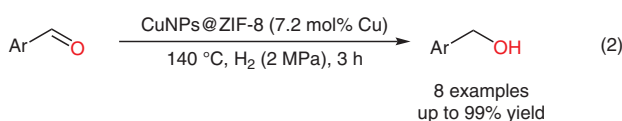
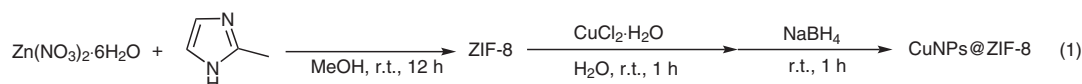


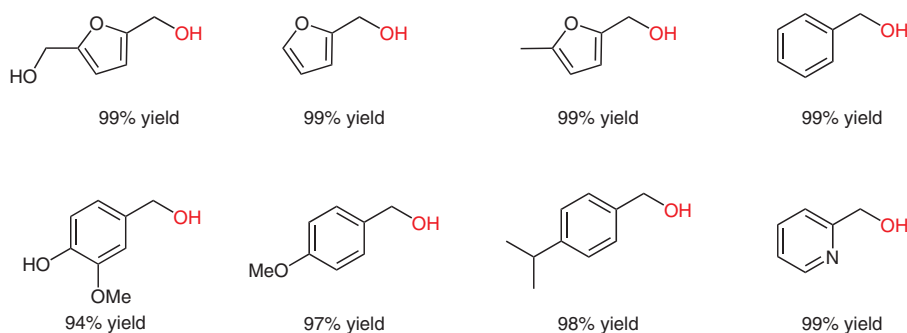
Y. FENG, G. YAN, T. WANG, W. JIA, X. ZENG*, J. SPERRY, Y. SUN, X. TANG, T. LEI, L. LIN (XIAMEN UNIVERSITY, FUJIAN ENGINEERING AND RESEARCH CENTRE OF CLEAN AND HIGH-VALUED TECHNOLOGIES FOR BIOMASS, XIAMEN, AND HENAN KEY LABORATORY OF BIOMASS ENERGY, P. R. OF CHINA; UNIVERSITY OF AUCKLAND, NEW ZEALAND)

Cu¹-Cu⁰ Bicomponent CuNPs@ZIF-8 for Highly Selective Hydrogenation of Biomass Derived 5-Hydroxymethylfurfural
Green Chem. **2019**, *21*, 4319–4323.

Zeolitic Imidazole Framework Encapsulated Copper Nanoparticles for Hydrogenation of Aldehydes



Results:



Significance: Copper nanoparticles encapsulated in a zeolitic imidazole framework (CuNPs@ZIF-8), prepared as shown in equation 1, catalyzed the hydrogenation of aromatic aldehydes with hydrogen gas to give the corresponding alcohols in yields of 94–99% (eq. 2; 8 examples).

Comment: The CuNPs@ZIF-8 catalyst was characterized by means of XRD, XPS, AES, TEM, and HR-TEM analyses. In the hydrogenation of 5-(hydroxymethyl)furfural, the catalyst was recovered and reused four times without loss of its catalytic activity.