

Supporting Information

Formation and structural characteristics of thermosensitive multiblock copolymer vesicles

Shiying Ma^{a,b}, Mengying Xiao^a, Rong Wang^{*,a}

^a Department of Polymer Science and Engineering, State Key Laboratory of
Coordination Chemistry, School of Chemistry and Chemical Engineering, Nanjing
National Laboratory of Microstructures, Nanjing University, Nanjing 210093, China

^b College of Chemistry and Chemical Engineering, Taishan University, Taian 271021,
China

Email: wangrong@nju.edu.cn

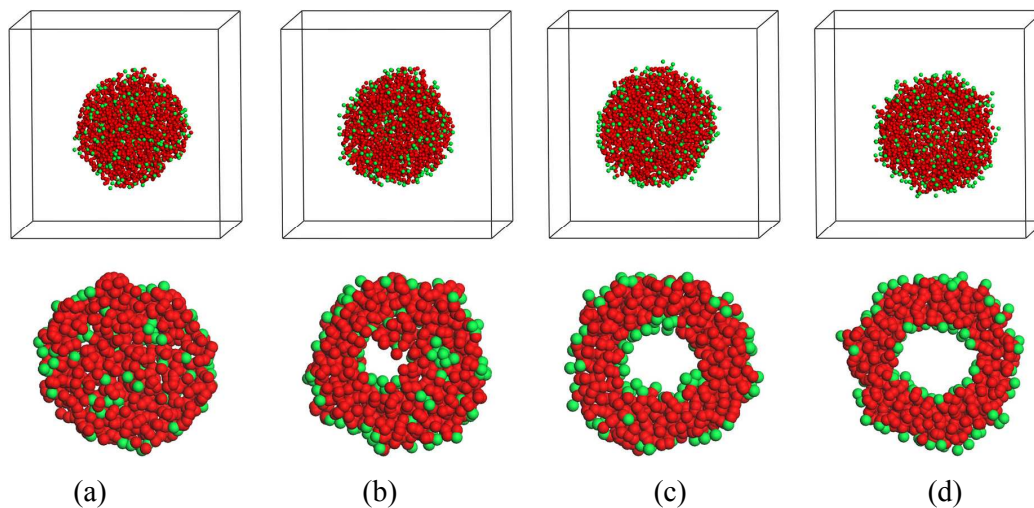


Figure S1 Snapshots showing the aggregates formed by $A_1B_{10}A_1B_{10}A_1$ multiblock copolymers with $a_{BS} = 75$ at $t = 12000\tau$ (a), 18000τ (b), 24000τ (c) and 27000τ (d). Note that the interaction parameter a_{AS} is started with 75 for the first 4×10^5 steps and then decreased to 25 with decreasing

rate $\Delta a_{AS} = -1.0 \times 10^{-4}$ per DPD step, that is, the a_{AS} is 75(a), 55(b), 35(c), and 25(d), respectively.

For a better understanding, the enlarged slices of aggregates are also given. The hydrophilic and hydrophobic beads are marked in green and red, respectively.

Table S1 Summary of the vesicle sizes, cavity sizes and corresponding wall thicknesses with various interaction parameter a_{AS} with fixed $a_{BS} = 75$ at equilibrium states obtained from the multi-block copolymer $A_1B_8A_1B_8A_1$.

a_{AS}	R_{in}	d	R_{out}
15	2.07	3.69	6.45
20	2.03	3.77	6.38
25	1.85	3.82	6.37
30	2.02	3.75	6.34
35	1.87	3.89	6.20
40	1.81	3.89	6.16
45	1.78	4.05	6.16
50	1.65	4.14	6.10
55	1.26	4.54	6.04
60	1.28	4.53	6.06

Table S2 Summary of the vesicle sizes and cavity sizes with different B-block length for multi-block copolymer $(A_1B_nA_1B_nA_1)$ with $a_{AS} = 25$ and $a_{BS} = 75$.

sample	R_{in}	R_{out}
$A_1B_4A_1B_4A_1$	2.32	6.63
$A_1B_6A_1B_6A_1$	2.12	6.45
$A_1B_8A_1B_8A_1$	1.85	6.37
$A_1B_{10}A_1B_{10}A_1$	1.90	6.26
$A_1B_{12}A_1B_{12}A_1$	1.65	6.29
$A_1B_{14}A_1B_{14}A_1$	1.50	6.13

Table S3 Summary of the vesicle sizes and cavity sizes with different A-block length for multi-block copolymer ($A_m B_8 A_m B_8 A_m$) with $a_{AS} = 25$ and $a_{BS} = 75$.

sample	R_{in}	R_{out}
$A_1 B_8 A_1 B_8 A_1$	1.85	6.37
$A_2 B_8 A_2 B_8 A_2$	1.86	6.28
$A_3 B_8 A_3 B_8 A_3$	1.46	6.32
$A_4 B_8 A_4 B_8 A_4$	1.07	6.33