Supplementary Information

Kinetic analysis for cyclic CO_2 capture using lithium orthosilicate sorbents derived from different silicon precursors

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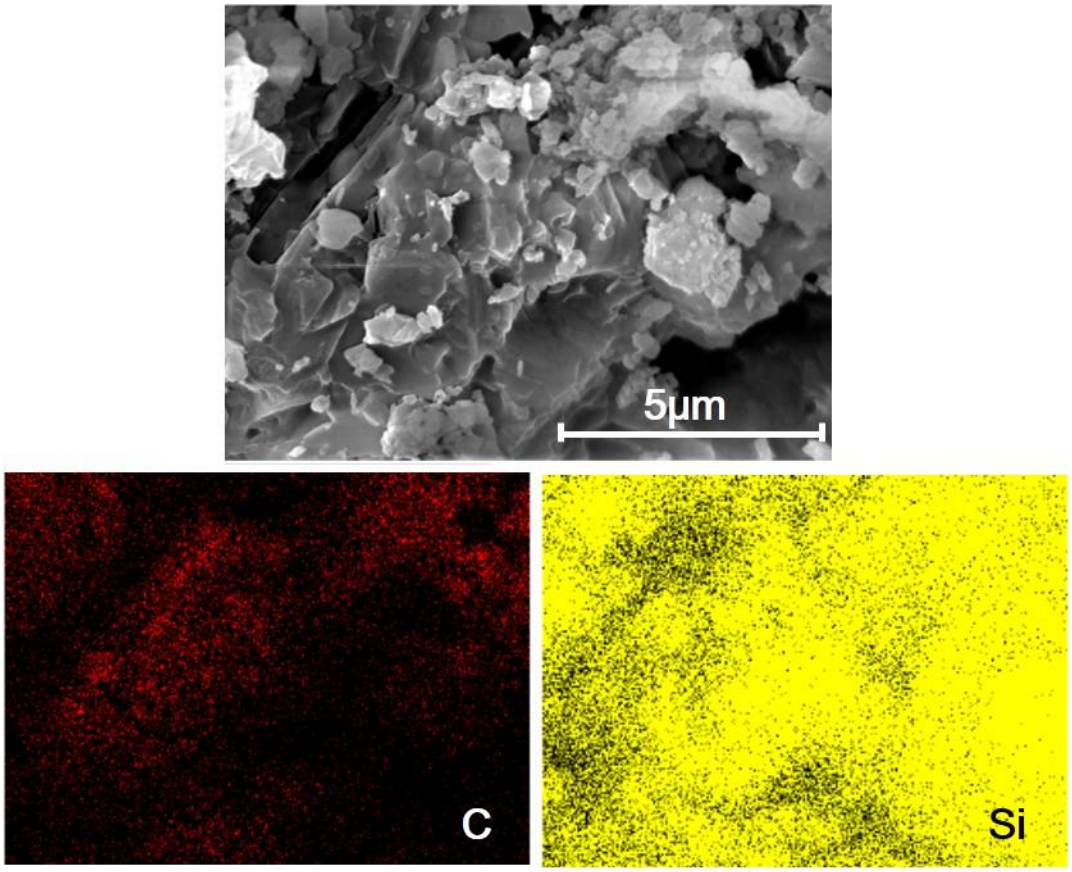

Fig. S1 EDX mapping of the Li_4SiO_4 sorbent which has been fully chemisorbed with CO_2. Sorbent was prepared at 650 °C under a stream of pure CO_2 at 60 ml min^{-1} for 10 h.

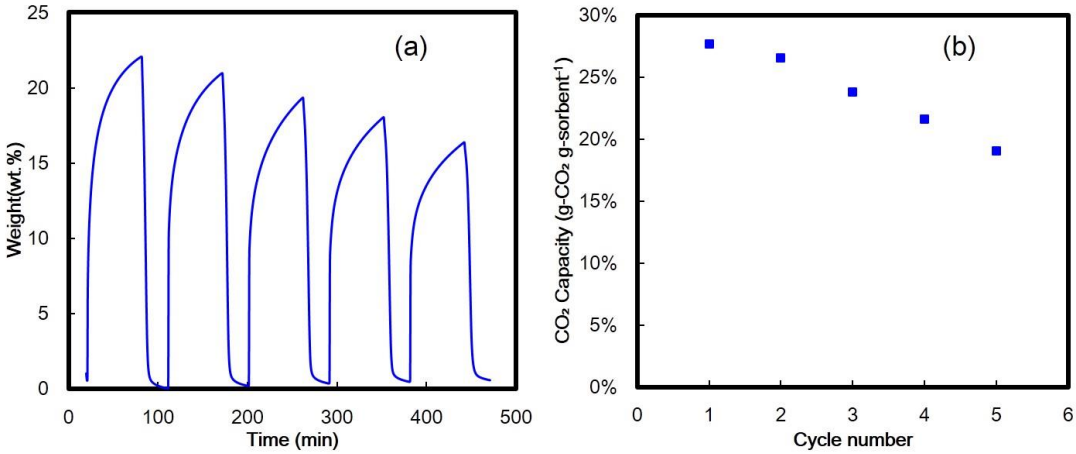

Fig. S2 Additional 5 sorption-desorption cycles of 30 cycled LS-Precipitated sample. Desorption time is 30 mins and sorption time is 60 mins. (a) CO_2 sorption-desorption uptake; (b) Cyclic capacity.

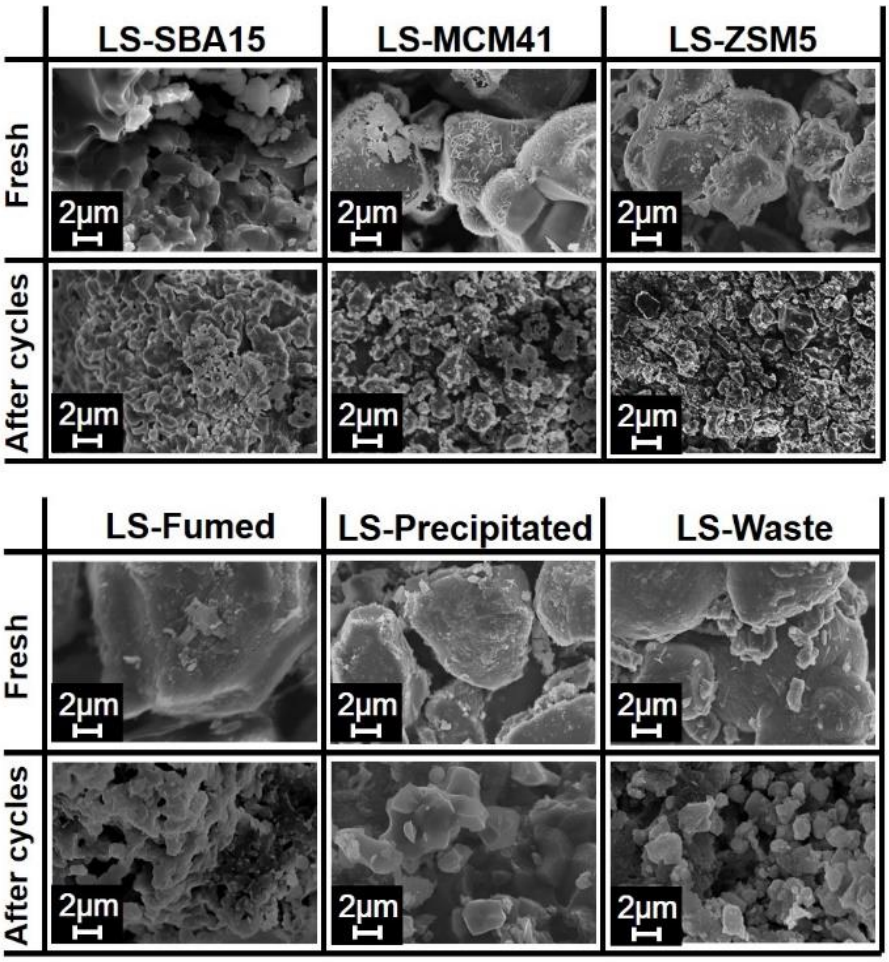

Fig. S3 SEM images of samples before and after 30 sorption-desorption-cycles

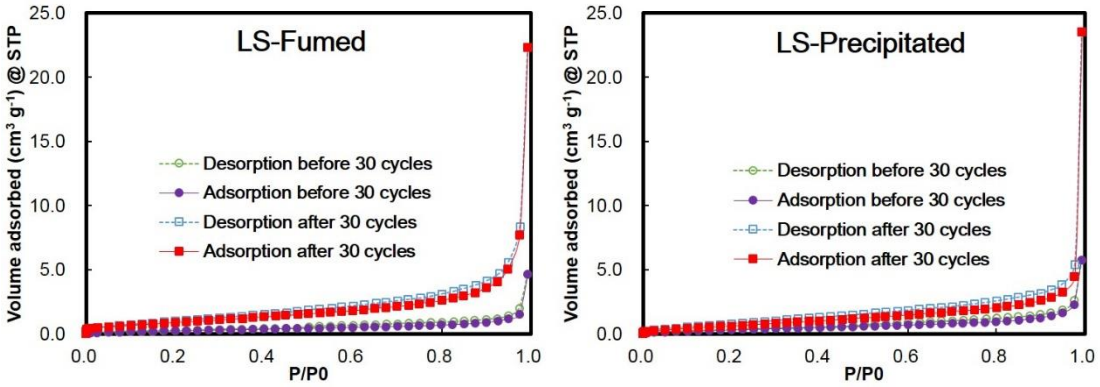

Fig. S4 N_2 adsorption-desorption isotherms of LS-Fumed and LS-Precipitated before and after 30 cycles