

Supplementary information for

Preparation of a series of photoresponsive polymersomes bearing photocleavable a 2-nitrobenzyl group at the hydrophobic/hydro-philic interfaces and their payload releasing behaviors

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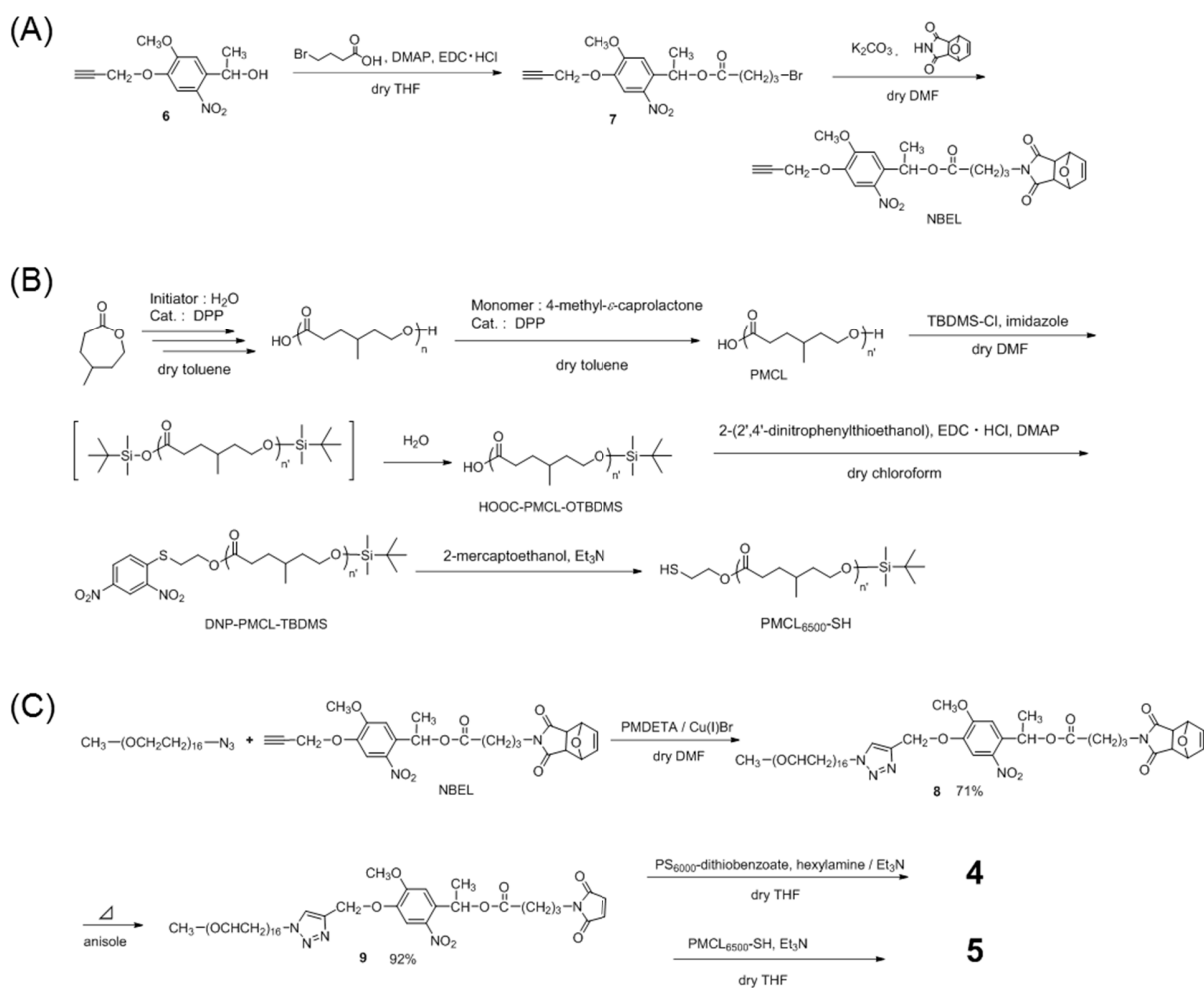


Figure S1. Synthetic routes of (A) NBEL, (B) thiol-terminated PMCL, and (C) photocleavable diblock copolymers **4** and **5**.

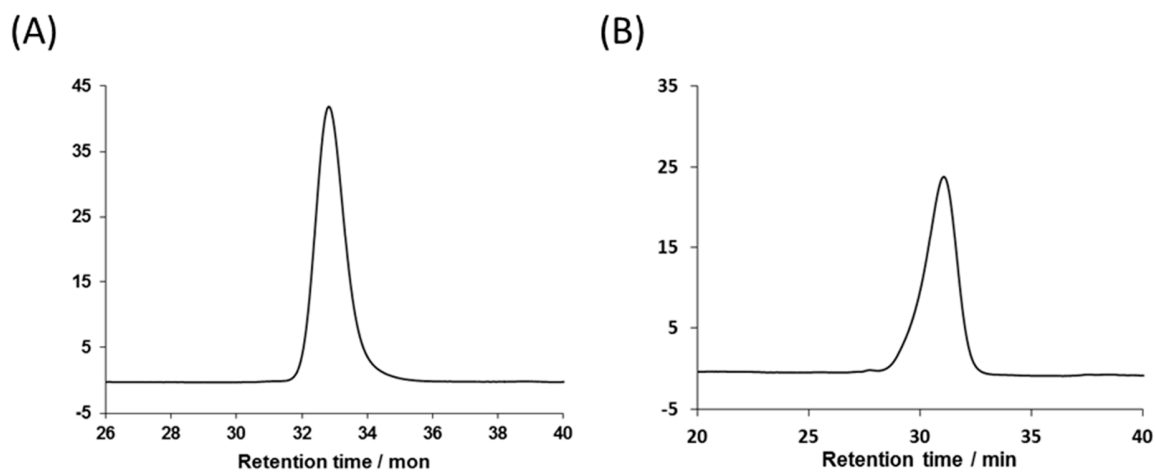


Figure S2. GPC charts of photocleavable diblock copolymer (A) **4** and (B) **5** with RI detection.

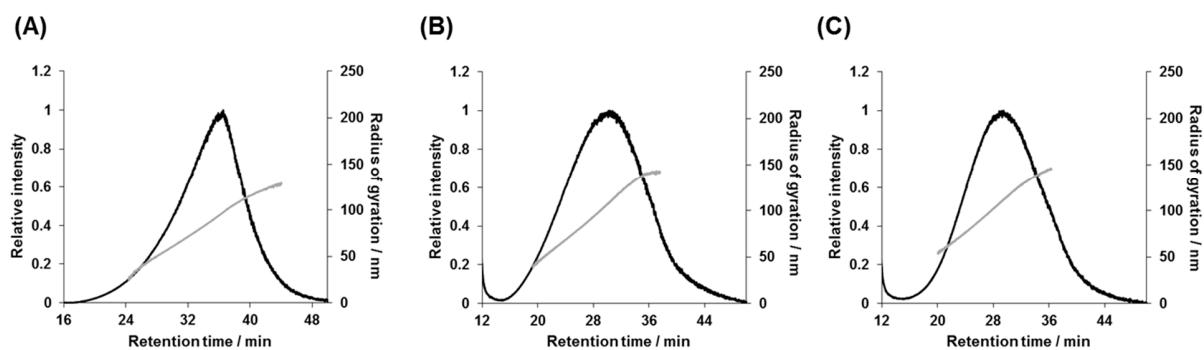


Figure S3. AF4 fractograms of polymersomes (A) **2**, (B) **3**, and (C) **5**.

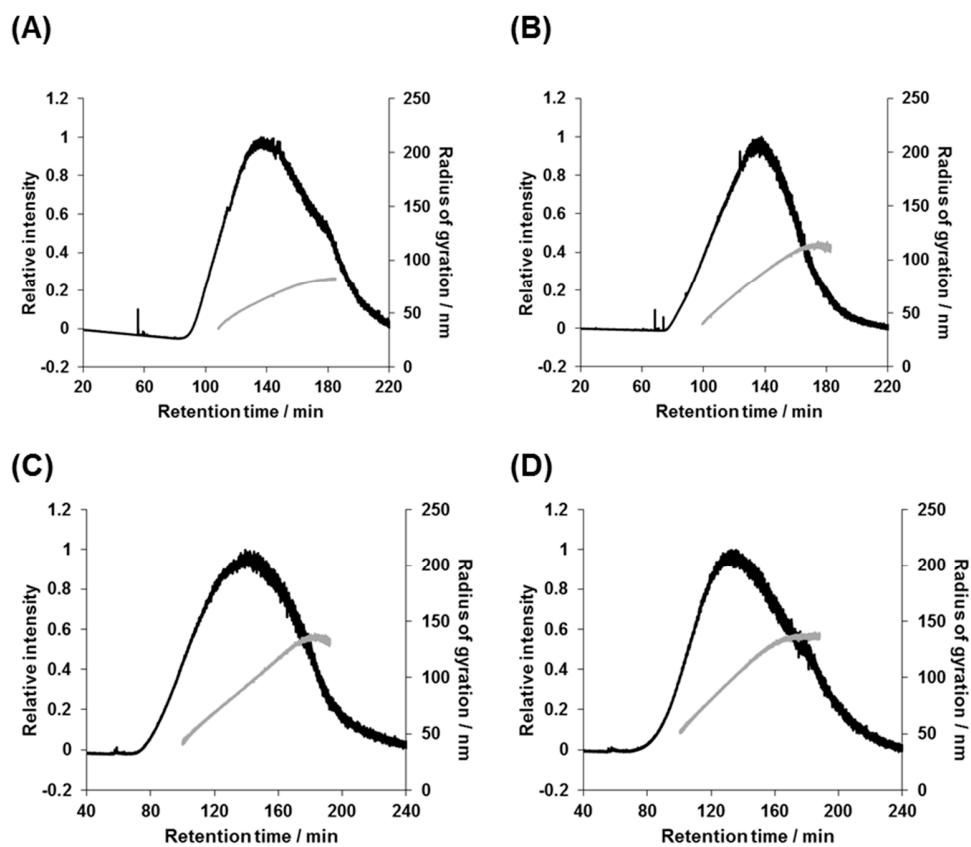


Figure S4. AF4 fractograms of (A) **1b**, (B) **2**, (C) **3**, and (D) **5** at a low flow rate (0.2 mL min^{-1}).

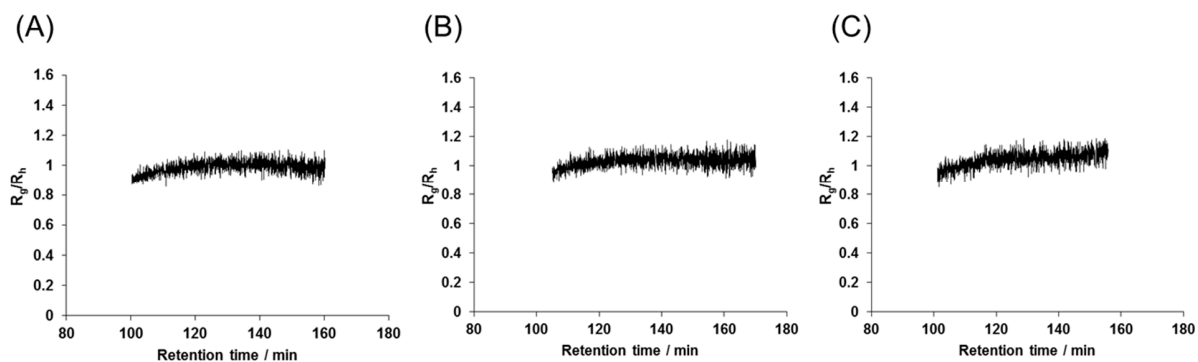


Figure S5. Structural characterization of the as-prepared polymersomes. R_g/R_h plots of (A) **2**, (B) **3**, and (C) **5**.

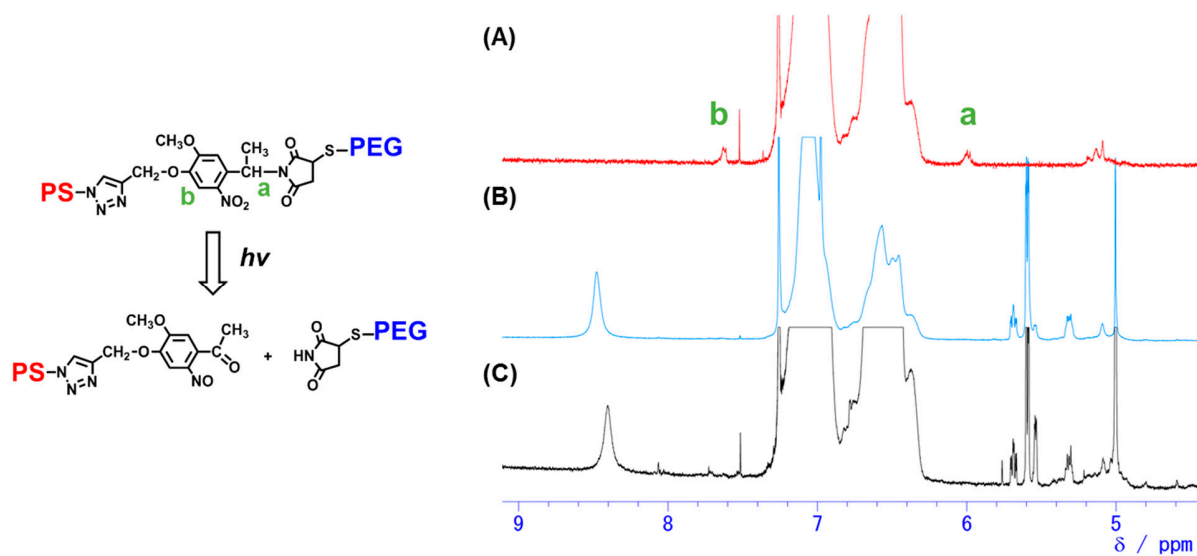


Figure S6. ^1H NMR of **1b** in CDCl_3 (A) before irradiation, and after irradiation for (B) 2 min and (C) 10 min.

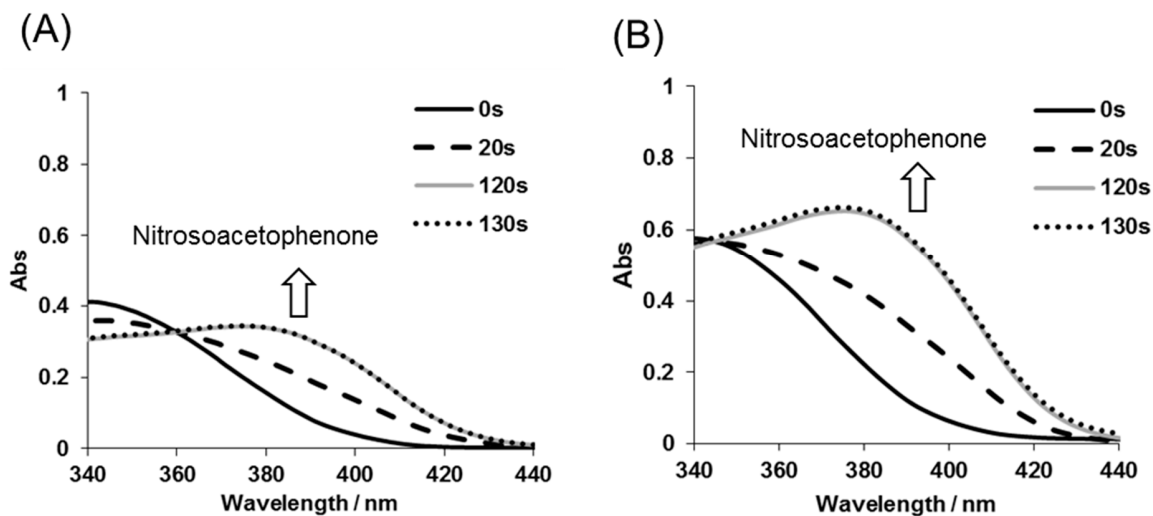


Figure S7. Changes in the UV spectra of photocleavable diblock copolymer (A) **1b** and (B) **4** upon photoirradiation in THF. The polymer solution (0.1 mM) was irradiated with near-UV light ($\lambda > 320$ nm). Photolysis of the 2-nitrobenzyl ester was complete in 120 s, similar to the case of 2-nitrobenzylimide, because there were no further changes in the UV spectrum.

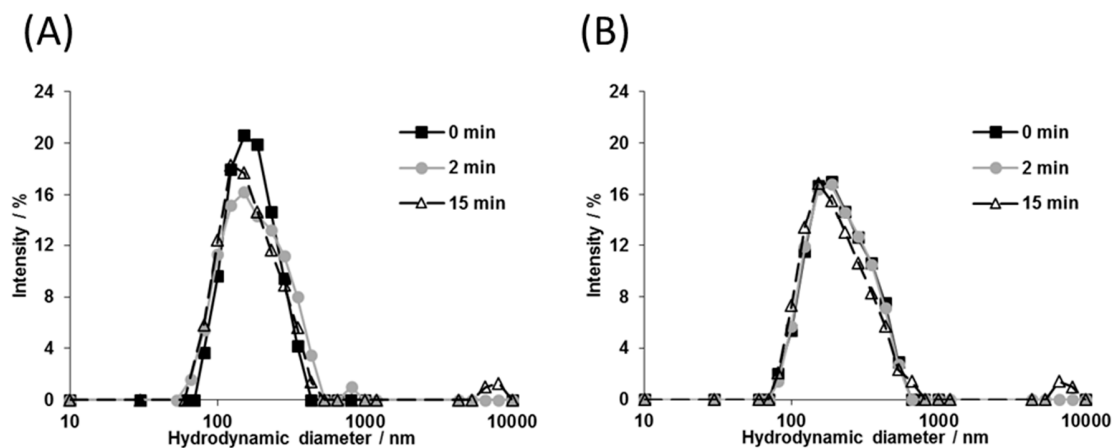


Figure S8. Structural changes of polymersomes in response to photoirradiation. (A-C) DLS results of polymersomes (A) **3** and (B) **4**, irradiated for 0 (■), 2 (gray, ◆), and 15 min (Δ).

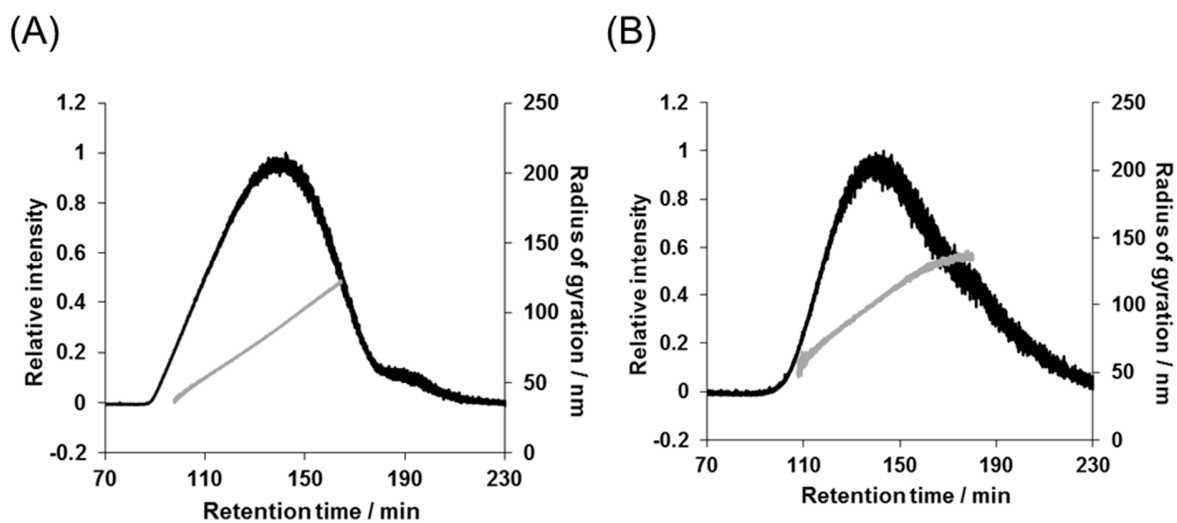


Figure S9. AF4 fractograms of polymersome (A) **3** and (B) **5** after irradiation for 15 min.

Table S1. Results of the payload releasing behaviors of entrapped fluorescein molecules from the polymersomes **1b** (NBIL type) and **4** (NBEL type) in dark without photoirradiation.

	% of fluorescein released	
	1b	4
5 min	1.55	1.29
10 min	1.12	1.69