

## Supporting Information

### **Growth and inhibition of monohydrate sodium urate banded spherulites**

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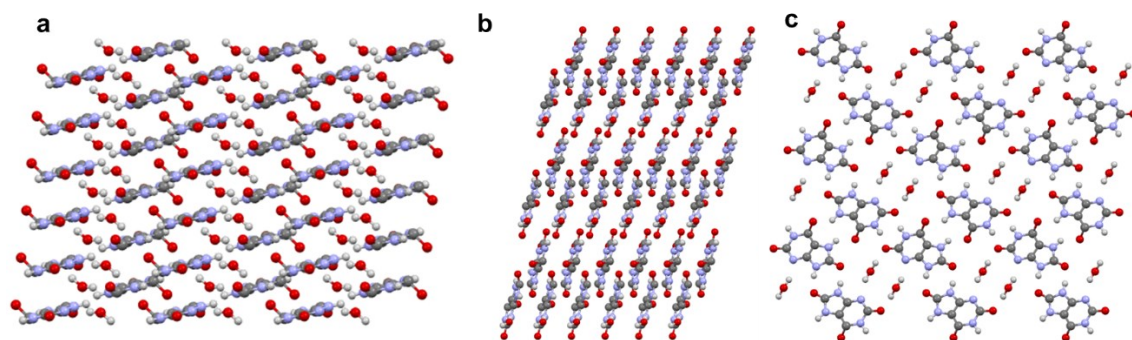
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**Figure S1.** Packing diagram of MSU viewed along *a* axis (a), *b* axis (b), *c* axis (c)

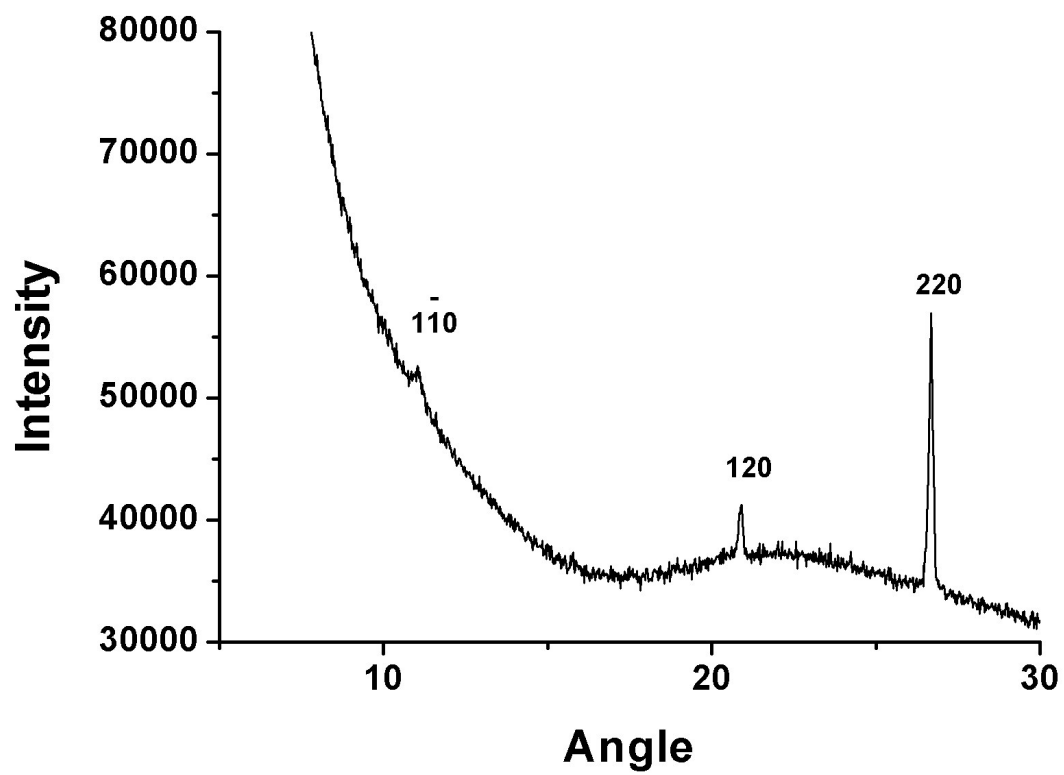


Figure S2. X-ray diffraction pattern of MSU spherulites.

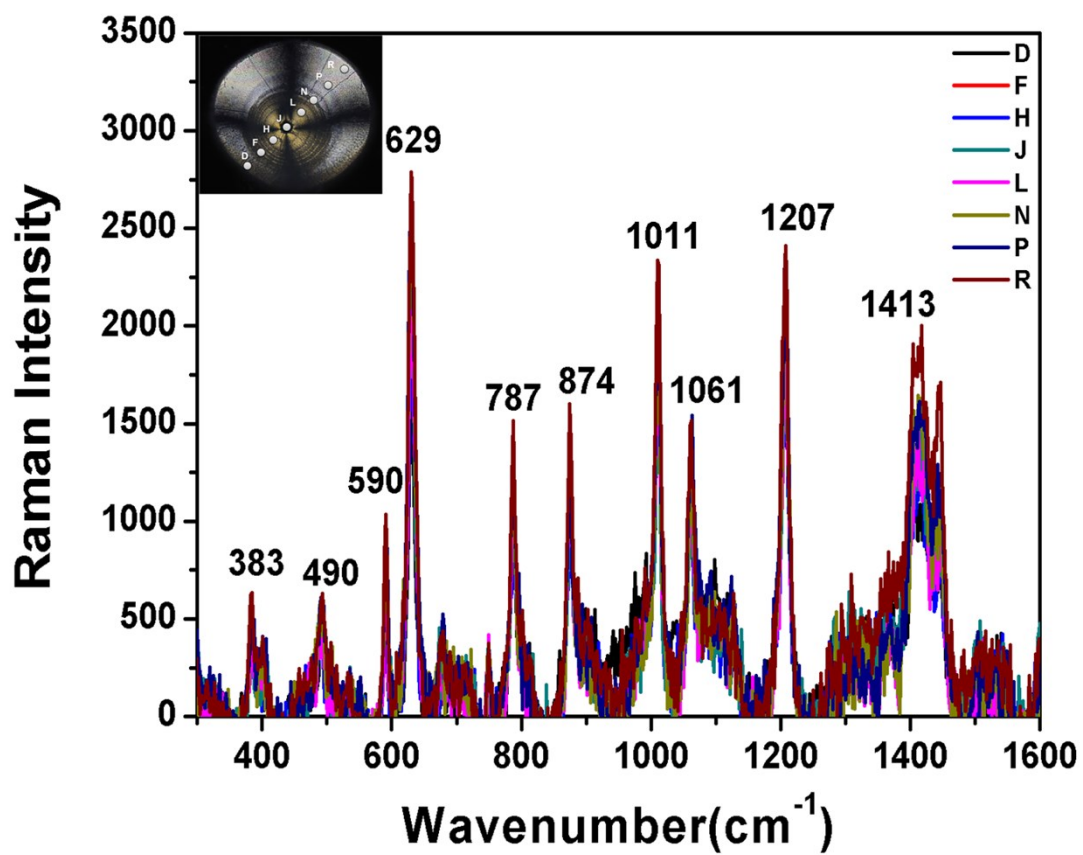
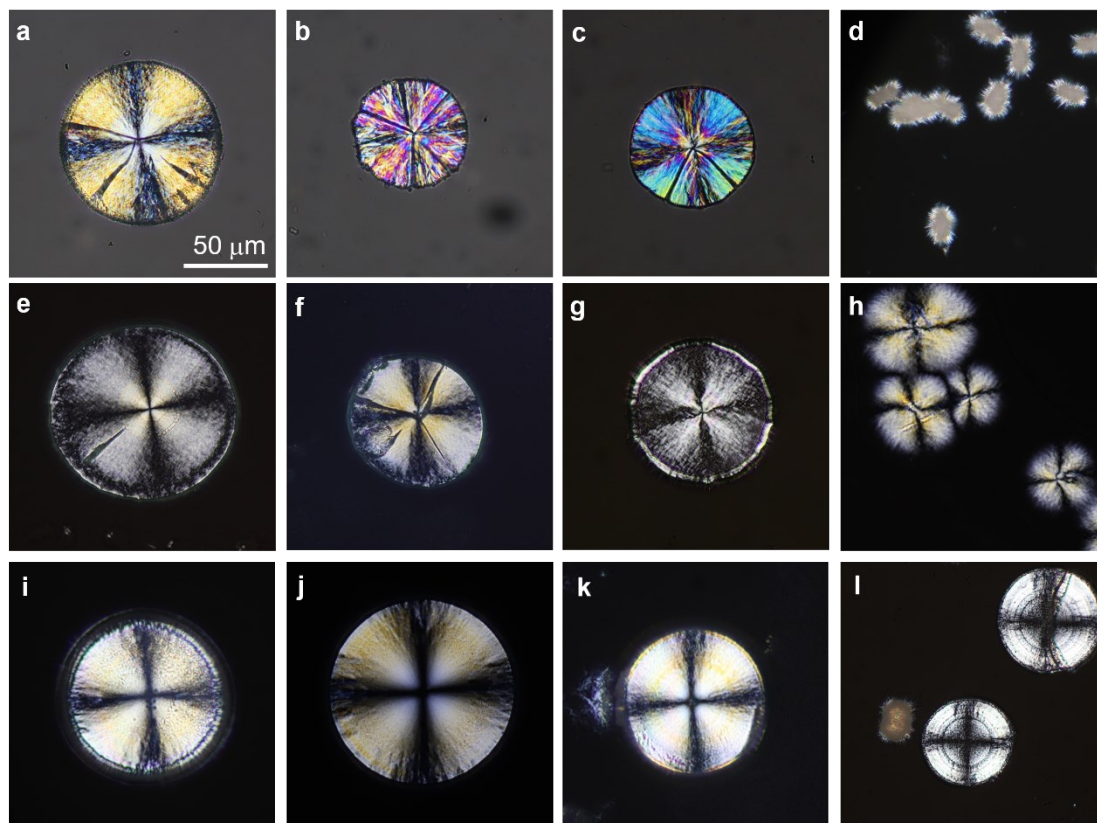
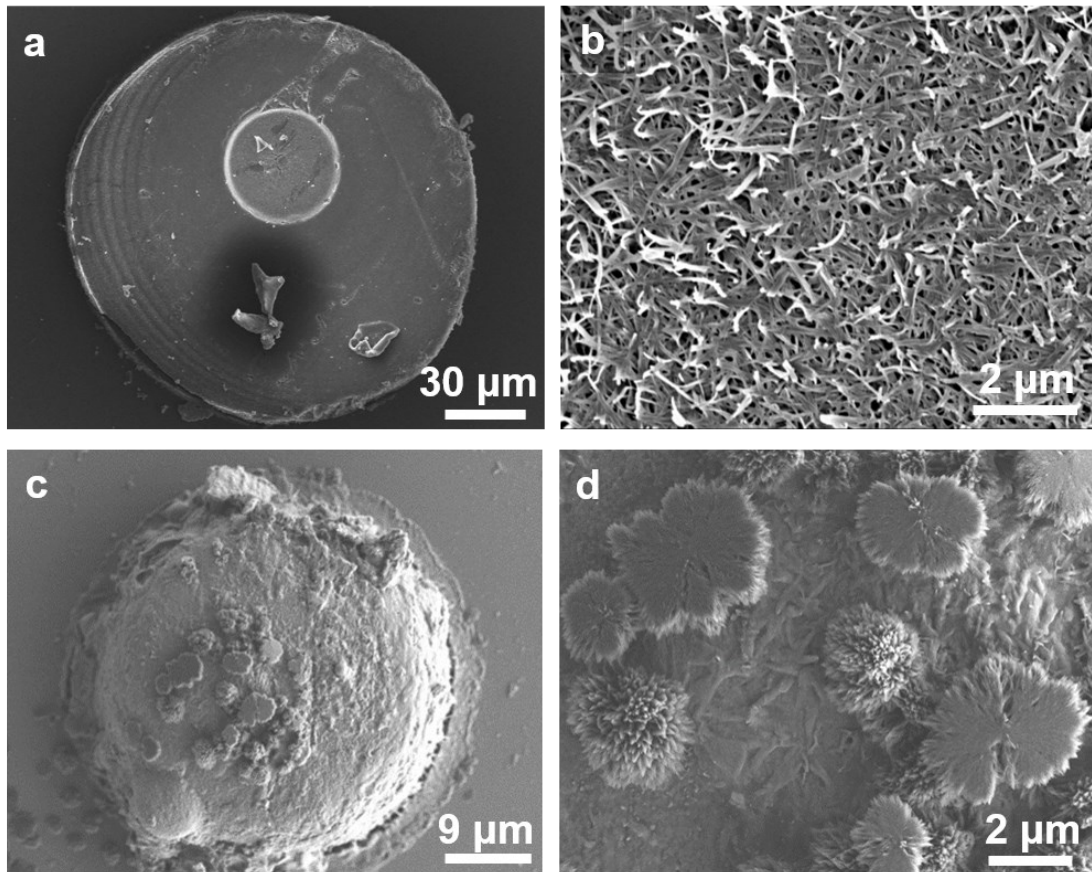


Figure S3. Raman spectra of banded spherulite measured along the radial direction of the insert optical pictures.

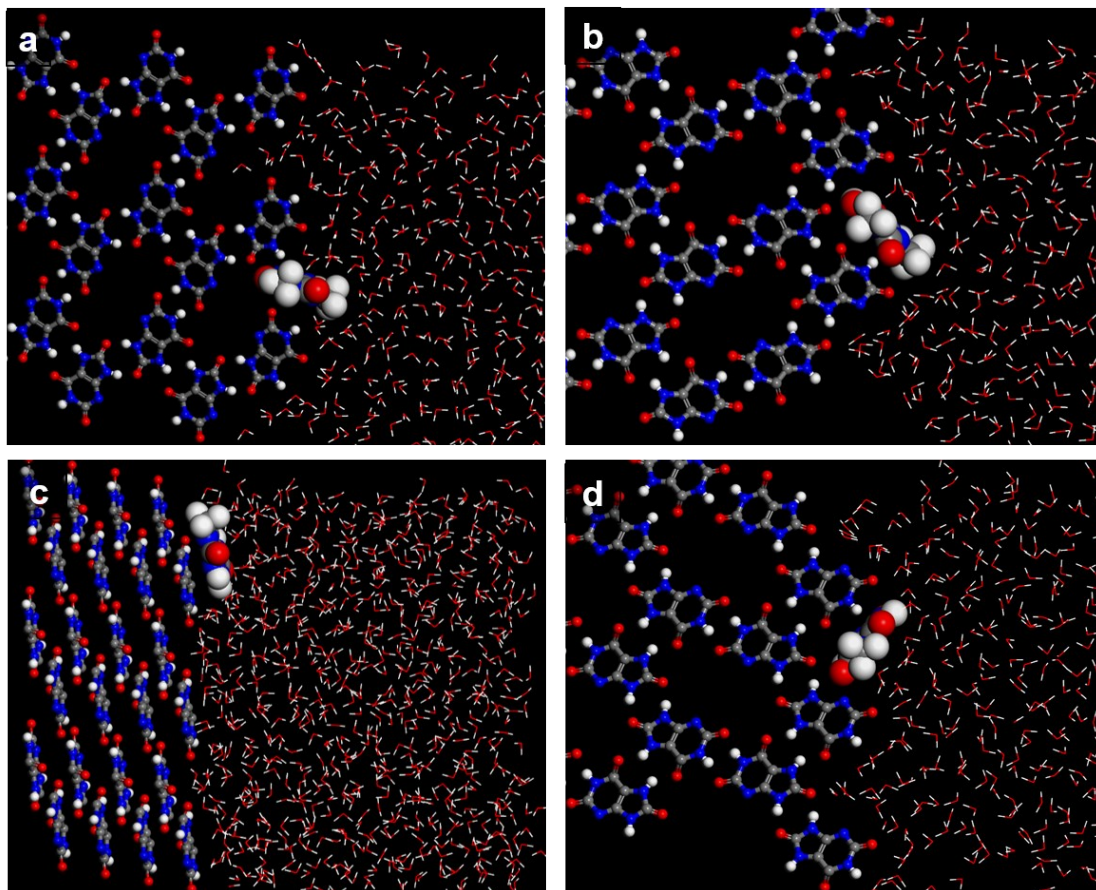


**Figure S4.** The optical images of banded MSU spherulites with DMUA (a-d), MUA (e-h) and xanthine(i-l) of varied concentrations (a, e, i) 1.0 mM, (b, f, j) 3.0 mM, (c, g, k) 5.0 mM and (d, h, l) 7.0 mM, respectively.



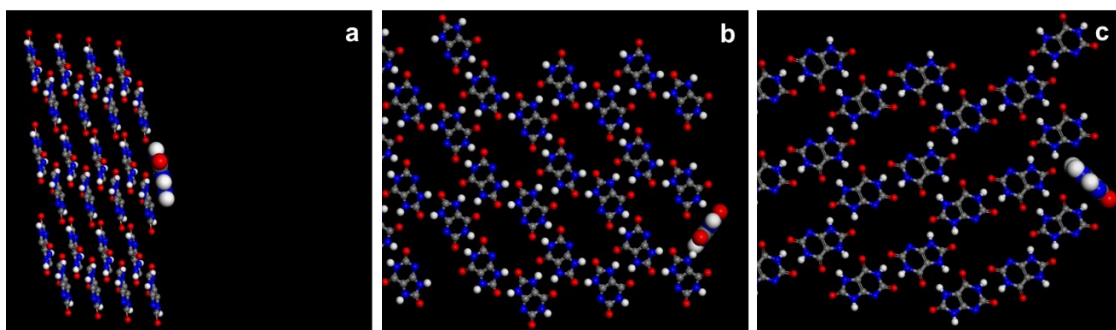
**Figure S5.** SEM images of MSU spherulites without tailor-made additives (a, b), with xanthine level at 3.0 mM (c, d).





**Figure S6.** Configurations of the DMUA (a, b) adsorbed onto (010), (100) faces, MUA (c, d) adsorbed onto (001), (100) faces of MSU crystal (in ball-and-stick presentation) in the existence of solvent (H<sub>2</sub>O, in line presentation).





**Figure S7.** Configurations of xanthine when absorbed onto the (001), (010), (100) facets of MSU crystal (in ball-and-stick presentation).

**Table S1. Adsorption Energies to the flat (100), (010) and (001) MSU faces in the existence of solvent**

Surfaces Adsorbates	Absolutes (kcal/mol)		
	(100)	(010)	(001)
DMUA	-36.5	-24.7	-47.2
MUA	-31.9	-19.5	-26.6