Electronic Supplementary Information

Coordination of alkaline-earth metal cations to a symmetrical octamethyl-substituted cucurbituril in the presence of polychlorido cadmium(II) anions

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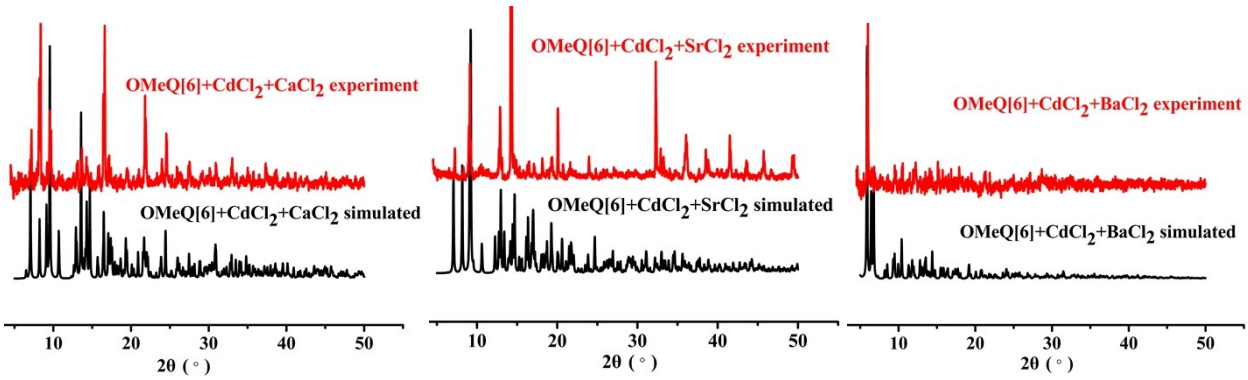

Fig. S1 Powder X-ray diffraction (PXRD) patterns for the OMeQ[6]/AE^{2+}-based compounds **1**-**3** and their corresponding simulated patterns.

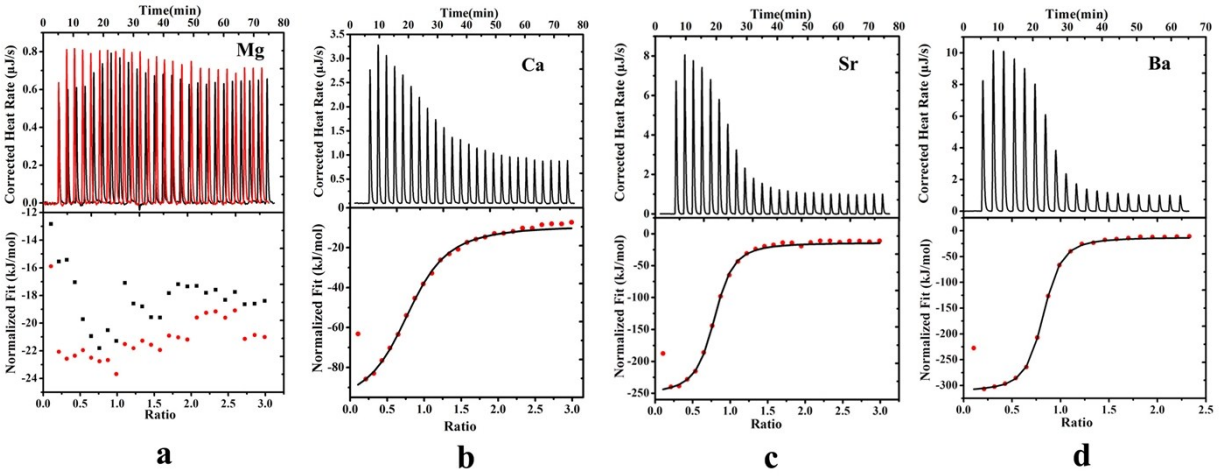

Fig. S2 Isothermal titration calorimetry profiles for OMeQ[6] with $M_{AE}Cl_2$ at 298.15 K.

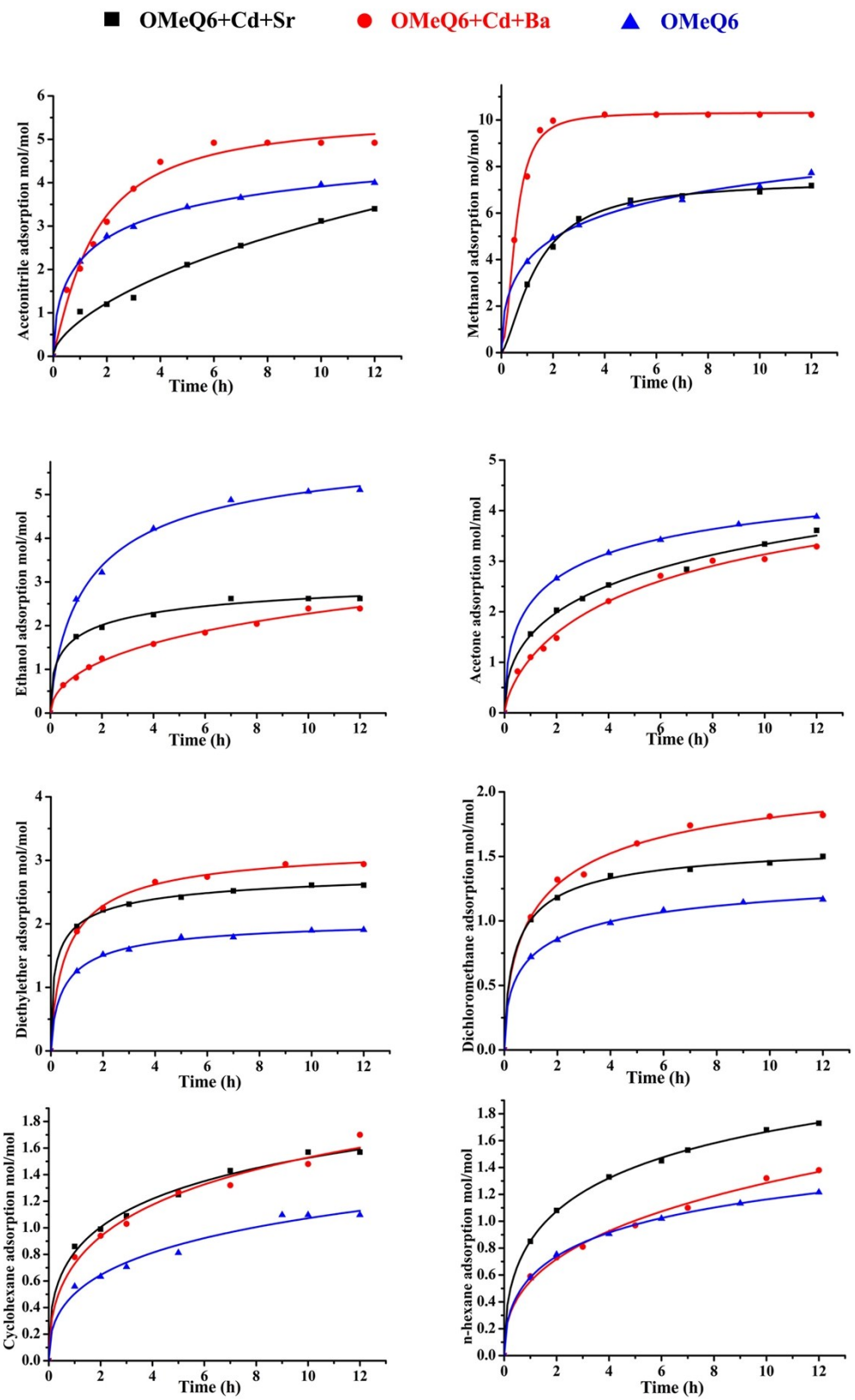

Fig. S3 Vapour absorption profiles **2** (■), **3** (●) and OMeQ[6] (▲) (as a bench mark) for the eight volatile liquids: methanol, ethanol, acetone, diethylether, dichlorodemethane, cyclohexane and n-hexane.

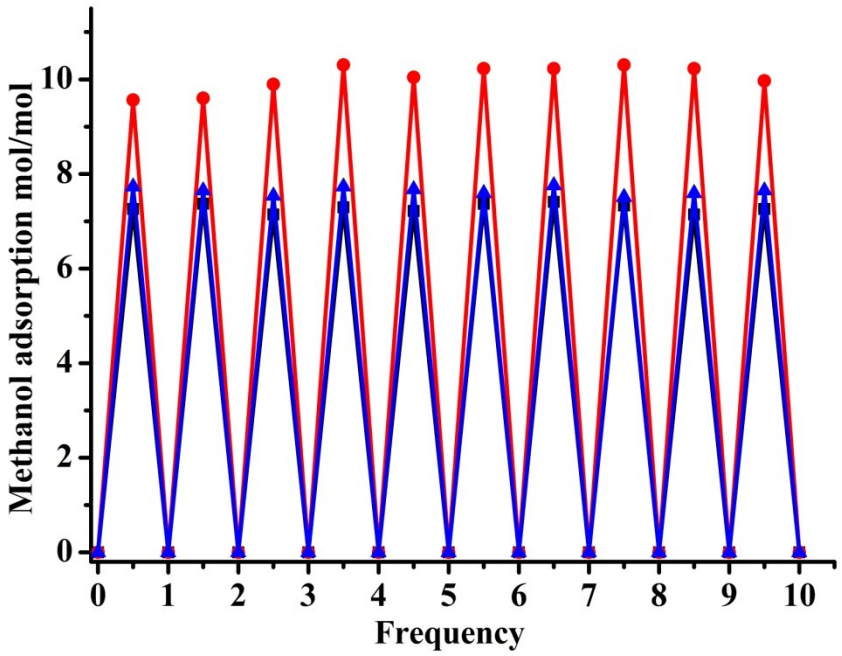

Fig. S4 Methanol vapour absorption/desorption profiles over 10 cycles for: **2** (▲), **3** (●) and (■) OMeQ[6]; obtained employing a similar procedure per cycle to that used for the single cycle runs.