Supporting Information

Microscale Homogeneous Refinement of $CaO/Ca(OH)_2$ Particles for enhancing Thermochemical Energy Storage Performance

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1. Supporting Figures

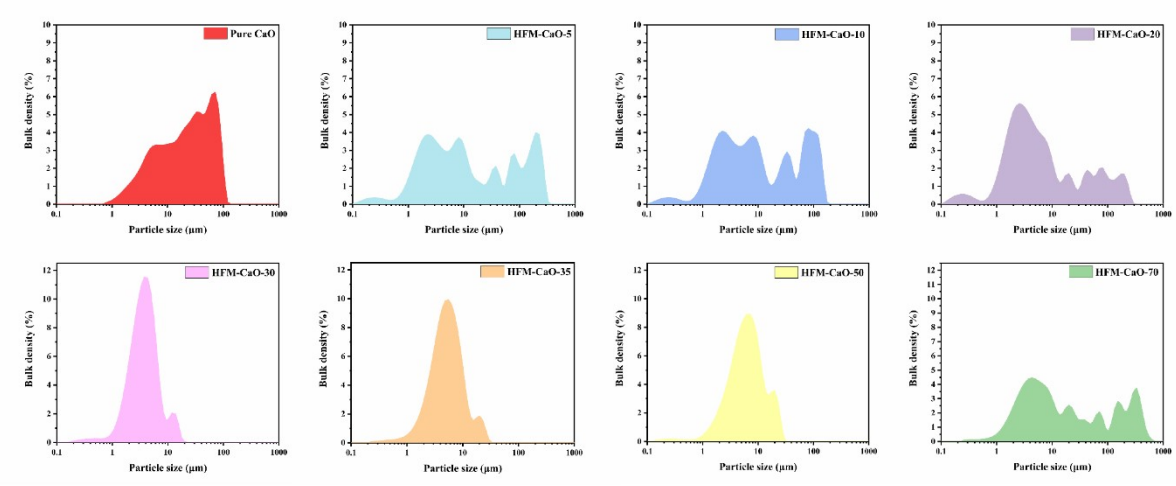

Fig. S1. Particle size distributions of Pure CaO and HFM-CaO.

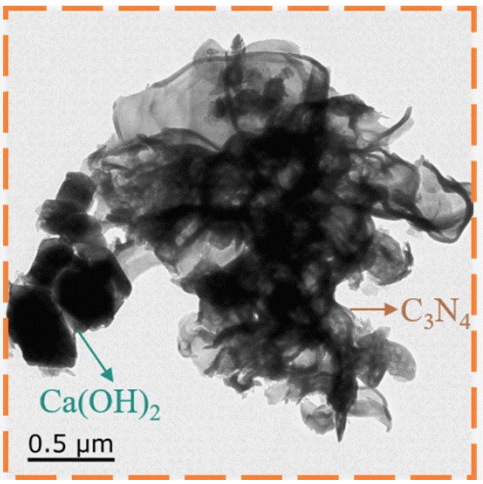

Fig. S2. Particle size distributions of Pure CaO and HFM-CaO.

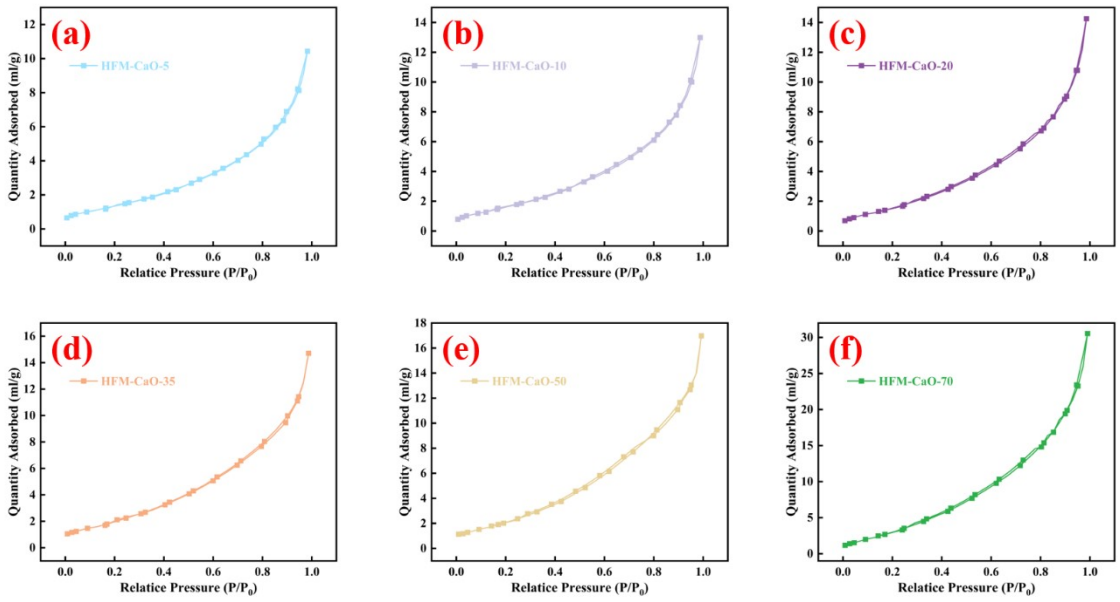

Fig. S3. Nitrogen adsorption-desorption isotherms of HFM-CaO samples with different C_3N_4 doping ratios: (a) HFM-CaO-5, (b) HFM-CaO-10, (c) HFM-CaO-20, (d) HFM-CaO-35, (e) HFM-CaO-50, and (f) HFM-CaO-70.

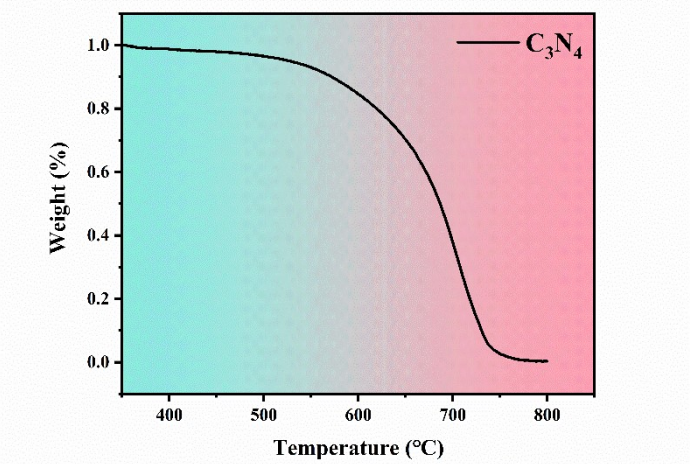

Fig. S4. TG curves of C_3N_4.

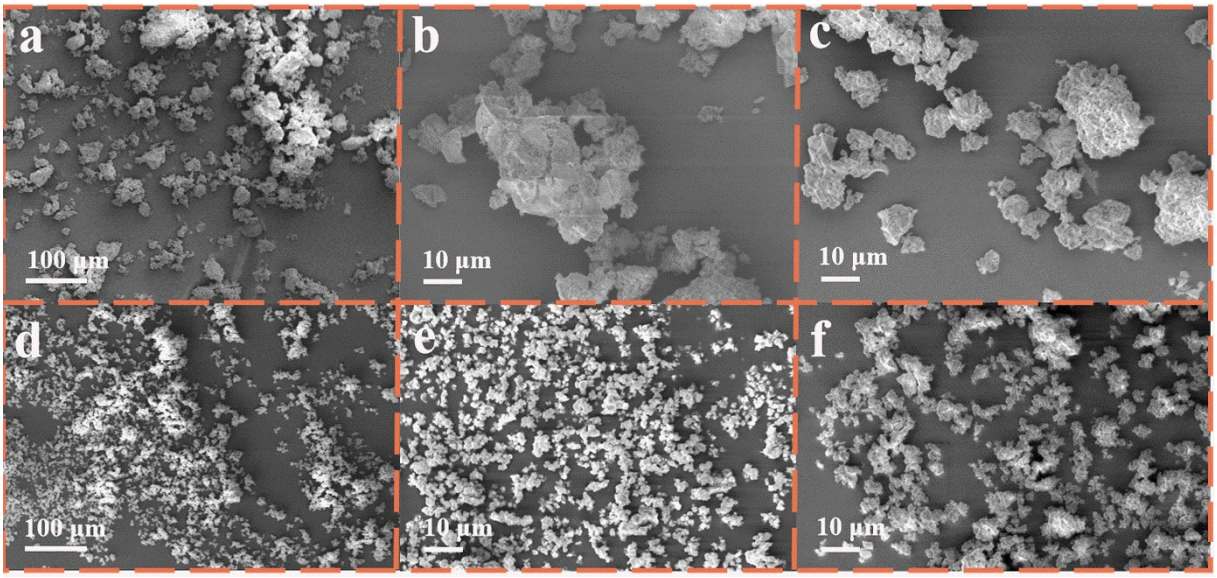

Fig. S5. SEM photographs of the (a, b, c) Pure $Ca(OH)_2$ and (d, e, f) HFM-$Ca(OH)_2$-30 dehydration-hydration products.

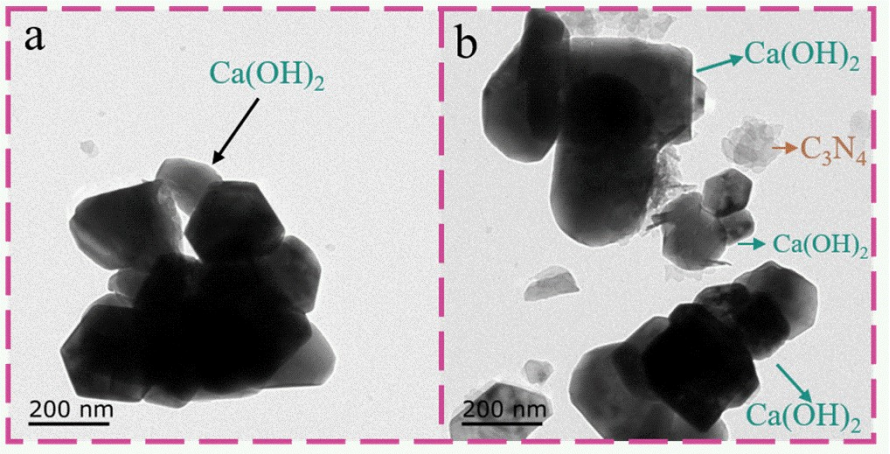

Fig. S6. TEM photographs of the (a) Pure $Ca(OH)_2$ and (b) Pure $Ca(OH)_2$ physical mixture with C_3N_4.

Table S1. Grain size of representative samples calculated according to Scherrer's formula.

Sample name	Grain size (nm)
Pure $Ca(OH)_2$	50.79
HFM-10	77.96
HFM-30	94.34
HFM-50	84.86
HFM-70	83.17