

## **Supporting Information**

# **Sodium Cation-mediated Crystallization of $\alpha$ -Hemihydrate Whiskers from Gypsum in Ethylene Glycol-Water Solutions**

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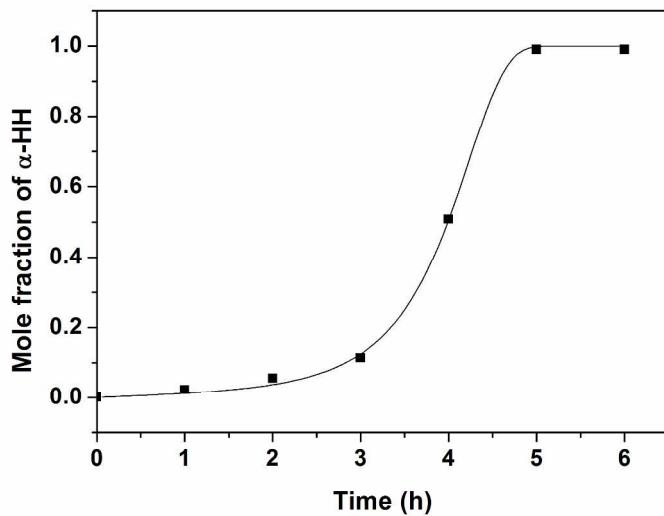
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**Figure S1.** Transformation kinetics of DH to  $\alpha$ -HH whiskers in a 40.0 vol% EG-water solution at 95.0 °C without  $\text{Na}^+$ .

**Table S1.** Water activity ( $a_w$ ) influenced by EG volume fractions at 95.0 °C.

Volume fraction (vol%)	22.5%	25.0%	30.0%	35.0%	40.0%
$a_w$	0.91	0.90	0.87	0.85	0.83

**Table S2.** Water activity ( $a_w$ ) influenced by  $\text{Na}^+$  in 25.0 vol% EG solutions 95.0 °C.

**Table S3.** X-ray diffraction angles ( $2\theta$ ) and interplanar spacing (d) calculated by the Bragg equation of hkl (0 2 1) and hkl (0 4 0) faces of different DHs.

	hkl (0 2 1)		hkl (0 4 0)	
	$2\theta$ (°)	d (nm)	$2\theta$ (°)	d (nm)
D1	20.702	4.2870	23.361	3.8048
D2	20.719	4.2835	23.378	3.8020
D3	20.790	4.2691	23.449	3.7906

**Table S4.** X-ray diffraction angles ( $2\theta$ ) and interplanar spacing (d) calculated by the Bragg equation of hkl (0 2 1) and hkl (0 4 0) faces of different  $\alpha$ -HHs.

	hkl (0 2 1)		hkl (0 4 0)	
	$2\theta$ (°)	d (nm)	$2\theta$ (°)	d (nm)
Control	25.760	3.4556	29.819	2.9937
H1, 0.075M	25.760	3.4556	29.819	2.9938
H2, 0.10M	25.981	3.4267	30.059	2.9704
H3, 0.15M	25.941	3.4319	30.000	2.9761
H4, 0.20M	25.900	3.4372	29.960	2.9800