

Supporting Information

Calcium Oxalate Crystallization in the Presence of Amphiphilic Phosphoproteins

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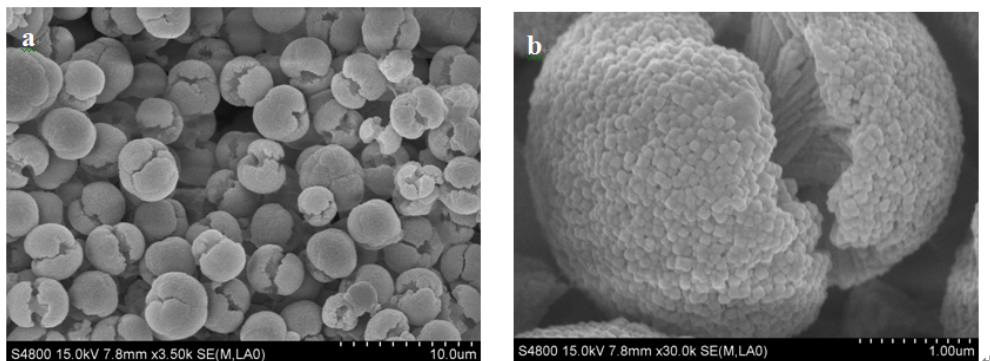


Fig. S1. SEM images of CaC_2O_4 obtained in the presence of 4.0 g L^{-1} casein kept in the air for five months

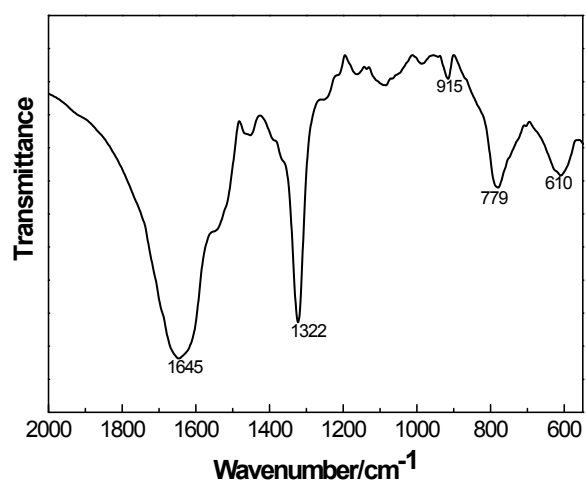


Fig. S2. FTIR spectra of CaC_2O_4 obtained in the presence of 4.0 g L^{-1} casein kept in the air for five months, $[\text{CaCl}_2] = 1 \text{ mM}$.

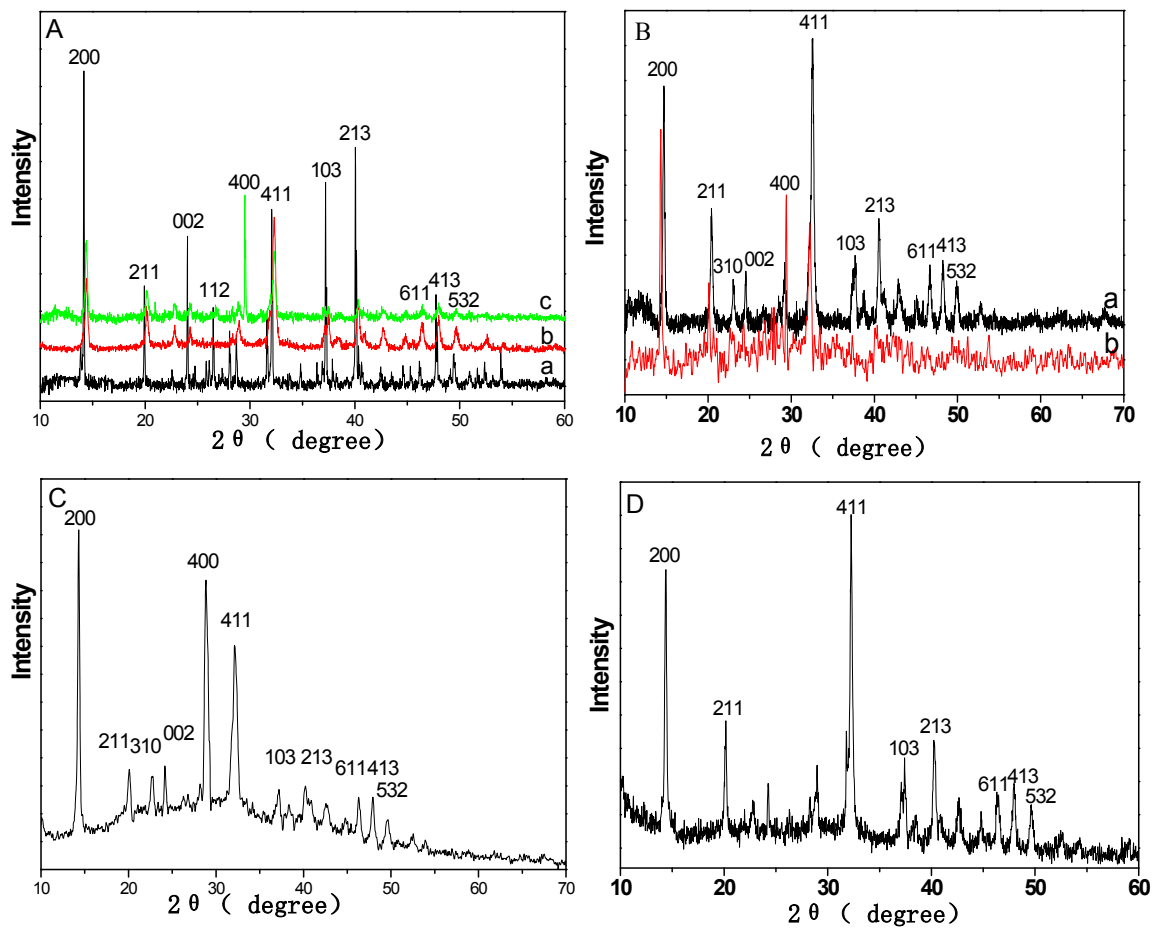


Fig. S3. XRD patterns of CaOx samples obtained at different reaction conditions. (A) $[\text{CaCl}_2] = 1$ mM, casein concentrations: 0.2 g L^{-1} (a), 1 g L^{-1} (b), and 6.0 g L^{-1} (c), $25 \pm 1^\circ\text{C}$, pH 6.9; (B) $[\text{CaCl}_2] = 1$ mM, 4.0 g L^{-1} casein, pH 6.9, temperatures: $10 \pm 1^\circ\text{C}$ (a), and $37 \pm 1^\circ\text{C}$ (b); (C) $[\text{CaCl}_2] = 1$ mM, 4.0 g L^{-1} casein, 25°C , pH 10.5; (D) $[\text{CaCl}_2] = 2$ mM, 4.0 g L^{-1} casein, 25°C , pH 6.9.

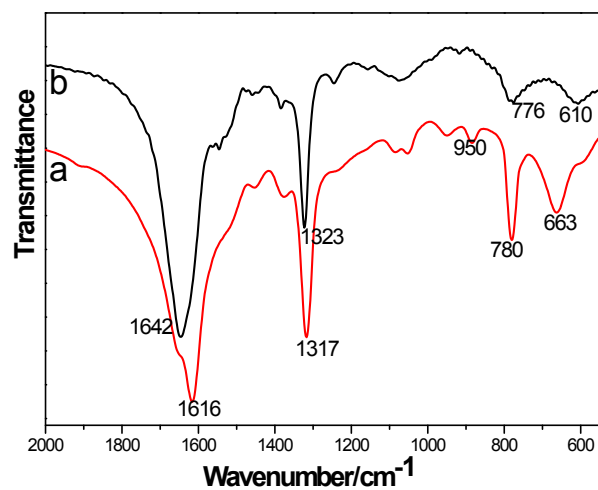


Fig. S4. FTIR spectra of CaOx samples obtained in the presence of 4.0 g L⁻¹ casein at pH 3.5 (a) and 10.5 (b).

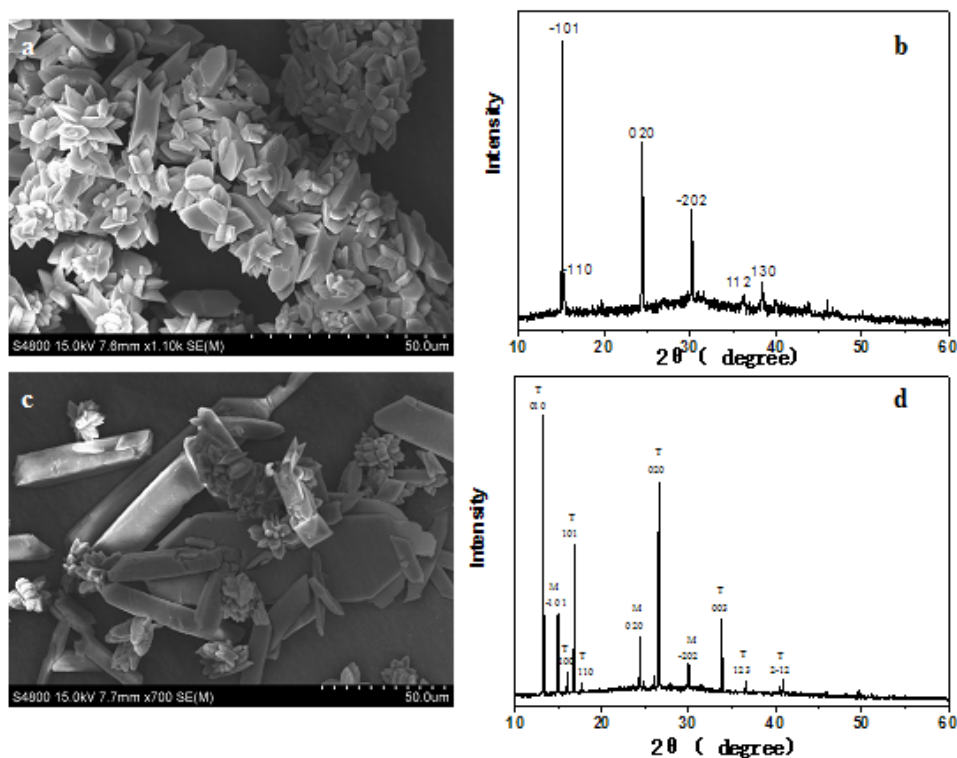


Fig. S5. (a, c) SEM image of CaOx obtained in the absence of casein at 25 ± 1 °C, $[\text{CaCl}_2] = 1$ mM, showing flowerlike COM agglomerates and hexagonal COM at pH 3.5 (a) and showing mainly tabular COT and flowerlike COM agglomerates at pH 10.5 (c); (b, d) XRD patterns of the corresponding CaOx obtained in the absence of casein at pH 3.5 (b) and 10.5 (d).

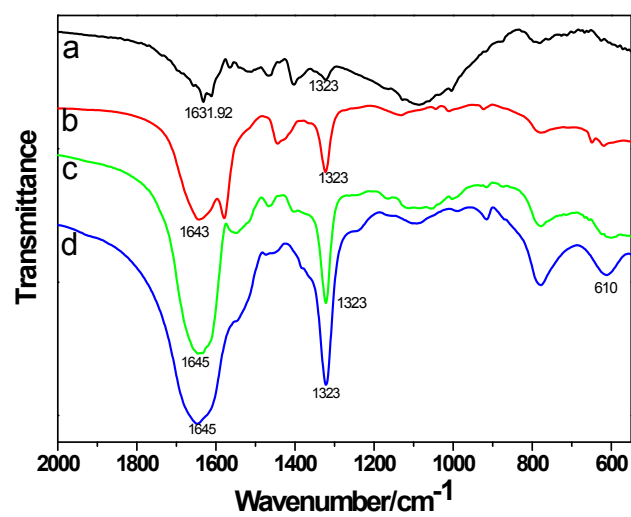


Fig. S6. FT-IR spectra of CaOx samples at the early reaction stages. The reaction time is (a) 3, (b) 8, (c) 12 and (d) 24 h.