

Metal-Organic Frameworks as effective catalysts for glycerol acetalization: morphology and functionality

Fátima Mirante¹, Pedro Leo^{*1,2}, Carlos Palomino³, Carlos M.

Granadeiro¹, L. Cunha-Silva¹ and Salette S. Balula^{*1}

¹ LAQV / REQUIMTE & Department of Chemistry and Biochemistry, Faculty of Sciences, University of Porto, 4169-007 Porto, Portugal.

² Department of Chemical and Environmental Technology, Universidad Rey Juan Carlos, Calle Tulipán s/n, 28933 Móstoles, Spain.

³ Department of Chemistry, University of the Balearic Islands, Cra. de Valldemossa, 07122, Palma, Spain

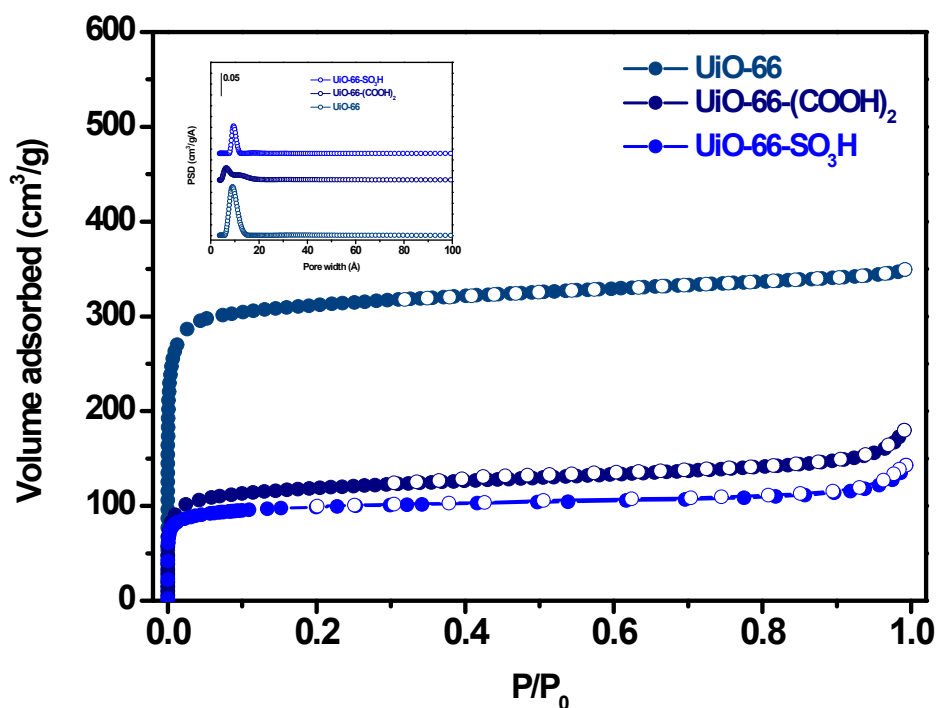


Figure S1. Adsorption isotherms of N₂ and pore diameter distribution of UiO-66, UiO-66-(COOH)₂ and UiO-66-SO₃H materials.

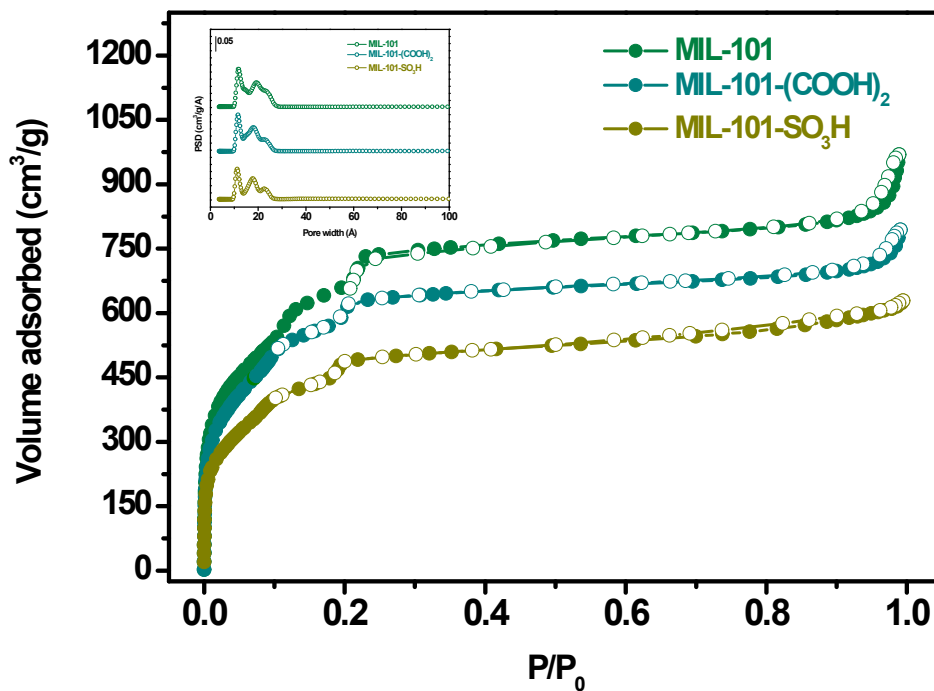


Figure S2. Adsorption isotherms of N_2 and pore diameter distribution of MIL-101, MIL-101-(COOH)₂ and MIL-101-SO₃H materials.

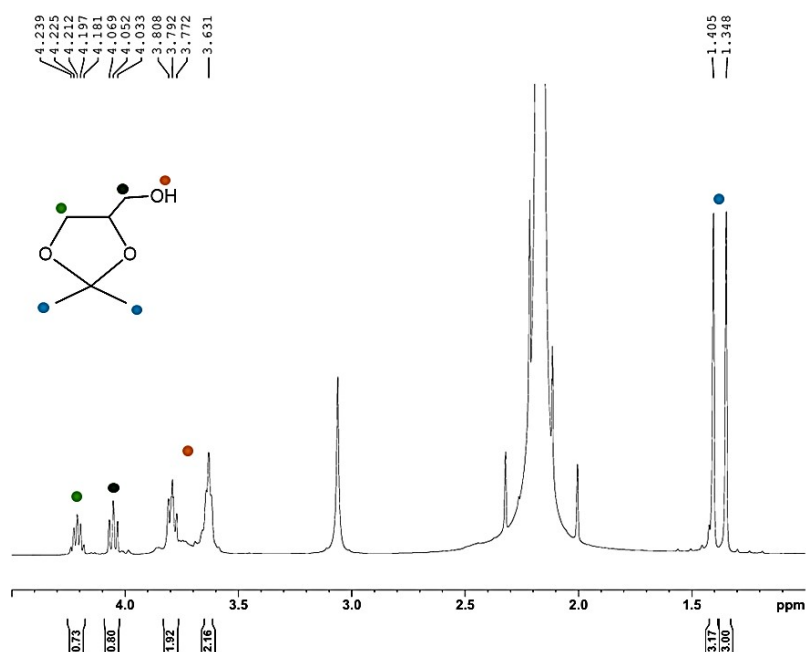


Figure S3. ¹H NMR spectrum of the reactional solution after the catalytic cycle, using UiO-66(Zr)-(COOH)₂ catalyst and 1:6 glycerol/acetone ratio at 60 °C. Spectra obtained using CD₃Cl solvent.