

Supporting Information

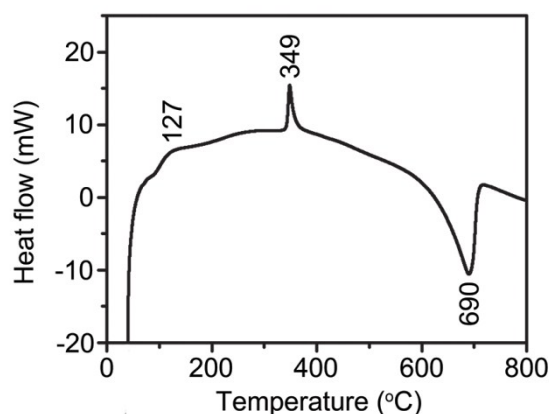


Fig. S1 DSC analysis of ACC prepared with 1 μM ACCBP. The crystallization peak of ACC is at 349 $^{\circ}\text{C}$.

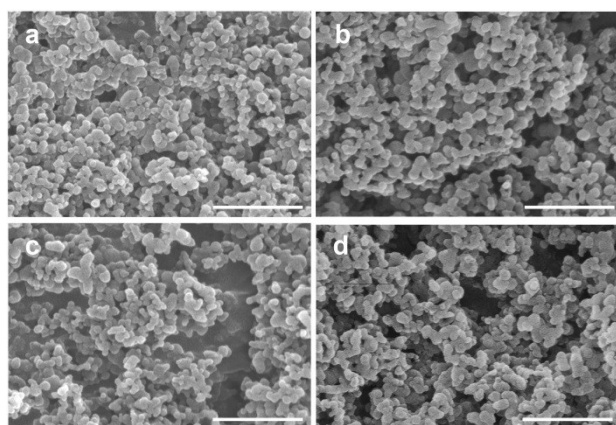


Fig. S2 SEM images of ACC prepared with different Mg/Ca ratios in the presence or absence of ACCBP. The solution conditions are a) Mg/Ca = 1, b) Mg/Ca = 1 and 0.5 μM ACCBP, c) Mg/Ca = 2, d) Mg/Ca = 2 and 0.5 μM ACCBP. These SEM images show that the morphologies of ACC spherulites are not controlled by ACCBP and that the diameters of the ACC spherulites range from 30 nm to 100 nm. Scale bar = 500 nm.

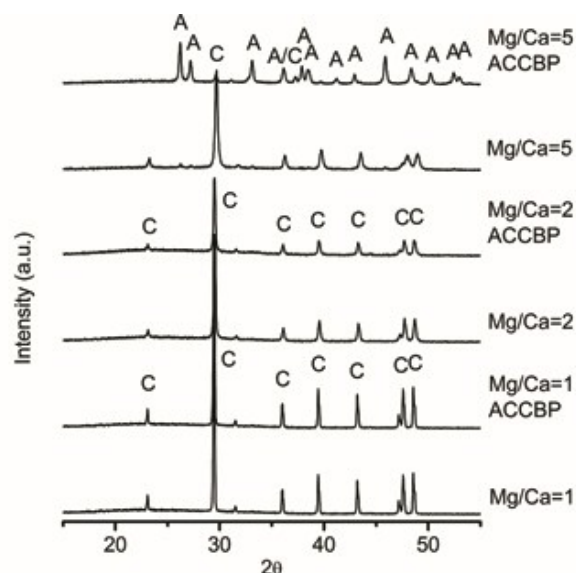


Fig. S3 XRD spectra of the final precipitates in the ACC transformation experiment II. A: aragonite; C: calcite. In this experiment, ACC was synthesized by adding the 50 mM CaCl_2 solution to the 50 mM Na_2CO_3 solution. The fresh ACC were separated immediately via centrifugation, and then transferred into the fresh 50 mM CaCl_2 solutions with Mg/Ca ratios of 1, 2, or 5, with or without ACCBP. The solutions were kept in a laboratory refrigerator (MPR 1410, SANYO) being set at 6 $^{\circ}\text{C}$. The calcium carbonate precipitates were collected at 96 hr via centrifugation. The results also show that ACCBP induces aragonite formation in solution with Mg/Ca = 5.