

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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2006, 348, 3, Pages 265–392

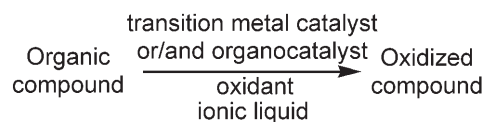
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REVIEW

Ionic Liquids as Solvents for Catalyzed Oxidations of Organic Compounds

Adv. Synth. Catal. **2006**, 348, 275–295

Jacques Muzart

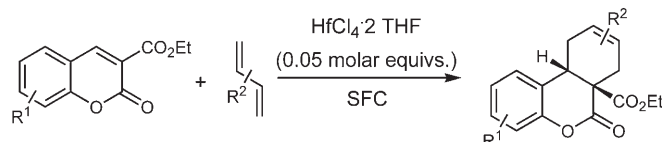


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COMMUNICATIONS

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Adv. Synth. Catal. **2006**, 348, 297–300



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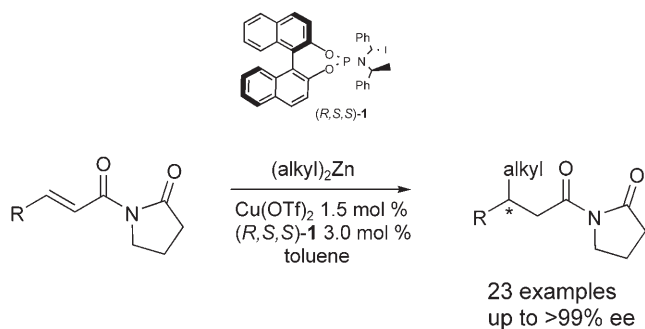
Francesco Fringuelli*, Rugiada Girotti, Ferdinando Pizzo*,
Ennio Zunino, Luigi Vaccaro

- 301** Highly Enantioselective Copper-Phosphoramidite-Catalyzed Conjugate Addition of Dialkylzinc Reagents to Acyclic α,β -Unsaturated Imides

Adv. Synth. Catal. **2006**, 348, 301–304



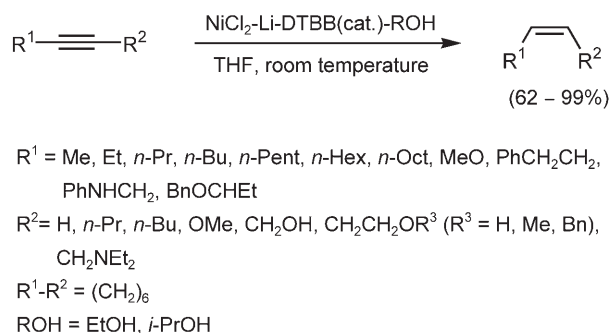
Mauro Pineschi,* Federica Del Moro, Valeria Di Bussolo, Franco Macchia



- 305** Highly Stereoselective Semihydrogenation of Alkynes Promoted by Nickel(0) Nanoparticles

Adv. Synth. Catal. **2006**, 348, 305–308

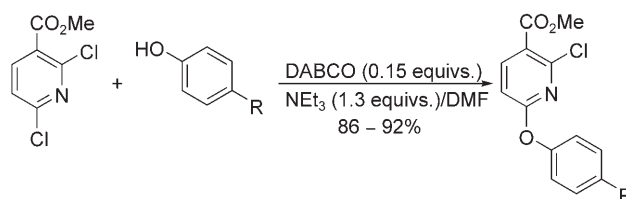
Francisco Alonso*, Iñaki Osante, Miguel Yus*



- 309** Highly Regioselective DABCO-Catalyzed Nucleophilic Aromatic Substitution (S_NAr) Reaction of Methyl 2,6-Dichloronicotinate with Phenols

Adv. Synth. Catal. **2006**, 348, 309–312

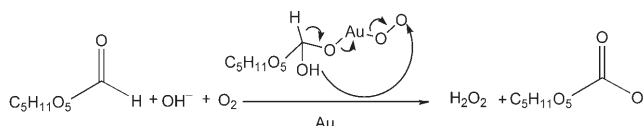
Yao-Jun Shi,* Guy Humphrey, Peter E. Maligres, Robert A. Reamer, J. Michael Williams



- 313** Aerobic Oxidation of Glucose with Gold Catalyst: Hydrogen Peroxide as Intermediate and Reagent

Adv. Synth. Catal. **2006**, 348, 313–316

Massimiliano Comotti, Cristina Della Pina, Ermelinda Falletta, Michele Rossi*

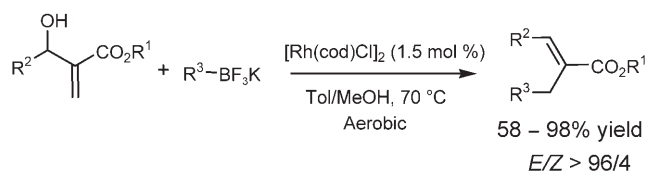


- 317** Access to Stereodefined Trisubstituted Alkenes via Rhodium-Catalyzed 1,4-Addition of Potassium Trifluoro(organo)borates to Baylis–Hillman Adducts

Adv. Synth. Catal. **2006**, 348, 317–322



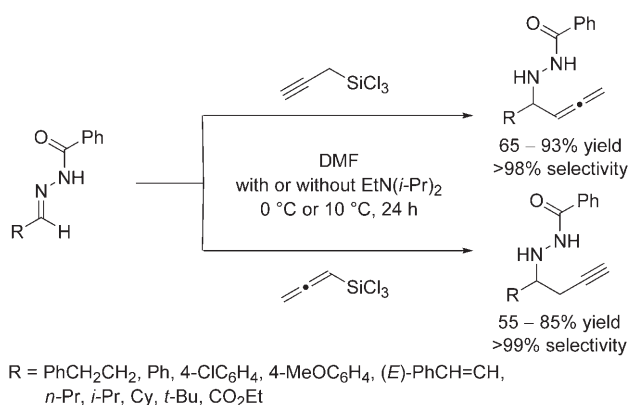
Laure Navarre, Sylvain Darses,* Jean-Pierre Genet*



Highly Selective Preparation of Allenic and Homopropargylic Hydrazides through Regiospecific Addition of Propargyltrichlorosilane and Allenyltrichlorosilane to Various Types of *N*-Acyldiazones

Adv. Synth. Catal. **2006**, 348, 323–329

Uwe Schneider, Masaharu Sugiura, Shū Kobayashi*



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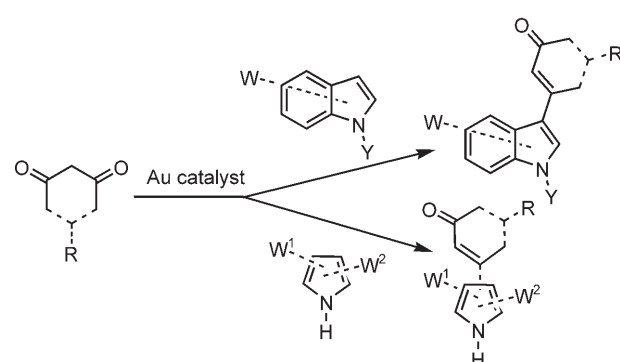
FULL PAPERS

Gold-Catalysed Direct Couplings of Indoles and Pyrroles with 1,3-Dicarbonyl Compounds

Adv. Synth. Catal. **2006**, 348, 331–338



Antonio Arcadi,* Maria Alfonsi, Gabriele Bianchi, Gaetano D'Anniballe, Fabio Marinelli

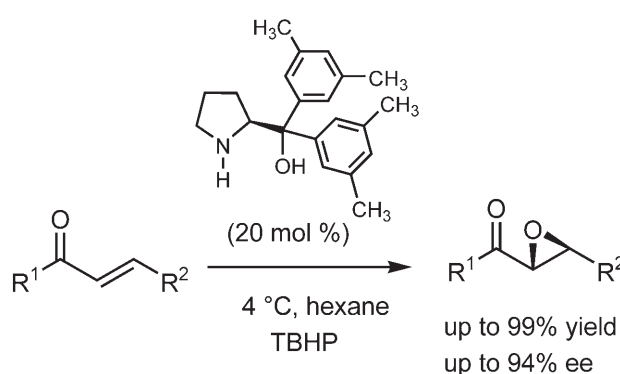


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Bis(3,5-dimethylphenyl)-(S)-pyrrolidin-2-ylmethanol: an Improved Organocatalyst for the Asymmetric Epoxidation of α,β -Enones

Adv. Synth. Catal. **2006**, 348, 339–346

Alessandra Lattanzi



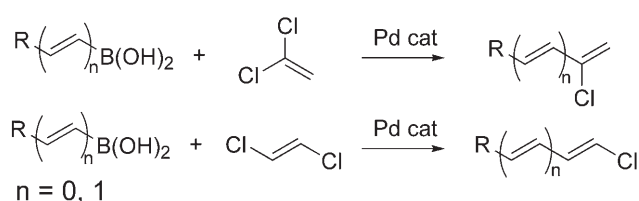
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A Very Simple Synthesis of Chloroalkenes and Chlorodienes by Selective Suzuki Couplings of 1,1- and 1,2-Dichloroethylene

Adv. Synth. Catal. **2006**, 348, 347–353



José Barluenga,* Patricia Moriel, Fernando Aznar, Carlos Valdés



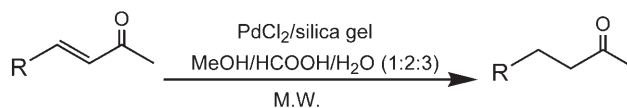
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- 354** A Chemoselective Hydrogenation of the Olefinic Bond of α,β -Unsaturated Carbonyl Compounds in Aqueous Medium under Microwave Irradiation

Adv. Synth. Catal. **2006**, 348, 354–360



Anuj Sharma, Vinod Kumar, Arun K. Sinha*

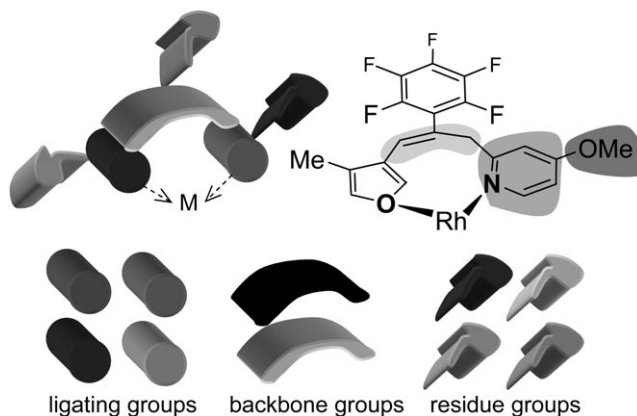


R = substituted aryl, naphthyl, furyl, etc.

- 361** Design and Assembly of Virtual Homogeneous Catalyst Libraries – Towards *in silico* Catalyst Optimisation

Adv. Synth. Catal. **2006**, 348, 361–369

Jos A. Hageman, Johan A. Westerhuis, Hans-Werner Frühauf, Gadi Rothenberg*

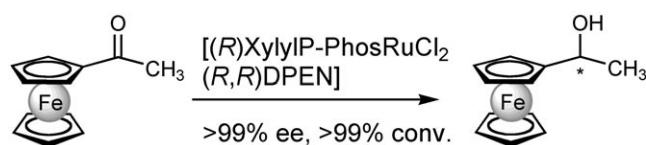


- 370** An Efficient Approach to Chiral Ferrocene-Based Secondary Alcohols *via* Asymmetric Hydrogenation of Ferrocenyl Ketones

Adv. Synth. Catal. **2006**, 348, 370–374



Wing-Sze Lam, Stanton H. L. Kok,* Terry T.-L. Au-Yeung, Jing Wu, Hong-Yee Cheung, Fuk-Loi Lam, Chi-Hung Yeung,* Albert S. C. Chan*



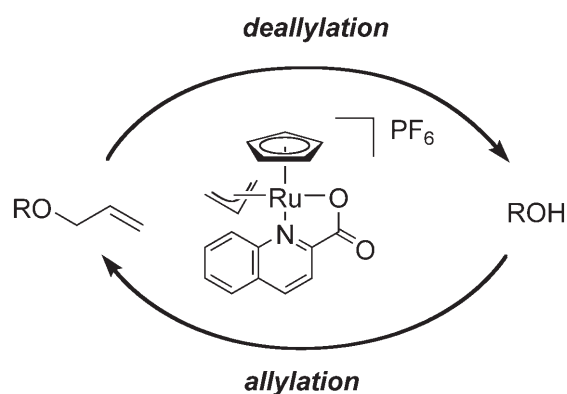
UPDATES

- 375** [CpRu(IV)(π -C₃H₅)(2-quinolinecarboxylato)]PF₆ Complex: A Robust Catalyst for the Cleavage and Formation of Allyl Ethers

Adv. Synth. Catal. **2006**, 348, 375–378



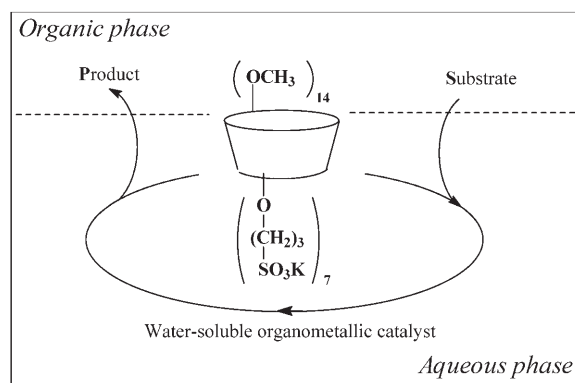
Shinji Tanaka, Hajime Saburi, Masato Kitamura*



Heptakis(2,3-di-*O*-methyl-6-*O*-sulfopropyl)- β -cyclodextrin:
A Genuine Supramolecular Carrier for Aqueous Organo-
metallic Catalysis

Adv. Synth. Catal. **2006**, 348, 379–387

D. Kirschner, T. Green, F. Hapiot, S. Tilloy, L. Leclercq,
H. Bricout, E. Monflier*



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