

Supplementary Material

Hydration Effects on the Stability of Calcium Carbonate Pre-Nucleation Species

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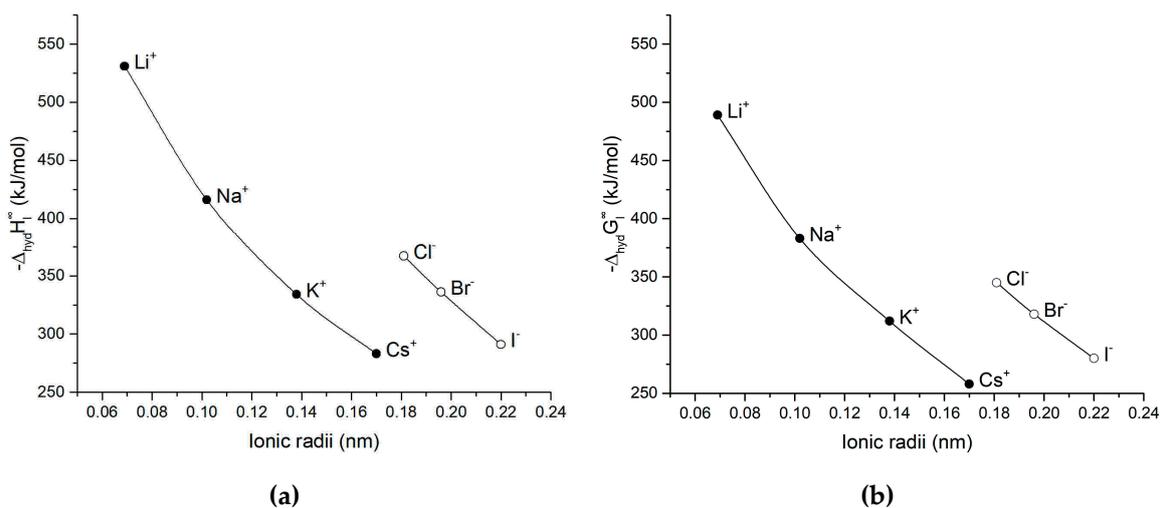
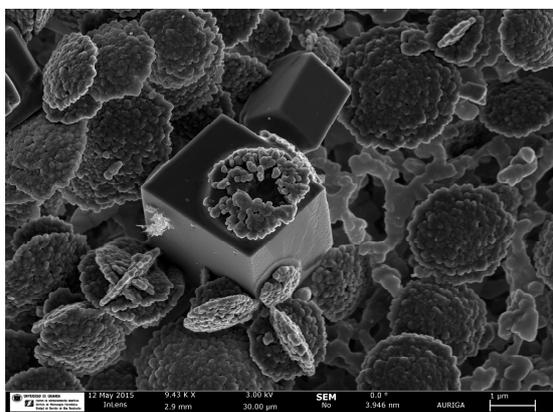
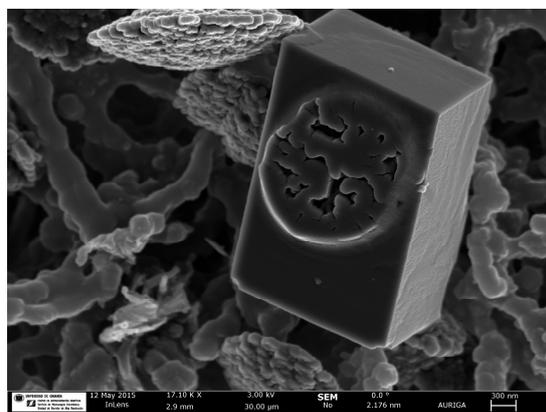


Figure S1. (a) Enthalpy of hydration vs ionic radii and (b) Standard molar Gibbs energy of hydration of an ion vs ionic radii. Note the quasilinear relationship between both variables with decreasing ionic radii.



(a)



(b)

Figure S2. FESEM images of vaterite to calcite transition from the same titration run as seen in Figure 5b showing (a) vaterite attached to calcite. The development of growth steps is observed on the calcite surface; and (b) calcite crystals with vaterite casts.