

Supplementary Materials

Article

Encapsulation of Multiple Microalgal Cells via a Combination of Biomimetic Mineralization and LbL Coating

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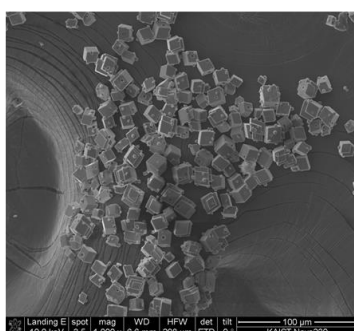
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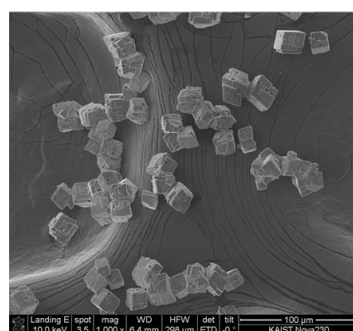
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Microalgae : 1.4 mg/mL
CaCl₂, Na₂CO₃ : 10mM



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CaCl₂, Na₂CO₃ : 50mM



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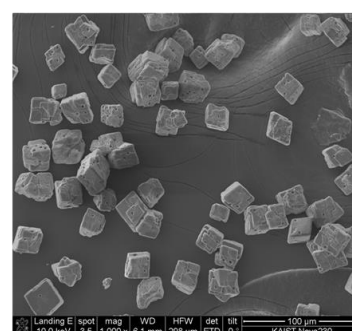


Figure S1. SEM images of the CaCO₃ crystals formed at each concentration.

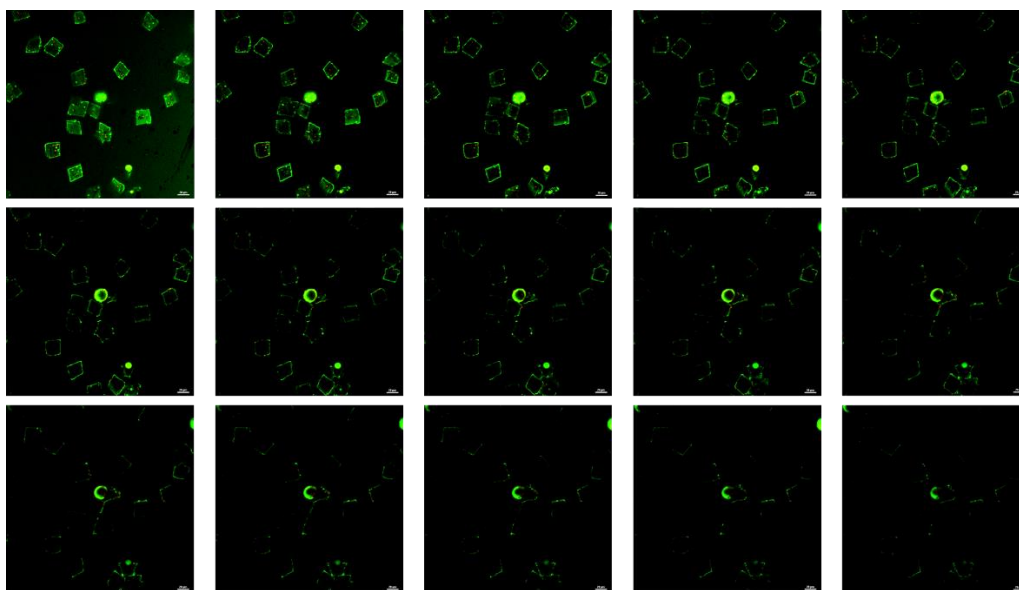


Figure S2. The confocal microscope images scanned at different depths of cell-embedded CaCO_3 crystals (1.4 mg/mL cell and 50 mM $\text{CaCl}_2/\text{Na}_2\text{CO}_3$)

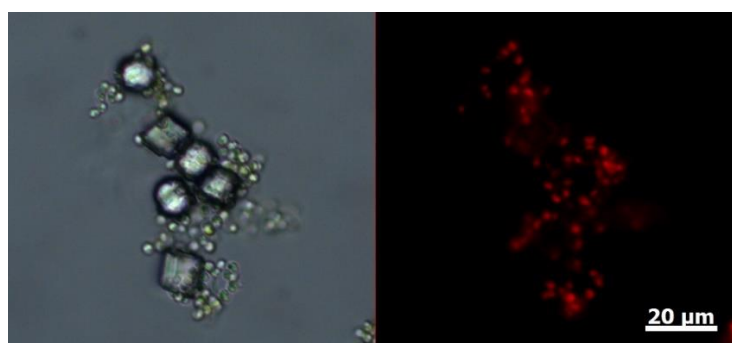


Figure S3. Optical microscope images of CaCO_3 crystals formed in the presence of microalgal cells with a negatively charged PSS outermost coating $(\text{PAH/PSS})_1$. The images show that cells are agglomerated and mostly attached on CaCO_3 particles, which is a totally different pattern of crystallization from that in the presence of the bare cells.

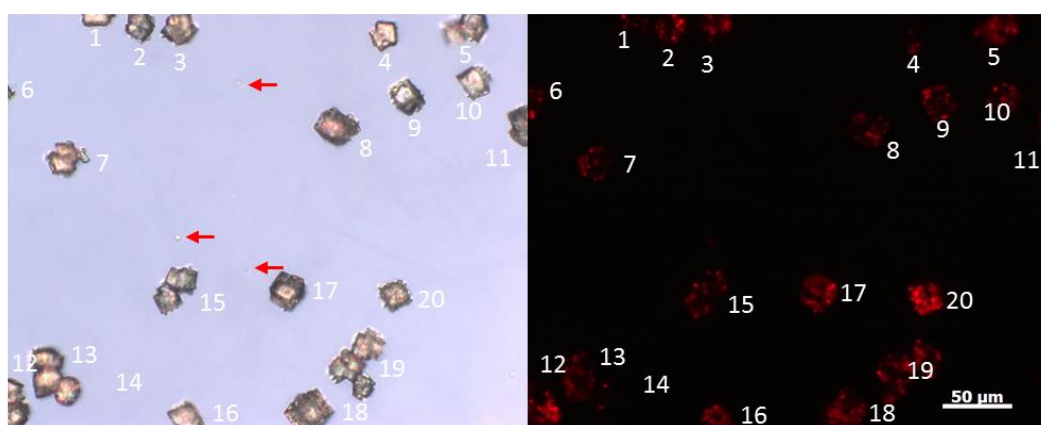


Figure S4. Optical microscope images showing that most crystals contain microalgal cells. Red autofluorescent signals from microalgae are observed from all 20 crystals, as indicated by numbers, and only a few microalgal cells are excluded from crystals, as indicated by red arrows.