

Supporting Information

Morphology-controlled synthesis of silica materials templated by self-assembled short amphiphilic peptides

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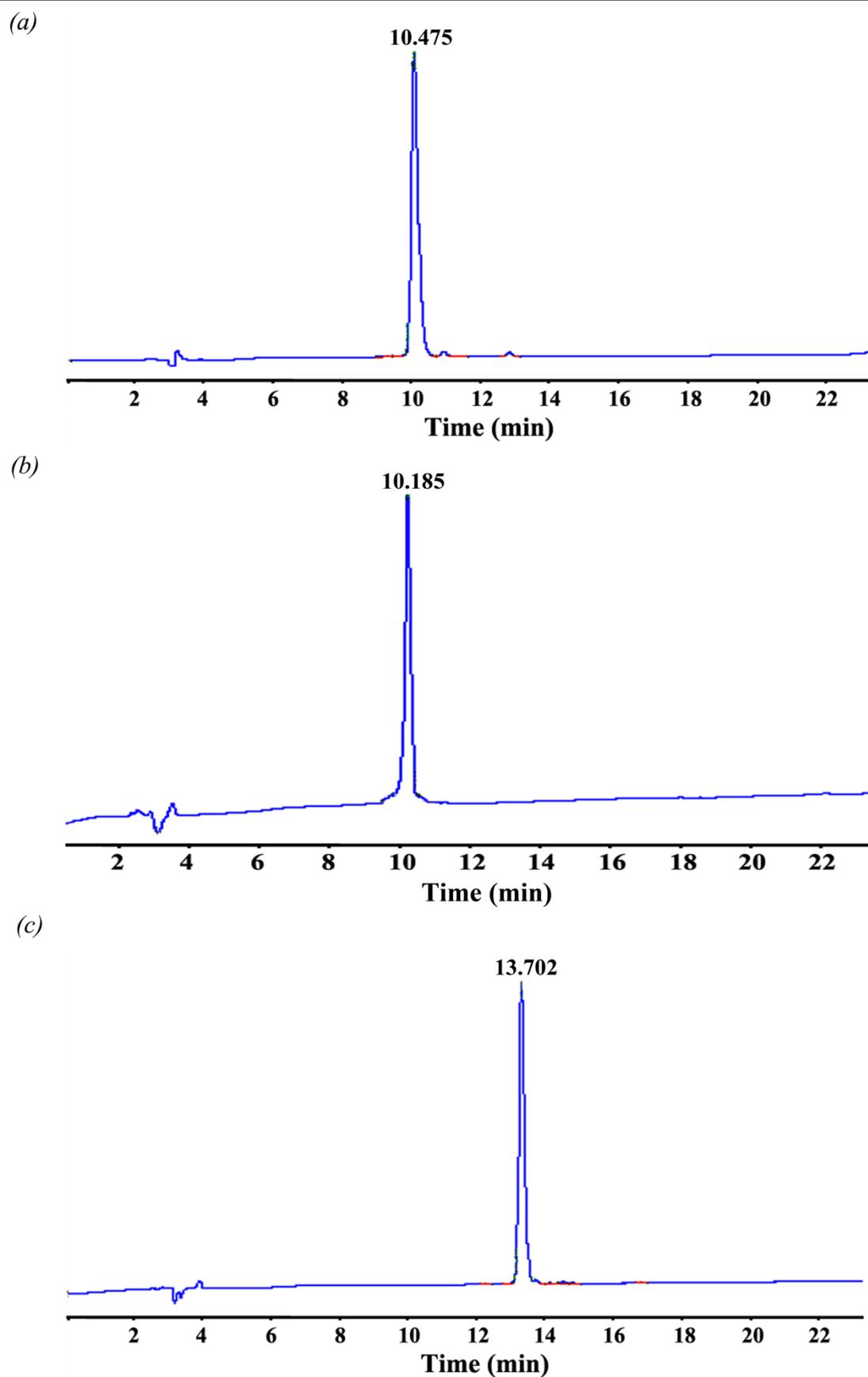


Fig. S1 HPLC spectra of (a) Ac-I₃K-NH₂, (b) Ac-A₃K-NH₂, and (c) Ac-A₉K-NH₂. The conditions for HPLC analysis of the three peptides were as follows: eluent A, 0.1% trifluoroacetic acid in acetonitrile, eluent B, 0.1% trifluoroacetic acid in water, 0→2 min, 95% (A%), 3→22 min, 95→40% (A%); UV detector, 214 nm; flow rate, 1.0 mL/min; column, VYDAC-C18, 4.6 mm × 250 mm.

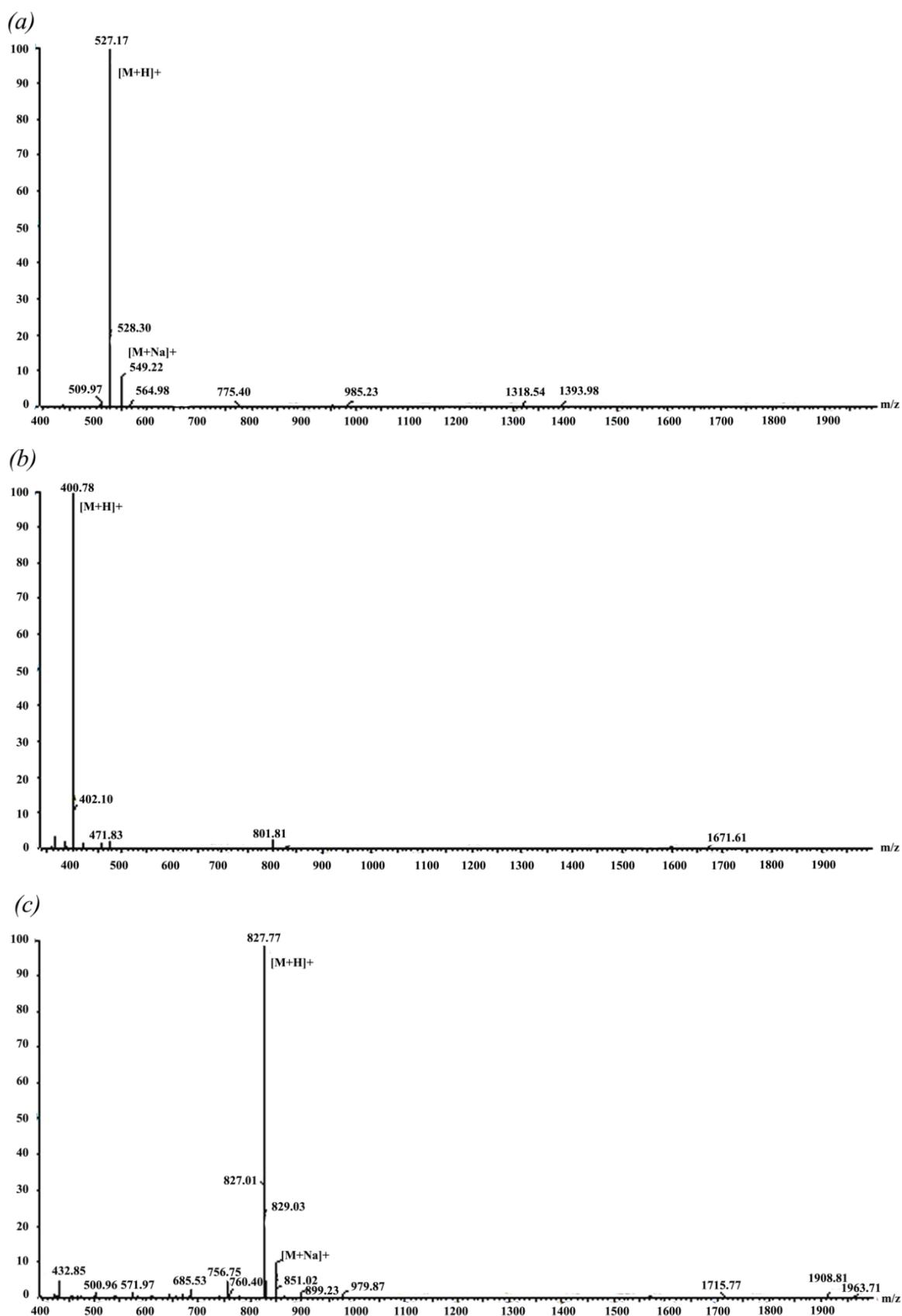


Fig. S2 ESI-MS spectra of (a) Ac-I₃K-NH₂, (b) Ac-A₃K-NH₂, and (c) Ac-A₉K-NH₂. Besides the singly charged molecular ion peaks, no other peak or fragmental ion peak was observed, confirming that the peptide products were of high purity. The measured molecular weights of the three peptides were all consistent with their respective theoretical values.

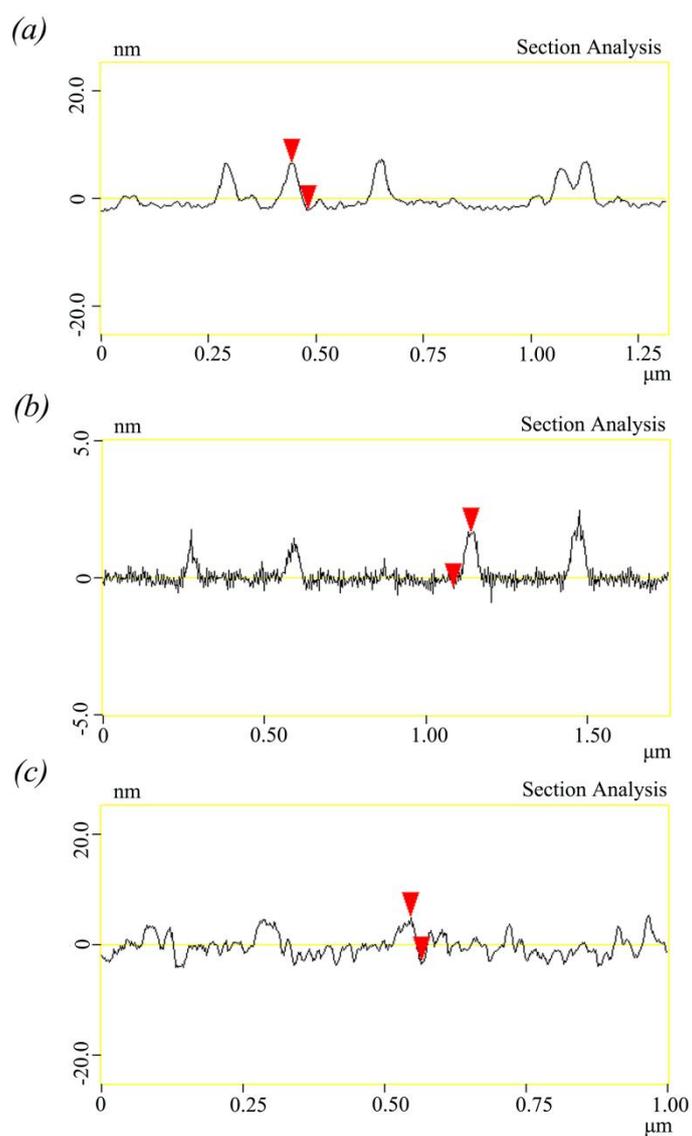


Fig. S3 The typical height section profiles of self-assembled nanostructures obtained using (a) Ac-I₃K-NH₂, (b) Ac-A₃K-NH₂, and (c) Ac-A₉K-NH₂.

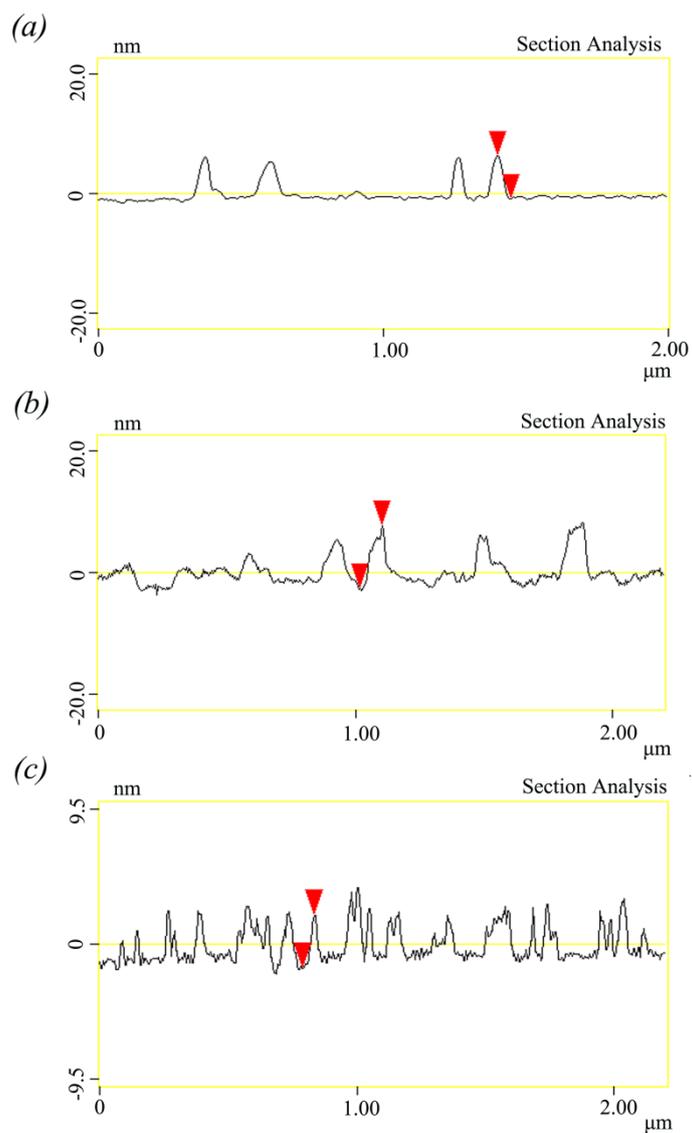


Fig. S4 The typical height section profiles of self-assembled nanostructures obtained using (a) Ac-I₃K-NH₂, (b) Ac-A₃K-NH₂, and (c) Ac-A₉K-NH₂ in the presence of phosphate ions.

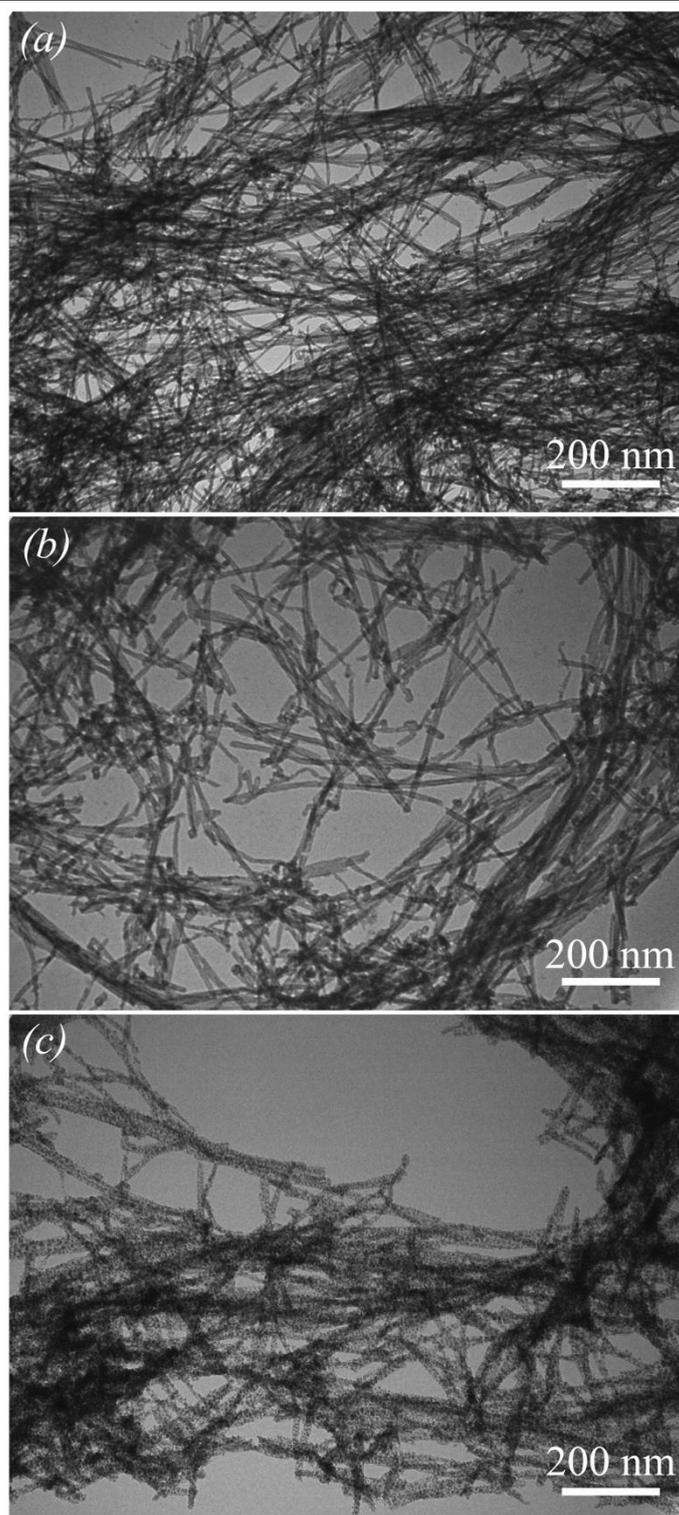


Fig. S5 TEM images of (a) Ac-I₃K-NH₂ self-assemblies in pure water, (b) Ac-I₃K-NH₂ self-assemblies in the presence of phosphate ions, and (c) hybrid biosilica aggregates templated by Ac-I₃K-NH₂ self-assemblies.