Supporting Information for

Fundamental studies of carbon capture using CaO-based materials

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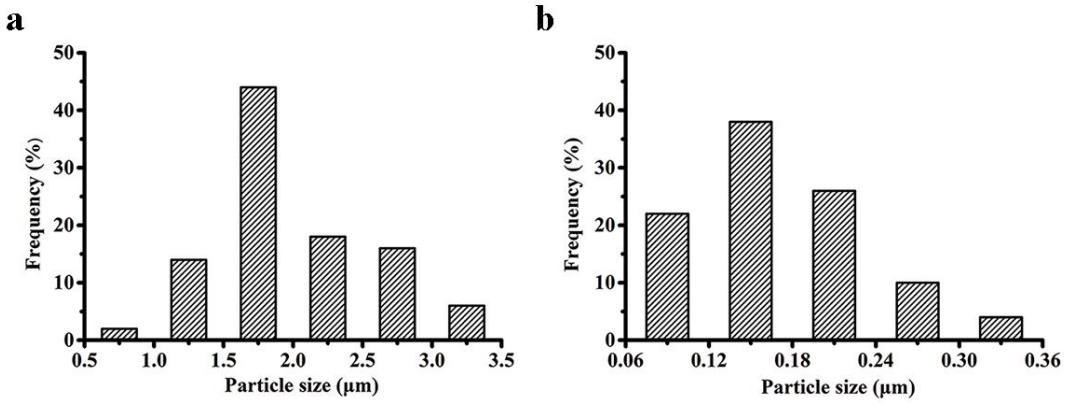

Fig. S1 CaO grain size of a) CaO, b) sol-gel CaO calculated by SEM images in Fig.3 (a) and (b).

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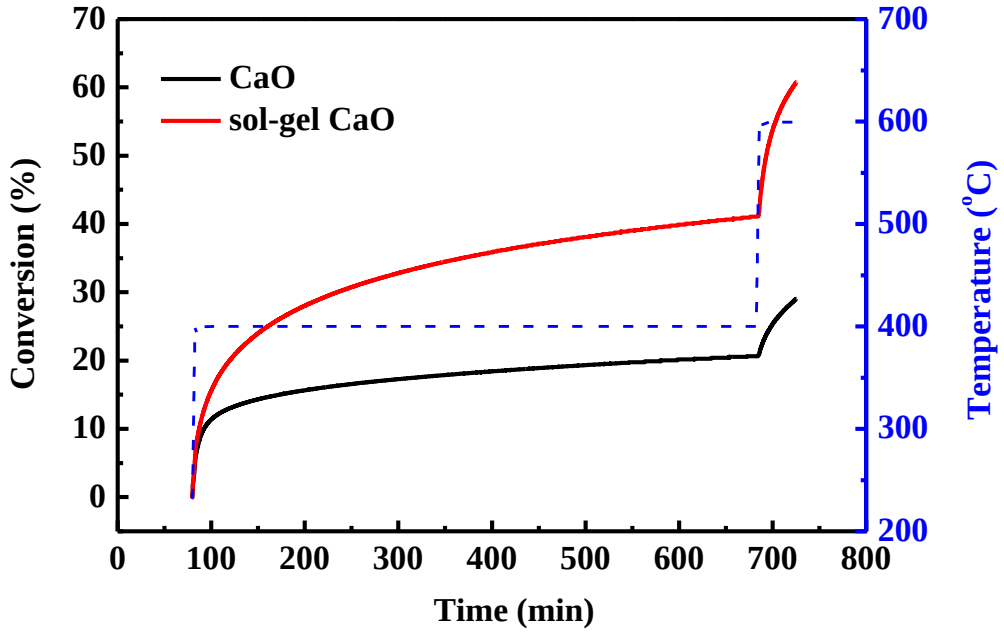

Fig. S2 CO_2 capture performance at 400 ˚C for 10 hours in TGA reactor.

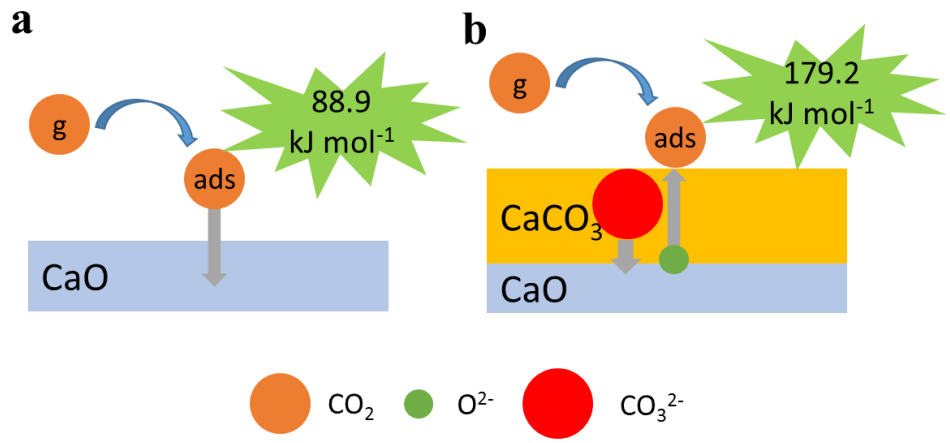

Fig. S3 Two competing ionic diffusion processes in CaO carbonation. a) T<515 ˚C, b) T>515 ˚C.

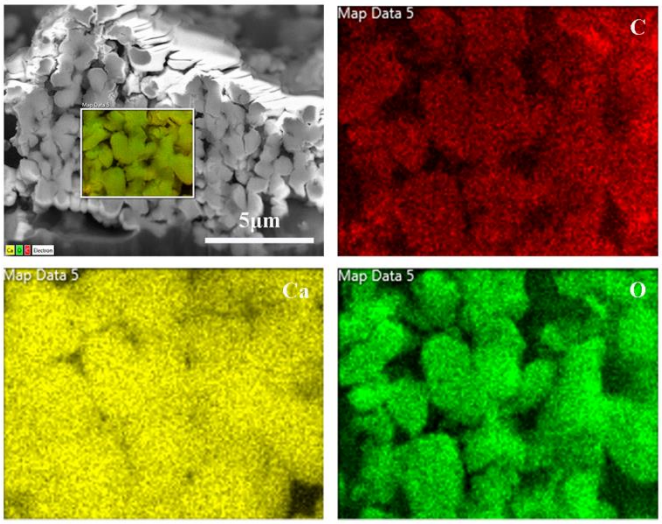

Fig. S4 FIB-SEM-EDS mapping of FB-400.

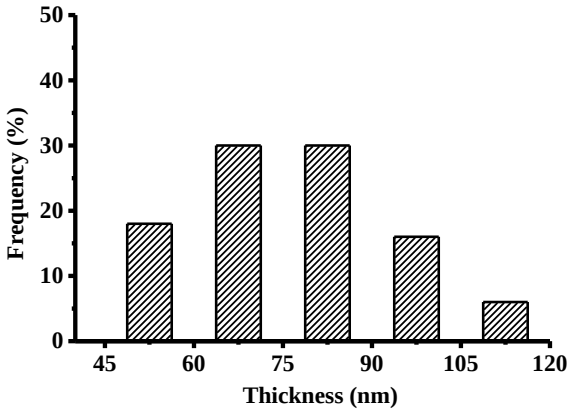

Fig. S5 $CaCO_3$ layer thickness of FB-600.