第82回理学研究流動機構・化学専攻共催セミナーのお知らせ

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"Catalytic Conversion of Renewable Resources - Challenges and Opportunities"

日　時：　平成26年1月24日(金)　15：05～16：35
場　所：　大岡山　本館第二会議室（3階45号室）
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Catalytic Conversion of Renewable Resources - Challenges and Opportunities

Oliver Reiser, University of Regensburg

January 23 & 24

If you have a device that allows you to connect to the Internet (smart phone, tablet, PC) please bring it, you will be encouraged to use it during the lecture!

With an estimated amount of 1600 billion tons on earth, carbohydrates (mainly cellulose, hemicellulose and lignin) hold the promise to provide an abundant and at the same time renewable source of feedstock for chemical and energy production. Indeed, there are great efforts in academia and industry to tap into this resource already. Nevertheless, the methodologies currently available to convert carbohydrates into fine chemicals under economical and ecological benign conditions are still limited.

The lecture will give an overview of the current state of the art on chemical conversion of renewable resources and will especially focus on catalytic methodologies such as C,O- and C,N-bond activation that are still greatly underdeveloped but appear to be of immanent importance when addressing the conversion of biomass. Emerging technologies for such processes such as supported catalysts, especially using magnetic nanoparticles as smart platforms, photoredoxcatalysis using visible light as the ultimate energy source, flow and microwave chemistry will be covered.