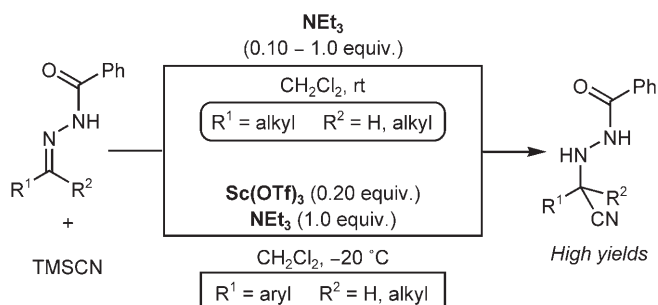
Xiang-Min Sun, Masatoshi Koizumi, Kei Manabe,  
Shū Kobayashi\*



- 1899** Cyanation of *N*-Acylhydrazones with Trimethylsilyl Cyanide Promoted by a Brønsted Base and a Lewis Acid

*Adv. Synth. Catal.* **2005**, 347, 1899–1903

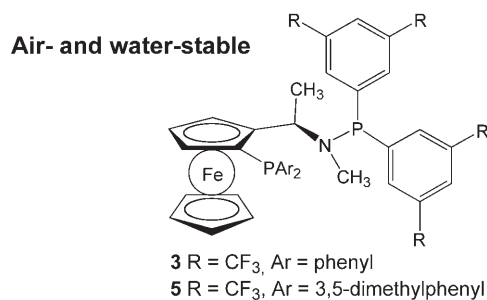
Hideyuki Konishi, Chikako Ogawa, Masaharu Sugiura, and  
Shū Kobayashi\*



- 1904** Highly Air- and Water-Stable Fluorinated Ferrocenylphosphine-Aminophosphine Ligands and their Applications in Asymmetric Hydrogenations

*Adv. Synth. Catal.* **2005**, 347, 1904–1908

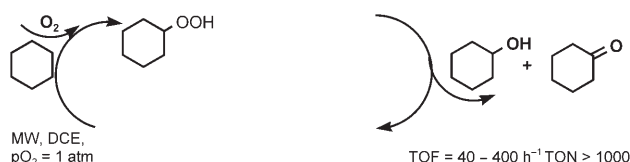
Xingshu Li, Xian Jia, Lijin Xu, Stanton H. L. Kok,  
C. W. Yip,\* Albert S. C. Chan\*



- 1909** Microwave-Assisted Fast Cyclohexane Oxygenation Catalyzed by Iron-Substituted Polyoxotungstates

*Adv. Synth. Catal.* **2005**, 347, 1909–1912

Marcella Bonchio,\* Mauro Carraro, Gianfranco Scorrano,  
Ulrich Kortz

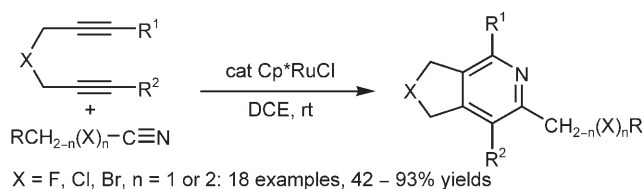


- 1913** Synthesis of 2-Haloalkylpyridines *via* Cp\*RuCl-Catalyzed Cycloaddition of 1,6-Diynes with  $\alpha$ -Halonitriles. Unusual Halide Effect in Catalytic Cyclocotrimerization

*Adv. Synth. Catal.* **2005**, 347, 1913–1916

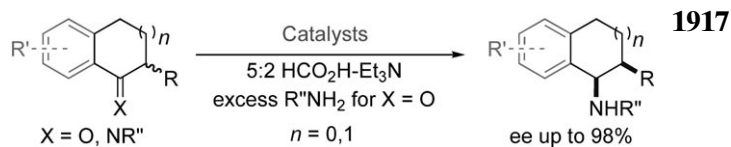


Yoshihiko Yamamoto,\* Keisuke Kinpara, Hisao Nishiyama,  
Kenji Itoh



Transfer Hydrogenation of  $\alpha$ -Branched Ketimines: Enantioselective Synthesis of Cycloalkylamines *via* Dynamic Kinetic Resolution

*Adv. Synth. Catal.* **2005**, 347, 1917–1920

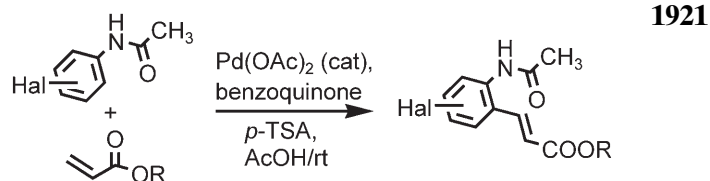


Abel Ros, Antonio Magriz, Hansjörg Dietrich, Mark Ford, Rosario Fernández,\* José M. Lassaletta\*

Pd-Catalyzed *ortho*-Selective Oxidative Coupling of Halo-genated Acetanilides with Acrylates

*Adv. Synth. Catal.* **2005**, 347, 1921–1924

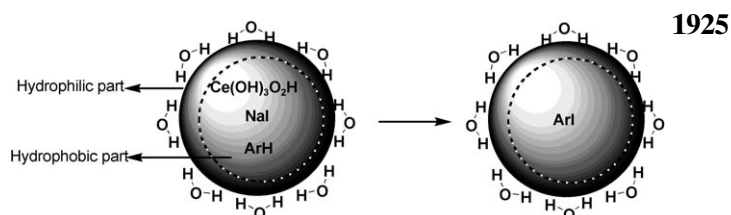
George T. Lee, Xinglong Jiang, Kapa Prasad,\* Oljan Repič, Thomas J. Blacklock



Pronounced Catalytic Effect of Micellar Solution of Sodium Dodecyl Sulfate (SDS) for Regioselective Iodination of Aromatic Compounds with a Sodium Iodide/Cerium(IV) Trihydroxide Hydroperoxide System

*Adv. Synth. Catal.* **2005**, 347, 1925–1928

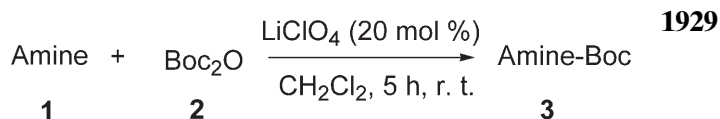
Habib Firouzabadi,\* Nasser Iranpoor,\* Atefeh Garzan



Lithium Perchlorate-Catalyzed Boc Protection of Amines and Amine Derivatives

*Adv. Synth. Catal.* **2005**, 347, 1929–1932

Akbar Heydari,\* Seyed Esmaeil Hosseini

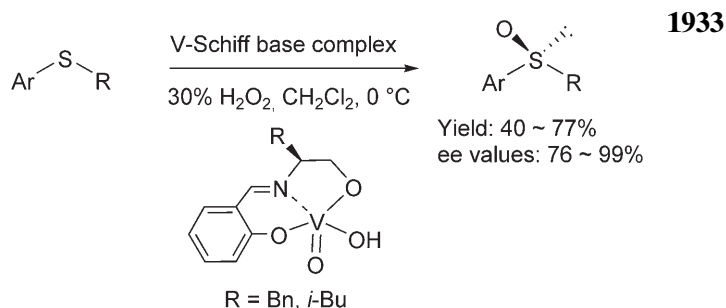


Vanadium-Catalyzed Enantioselective Sulfoxidation and Concomitant, Highly Efficient Kinetic Resolution Provide High Enantioselectivity and Acceptable Yields of Sulfoxides

*Adv. Synth. Catal.* **2005**, 347, 1933–1936



Qingle Zeng,\* Heqing Wang, Tongjian Wang, Yimin Cai, Wen Weng, Yufen Zhao\*

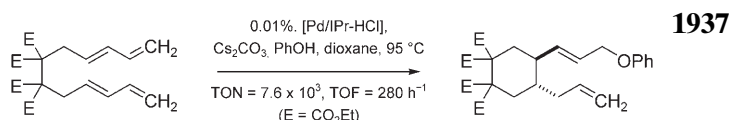


Improved Turnover Numbers in Palladium-Catalyzed Bis-diene Cyclization-Trapping using N-Heterocyclic Carbene Ligands

*Adv. Synth. Catal.* **2005**, 347, 1937–1942



James M. Takacs,\* Suman Layek, Hector Palencia, Ross N. Andrews

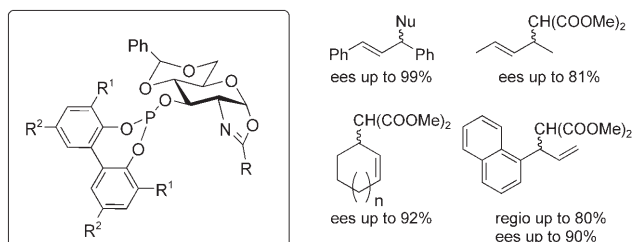


- 1943** New Carbohydrate-Based Phosphite-Oxazoline Ligands as Highly Versatile Ligands for Palladium-Catalyzed Allylic Substitution Reactions

*Adv. Synth. Catal.* **2005**, 347, 1943–1947



Yvette Mata, Montserrat Diéguez,\* Oscar Pàmies,\*  
Carmen Claver

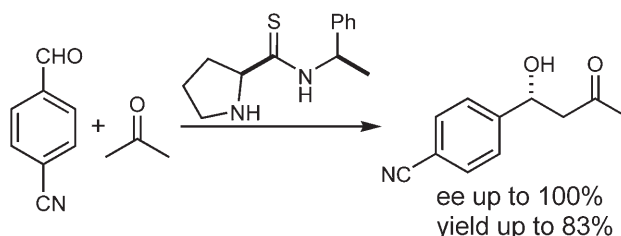


- 1948** L-Prolinethioamides – Efficient Organocatalysts for the Direct Asymmetric Aldol Reaction

*Adv. Synth. Catal.* **2005**, 347, 1948–1952



Dorota Gryko,\* Radosław Lipiński

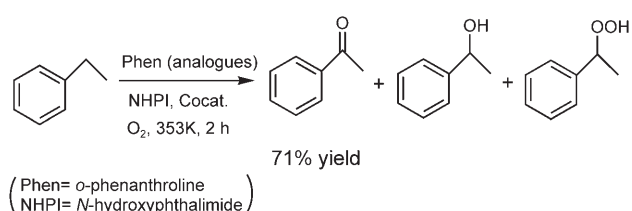


- 1953** Highly Efficient and Metal-Free Aerobic Hydrocarbons Oxidation Process by an *o*-Phenanthroline-Mediated Organocatalytic System

*Adv. Synth. Catal.* **2005**, 347, 1953–1957



Xinli Tong, Jie Xu,\* Hong Miao

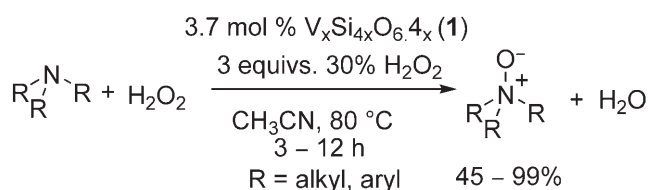


- 1958** Silica-Supported Vanadium-Catalyzed *N*-Oxidation of Tertiary Amines with Aqueous Hydrogen Peroxide

*Adv. Synth. Catal.* **2005**, 347, 1958–1960



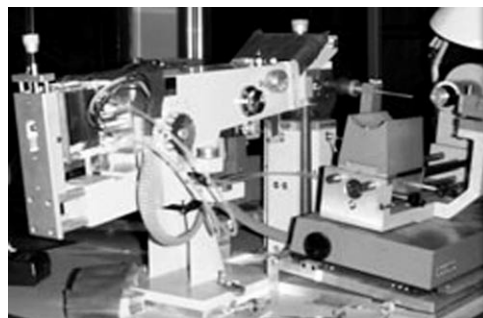
Laxmidhar Rout, Tharmalingam Punniyamurthy\*



- 1961** Taking “Nothing” into Consideration: Supported Metal Catalysts by SAXS

*Adv. Synth. Catal.* **2005**, 347, 1961–1964

Mario Pagliaro

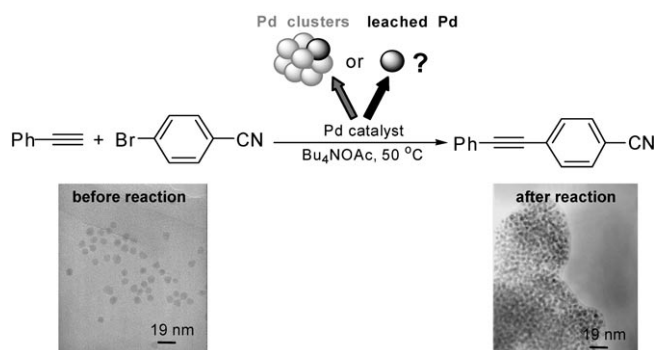


- 1965** Palladium Nanoclusters in Sonogashira Cross-Coupling: A True Catalytic Species?

*Adv. Synth. Catal.* **2005**, 347, 1965–1968



Mehul B. Thathagar, Patricia J. Kooyman, Romilda Boerleider, Eveline Jansen, Cornelis J. Elsevier, Gadi Rothenberg\*



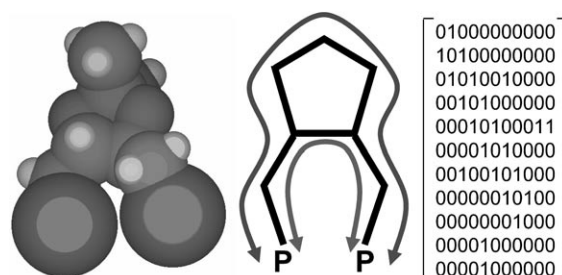
## FULL PAPERS

## Topological Mapping of Bidentate Ligands: A Fast Approach for Screening Homogeneous Catalysts

*Adv. Synth. Catal.* **2005**, 347, 1969–1977



Enrico Burello, Gadi Rothenberg\*

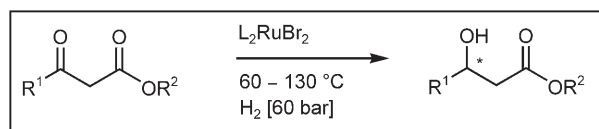


1969

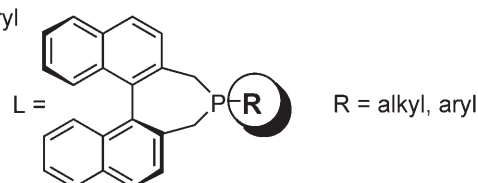
A General Method for the Enantioselective Hydrogenation of  $\beta$ -Keto Esters using Monodentate Binaphthophosphine Ligands

*Adv. Synth. Catal.* **2005**, 347, 1978–1986

Bernhard Hagemann, Kathrin Junge, Stephan Enthaler, Manfred Michalik, Thomas Riermeier, Axel Monsees, Matthias Beller\*



$R^1$  = alkyl, aryl  
 $R^2$  = alkyl

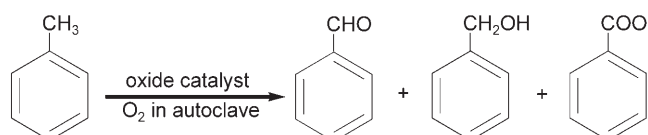


1978

## Liquid Phase Oxidation of Toluene to Benzaldehyde with Molecular Oxygen over Copper-Based Heterogeneous Catalysts

*Adv. Synth. Catal.* **2005**, 347, 1987–1992

Feng Wang, Jie Xu,\* Xiaoqiang Li, Jin Gao, Lipeng Zhou, Ryuichi Ohnishi



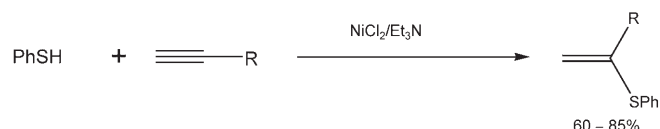
1987

## Nickel(II) Chloride-Catalyzed Regioselective Hydrothiolation of Alkynes

*Adv. Synth. Catal.* **2005**, 347, 1993–2001



Valentine P. Ananikov,\* Denis A. Malyshev, Irina P. Beletskaya,\* Grigory G. Aleksandrov, Igor L. Eremenko

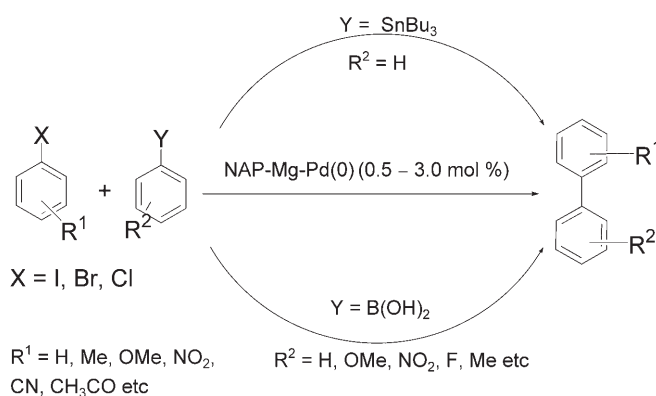


1993

## Nanocrystalline Magnesium Oxide-Stabilized Palladium(0): An Efficient and Reusable Catalyst for Suzuki and Stille Cross-Coupling of Aryl Halides

*Adv. Synth. Catal.* **2005**, 347, 2002–2008

M. Lakshmi Kantam,\* Sarabindu Roy, Moumita Roy, B. Sreedhar, B. M. Choudary\*

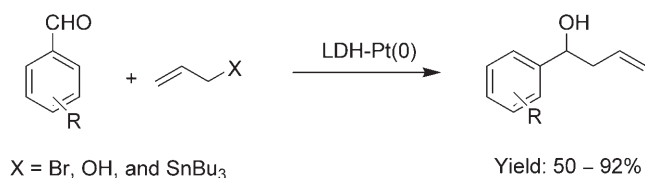


2002

- 2009** Layered Double Hydroxide Supported Nanoplatinum and Nanopalladium Catalyzed Allylation of Aldehydes: A Mechanistic Study

*Adv. Synth. Catal.* **2005**, 347, 2009–2014

B. M. Choudary, Moumita Roy, Sarabindu Roy, M. Lakshmi Kantam,\* Karangula Jyothi, Bojja Sreedhar



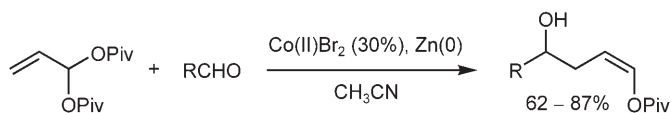
## UPDATE

- 2015** Cobalt-Catalysed Addition of Allylidene Dipivalate to Aldehydes. A Formal Homoaldol Condensation

*Adv. Synth. Catal.* **2005**, 347, 2015–2019



Marco Lombardo,\* Sebastiano Licciulli, Filippo Pasi, Gaetano Angelici, Claudio Trombini\*



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

\*Author to whom correspondence should be addressed.



Fast, Individual, Popular...  
**REPRINTS**  
Available to order anytime!  
Contact Carmen Leitner (e-mail: [cleitner@wiley-vch.de](mailto:cleitner@wiley-vch.de))