Abstract Submitted
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Biomimetic nucleation of calcium carbonate layers at the air-water interface KYUNGIL KIM, Northwestern University — The interaction between calcium carbonate crystals and chitosan at the air-water interface was investigated. Chitosan was selected as an organic, pseudo-structural component of calcium carbonate biominerals in the subphase in the presence of octadecyl sulfate Langmuir monolayers. Calcite crystallization was studied using X-ray diffraction and optical microscope techniques; in-situ grazing incidence x-ray diffraction was performed at synchrotron sources. Calcite crystallization under octadecyl sulfate monolayers shows a superlattice structure. This chitosan system also results in ACC(amorphous calcium carbonate) formation in the early stage of crystallization.

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