Electronic Supplementary Material (ESI) for Soft Matter.

Supporting Information

Domain Swelling in ARB-Type Triblock Copolymer via Self-Adjusting Effective Dispersity

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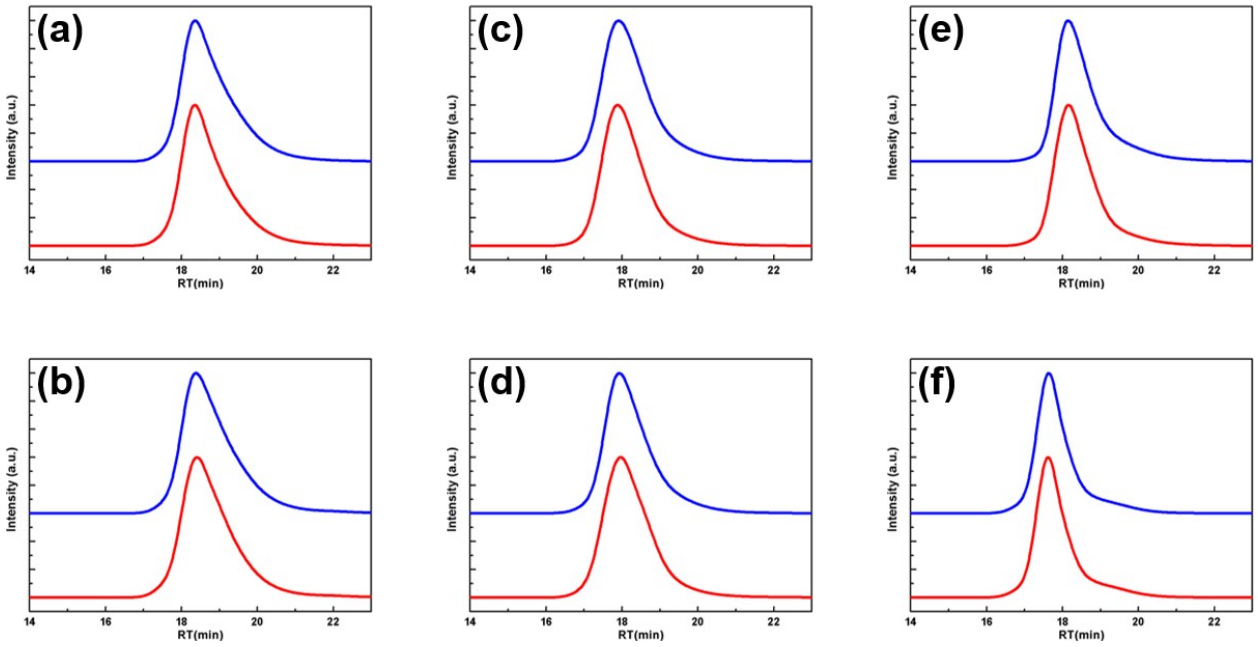

Fig. S1 GPC traces of (a) L-ARB 60-04, (b) L-ARB 60-08, (c) L-ARB 90-04, (d) L-ARB 90-08, (e) C-ARB 80-04, and (f) C-ARB 80-08 before and after annealing. Red and blue lines represent the samples before annealing and blue lines represent the samples after annealing at 200 ^{o}C for two days.

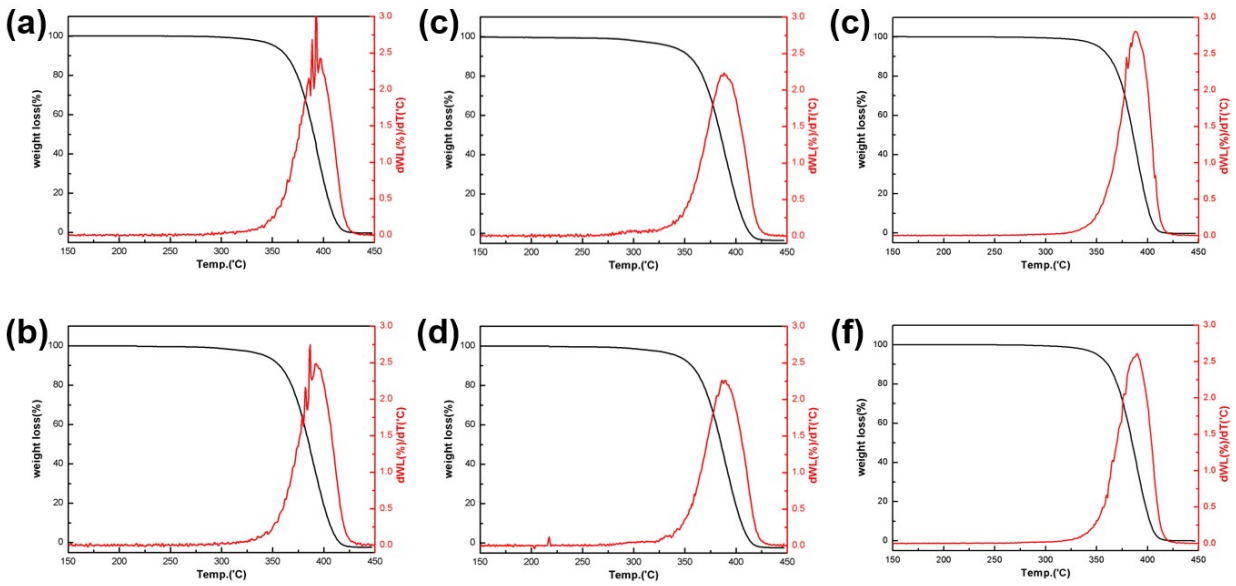

Fig. S2 TGA traces of PS-*b*-PMMA and PS-*b*-P(S-*r*-MMA)-*b*-PMMA; (a) L-ARB 60-04, (b) L-ARB 60-08, (c) L-ARB 90-04, (d) L-ARB 90-08, (e) C-ARB 80-04, and (f) C-ARB 80-08. Black and red lines represent percentages of weight loss and TGA derivative curves as a function of temperature, respectively.

Table S1 Estimated domain spacing of monodisperse PS-*b*-PMMA diBCPs ($Đ$ = 1.05 – 1.09).

	M_n (kg/mol)	$Đ$	Domain Spacing (nm)
Lamellae forming BCP	47	1.07	27.1
	52	1.06	28.3
	66	1.06	38.1
	99	1.12	50.8
	107	1.05	54.9
	124	1.08	58.0
Cylinder forming BCP	82	1.07	39.6

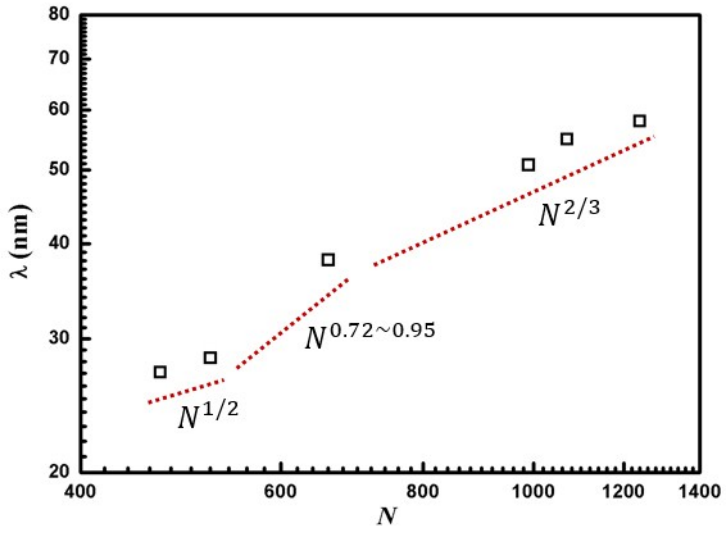

Fig. S3 Domain spacing as a function of molecular weight for monodisperse diBCPs ($Đ$ = 1.05 ~ 1.09). The dashed red lines represent the theoretical scaling relations for weak segregation regime[1], intermediate segregation regime,[2, 3] and strong segregation regime.[4]

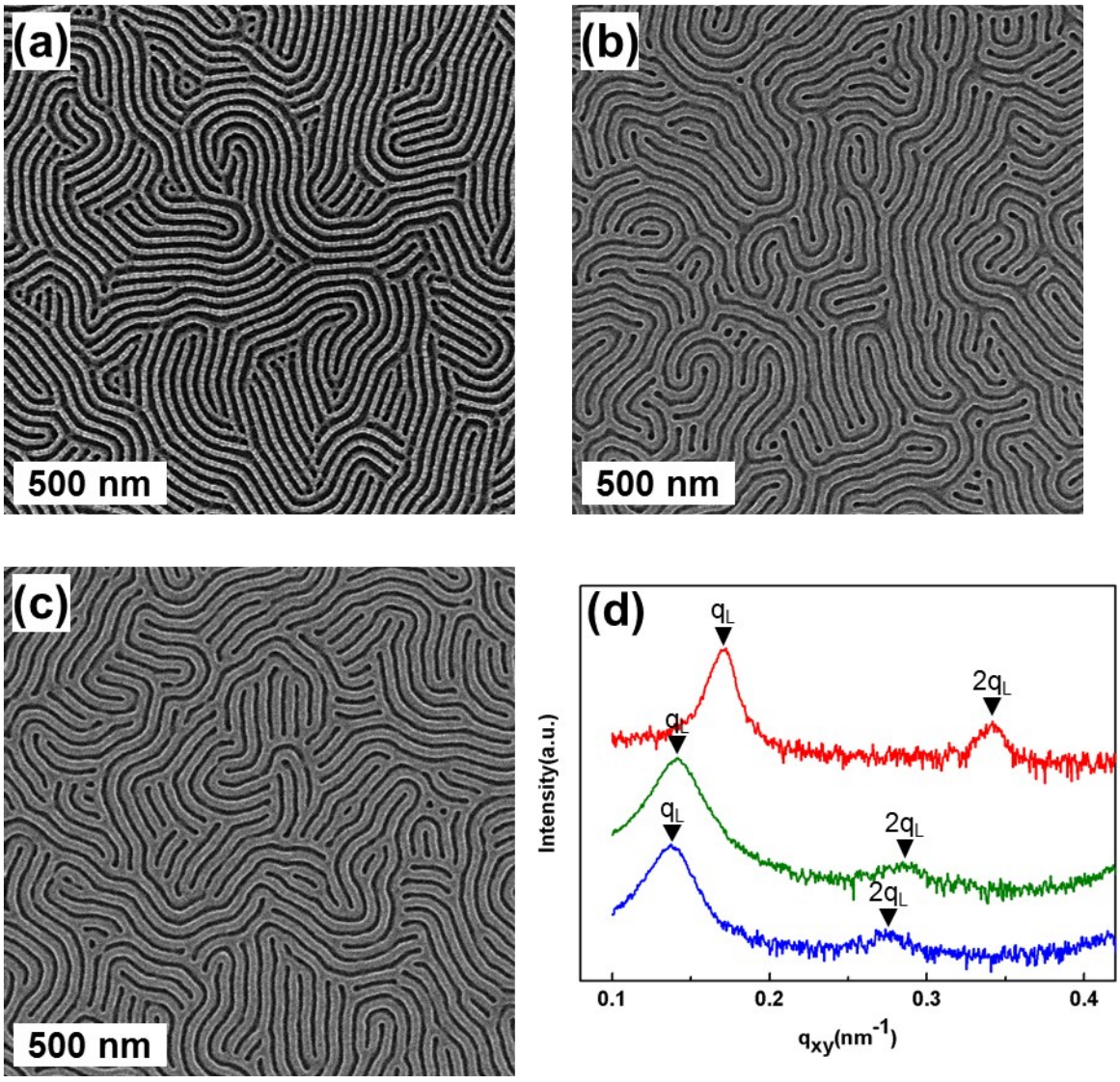

Fig. S4 Top view SEM images of (a) L-AB 60, (b) L-ARB 60-04, and (c) L-ARB 60-08 thin films, and (d) corresponding GI-SAXS profiles of these samples. Red, green, and blue lines represent profiles for L-AB 60, L-ARB 60-04, and L-ARB 60-08, respectively.

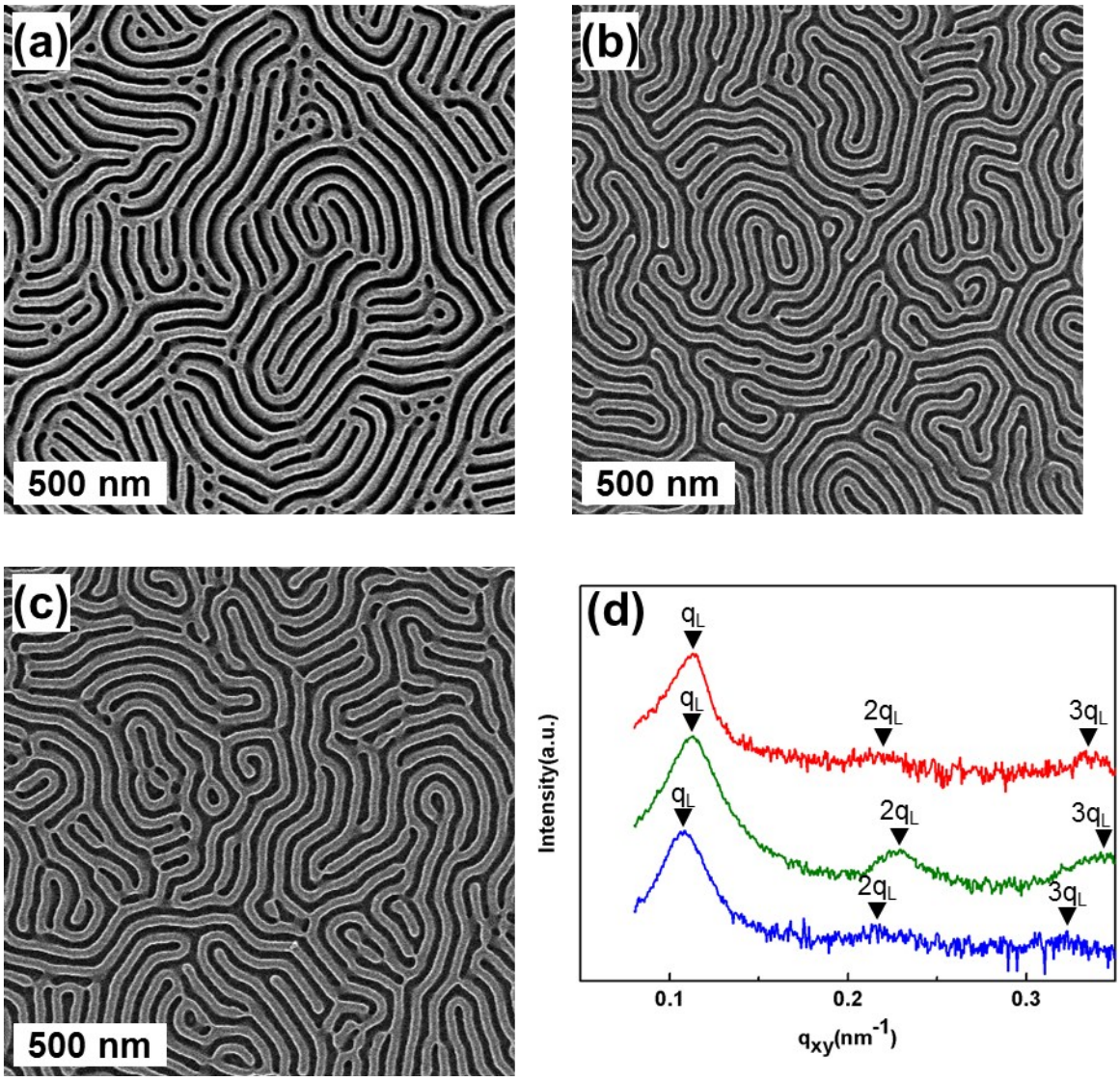

Fig. S5 Top view SEM images of (a) L-AB 90, (b) L-ARB 90-04, and (c) L-ARB 90-08 thin films, and (d) corresponding GI-SAXS profiles of these samples. Red, green, and blue lines represent L-AB 90, L-ARB 90-04, and L-ARB 90-08, respectively.

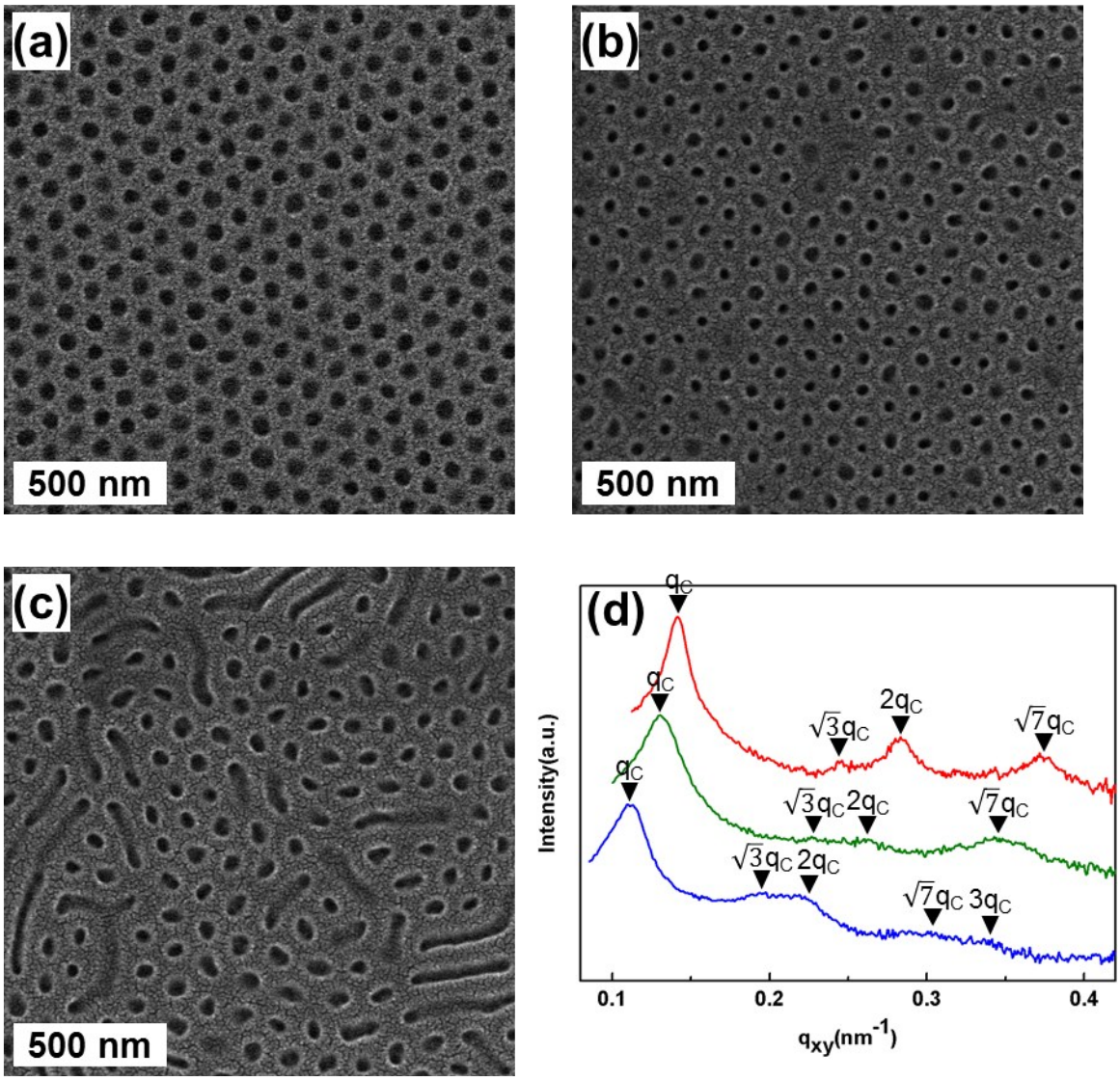

Fig. S6 Top view SEM images of (a) C-AB 80, (b) C-ARB 80-04, (c) C-ARB 80-08 thin films, and (d) corresponding GI-SAXS profiles of these samples. Red, green, and blue lines represent C-AB 80, C-ARB 80-04, and C-ARB 80-08, respectively.

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