

AIMS AND SCOPE

Although 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 metal catalysis, biocatalysis and organocatalysis 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>

2007, 349, 11 + 12, Pages 1817–2068

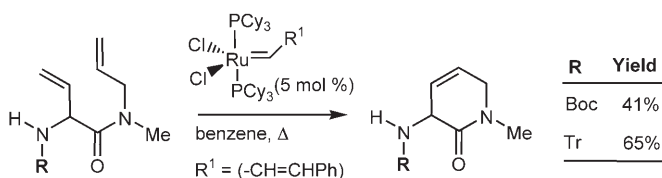
Issue 10/2007 was published online on July 2, 2007

REVIEW

Olefin Metathesis of Amine-Containing Systems: Beyond the Current Consensus

Adv. Synth. Catal. **2007**, 349, 1829–1846

Philippe Compain*



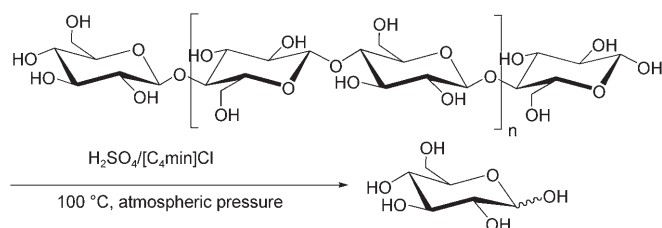
1829

COMMUNICATIONS

Efficient Acid-Catalyzed Hydrolysis of Cellulose in Ionic Liquid

Adv. Synth. Catal. **2007**, 349, 1847–1850

Changzhi Li, Zongbao K. Zhao*

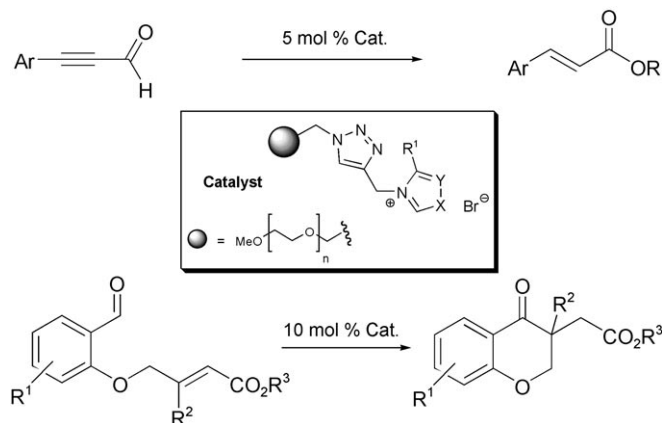


1847

- 1851** An Efficient and Versatile Approach for the Immobilization of Carbene Precursors *via* Copper-Catalyzed [3+2]-Cycloaddition and their Catalytic Application

Adv. Synth. Catal. **2007**, 349, 1851–1857

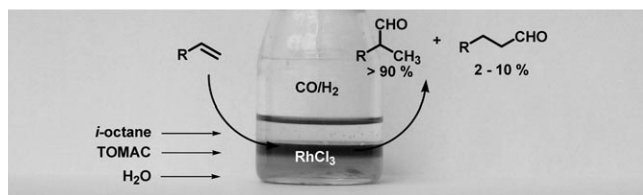
 Kirsten Zeitler,* Ina Mager



- 1858** Triphasic Liquid Systems for Improved Separations. Trioctylmethylammonium Chloride-Immobilised Rhodium Trichloride: A Phosphine-Free Hydroformylation Catalytic System


Adv. Synth. Catal. **2007**, 349, 1858–1862

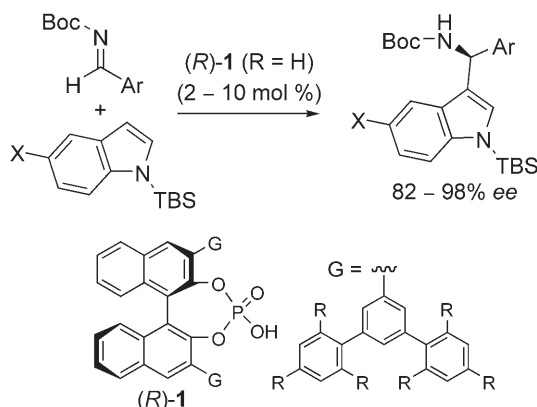
Stefano Paganelli, Alvise Perosa,* Maurizio Selva



- 1863** Chiral Phosphoric Acid-Catalyzed Enantioselective Aza-Friedel–Crafts Reaction of Indoles


Adv. Synth. Catal. **2007**, 349, 1863–1867

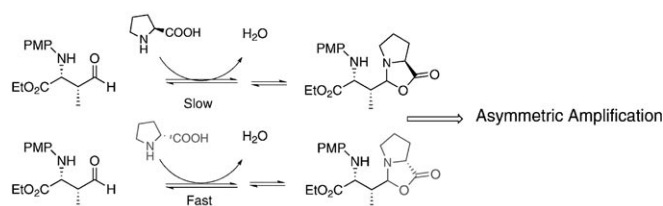
 Masahiro Terada,* Shigeko Yokoyama, Keiichi Sorimachi, Daisuke Uraguchi



- 1868** Asymmetric Amplification in the Amino Acid-Catalyzed Synthesis of Amino Acid Derivatives


Adv. Synth. Catal. **2007**, 349, 1868–1872

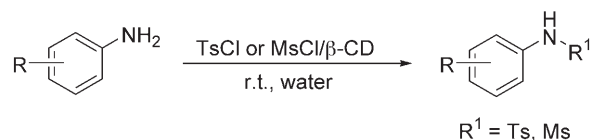
 Ismail Ibrahim, Henrik Sundén, Pawel Dziedzic, Ramon Rios, Armando Córdoba*



- 1873** β -Cyclodextrin-Catalyzed Monosulfonylation of Amines and Amino Acids in Water

Adv. Synth. Catal. **2007**, 349, 1873–1876

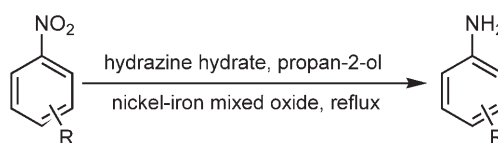
 R. Sridhar, B. Srinivas, V. Pavan Kumar, M. Narender, K. Rama Rao*



Efficient Reduction of Nitroarenes over Nickel-Iron Mixed Oxide Catalyst Prepared from a Nickel-Iron Hydrotalcite Precursor

Adv. Synth. Catal. **2007**, 349, 1877–1881

Qixun Shi, Rongwen Lu,* Lianhai Lu, Xinmei Fu, Defeng Zhao

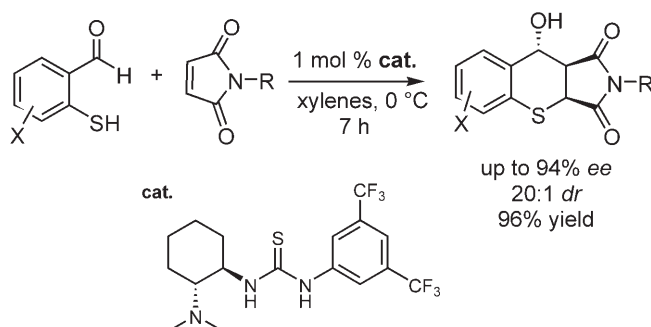


1877

Chiral Amine Thiourea-Promoted Enantioselective Domino Michael-Aldol Reactions between 2-Mercaptobenzaldehydes and Maleimides

Adv. Synth. Catal. **2007**, 349, 1882–1886

Liansuo Zu, Hexin Xie, Hao Li, Jian Wang, Wei Jiang, Wei Wang*

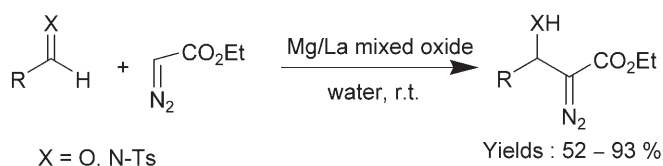


1882

Catalysis in Water: Aldol-Type Reaction of Aldehydes and Imines with Ethyl Diazoacetate Catalyzed by Highly Basic Magnesium/Lanthanum Mixed Oxide

Adv. Synth. Catal. **2007**, 349, 1887–1890

M. Lakshmi Kantam,* V. Balasubrahmanyam, K. B. Shiva Kumar, G. T. Venkanna, F. Figueras

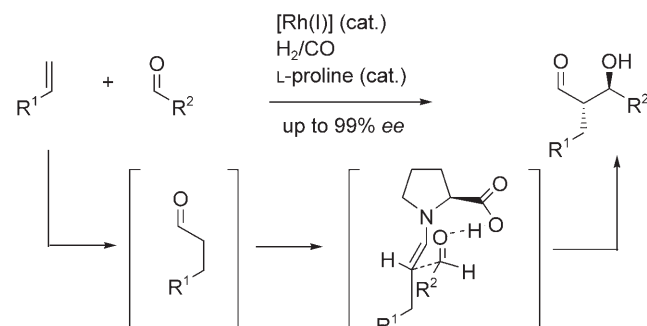


1887

Domino Hydroformylation/Enantioselective Cross-Aldol Addition

Adv. Synth. Catal. **2007**, 349, 1891–1895

Olivier Abillard, Bernhard Breit*



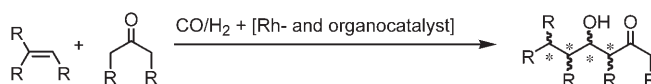
1891

FULL PAPERS

Tandem Metal- and Organocatalysis in Sequential Hydroformylation and Enantioselective Aldol Reactions

Adv. Synth. Catal. **2007**, 349, 1897–1905

Serghei Chercheja, Peter Eilbracht*

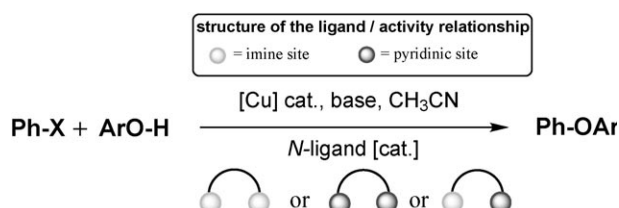


1897

Nitrogen Ligands in Copper-Catalyzed Arylation of Phenols: Structure/Activity Relationships and Applications

Adv. Synth. Catal. **2007**, 349, 1906–1916

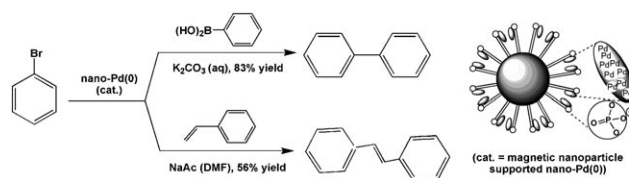
Armelle Ouali, Jean-Francis Spindler, Anny Jutand, Marc Taillefer*



1906

- 1917** Supported Ultra Small Palladium on Magnetic Nanoparticles Used as Catalysts for Suzuki Cross-Coupling and Heck Reactions

Adv. Synth. Catal. **2007**, 349, 1917–1922

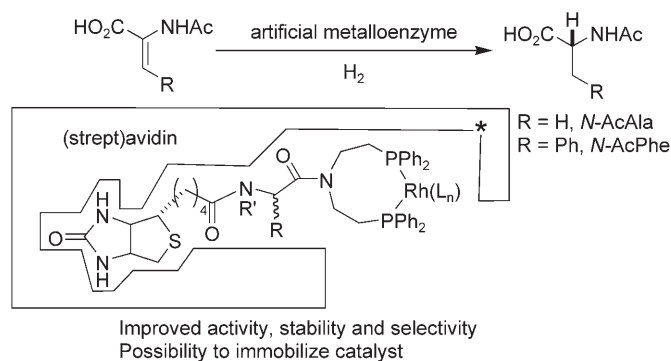


Zhu Yinghuai,* Ship Chee Peng, A. Emi, Su Zhenshun, Monalisa, Richard A. Kemp

- 1923** Second Generation Artificial Hydrogenases Based on the Biotin-Avidin Technology: Improving Activity, Stability and Selectivity by Introduction of Enantiopure Amino Acid Spacers

Adv. Synth. Catal. **2007**, 349, 1923–1930

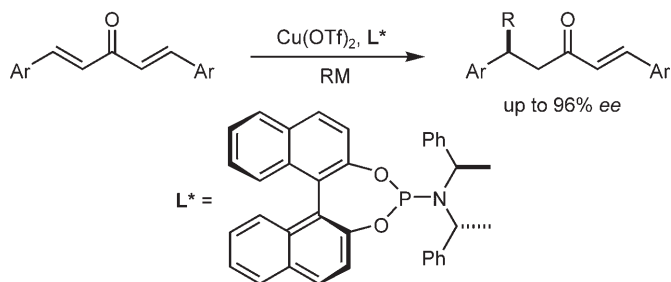
Untung E. Rusbandi, Cheikh Lo, Myriem Skander, Anita Ivanova, Marc Creus, Nicolas Humbert, Thomas R. Ward*



- 1931** Copper-Catalyzed Enantioselective Conjugate Addition of Organometallic Reagents to Acyclic Dienones

Adv. Synth. Catal. **2007**, 349, 1931–1937

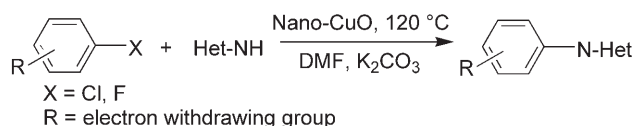
Radovan Šebesta, M. Gabriella Pizzuti, Adriaan J. Minnaard,* Ben L. Feringa*



- 1938** N-Arylation of Heterocycles with Activated Chloro- and Fluoroarenes using Nanocrystalline Copper(II) Oxide

Adv. Synth. Catal. **2007**, 349, 1938–1942

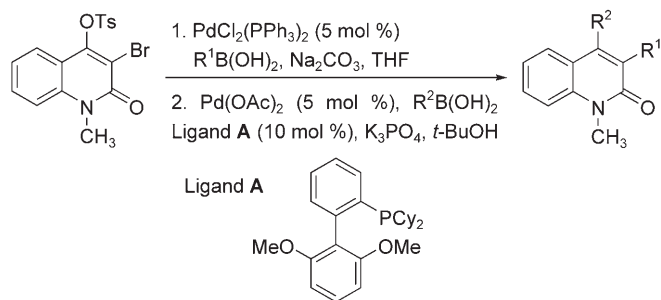
M. Lakshmi Kantam,* Jagjit Yadav, Soumi Laha, Bojja Sreedhar, Shailendra Jha



- 1943** Palladium-Catalyzed Regioselective Cross-Coupling Reactions of 3-Bromo-4-tosyloxyquinolin-2(1H)-one with Arylboronic Acids. A Facile and Convenient Route to 3,4-Disubstituted Quinolin-2(1H)-ones

Adv. Synth. Catal. **2007**, 349, 1943–1948

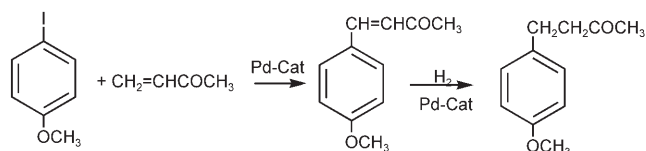
Zhiyong Wang, Renhua Fan, Jie Wu*



Heterogeneous Palladium Catalysts for a New One-Pot Chemical Route in the Synthesis of Fragrances Based on the Heck Reaction

Adv. Synth. Catal. **2007**, 349, 1949–1954

Maria Jose Climent, Avelino Corma,* Sara Iborra, Maria Mifsud

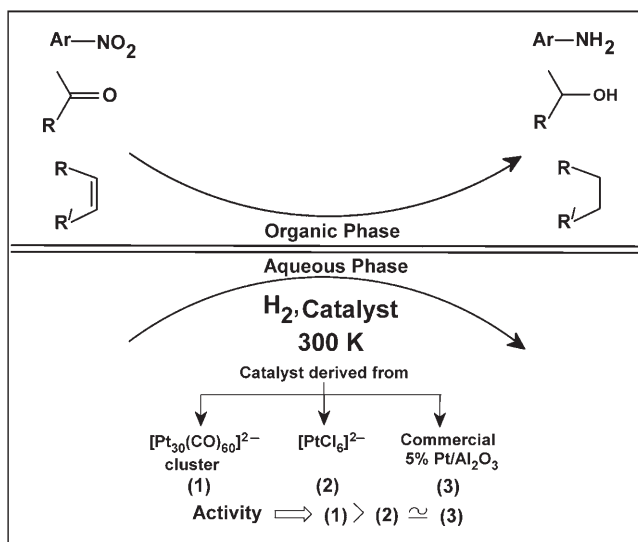


1949

Superior Performance of a Nanostructured Platinum Catalyst in Water: Hydrogenations of Alkenes, Aldehydes and Nitroaromatics

Adv. Synth. Catal. **2007**, 349, 1955–1962

Prasenjit Maity, Susmit Basu, Sumit Bhaduri,* Goutam Kumar Lahiri*

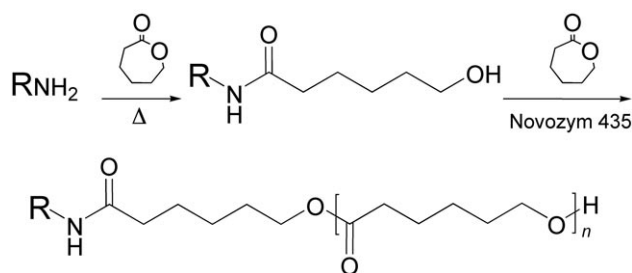


1955

Incorporation of Primary Amines into a Polyester Chain by a Combination of Chemical and Lipase-Catalyzed ϵ -Caprolactone Ring-Opening Processes

Adv. Synth. Catal. **2007**, 349, 1963–1968

Mattia Marzorati, Karl Hult, Sergio Riva,* Bruno Danieli

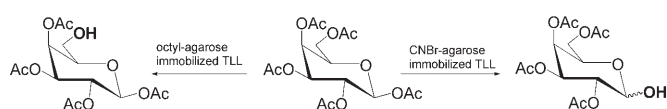


1963

Regioselective Hydrolysis of Different Peracetylated β -Monosaccharides by Immobilized Lipases from Different Sources. Key Role of The Immobilization

Adv. Synth. Catal. **2007**, 349, 1969–1976

Jose M. Palomo,* Marco Filice, Roberto Fernandez-Lafuente, Marco Terreni, Jose M. Guisan*

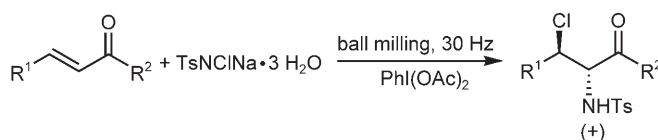


1969

Mechanochemical Aminochlorination of Electron-Deficient Olefins with Chloramine-T Promoted by (Diacetoxyiodo)benzene

Adv. Synth. Catal. **2007**, 349, 1977–1982

Guan-Wu Wang,* Xue-Liang Wu

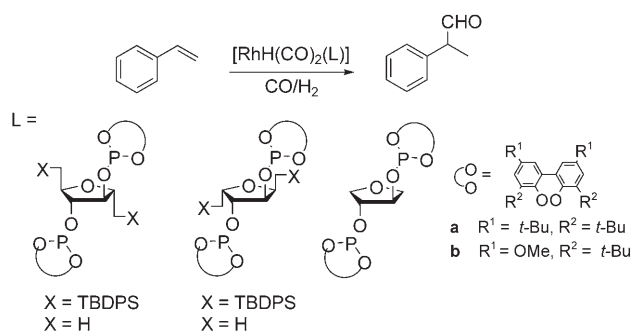


1977

1983 New C₂-Symmetric Diphosphite Ligands Derived from Carbohydrates: Effect of the Remote Stereocenters on Asymmetric Catalysis


Adv. Synth. Catal. **2007**, 349, 1983–1998

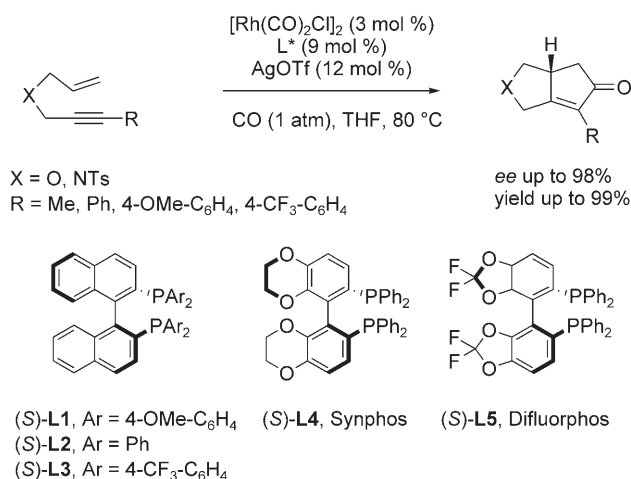
 M. Rosa Axet, Jordi Benet-Buchholz, Carmen Claver,* Sergio Castellón*



1999 Electronic and Steric Effects of Atropisomeric Ligands SYNPHOS® and DIFLUORPHOS® vs. BINAPs in Rh(I)-Catalyzed Asymmetric Pauson–Khand Reaction

Adv. Synth. Catal. **2007**, 349, 1999–2006

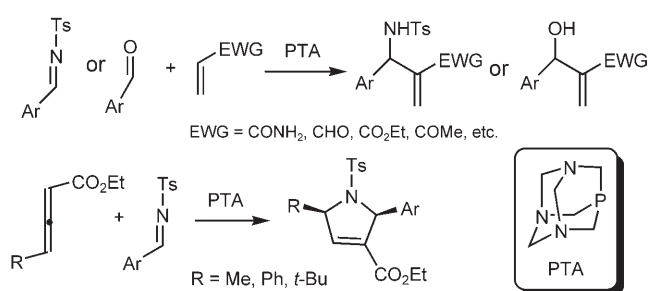
 Dong Eun Kim, Choong Choi, In Su Kim, Séverine Jeulin, Virginie Ratovelomanana-Vidal,* Jean-Pierre Genêt,* Nakcheol Jeong*



2007 1,3,5-Triaza-7-phosphaadamantane (PTA): A Practical and Versatile Nucleophilic Phosphine Organocatalyst


Adv. Synth. Catal. **2007**, 349, 2007–2017

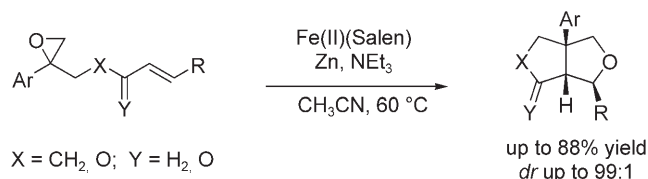
Xiaofang Tang, Bo Zhang, Zhengrong He, Ruili Gao, Zhengjie He*



2018 Synthesis of Hexahydrocyclopenta[c]furans by an Intramolecular Iron-Catalyzed Ring Expansion Reaction

Adv. Synth. Catal. **2007**, 349, 2018–2026

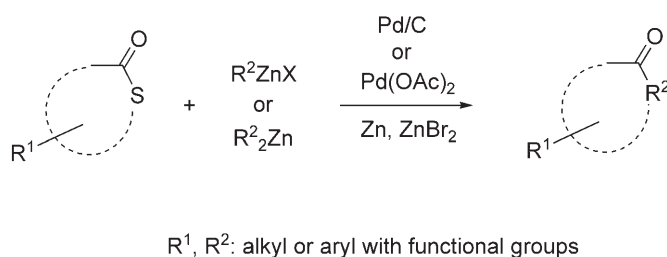
 Gerhard Hilt,* Patrick Bolze, Maja Heitbaum, Katrin Hasse, Klaus Harms, Werner Massa



2027 A Practical Synthesis of Multifunctional Ketones through the Fukuyama Coupling Reaction

Adv. Synth. Catal. **2007**, 349, 2027–2038

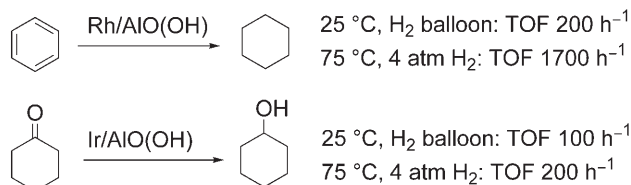
Yoshikazu Mori, Masahiko Seki*



Rhodium and Iridium Nanoparticles Entrapped in Aluminum Oxyhydroxide Nanofibers: Catalysts for Hydrogenations of Arenes and Ketones at Room Temperature with Hydrogen Balloon

Adv. Synth. Catal. **2007**, 349, 2039–2047

In Soo Park, Min Serk Kwon, Kyung Yeon Kang, Jae Sung Lee,* Jaiwook Park*

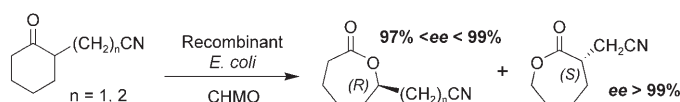


2039

UPDATES

Asymmetric Baeyer–Villiger Biooxidation of α -Substituted Cyanocyclohexanones: Influence of the Substituent Length on Regio- and Enantioselectivity

Adv. Synth. Catal. **2007**, 349, 2049–2053



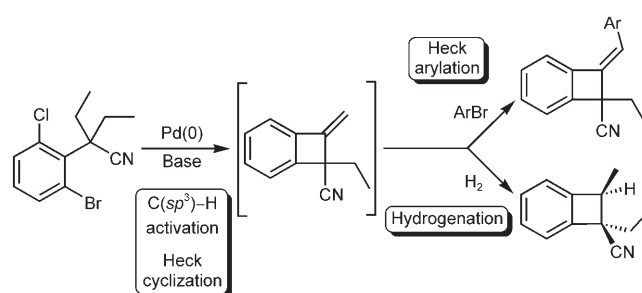
2049

Nathalie Berezina, Erika Kozma, Roland Furstoss, Véronique Alphand*

Substituted Benzocarbocycles by Palladium-Catalyzed Cascade Reactions Featuring a C(sp³)-H Activation Step

Adv. Synth. Catal. **2007**, 349, 2054–2060

Julien Hitce, Olivier Baudoin*

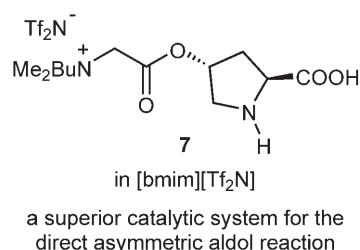


2054

An Improved Protocol for the Direct Asymmetric Aldol Reaction in Ionic Liquids, Catalysed by Onium Ion-Tagged Prolines

Adv. Synth. Catal. **2007**, 349, 2061–2065

Marco Lombardo,* Filippo Pasi, Srinivasan Easwar, Claudio Trombini*



2061

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

*Author to whom correspondence should be addressed.