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Control the Morphology of Calcium Sulfate Hemihydrate Using Aluminum Chloride as Habit Modifier

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New Journal of Chemistry

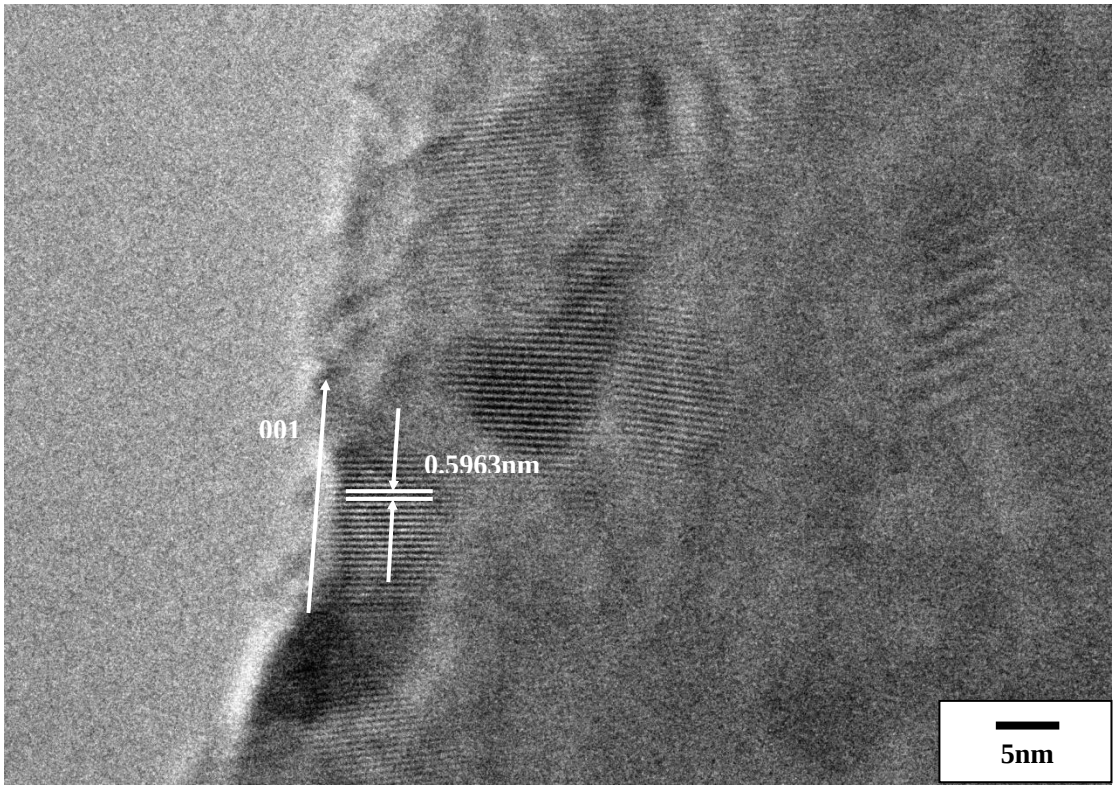
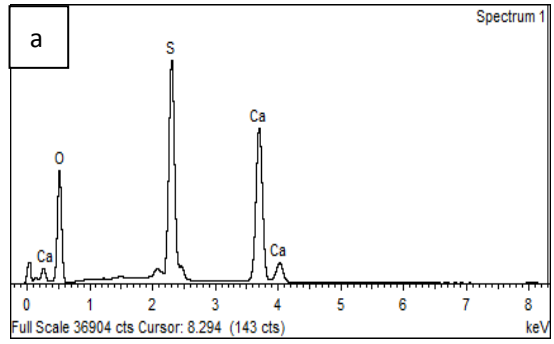
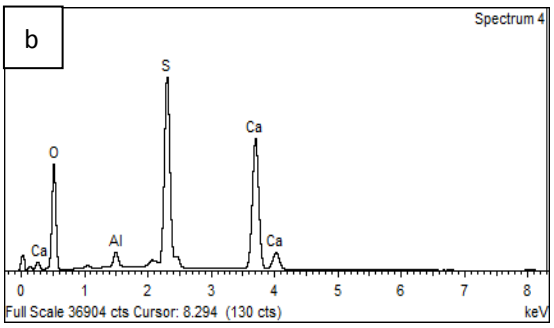


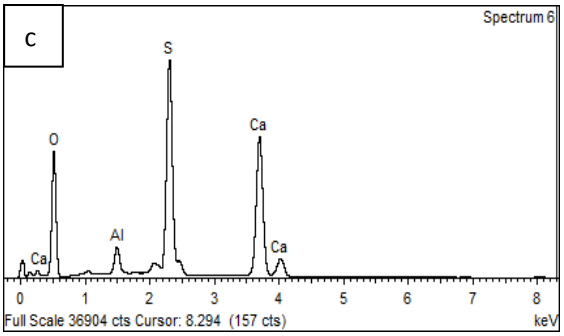
Figure s1 HRTEM images of HH crystal in the presence of 2.5× 10^{-3} mol·L^{-1} $AlCl_3$



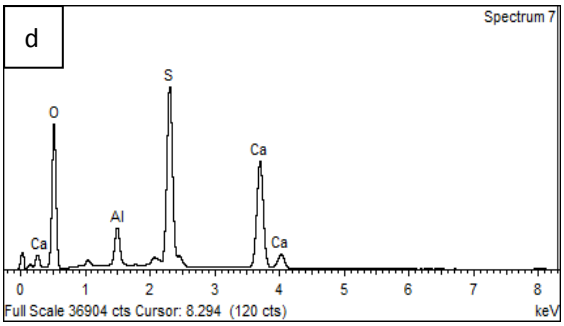
Element	Weight%	Atomic%
O K	53.18	71.82
S K	21.46	14.48
Ca K	25.37	13.69
Totals	100.00	



Element	Weight%	Atomic%
O K	53.17	71.63
Al K	1.28	1.02
S K	21.19	14.24
Ca K	24.36	13.10
Totals	100.00	



Element	Weight%	Atomic%
O K	54.09	72.21
Al K	2.03	1.61
S K	21.02	14.00
Ca K	22.86	12.18
Totals	100.00	



Element	Weight%	Atomic%
O K	58.48	75.35
Al K	3.22	2.46
S K	19.32	12.42
Ca K	18.98	9.76
Totals	100.00	

Figure s2 EDS patterns of HH crystal in the presence of $AlCl_3$ ($mol \cdot L^{-1}$): (a) 0, (b) 2.5×10^{-3}, (c) 2.5×10^{-2} , (d) 7.5×10^{-2}.

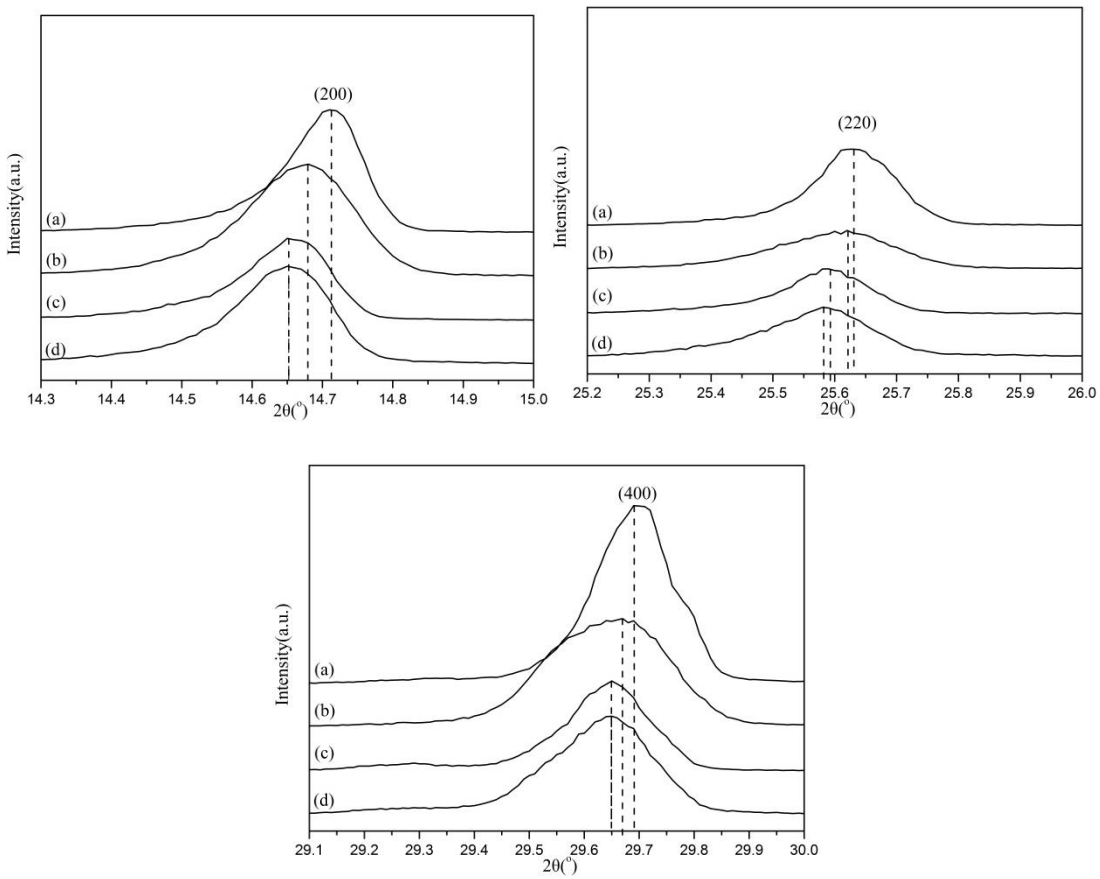


Figure s3 The peak shift of XRD patterns of HH crystals in the present of $AlCl_3$: (a) 0, (b) 2.5×10^{-3} $mol \cdot L^{-1}$, (c) 2.5×10^{-2} $mol \cdot L^{-1}$ (d) 7.5×10^{-2} $mol \cdot L^{-1}$

Table s1 Influence of Al3+ concentration on the plane distance of hydrothermal product

concentration of Al^{3+}（mol/L）	（hlk）	（200）	（220）	（400）
0	2θ, (°)	14.710	25.630	29.690
	d, (Å)	6.0169	3.4728	3.0065
0.0025	2θ, (°)	14.680	25.620	29.670
	d, (Å)	6.0283	3.4742	3.0085
0.025	2θ, (°)	14.651	25.590	29.650
	d, (Å)	6.0413	3.4781	3.0105
0.075	2θ, (°)	14.650	25.580	29.650
	d, (Å)	6.0415	3.4794	3.0105