

Supporting Information for

Optical Property Modulation of Fmoc Group by pH-Dependent Self-Assembly

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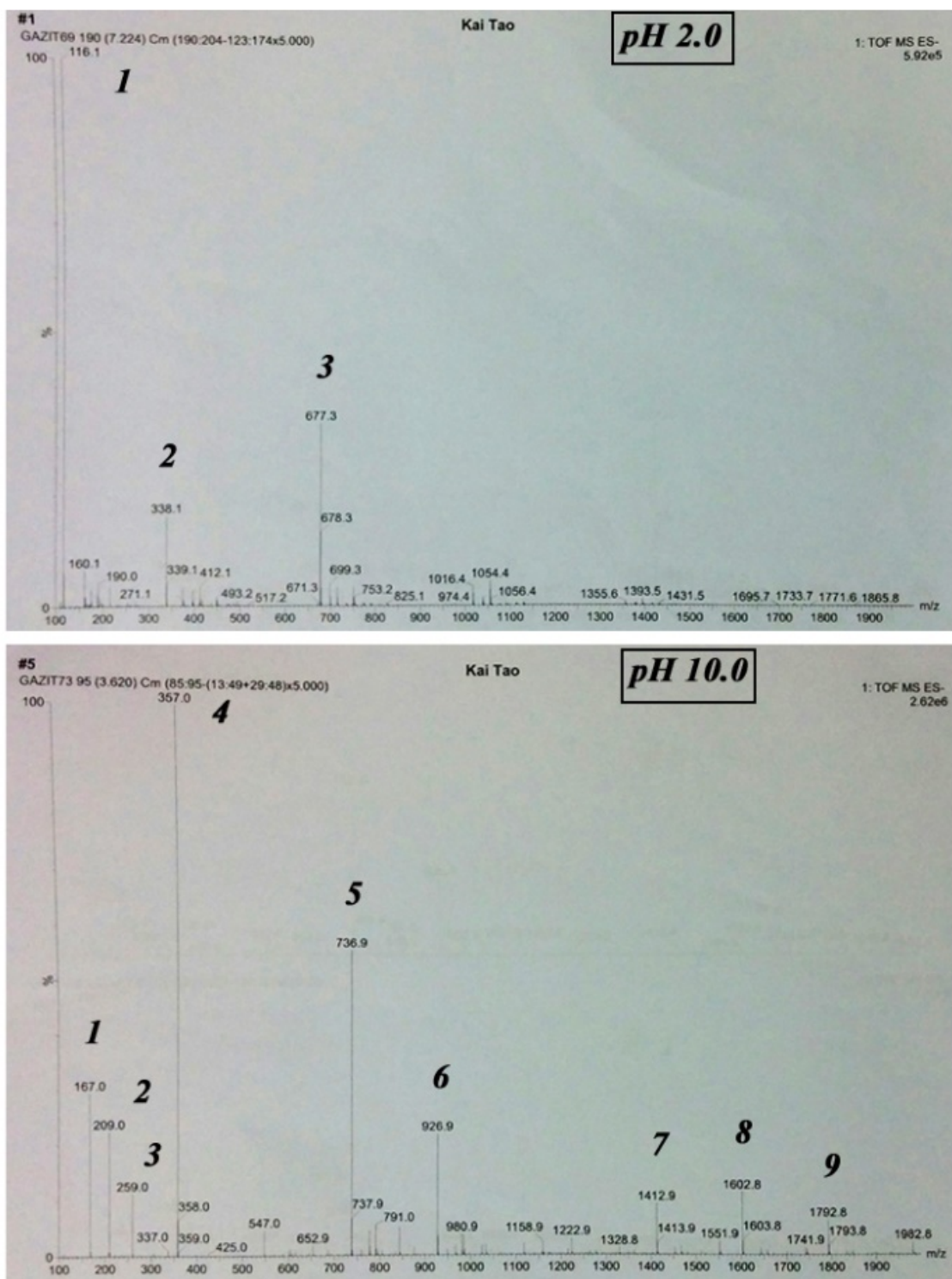


Figure S1. The MS spectra of the samples after 20 days of incubation at pH 2.0 (upper panel) and pH 10.0 (lower panel). Assignments of the peaks labeled with Arabic numerals are listed in

Table S1.

Table S1. The peak assignments for MS spectra in Figure S1

Sample	No.	Assignment	Calculated	Observed
			MW	MW
pH 2.0	1	$[\text{NH}_3^+\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{COOH} + \text{H}]^+$	118.1	116.1
	2	$[\text{tryptophan-CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{COOH} + \text{H}]^+$	340.4	338.1
	3	$[2 \times \text{tryptophan-CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{COOH} + \text{H}]^+$	679.8	677.3
pH 10.0	1	$[\text{tryptophan} + \text{H}]^+$	167.2	167.0
	2	$[\text{tryptophan-CH}_3 + \text{H}]^+$	208.3	209.0
	3	$[\text{tryptophan-CH}_2\text{COOCH}_3 + \text{Na}]^+$	261.3	259.0
	4	$[2 \times \text{tryptophan} + \text{Na}]^+$	354.4	357.0
	5	$[3 \times \text{tryptophan-CH}_2\text{COOCH}_3 + \text{Na}]^+$	739.9	736.9
	6	$[3 \times \text{tryptophan-CH}_2\text{COOCH}_3 + \text{tryptophan-CH}_3 + \text{H}]^+$	926.2	926.9
	7	$[5 \times \text{tryptophan-CH}_2\text{COOCH}_3 + \text{tryptophan-CH}_3 + \text{Na}]^+$	1413.7	1412.9
	8	$[6 \times \text{tryptophan-CH}_2\text{COOCH}_3 + \text{tryptophan} + \text{H}]^+$	1603.0	1602.8
	9	$[6 \times \text{tryptophan-CH}_2\text{COOCH}_3 + 2 \times \text{tryptophan} + \text{Na}]^+$	1790.2	1792.8

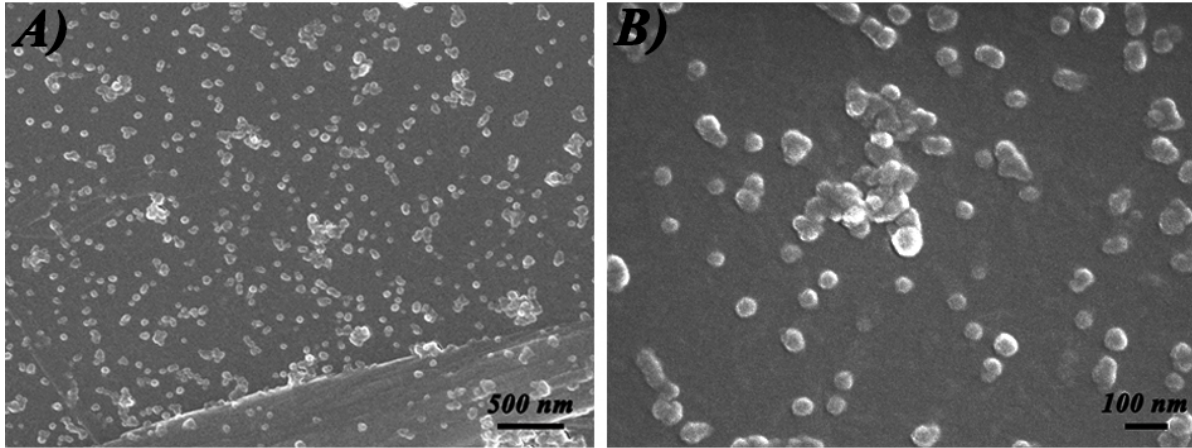


Figure S2. The SEM micrographs showing the individual nanospheres and discrete, smaller nanoclusters of the sample after 7 days of incubation at pH 10.0.

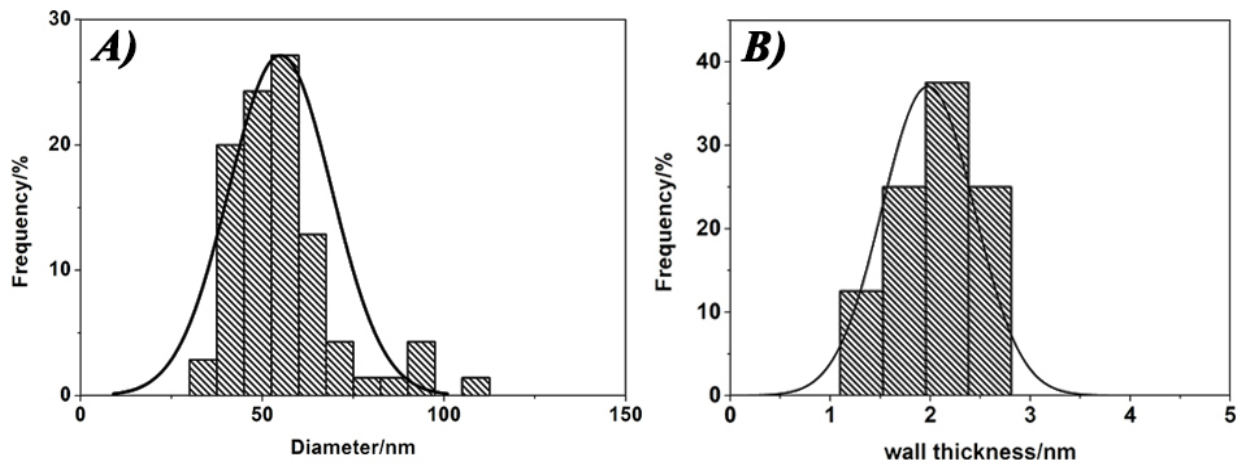


Figure S3. Statistical distribution of the outer diameter (A) and wall thickness (B) of the nanovesicles formed after dissolving Fmoc-5 in HFIP/water (1/20) at pH 10.0 analyzed from TEM micrographs.

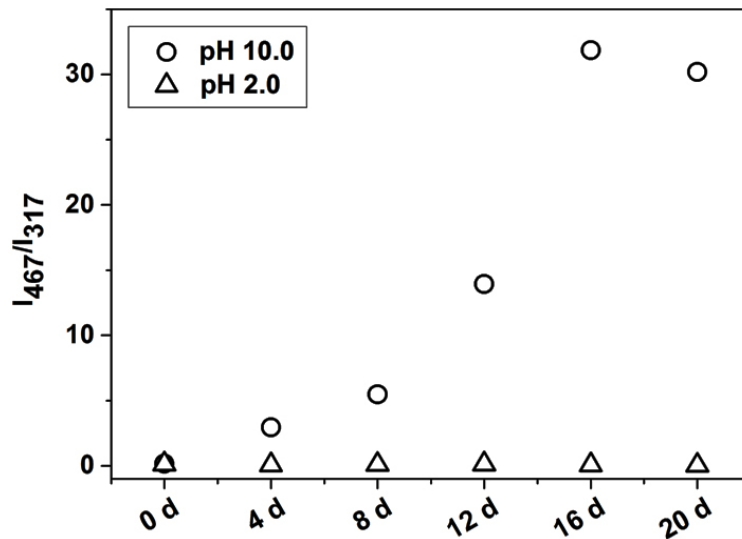


Figure S4. Fluorescent intensity ratio between 467 nm and 317 nm vs. time for the samples at pH 2.0 (triangles) and pH 10.0 (circles).

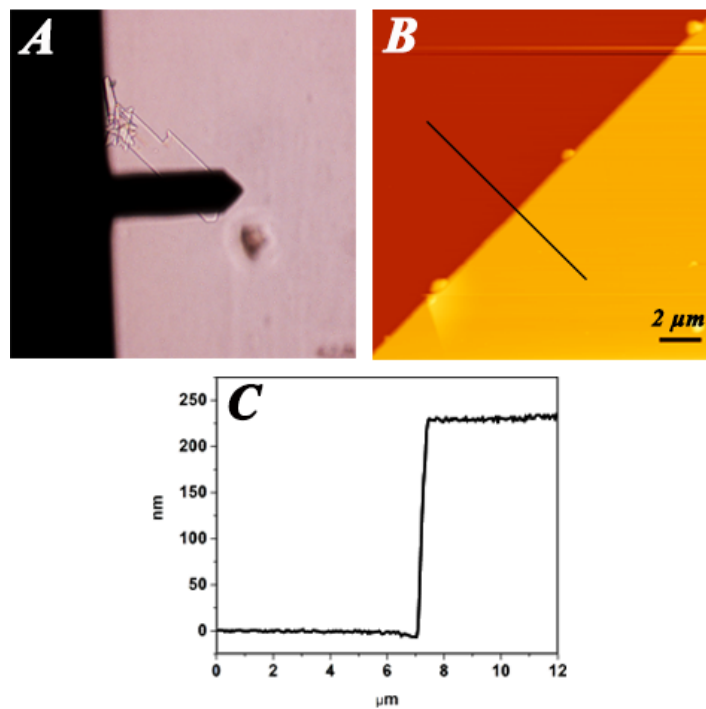


Figure S5. The thickness measurement of plate-like crystals at pH 2.0 after 20 days of incubation. (A) and (B) is the optical and AFM microscopic image of the measured crystal, respectively; (C) is the cross-sectional profile corresponding to the black line in (B).