The 193rd iCeMS SEMINAR

Mon 28 Sep 2015
13:30-15:00

Activation of Dihydrogen and Carbon Dioxide by Early Transition and Main Group Metals

Lecturer: **Prof Jun Okuda**
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Venue: Room A2-306
Katsura Campus, Kyoto University

In the post-petrochemical era, the ultimate carbon source carbon dioxide need to be efficiently reduced to molecules with $C_{n>1}$ containing C-C bonds. Dihydrogen will in the future be the reductant and carbon-free energy carrier. From the fundamental standpoint of studying reactivity of electropositive metal hydrides as reductants, new hydrides of earth alkaline (Mg,[1] Ca) and rare earth metals[2] will be presented. In the context of converting CO_2 into valuable products, new reactivitiy involving a doubly reduced CO_2^{2-} at Ti centers will be presented.[3]

[1] Martin, D. et al. *Angew. Chem. Int. Ed.* **2015**, 54, 4115. [2] Fegler, W. et al. *Angew. Chem. Int. Ed.* **2013**, 52, 7976. [3] Paparo, A. et al. *Angew. Chem. Int. Ed.* **2015**, 54, 9115.

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