

# Hydrogenation of Dimethyl Oxalate to Ethylene Glycol over Cu/KIT-6 Catalysts

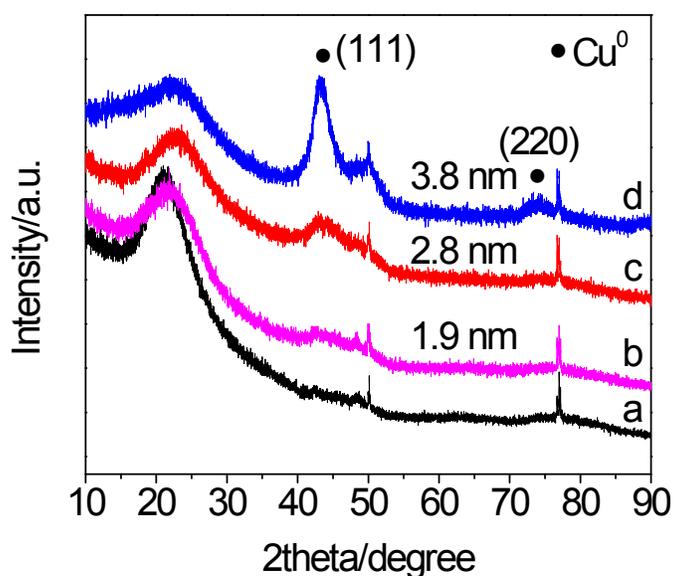
Xinbin Yu<sup>1</sup>, Michael Burkholder<sup>2</sup>, Stavros G. Karakalos<sup>1</sup>, Gregory L. Tate<sup>1</sup>, John R. Monnier<sup>1</sup>, B. Frank Gupton<sup>2</sup> and Christopher T. Williams<sup>1\*</sup>

<sup>1</sup> Department of Chemical Engineering, University of South Carolina, Columbia, SC 29208, USA

<sup>2</sup> Department of Chemical Engineering, Virginia Commonwealth University, Richmond VA 23284-3068, USA

Corresponding Author

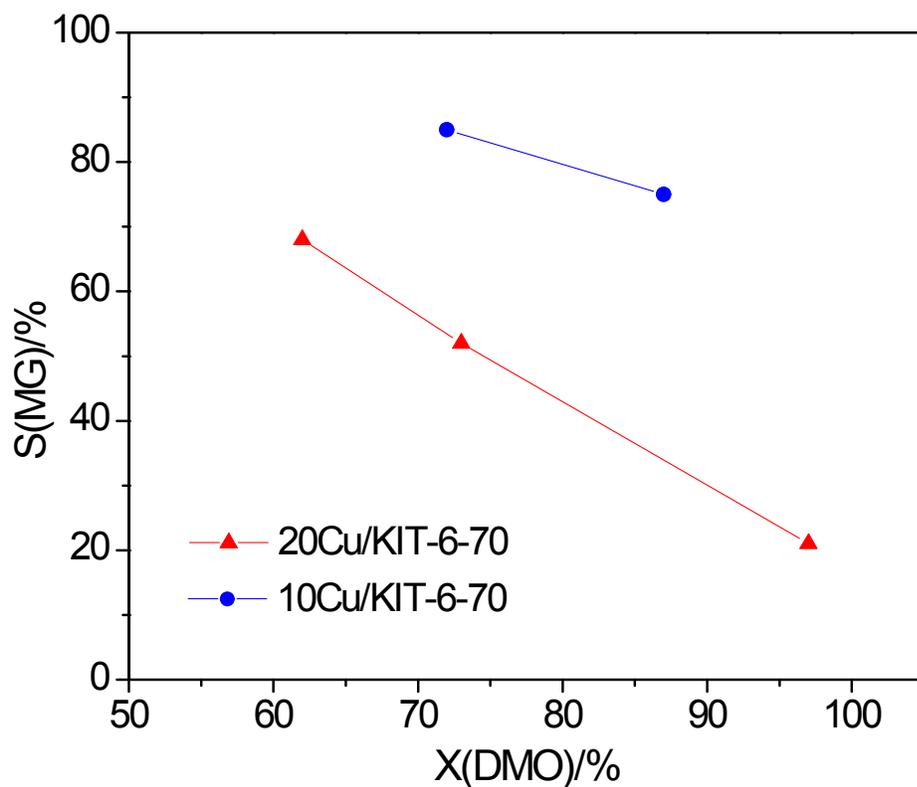
\* E-mail Christopher T. Williams: willia84@cec.sc.edu



**Figure S1.** *In situ* XRD patterns of reduced catalysts at 350 °C, a. a blank XRD reactor, b. 5Cu-70, c. 10Cu-70, d. 20Cu-70.

**Table S1.** Evidence of ruling out diffusion problems

Conversion/%	40-60 mesh, 100 mg, WHSV=5.1 h <sup>-1</sup>	40-60 mesh, 128mg, WHSV=5.1 h <sup>-1</sup>	60-80 mesh, 100mg, WHSV=5.1 h <sup>-1</sup>
20Cu-70	28	29	27



**Figure S2.** S(MG)-X(DMO) for different catalysts, reaction condition: T = 190 °C, P(H<sub>2</sub>) = 2.5 MPa, H<sub>2</sub>/DMO molar ratio = 95.