Archives in Chemistry

Abstract

Transition Metal-Catalyzed Reactions : Synthetic Applications

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Abstract:

Over the past few years, significant research has been directed toward the development of new methods for synthetic efficiency and atom economical processes. Among them, the potential of transition metal-catalyzed reactions has been steadily demonstrated, as they provide a direct and selective way toward the synthesis of highly valuable products. We have been engaged in a project dedicated to the development of catalytic methods for the synthesis of bio-relevant targets. More specifically, we have been interested in asymmetric reductions such as hydrogenation and transfer hydrogenation reactions, which provide important catalytic approaches to fine chemicals. In this context, our contribution to this field is the development of novel organometallic complexes for C-H bond forming processes to access biorelevant targets. Some recent applications in this field will be presented.

Biography:

Dr Virginie VIDAL is Research Director at the CNRS (National Center of the Scientific Research) and head of the group « Catalysis, Synthesis of Biomolecules and Sustainable Development » at Chimie ParisTech in Paris France. She received a PhD degree in Chemistry from Paris Sud University, France. Her research interests focus on transition-metal catalysis for atom- and step-economical reactions. The synthesis of bio-relevant targets is also a focus in her group. She was Chair of the Division of Organic Chemistry of the French Chemical Society. She has published 170 papers and chapters and has been serving as member in the board of EuChemS Organic Division.

Publication of speakers:

1. Rh(III)-Catalyzed Diastereoselective Transfer Hydrogenation an Efficient Entry to Key Intermediates of HIV Protease Inhibitors
2. Rhodium-catalyzed asymmetric transfer hydrogenation of 4-quinolone derivatives
3. Novel Rh(III) Catalyzed Asymmetric Transfer Hydrogenation of Methoxy Ketoesters via DKR in Water: Toward a Greener Procedure
4. Anodic Stability of New Sulfone-Based Electrolytes for Lithium-Ion Batteries
5. Asymmetric Preparation of Polysubstituted Cyclopentanes by Synergistic Pd(0)/Amine Catalyzed Formal [3_+_2] Cycloadditions of Vinyl Cyclopropanes with Enals

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