Electronic Supplementary Material (ESI) for RSC Advances.

SUPPORTING INFORMATION

G0.5 PAMAM dendrimers improved kinetic stabilization and nanoscale precipitation mechanism of amorphous calcium carbonate

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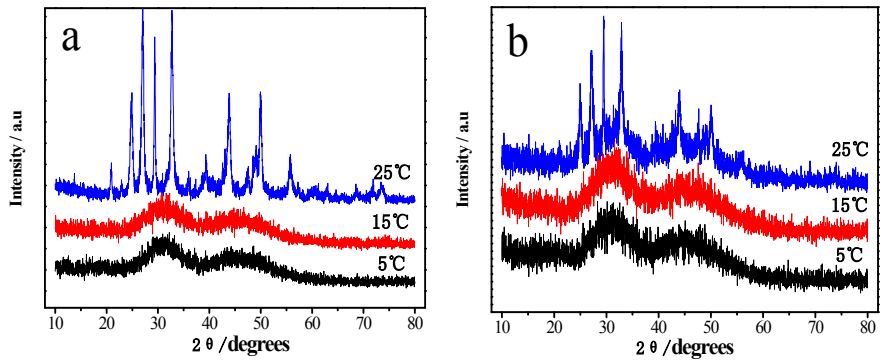
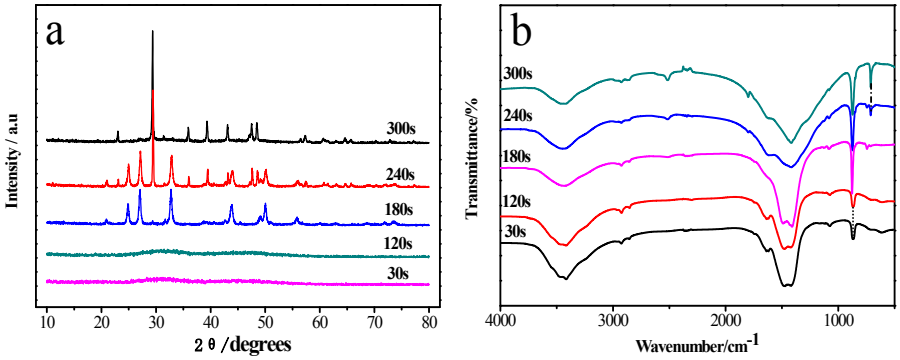
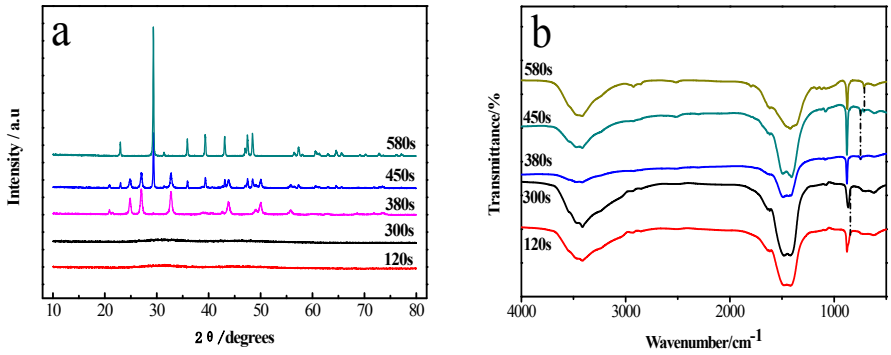


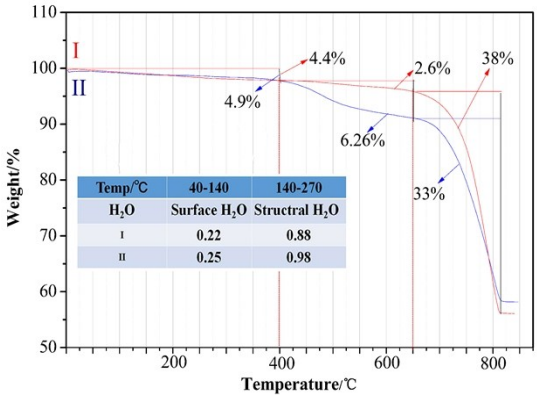
Supporting Figure 1: pXRD patterns of $CaCO_3$ particles at different temperature. (a) without G0.5 at 120s and (b)with G0.5 at 300s.



Supporting Figure 2: (a) pXRD patterns and (b) FTIR spectra of $CaCO_3$ particles in different time-scale without G0.5 at 15℃.

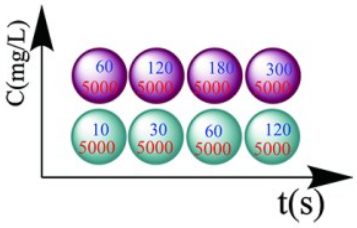


Supporting Figure 3: (a) pXRD patterns and (b) FTIR spectra of $CaCO_3$ particles in different time-scale with 5000 mg/L G0.5 at 15℃.

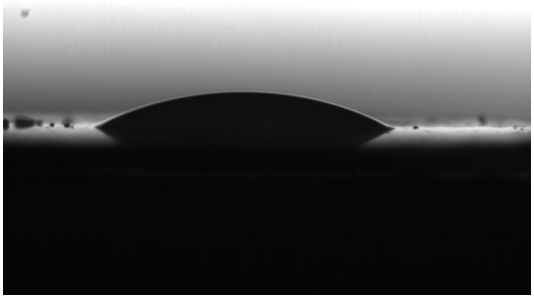


Temp/℃	40-140	140-270
H_2O	Surface H_2O	Structral H_2O
I	0.22	0.88
II	0.25	0.98

Supporting Figure 4: Thermogravimetric analysis (TGA) of ACC. (a) Control and (b) 5000 mg/L G0.5 at 15℃.

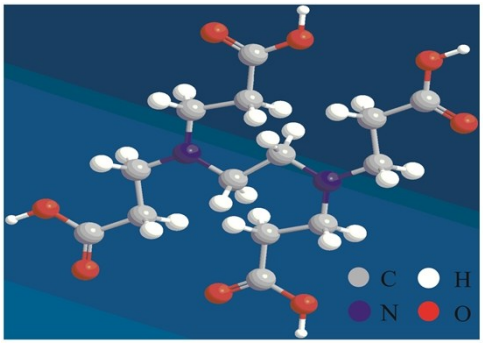


Supporting Figure 5: Schematic diagrams of the sample generation.



Supporting Figure 6: Contact angel of ACC generated at 15℃ with 5000 mg/L G0.5.

The contact angel was 27.11° obtained by hypsometry method.



Supporting Figure7: Schematic diagram for carboxylic-terminated G0.5 PAMAM dendrimers molecular structure.