

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.

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2007, 349, 14 + 15, Pages 2201–2396

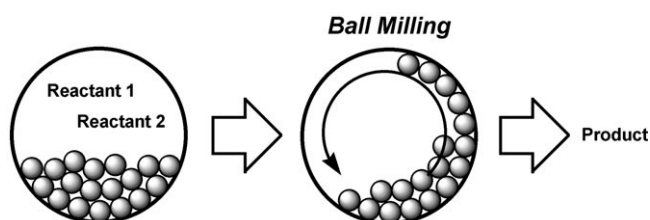
Issue 13/2007 was published online on September 18, 2007

REVIEW

Solvent-Free Carbon-Carbon Bond Formations in Ball Mills

Adv. Synth. Catal. **2007**, 349, 2213–2233

Belén Rodríguez, Angelika Bruckmann, Toni Rantanen, Carsten Bolm*



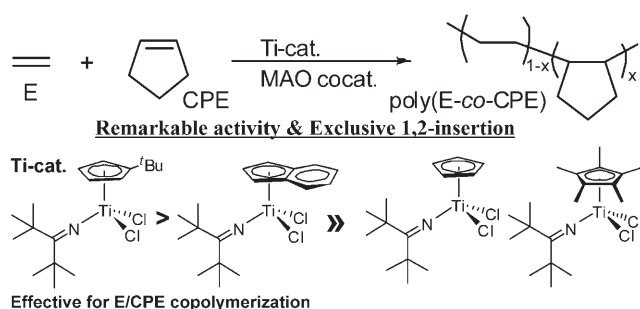
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COMMUNICATIONS

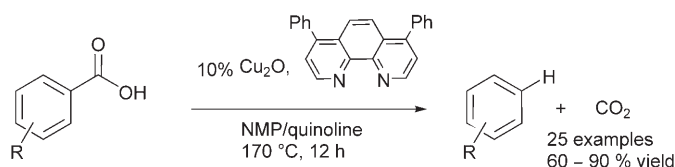
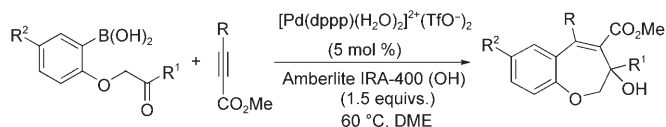
Highly Efficient Ethylene/Cyclopentene Copolymerization with Exclusive 1,2-Cyclopentene Incorporation by (Cyclopentadienyl)(ketimide)titanium(IV) Complex–MAO Catalysts

Adv. Synth. Catal. **2007**, 349, 2235–2240

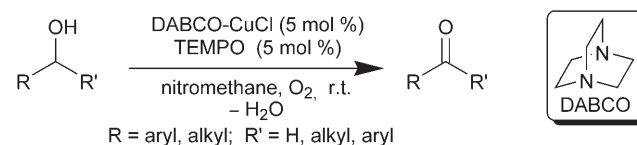
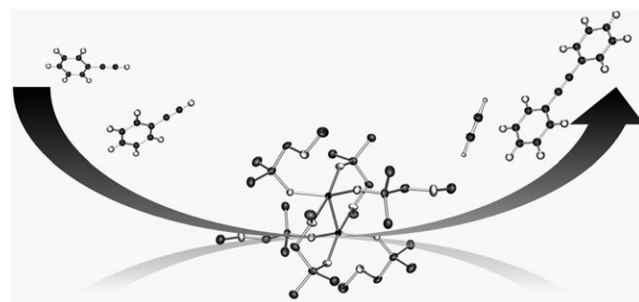
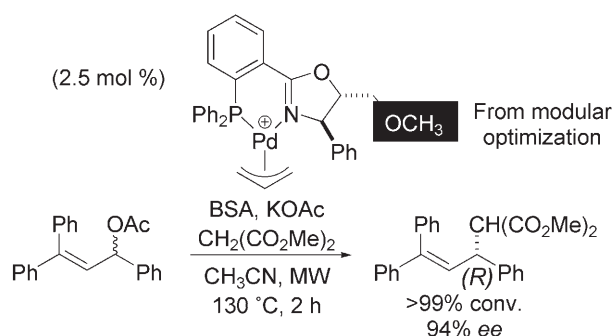
 Jingyu Liu, Kotohiro Nomura*



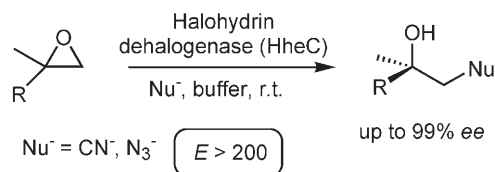
2235

2241 Copper-Catalyzed Protodecarboxylation of Aromatic Carboxylic Acids*Adv. Synth. Catal.* **2007**, 349, 2241–2246
 Lukas J. Gooßen,* Werner R. Thiel,* Nuria Rodríguez, Christophe Linder, Bettina Melzer
**2247** Cationic Palladium-Catalyzed [5+2] Annulation: Synthesis of 1-Benzoxepines from 2-Aroylmethoxyarylboronic Acids*Adv. Synth. Catal.* **2007**, 349, 2247–2252
 Guixia Liu, Xiyan Lu*
**2253** Aerobic, Chemoselective Oxidation of Alcohols to Carbonyl Compounds Catalyzed by a DABCO-Copper Complex under Mild Conditions*Adv. Synth. Catal.* **2007**, 349, 2253–2258

Sreedevi Mannam, S. Kumar Alamsetti, G. Sekar*

**2259** Selective Terminal Alkyne Metathesis: Synthesis and Use of a Unique Triple Bonded Dinuclear Tungsten Alkoxy Complex Containing a Hemilabile Ligand*Adv. Synth. Catal.* **2007**, 349, 2259–2263
 Olivier Coutelier, Guy Nowogrocki, Jean-François Paul, André Mortreux*
**FULL PAPERS****2265** Phosphinooxazolines Derived from 3-Amino-1,2-diols: Highly Efficient Modular *P-N* Ligands*Adv. Synth. Catal.* **2007**, 349, 2265–2278
 Dana Popa, Cristina Puigjaner, Montserrat Gómez, Jordi Benet-Buchholz, Anton Vidal-Ferran,* Miquel A. Pericàs*
**2279** Enzyme-Catalyzed Nucleophilic Ring Opening of Epoxides for the Preparation of Enantiopure Tertiary Alcohols*Adv. Synth. Catal.* **2007**, 349, 2279–2285

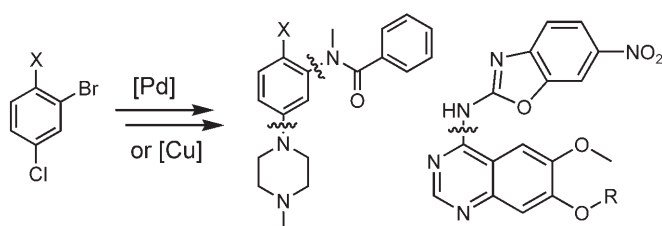
Maja Majerić Elenkov, H. Wolfgang Hoeffken, Lixia Tang, Bernhard Hauer, Dick B. Janssen*



Applicability Aspects of Transition Metal-Catalyzed Aromatic Amination Protocols in Medicinal Chemistry

Adv. Synth. Catal. **2007**, 349, 2286–2300

 Stefan Tasler,* Jan Mies, Martin Lang

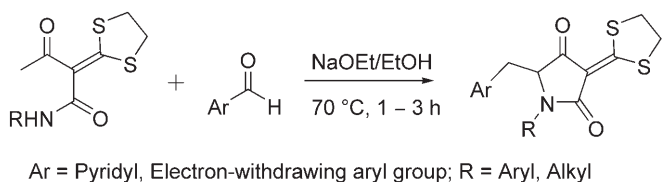


2286

Intramolecular Aza-Anti-Michael Addition of an Amide Anion to Enones: A Regiospecific Approach to Tetramic Acid Derivatives

Adv. Synth. Catal. **2007**, 349, 2301–2306

 Xihe Bi, Jingping Zhang,* Qun Liu,* Jing Tan, Bing Li

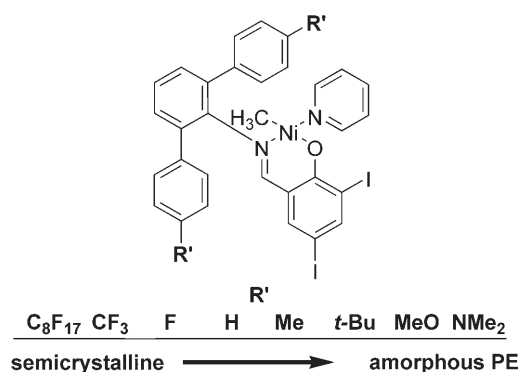


2301

Polymer Microstructure Control in Catalytic Polymerization Exclusively by Electronic Effects of Remote Substituents

Adv. Synth. Catal. **2007**, 349, 2307–2316

Amaia Bastero, Inigo Göttker-Schnetmann, Caroline Röhr, Stefan Mecking*

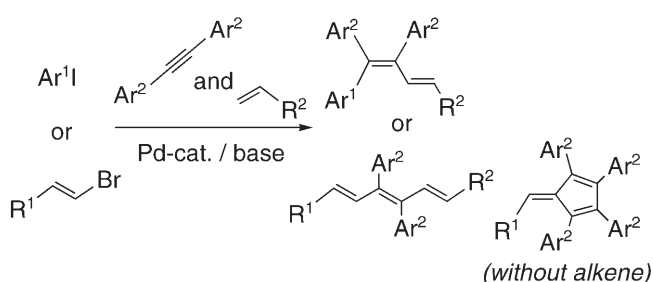


2307

Palladium-Catalyzed Intermolecular Three-Component Coupling of Organic Halides with Alkynes and Alkenes: Efficient Synthesis of Oligoene Compounds

Adv. Synth. Catal. **2007**, 349, 2317–2325

 Kana Shibata, Tetsuya Satoh,* Masahiro Miura*

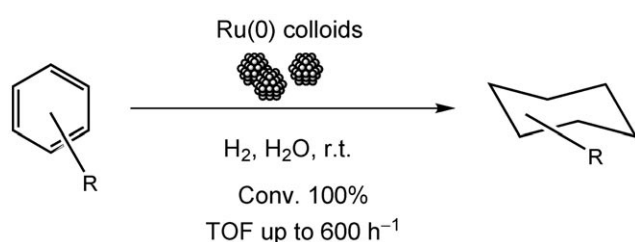


2317

Nanoheterogeneous Catalytic Hydrogenation of Arenes: Evaluation of the Surfactant-Stabilized Aqueous Ruthenium(0) Colloidal Suspension

Adv. Synth. Catal. **2007**, 349, 2326–2330

Audrey Nowicki, Virginie Le Boulair, Alain Roucoux*

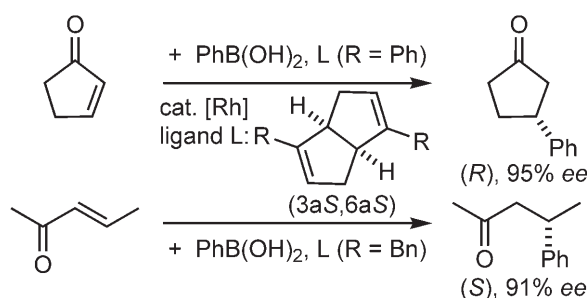


2326

Chiral Bicyclo[3.3.0]octa-2,5-dienes as Steering Ligands in Substrate-Dependent Rhodium-Catalyzed 1,4-Addition of Arylboronic Acids to Enones

Adv. Synth. Catal. **2007**, 349, 2331–2337

Sarah Helbig, Sven Sauer, Nicolai Cramer, Sabine Laschat,* Angelika Baro, Wolfgang Frey

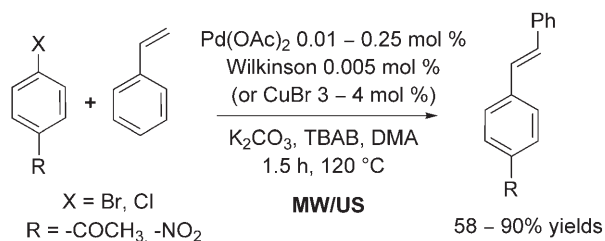


2331

- 2338** Heck Reactions with Very Low Ligandless Catalyst Loads Accelerated by Microwaves or Simultaneous Microwaves/Ultrasound Irradiation

Adv. Synth. Catal. **2007**, 349, 2338–2344

Giovanni Palmisano, Werner Bonrath, Luisa Boffa, Davide Garella, Alessandro Barge, Giancarlo Cravotto*

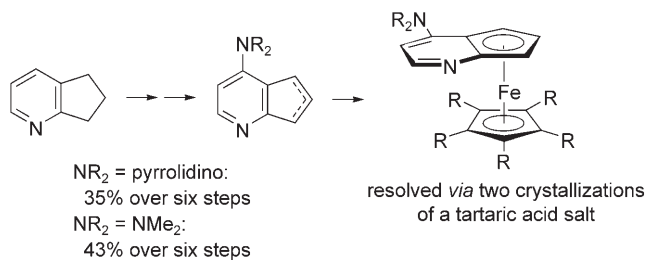


UPDATES

- 2345** Synthesis and Resolution of Planar-Chiral Derivatives of 4-(Dimethylamino)pyridine

Adv. Synth. Catal. **2007**, 349, 2345–2352

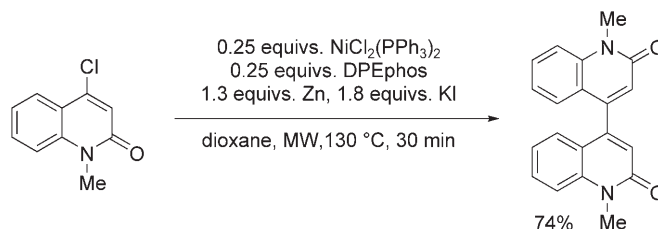
Ryan P. Wurz, Elaine C. Lee, J. Craig Ruble, Gregory C. Fu*



- 2353** Synthesis of Symmetrical Bisquinolones via Nickel(0)-Catalyzed Homocoupling of 4-Chloroquinolones

Adv. Synth. Catal. **2007**, 349, 2353–2360

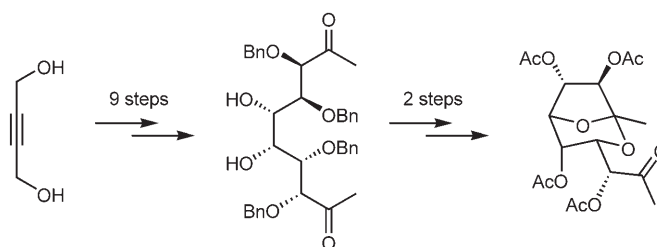
Jamshed Hashim, C. Oliver Kappe*



- 2361** A Symmetry-Based Approach to the Heterobicyclic Core of the Zaragozic Acids – Model Studies in the Pseudo C₂-Symmetric Series

Adv. Synth. Catal. **2007**, 349, 2361–2367

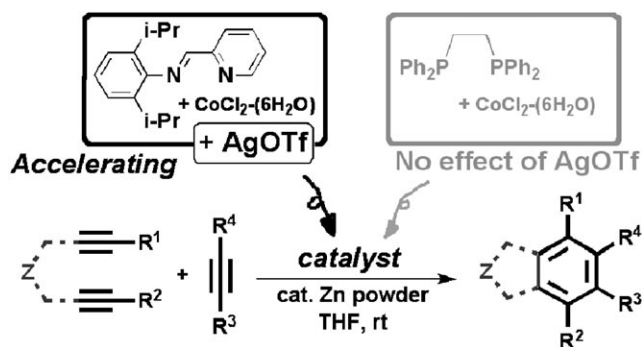
Yuzhou Wang, Sylvia Gang, Anja Bierstedt, Margit Gruner, Roland Fröhlich, Peter Metz*



- 2368** Efficient Activation of 2-Iminomethylpyridine/Cobalt-Based Alkyne [2+2+2]Cycloaddition Catalyst by Addition of a Silver Salt

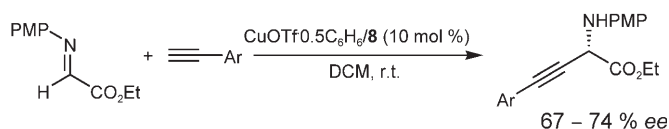
Adv. Synth. Catal. **2007**, 349, 2368–2374

Avijit Goswami, Taichi Ito, Sentaro Okamoto*



- 2375** Unprecedented Effects of Additives and Ligand-to-Metal Ratio on the Enantiofacial Selection of Copper-Catalyzed Alkynylation of α -Imino Ester with Arylacetylenes

Adv. Synth. Catal. **2007**, 349, 2375–2379

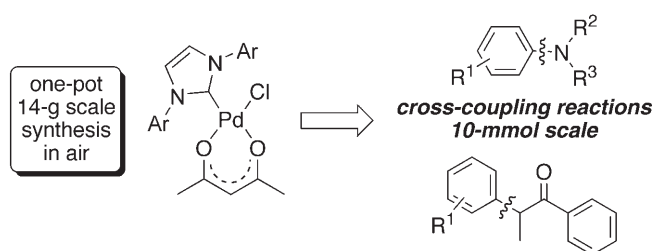


Zhihui Shao, Jun Wang, Kai Ding, Albert S. C. Chan*

N-Heterocyclic Carbene–Palladium Complexes
 [(NHC)Pd(acac)Cl]: Improved Synthesis and Catalytic
 Activity in Large-Scale Cross-Coupling Reactions

Adv. Synth. Catal. **2007**, 349, 2380–2384

Nicolas Marion, Pierre de Frémont, Iris M. Puijk, Elise
 C. Ecarnot, Dino Amoroso, Andrew Bell, Steven P. Nolan*

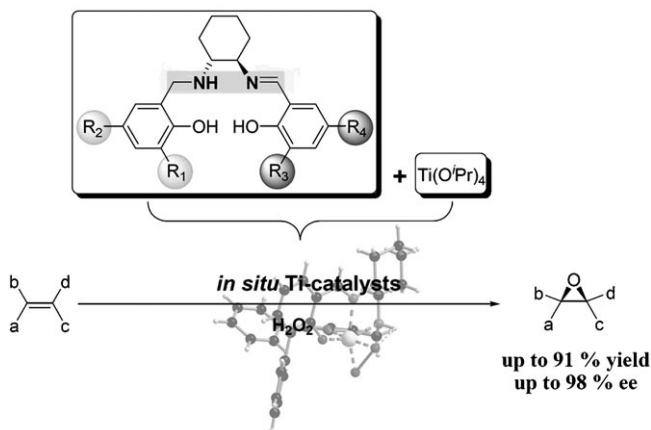


2380

A Practical and Versatile Access to Dihydrosalen (Salalen)
 Ligands: Highly Enantioselective Titanium *In Situ* Catalysts
 for Asymmetric Epoxidation with Aqueous Hydrogen
 Peroxide

Adv. Synth. Catal. **2007**, 349, 2385–2391

Albrecht Berkessel,* Marc Brandenburg, Eva Leitterstorf,
 Julia Frey, Johann Lex, Mathias Schäfer



2385

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