

Supporting information

Recovery and Reuse of Heteropolyacid Catalyst in Liquid Reaction Medium through Reversible Encapsulation in $\text{Cu}_3(\text{BTC})_2$ Metal-Organic Framework

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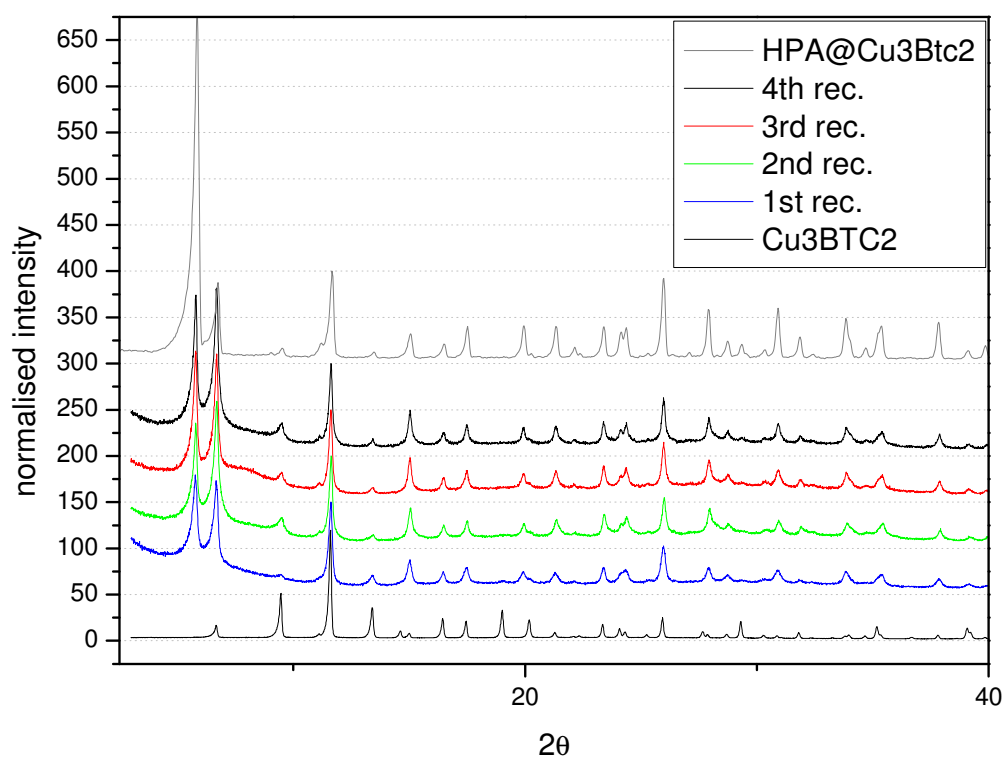


Figure S1. XRD patterns of the $\text{HPW@Cu}_3(\text{BTC})_2$ recovered in 4 consecutive reactions, reference $\text{Cu}_3(\text{BTC})_2$ HKUST-1^[1] (bottom) and reference $\text{HPW@Cu}_3(\text{BTC})_2$ ^[2] (top). Powder X-ray diffraction (XRD) using $\text{Cu K}\alpha_1$ radiation was performed on a STOE StadiP diffractometer in transmission mode.

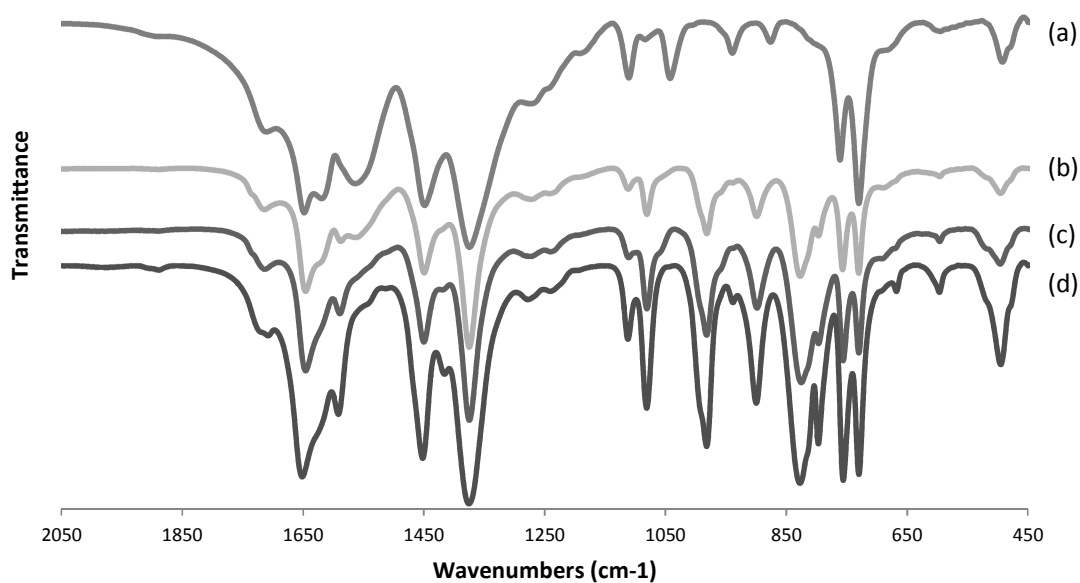


Figure S2. ATR-IR spectra of (a) $\text{Cu}_3(\text{BTC})_2$ synthesized^[1]; (b) $\text{HPW}@\text{Cu}_3(\text{BTC})_2$ first time precipitated in reaction product; (c) $\text{HPW}@\text{Cu}_3(\text{BTC})_2$ recovered from reaction products after 4 times reuse; (d) $\text{HPW}@\text{Cu}_3(\text{BTC})_2$ reference material.^[2] ATR-IR (Attenuated Total Reflection-Infrared) spectra were recorded using Bruker Vertex 70 V spectrometer equipped with a diamond golden gate ATR cell.

[1] S. S. Y. Chui, S. M. F. Lo, J. P. H. Charmant, A. G. Orpen, I. D. Williams, *Science* **1999**, 283, 1148.

[2] S. R. Bajpe, C. E. A. Kirschhock, A. Aerts, E. Breynaert, G. Absillis, T. N. Parac-Vogt, L. Giebeler, J. A. Martens, *Chem.-Eur. J.* **2010**, 16, 3926.