

## **Supplementary file**

**A stable and reusable supported copper catalyst for the selective liquid-phase hydrogenation of 5-hydroxymethylfurfural to 2,5-bishydroxymethylfuran.**

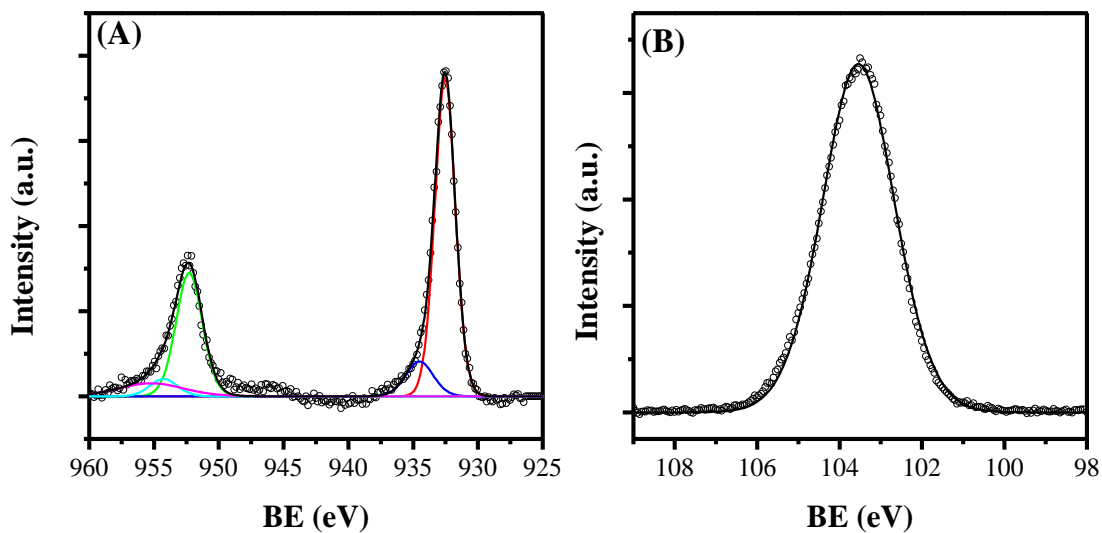
J. Zelin, C.I. Meyer, H. A. Duarte, A.J. Marchi\*

Catalysis Science and Engineering Research Group (GICIC), INCAPE, UNL-CONICET.

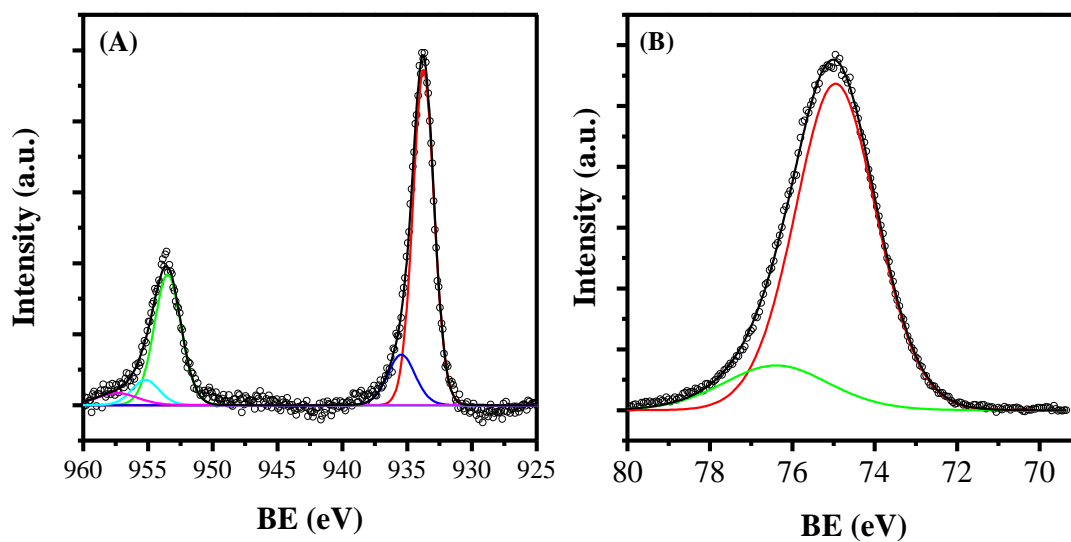
Colectora Ruta Nac. N° 168 Km 0 (3000) Santa Fe, Argentina.

\* Corresponding author: amarchi@fiq.unl.edu.ar

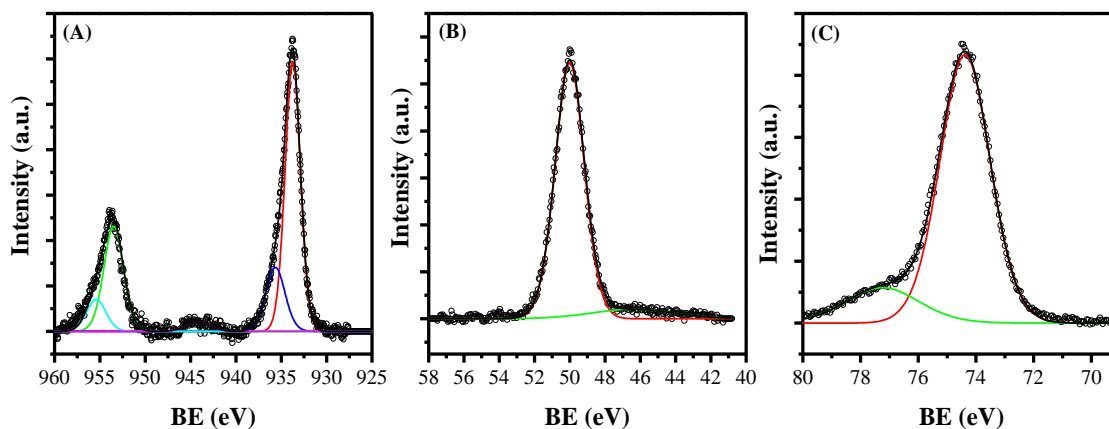
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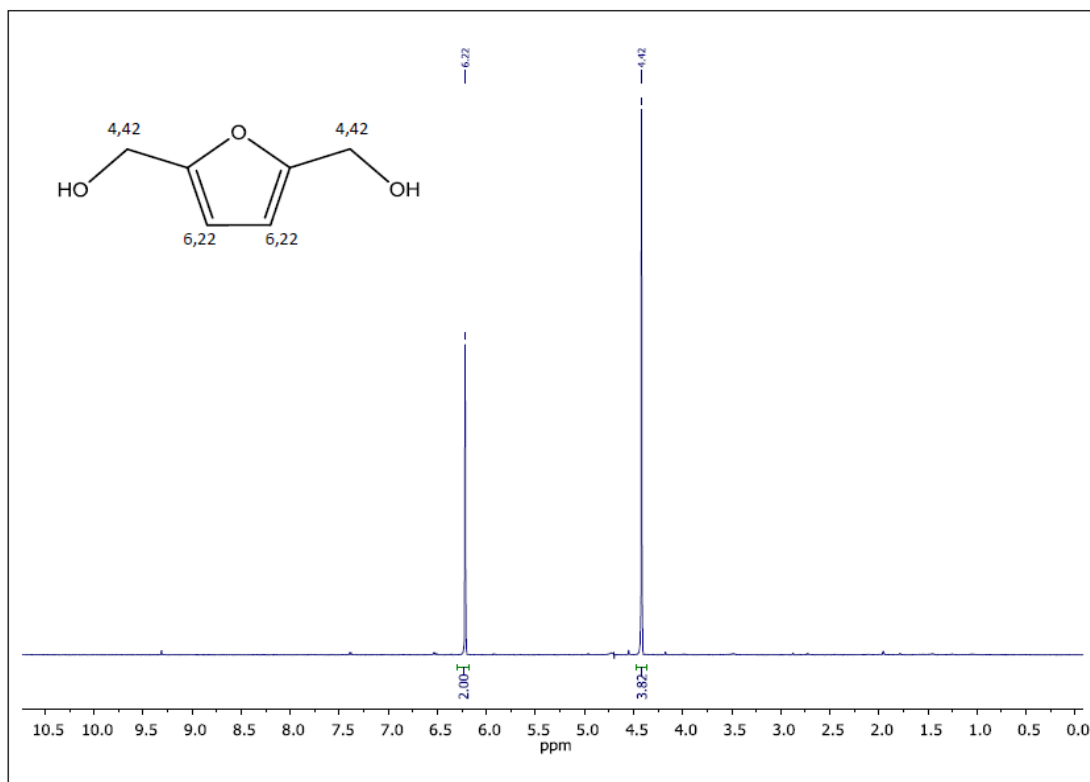
**Figure S1.** X-ray photoelectron spectroscopy of reduced Cu/SiO<sub>2</sub>-PD sample: Cu-2p region (A), Si-2p region (B). Experimental data (points) and XPS-Casa software fittings (solid lines).



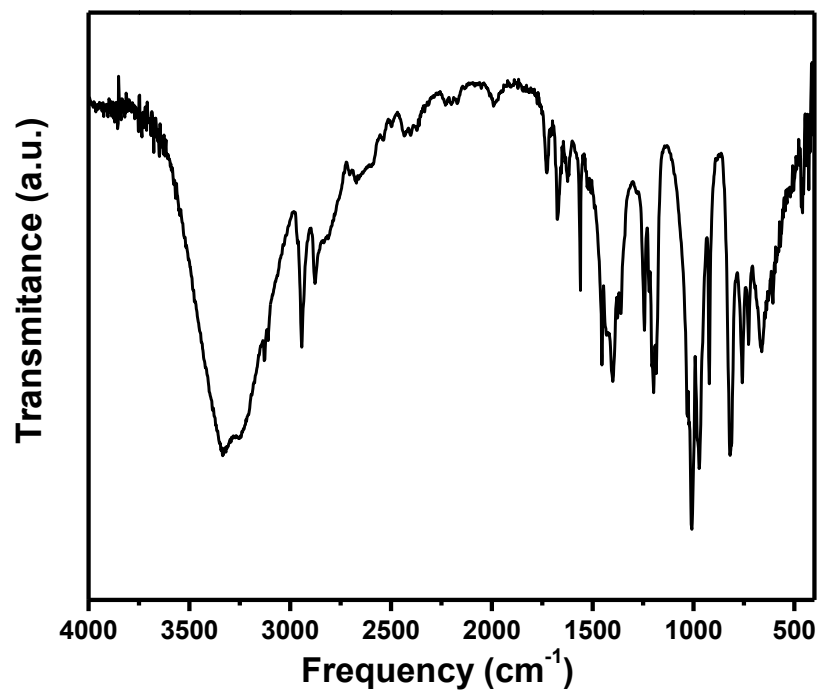
**Figure S2.** X-ray photoelectron spectroscopy of reduced Cu/Al<sub>2</sub>O<sub>3</sub>-I sample: Cu-2p region (A), Al-2p region (B). Experimental data (points) and XPS-Casa software fittings (lines).



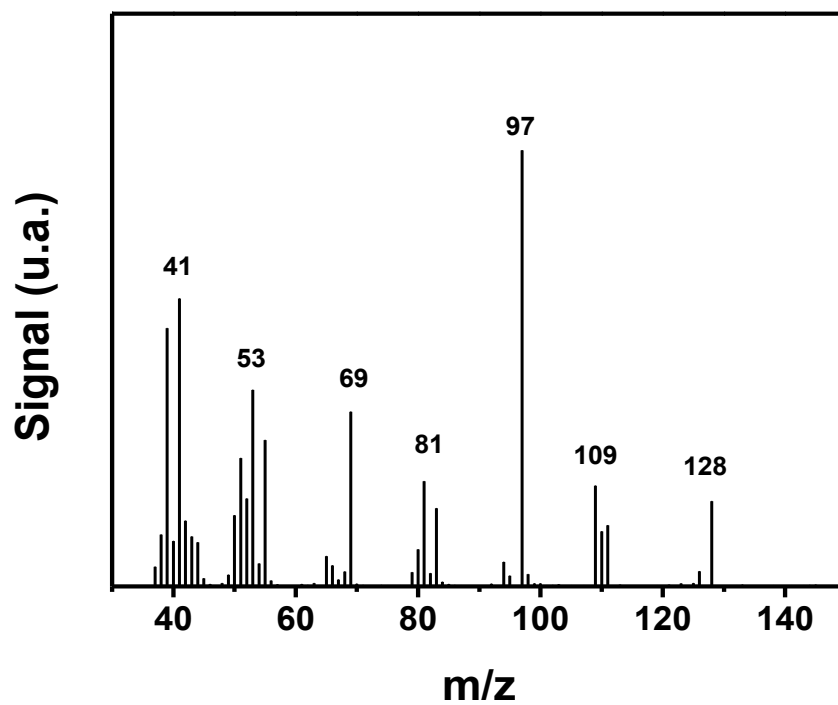
**Figure S3.** X-ray photoelectron spectroscopy of reduced CuMgAl sample: Cu-2p region (A), Mg-2p region (B), Al-2p region (C). Experimental data (points) and XPS-Casa software fittings (lines).



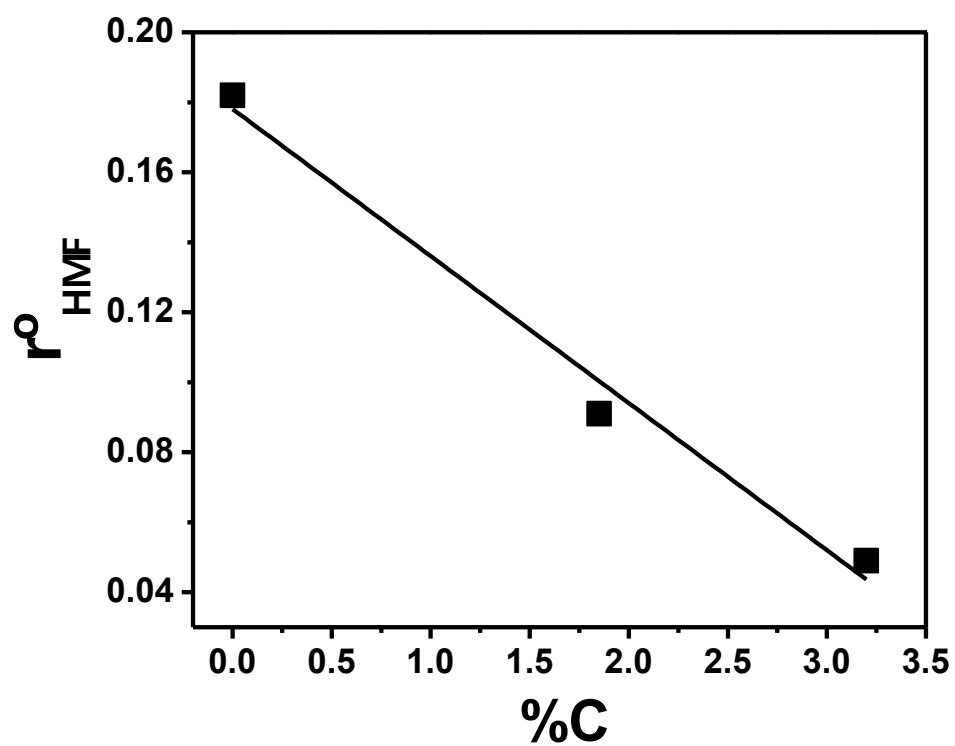
**Figure S4.**  $^1\text{H}$ -NMR of product sample from 5-hydroxymethylfurfural hydrogenation in liquid phase [300 MHz,  $\text{H}_2\text{O}/\text{D}_2\text{O}$  (90:10), water suppression at 4,71 ppm].



**Figure S5.** Infrared Fourier transform spectroscopy (FTIR) spectra of product sample from 5-hydroxymethylfurfural hydrogenation in liquid phase.



**Figure S6.** Mass spectroscopy (MS) of product sample from 5-hydroxymethylfurfural hydrogenation in liquid phase.



**Figure S7.** Initial hydrogenation rate ( $r_{HMF}^0$ ) of HMF as a function of the percentage of carbonaceous residues (%C) deposited on Cu/SiO<sub>2</sub>-PD.