

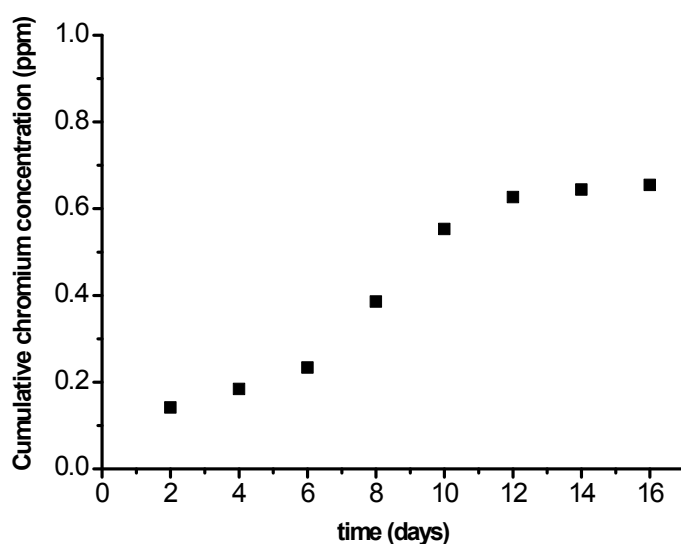
**Supplementary information for**

Enhanced CO<sub>2</sub> adsorption capacity of amine-functionalized  
MIL-100(Cr) metal-organic frameworks

by

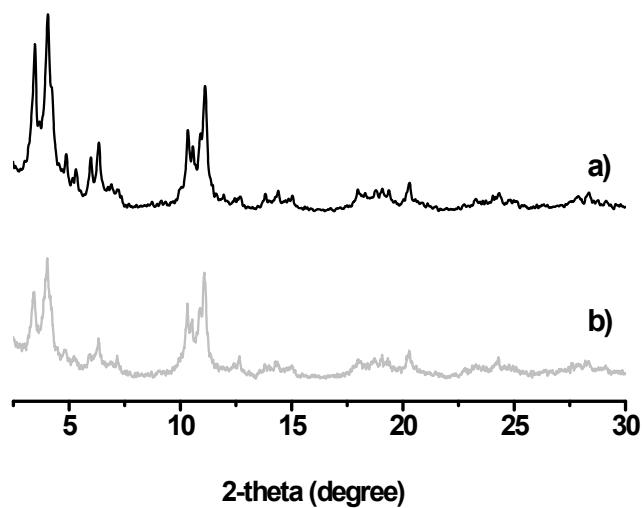
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**Water stability study.** 200 mg of MIL 100 (Cr) sample was mixed with 100 ml of distilled water and the resulting mixture was stirred during 16 days at room temperature. The initial pH of the suspension was 4.1 and no change was observed during the treatment. Every 2 days, the mixture was centrifuged and 1 ml of the supernatant was collected. The supernatant, free of particles, was then poured into 10 ml volumetric flasks and acidified to a pH less than 2 prior to metal analysis. Total chromium content was determined by inductively coupled plasma optical emission spectrometry (ICP-OES) using a PERKIN ELMER Optima 5300 DV instrument. The cumulative chromium concentration is always less than 1 ppm and seems to reach a constant maximum value of approximately 0,65 ppm after 10 days.



**Figure S1.** Cumulative chromium concentration of the supernatant solution as a function of time.

After the 16 days, the remaining solid was removed from the solution by filtering, and, after drying, was analyzed by powder X-ray diffraction. Changes in the X-ray diffraction pattern after water exposure are minimal.



**Figure S2.** Powder X-ray diffraction patterns of MIL-100(Cr) before (a) and after (b) the exposure to water during 16 days.