Electronic Supplementary Information (ESI)

Controlled growth and gas sorption property of IRMOF-3 nano/microcrystals

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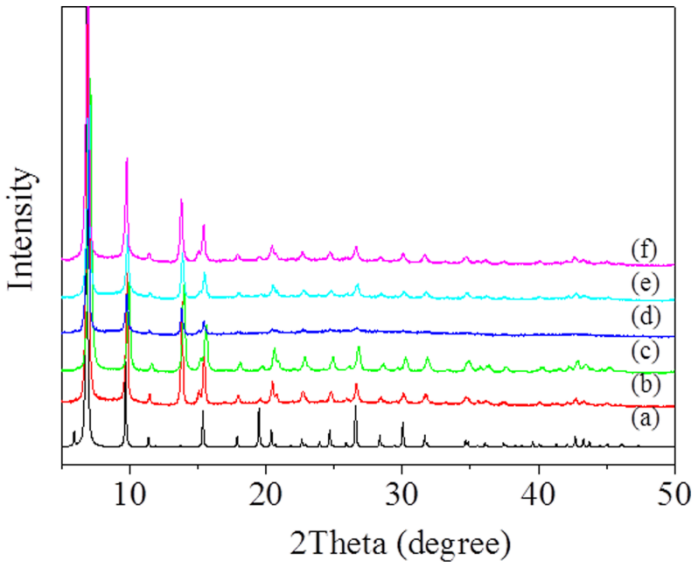

Fig. S1 PXRD patterns of simulated IRMOF-3 and the samples synthesized at 120 °C with different amounts of CTAB: (a) simulated, (b) 0, (c) 5, (d) 8, (e) 12 and (f) 15 mg.

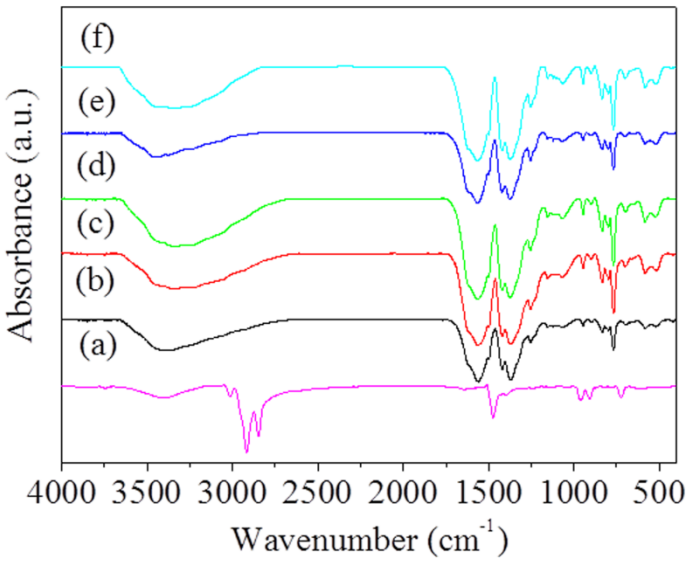

Fig. S2 FT-IR spectra of CTAB and the samples synthesized at 110 °C with different amounts of CTAB: (a) CTAB, (b) 0, (c) 5, (d) 8, (e) 12 and (f) 15 mg.

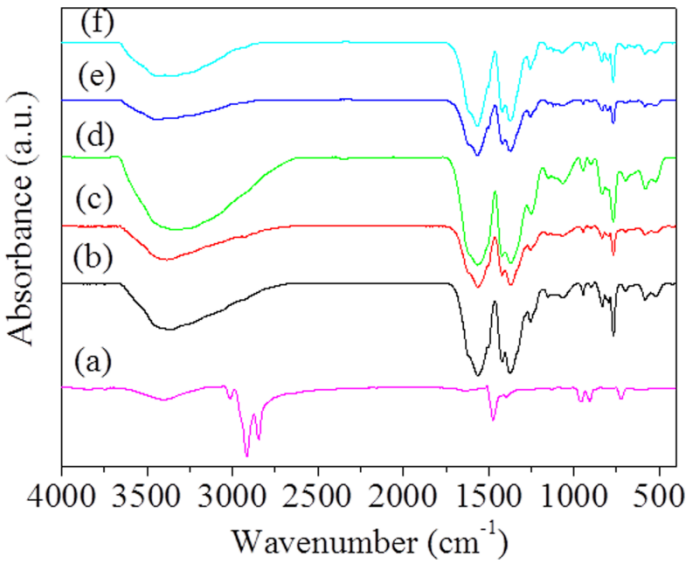

Fig. S3 FT-IR spectra of CTAB and the samples synthesized at 120 °C with different amounts of CTAB: (a) CTAB, (b) 0, (c) 5, (d) 8, (e) 12 and (f) 15 mg.

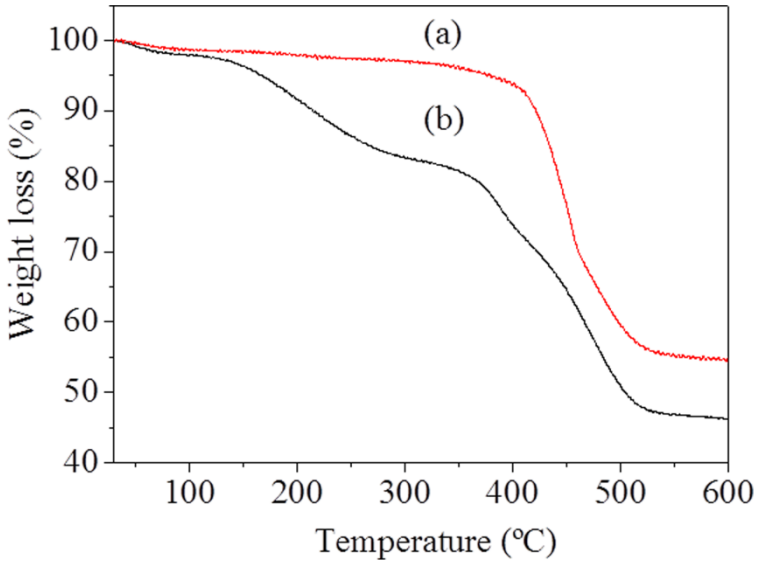

Fig. S4 TGA curves of (a) activated IRMOF-3 and (b) as-obtained IRMOF-3

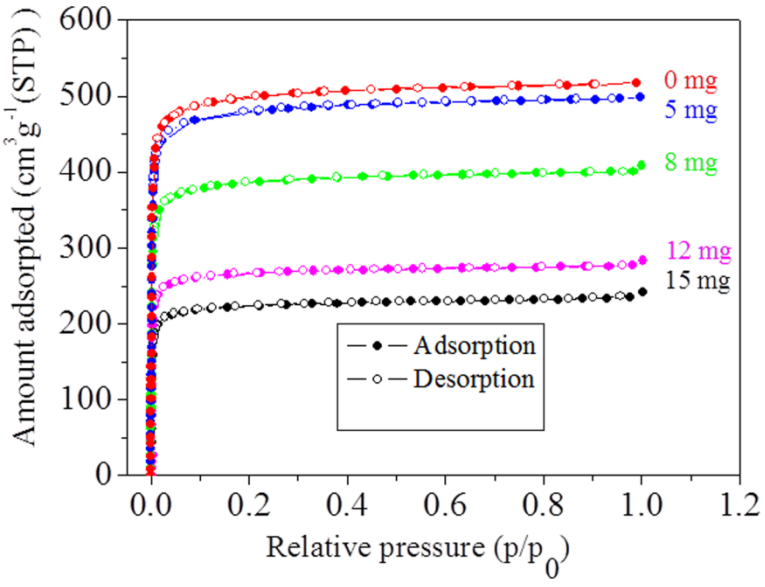

Fig. S5 Nitrogen sorption isotherms of the products synthesized at 120 °C with different amounts of CTAB at 77 K. (In the isotherms, solid and open markers represent adsorption and desorption points, respectively.)

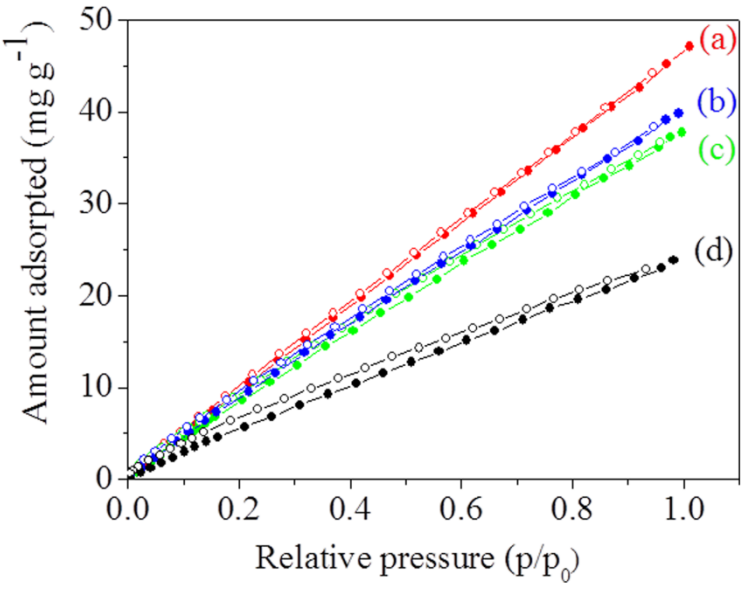

Fig. S6 CO_2 sorption isotherms at 298 K of the products synthesized at different temperatures and amounts of CTAB: (a) 110 °C, 0 mg, (b) 120 °C, 0 mg, (c) 110 °C, 15 mg and (d) 120 °C, 15 mg.