

Supporting Materials for Lauric Acid Triggered *in-situ* Surface Modification and Phase Selectivity of Calcium Carbonate: Its Application as an Oil Sorbent

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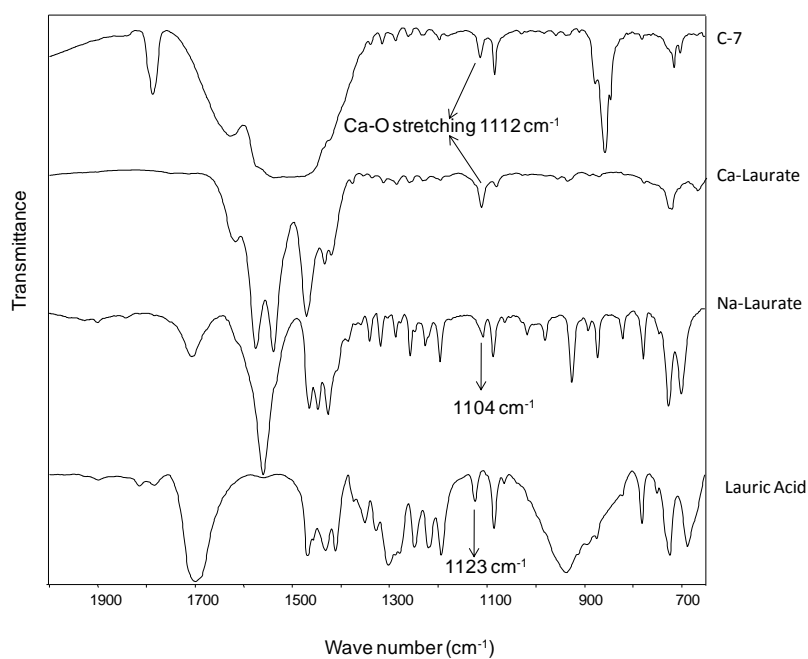


Figure S-1. FT IR spectra of Lauric acid, Na-Laurate, Ca-Laurate and Sample C-7, CaCO₃ synthesized in the presence of Lauric acid.

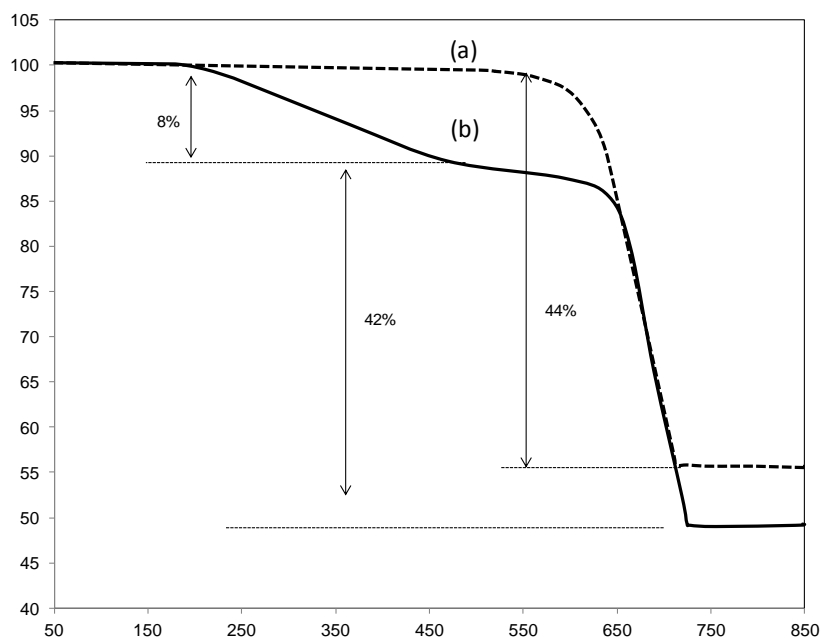


Figure S-2. a) TGA curve of Calcite sample synthesized in the absence of any additive (C-1) , and (b) TGA profile of CaCO_3 synthesized in the presence of Lauric acid (C-6, Ca^{2+} :Lauric acid 1:0.05)

Table S-3. Percentage Weight Loss different CaCO_3 samples at 250-600°C

Sample	Ca^{2+} : Lauric acid (mole ratio)	Wt. Loss at 250- 600°C(%)
C-1	1 : 0	Nil
C-6	1 : 0.05	8
C-7	1 : 0.1	15

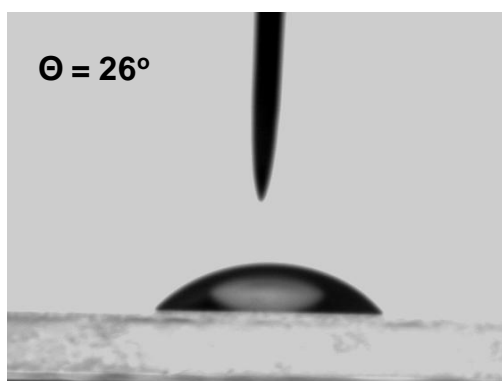


Figure S-4. Contact angle formed by a drop of sunflower oil on a substrate coated with sample C-5 (Ca^{2+} : Lauric acid mole ratio 1:0.01)

Table S-5. Oil absorption efficiency of various hydrophobic CaCO₃ samples from oil-water mixture (1:10)*

Sample	Ca ²⁺ : Lauric acid (mole ratio)	Wt. of water recovered (g)	Oil absorption efficiency (%)
C-2	1: 0.001	17	85
C-4	1:0.0075	19	95
C-6	1:0.05	19.7	98.5

*Total volume of oil-water mixture was 20ml. 2g CaCO₃ samples were added in each case.