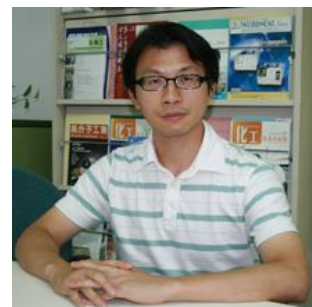




演題：**Functional Nanospace Materials for Lignocellulosic Biomass Conversion**

講師：**Prof. Kevin C.-W. Wu**

Department of Chemical Engineering,
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日時：2017年8月3日（木）10:30~11:30

場所：フロンティア応用科学研究棟 1F セミナー室1

共催：物質科学フロンティアを開拓する Ambitious リーダー育成プログラム
要旨：

In this presentation, I will demonstrate the successful synthesis of functionalized nanospace materials including metal-organic frameworks (MOFs) and mesoporous silica nanoparticles (MSNs) as an effective, reliable, and re-usable solid catalysts for lignocellulosic biomass conversion. For enzyme-assisted catalytic system, we optimized the reaction conditions for cellulase-immobilized solid catalysts in cellulosic hydrolysis. We also use MOFs-derived nanoporous nanoparticles as effective solid catalysts for converting 5-hydroxymethylfurfural (HMF), one of the most promising platform of lignocellulosic biomass, into dimethylfuran (DMF) and 2,5-furandicarboxylic acid (FDCA) through hydrogenation/hydrogenolysis and oxidation, respectively. The results obtained in this study indicated that high yields of DMF and FDCA could be separately obtained from HMF via the combination of our newly designed MOFs-based nanoporous catalysts with the liquid-phase hydrogen/oxygen sources.



本講演は、大学院総合化学院『化学研究先端講義/総合化学特別研究第二』の一部として認定されています。

(ただし、8/2 (水) 13:00 からの Prof. Yu-Tzu Huang 講演会もしくは 8/3 (木) 13:00 からの Prof. Fa-Kuen Shieh 講演会どちらかと併せて2件以上の聴講で出席一回とカウントします。)

連絡先：工学研究院応用化学部門 吉川琢也、中坂佑太、増田隆夫（内線：6551）