Supporting Information: Controlling the Steepness of Gate–Opening Behavior on Elastic Layer-Structured Metal–Organic Framework-11 via Solvent-Mediated Phase Transformation

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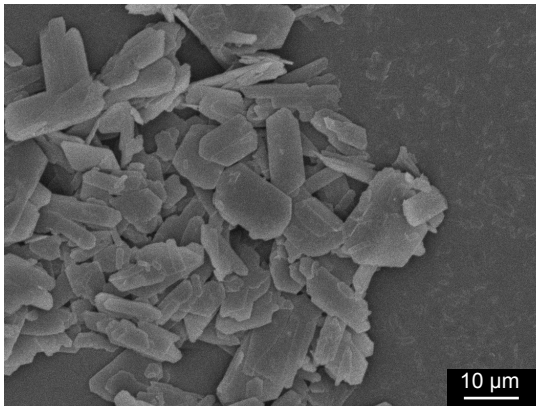

Figure S1: SEM image of particles obtained through low-concentration synthesis.

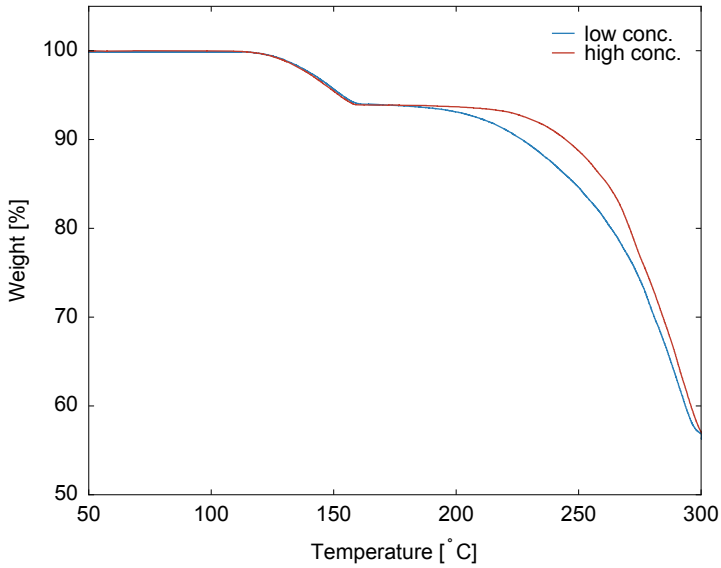

Figure S2: Thermogravimetric analysis (TGA) profiles of pre-ELM-11 synthesized under high- and low-concentration conditions. TGA was conducted using a DTG-60H thermogravimetric analyzer (Shimadzu Corp., Japan) under a nitrogen flow of 50 ml/min at a heating rate of 3 °C/min up to 300 °C.

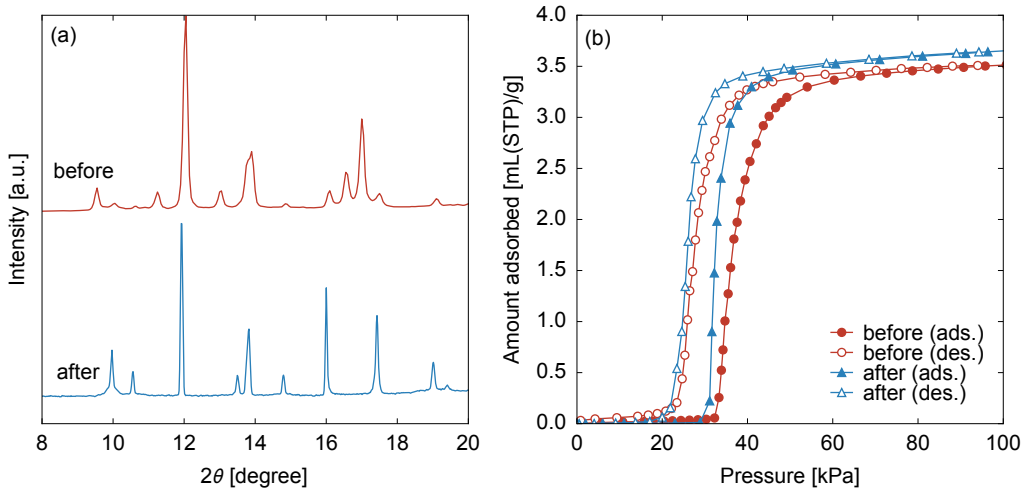

Figure S3: Changes in (a) the XRD pattern of pre-ELM-11 and (b) the CO_2 adsorption isotherm on ELM-11 at 273 K following re-immersion in a methanol–water solvent. The term "before" refers to the particles with an aging time of 24 h shown in Figure 2. In this experiment, the particles were immersed in a methanol–water solvent for one week, where the quantity of particles used was determined to achieve the same concentration as that in the synthesis under high concentration conditions if all the pre-ELM-11 added dissolved.

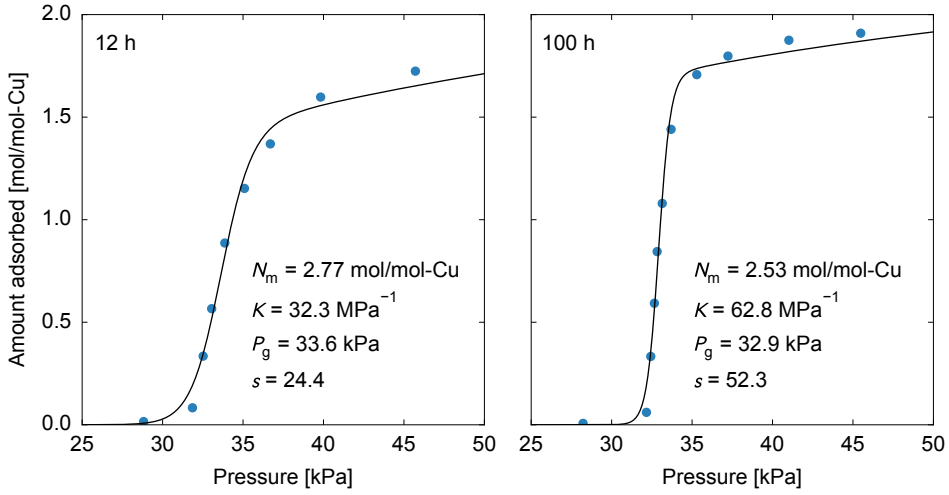

Figure S4: CO_2 adsorption isotherms on ELM-11 at 273 K with aging times of 12 h and 100 h (blue markers) and the STA equations fitted to them (black lines).

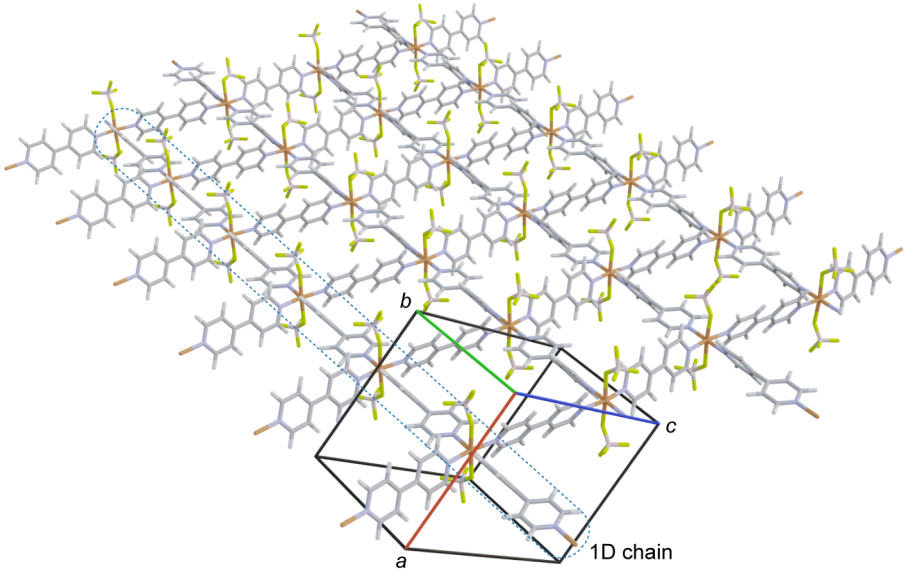

Figure S5: The relationship between the layer structure of ELM-11 and its conventional cell.