

Description of Additional Supplementary Files

File Name: Supplementary Movie 1

Description: **Movie NIR light induced nucleation and growth of CaCO₃ crystals**

In this movie, the nucleation and growth of CaCO₃ crystals positioned in a line (described in the main text) are presented. The red dashed circle represents the location of NIR light spot. The total movie consists of 453 frames that cover a time span of 61 h real-time growth. Due to the long timespan the video contains some time jumps. The real-time of crystallization per crystal as numbered in the movie is (times of nucleation are an estimation):

1. 16 h (growth 120 mW, nucleation within first minute with 180 mW)
2. 6 h (growth 120 mW, nucleation within first hour as well with 120 mW)
3. 14 h (growth 130 mW, nucleation within first hour with 140 mW)
4. 9 h (130 mW, nucleation within first 2 h as well with 130 mW)
5. 17 h (120 mW, nucleation within first 3 h as well with 120 mW)