This dataset supports the investigation in “Using Confinement To Study the Crystallization Pathway of Calcium Carbonate” (Authors: Yunwei Wang, Muling Zeng, Fiona C. Meldrum and Hugo K. Christenson).

File 1 - Optical microscope: this file contains the raw images of ACC precipitated on different surfaces.

File 2 - Optical microscope: this file contains the raw images of bulk experiments on glass substrates under different concentrations (1.0 mM, 2.5 mM and 4.5 mM).

File 3 - pH measurement raw and analysis data: this file contains the pH value under various concentrations of Na2CO3 and different concentrations of reaction solutions according with the time.

File 4 - All the different conditions: this file contains 0.5 mM, 1.0 mM, 1.5 mM, 2.0 mM, 4.0 mM reaction conditions in confinement.

File 5 – All the TEM images under different conditions