Electronic Supplementary Material (ESI) for RSC Advances.

Phase and morphology of calcium carbonate precipitated by rapid mixing in the absence of additives

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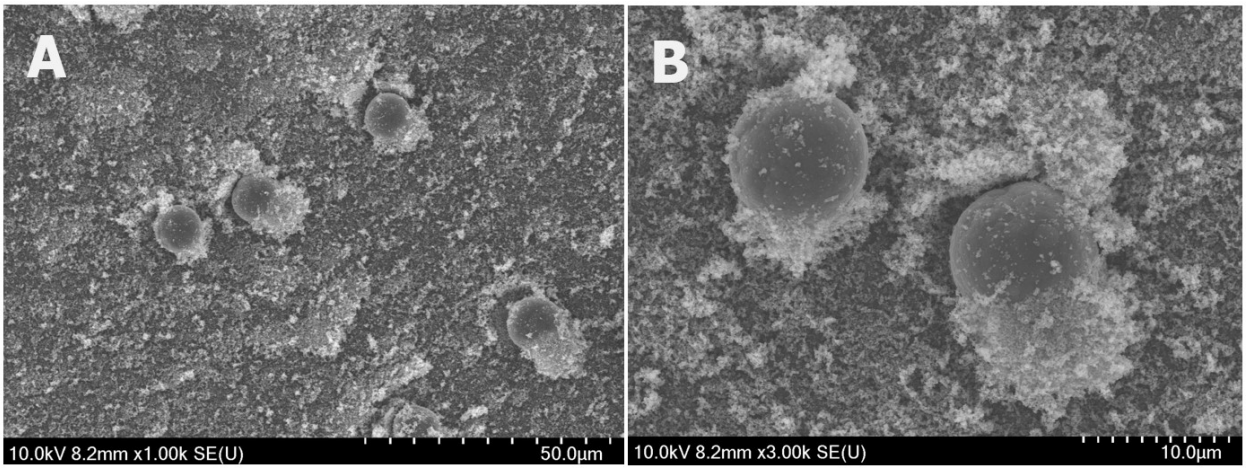

Figure S1. FE-SEM images of the precipitated ACC particles obtained after the rapid mixing of equal volumes at magnifications of (A) 1 K and (B) 3 K.

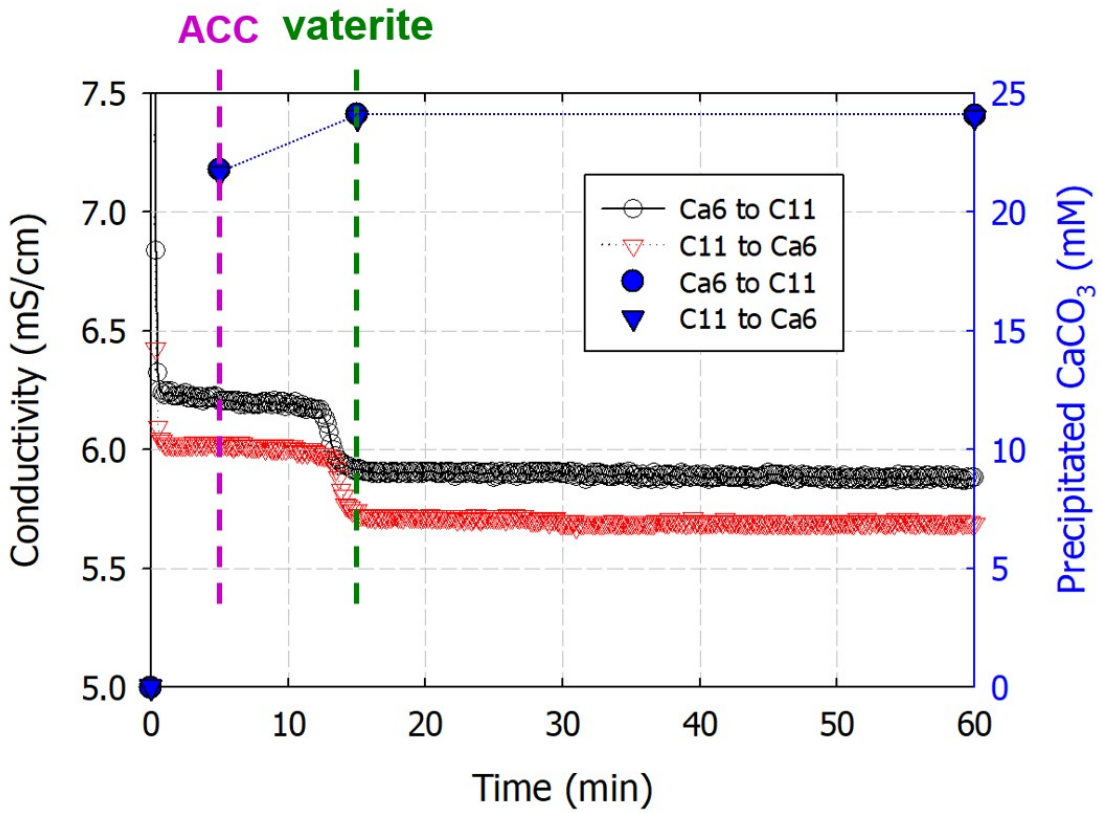

Figure S2. Variations of the conductivity and amount of precipitated $CaCO_3$ particles with time after rapid mixing of equal volumes of the 50 mM Ca6/C11. Ca and C represent the calcium chloride and sodium (bi)carbonate solutions, respectively, and the adjacent numbers represent the starting pH values of the individual solutions.

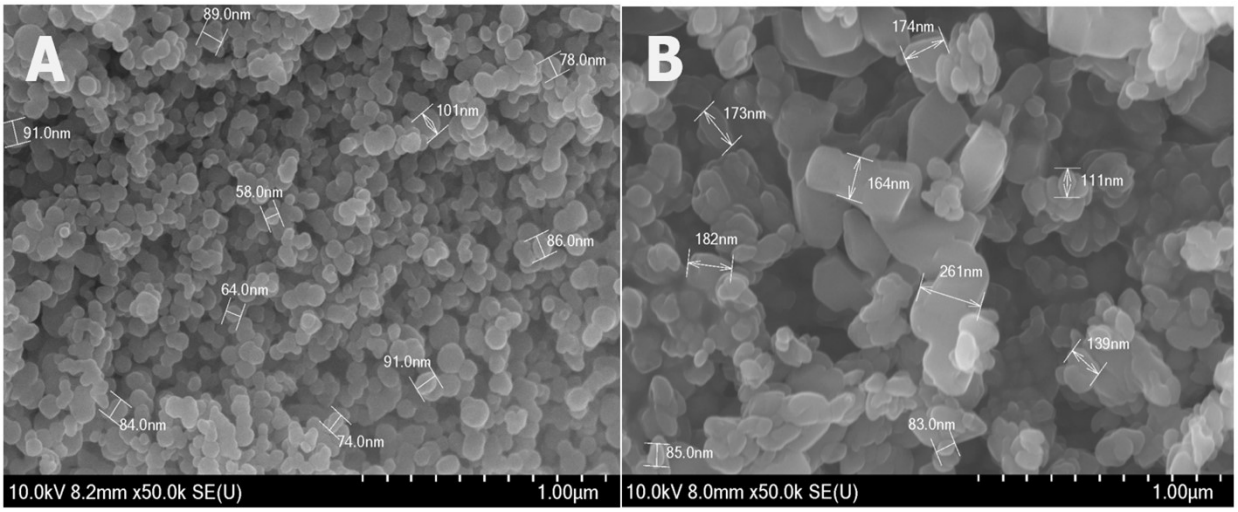

Figure S3. FE-SEM images of the precipitated ACC particles obtained after the rapid mixing of equal volumes of the (A) 50 mM and (B) 20 mM reactant solutions.

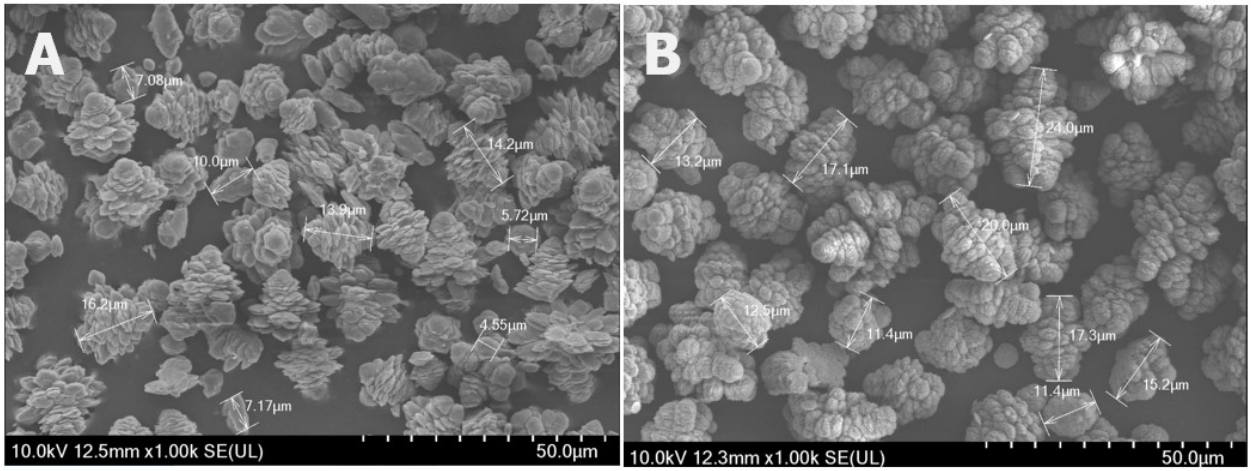

Figure S4. FE-SEM images of the precipitated vaterite particles obtained after the rapid mixing of equal volumes of the 50 mM calcium chloride and sodium (bi)carbonate solutions. (A) $NaHCO_3$ and (B) $NaHCO_3/Na_2CO_3$ (50/50 vol.%) at initial pH values of 8.7 and 10.4, respectively.