

Title From H₂ to CO₂ activation by ruthenium polyhydride complexes

Speaker Prof. Sylviane Sabo-Etienne
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 France



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Place Meeting room, 2nd floor, I²CNER Bldg., Ito campus,
 Kyushu University

Abstract

Polyhydride Ruthenium complexes, and particularly those incorporating one or two dihydrogen ligands, are attractive species. The dihydrogen ligand is labile or/and prepares the metal center for hydrogen transfer processes. During this lecture we will focus on some recent findings concerning the properties of this unique class of complexes with respect to activation and functionalization of small molecules towards applications in the fields of catalysis and energy. The impact on some important catalytic transformations such as hydrogenation/dehydrogenation reactions, deuterium labeling, and CO₂ functionalization will be analyzed.

About the Speaker

Prof. Sylviane Sabo-Etienne is CNRS Research Director at the Laboratoire de Chimie de Coordination in Toulouse, France. She was awarded the RSC Frankland award in 2010, and the Glenn T Seaborg Memorial Lecturer award by the University of California, Berkeley. This year, she received the award of the Coordination Chemistry Division of the French Chemical Society (SCF). Her broad research interests encompass coordination chemistry, organometallic chemistry, and catalysis with a specific focus on transition metal complexes displaying H-H, B-H, Si-H, and C-H bonding modes via agostic and/or sigma interactions. Small molecule activation, and hydrogen transfer processes are areas under active pursuit with structure-activity relationships, and the mechanism of the catalytic reactions being integral components of the different projects.

Host: Professor Seiji Ogo

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