

## **Supporting information**

### **Arginine-rich peptides as crystallization-inhibitor for sodium urate**

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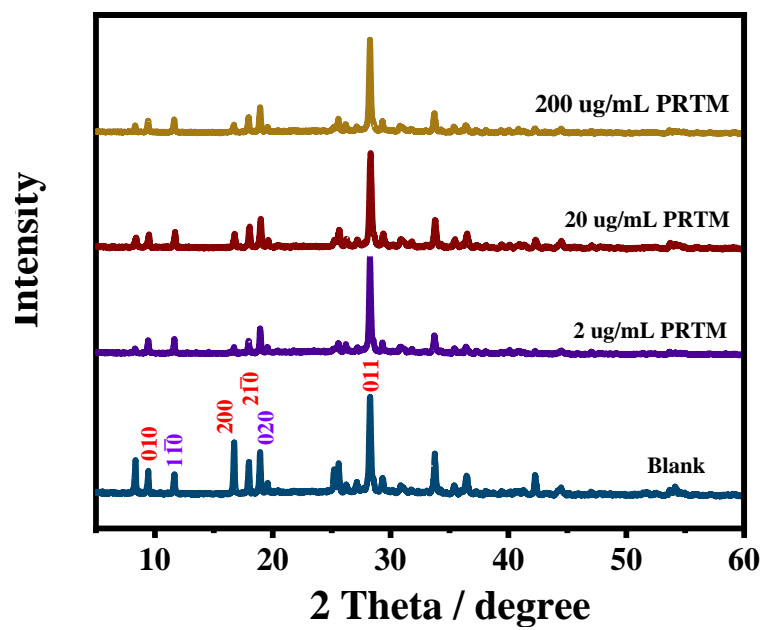


Fig. S1. XRD patterns of urate crystals obtained in the presence of PRTM with different concentrations after crystallization for 24 h . [Uric acid] = 8 mM, [NaCl] = 150 mM, pH 7.4, 37 °C.

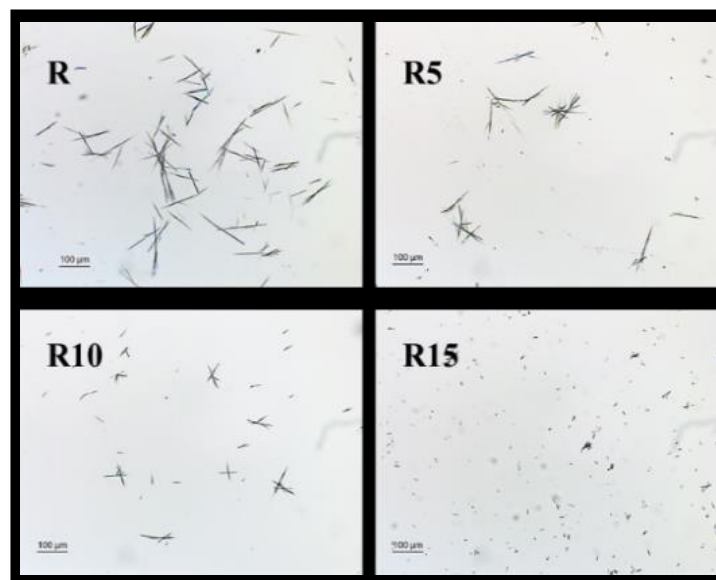


Fig. S2. The optical micrograph of urate crystal obtained in the presence of Arg and peptides after crystallization for 24 h. [Uric acid] = 8 mM, [NaCl] = 150 mM, pH 7.4, 37 °C.

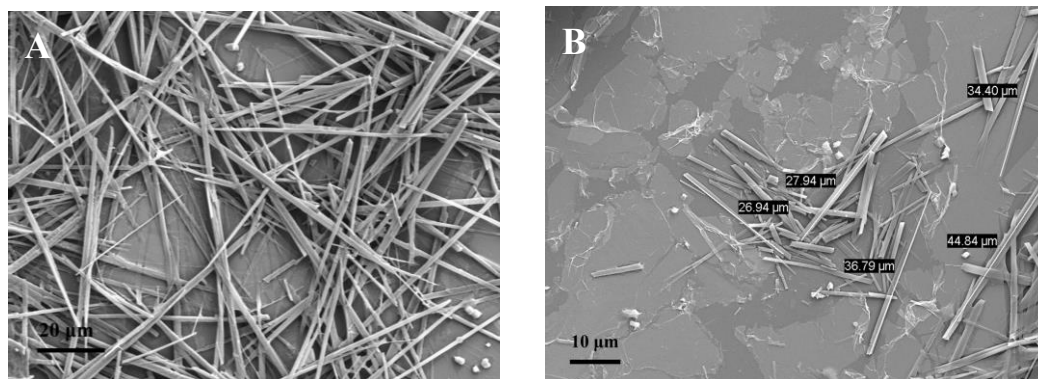


Figure S3. The SEM images of urate crystal obtained in the presence of Arg (A) and R<sub>10</sub> (B) after crystallization for 24 h . [Uric acid] = 8 mM, [NaCl] = 150 mM, pH 7.4, 37 °C.

Table S1. The chemical composition of MSUM samples obtained with and without PRTM for C, N and H.

Sample	C (%)	N (%)	H (%)
MSUM obtained without PRTM	$28.82 \pm 0.01$	$26.94 \pm 0.01$	$2.55 \pm 0.03$
MSUM obtained with PRTM	$28.89 \pm 0.03$	$26.86 \pm 0.00$	$2.66 \pm 0.03$
Theoretical	28.85	26.92	2.40