

Supplementary Materials

Thermogravimetric analysis of moisture in natural and thermally-treated clay materials

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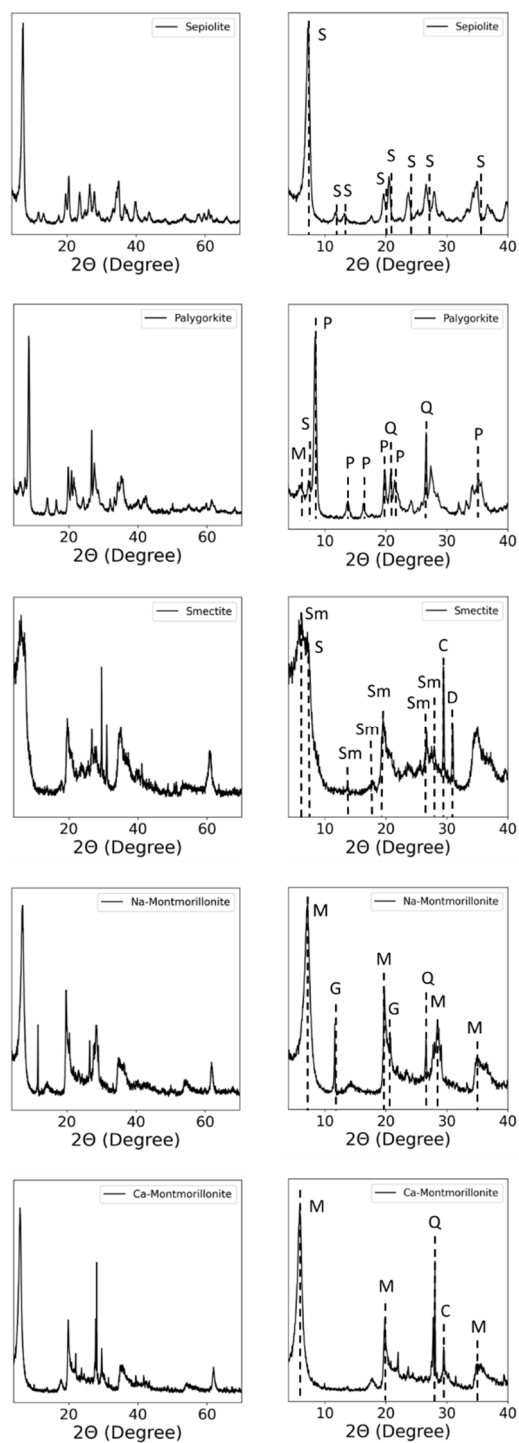


Figure S1. XRD patterns of the studied five samples. The corresponding typical diffraction peaks are highlighted (S=sepiolite, P=palygorkite, Sm=smectite, M=montmorillonite, C=calcite, D=dolomite, Q=quartz).

Table S1. Main crystalline components identified in the XRD patterns.

Sample name	Attapulgite	Sepiolite	Stevensite	Na-montmorillonite	Ca-montmorillonite
Sepiolite (%)	2	98	10	0	0
Smectite (%)	1	0	82	88	90
Palygorskite (%)	78	0	0	0	0
Quartz (%)	3	0	1	1	1
Gypsum (%)	0	0	0	2	0
Calcite (%)	0	0	3	0	1
Dolomite (%)	0	0	2	0	0
Total phyllosilicate (%)	81	98	92	88	90

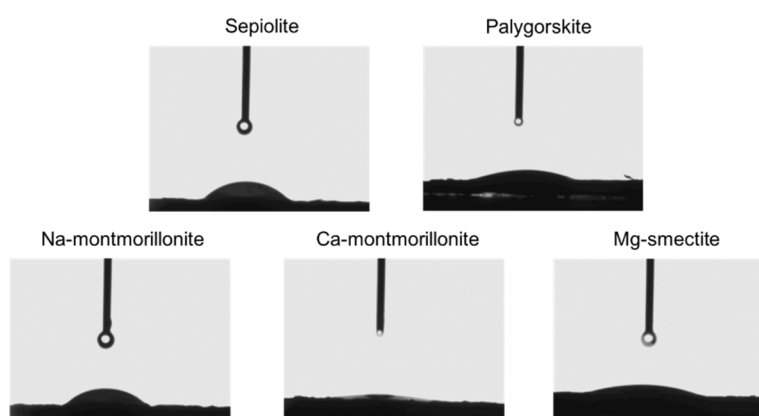


Figure S2. Images of the water droplets just after their deposition on the surface of the five clay samples.

Table S2. β -carotene1 adsorption results for the untreated 5 class of minerals.

Clay minerals	β -carotene ads (%) ^a
Na-Montmorillonite	30
Ca-Montmorillonite	33
Palygorskite	24
Stevensite	35
Sepiolite	29

^a The amount is expressed as % of the adsorbed molecule with respect to the total starting amount (see Method section for details).