

## Hydrogen peroxide as a crystal growth modifier of CaCO<sub>3</sub>

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### Supporting information

Table S1. Intensities of Pure Calcite and Calcite Grown in the Presence of H<sub>2</sub>O<sub>2</sub>

$2\theta$	<i>hkl</i> assignment	H <sub>2</sub> O <sub>2</sub> calcite intensity	Pure calcite intensity
23.04 □	012	9.2	10 ± 1.1
29.43	104	100	100
31.45	006	2.2	3.9 ± 1.2
36.00	110	13.9	14 ± 1.6
39.44	113	21.4	21 ± 2.5
43.18	202	19.1	18 ± 1.3
47.17	024	9.6	8.0 ± 1.9
47.53	018	30.7	24 ± 4.5
48.56	116	25.4	24 ± 2.2

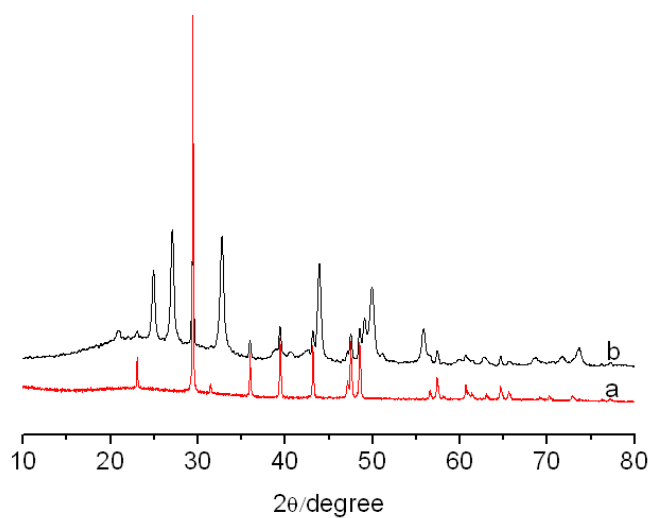


Fig.S1 XRD patterns of  $\text{CaCO}_3$  crystals precipitated at: a) pH= 11.4, b) PSS and  $\text{H}_2\text{O}_2$  mixture  
solution

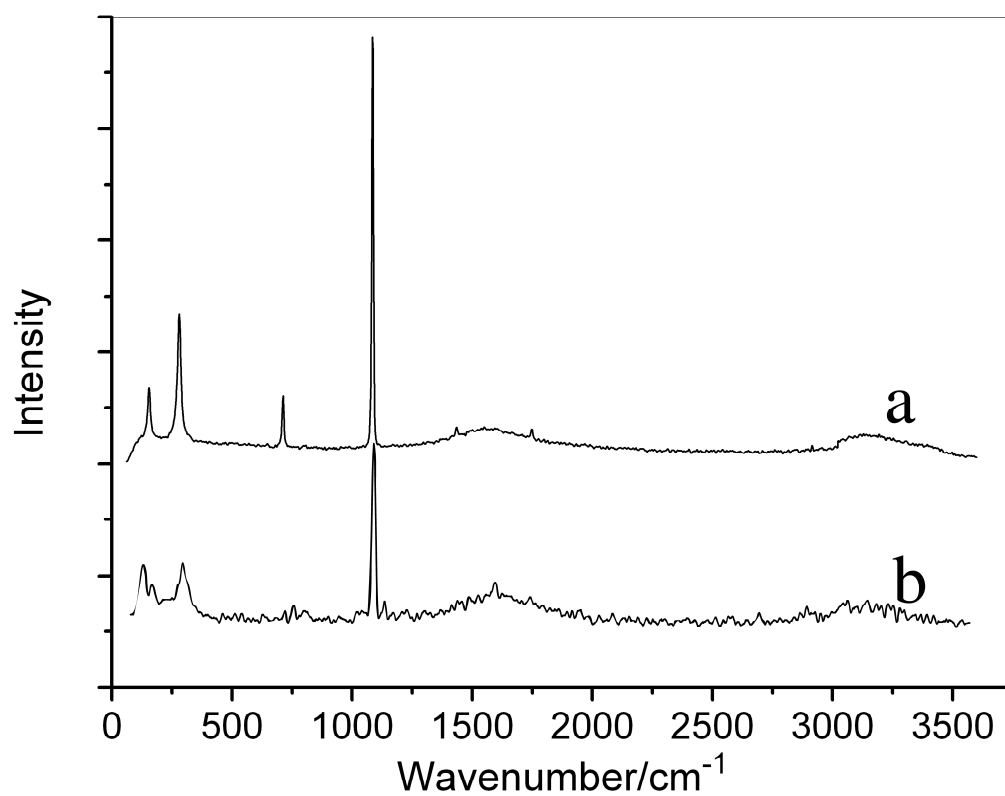


Fig.S2 Raman spectra of CaCO<sub>3</sub> crystals precipitated at: a) pH= 11.4, b) PSS and H<sub>2</sub>O<sub>2</sub> mixture  
solution