A Photosensitizer-Loaded DNA Origami Nanosystem for Photodynamic Therapy

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SUPPORTING FIGURES

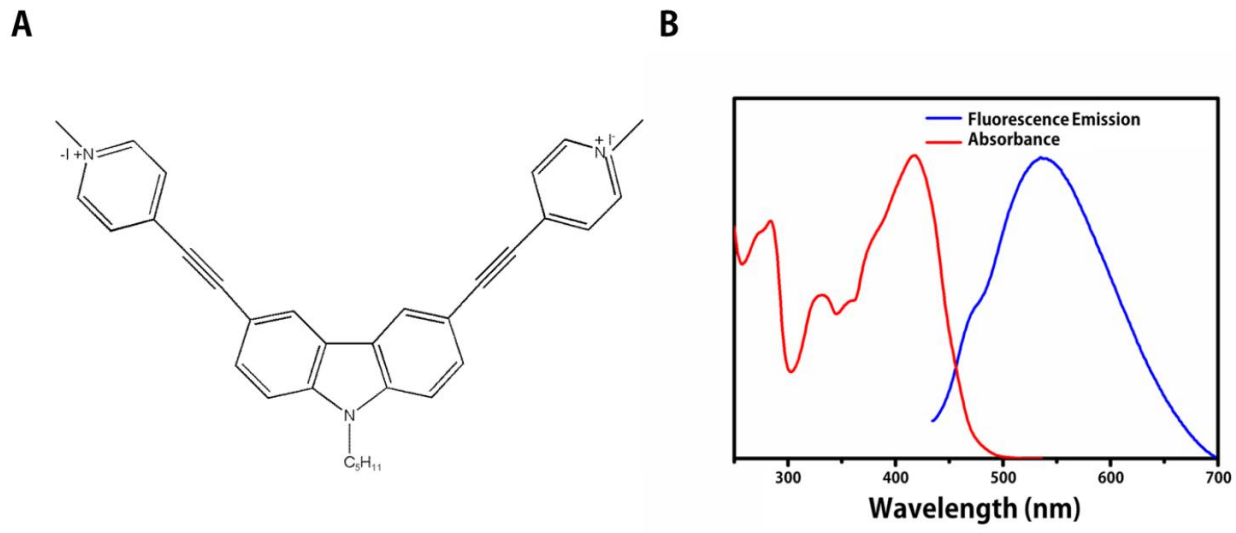

Figure S1. Spectroscopic properties of BMEPC photosensitizer. (A) Chemical structure of BMEPC molecules. (B) Normalized UV-vis absorption and one-photon induced fluorescence emission spectra of BMEPC in ddH_2O.

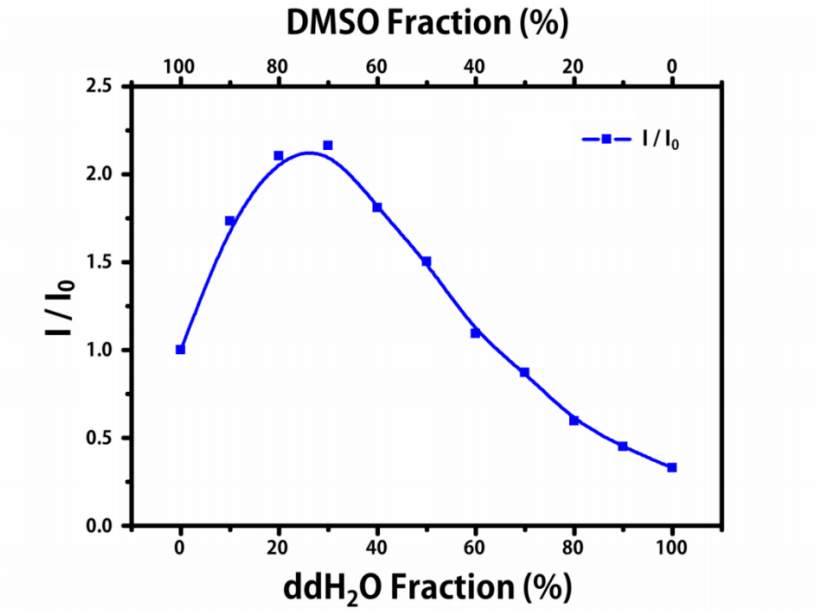

Figure S2. Plot of fluorescence intensity (I) of 20 μM BMEPC in different fractions of DMSO/ddH_2O mixture versus that in pure DMSO (I_0).

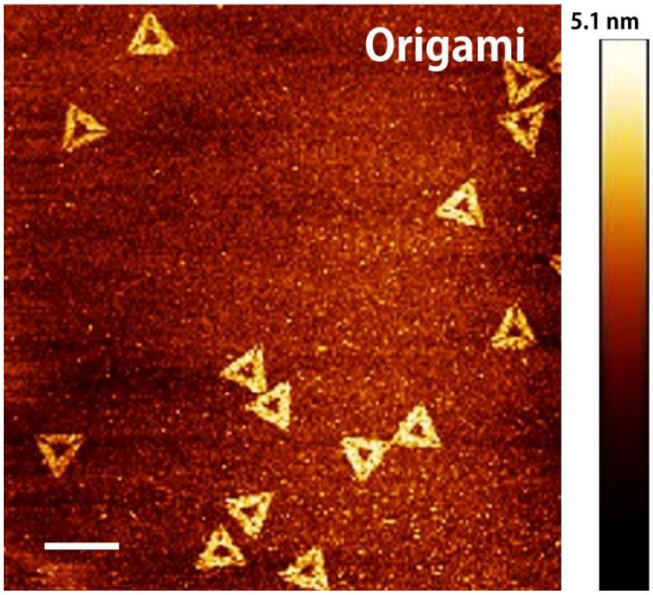

Figure S3. AFM image of triangular-shaped DNA origami. The scale bar is 200 nm.

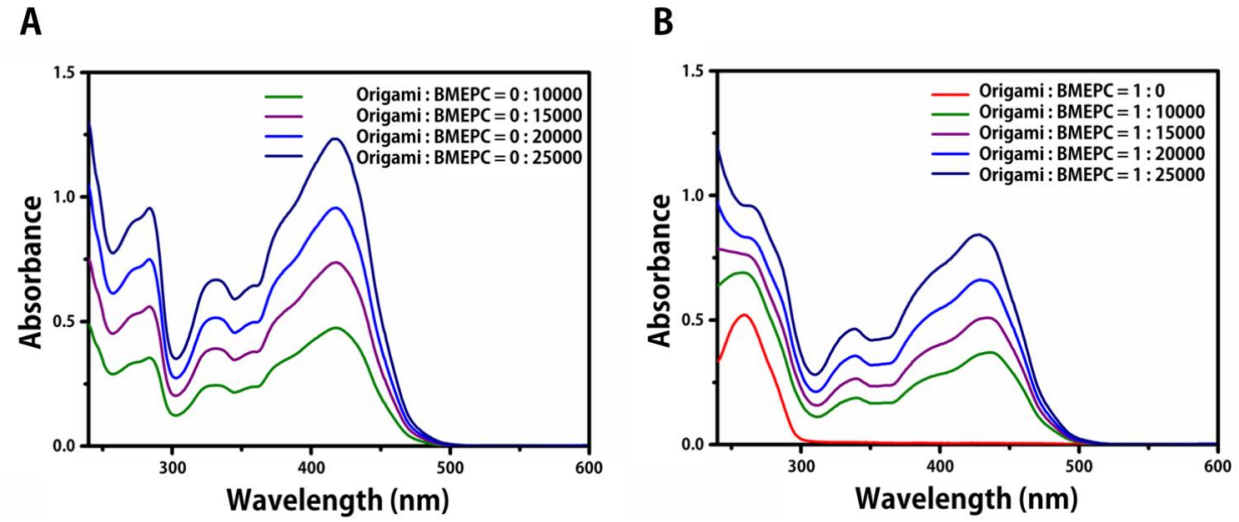

Figure S4. UV-vis absorption spectra. (A) Absorption spectra of BMEPC in ddH_2O. (B) Absorption spectra of BMEPC-loaded DNA origami complex of different BMEPC molar ratios in ddH_2O.

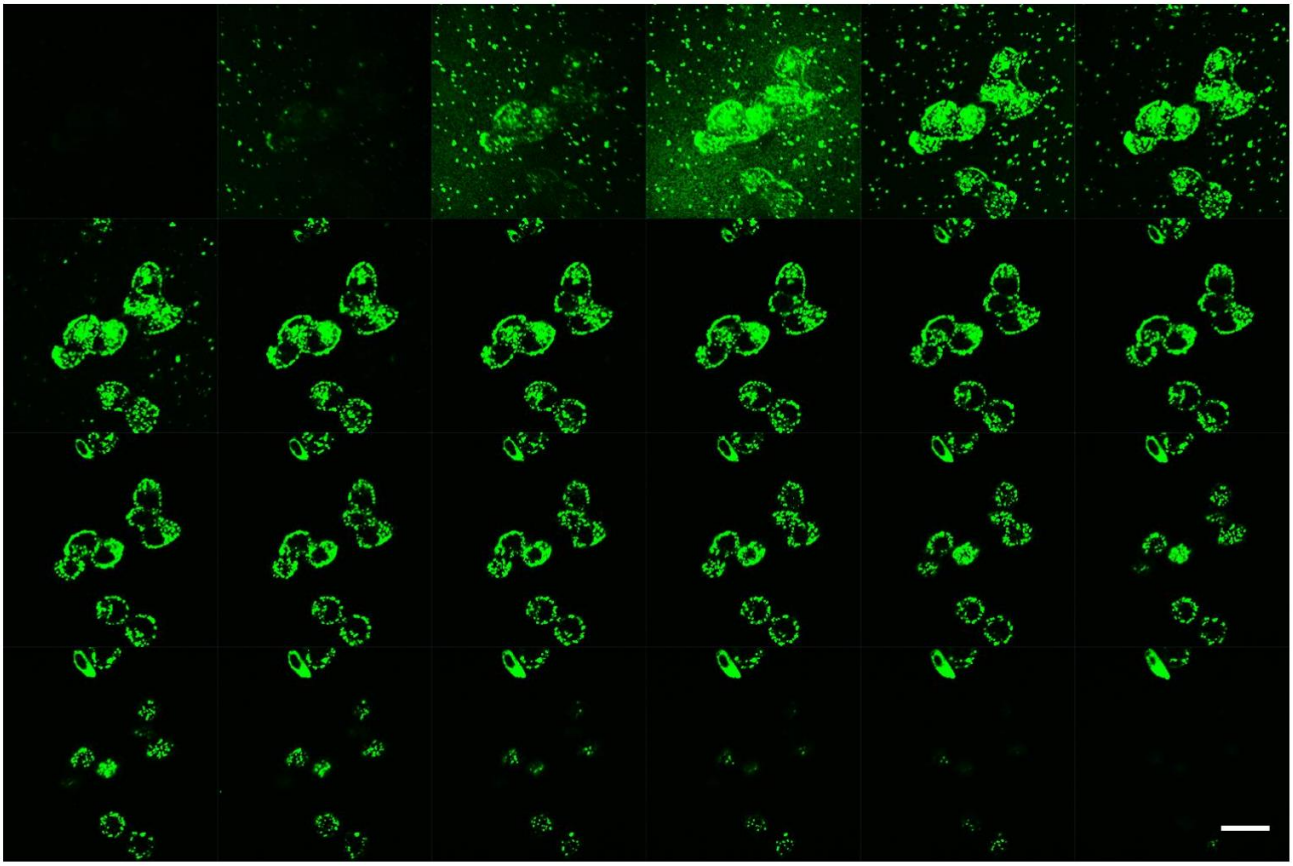

Figure S5. One-photon induced vertical section scanning at 405 nm excitation. Adhered MCF-7 cells were incubated with 1.0 nM (20 μM BMEPC-loaded) DNA origami for 12 h in DMEM and imaging in DMEM (phenol red free). The scale bar is 25 μm.

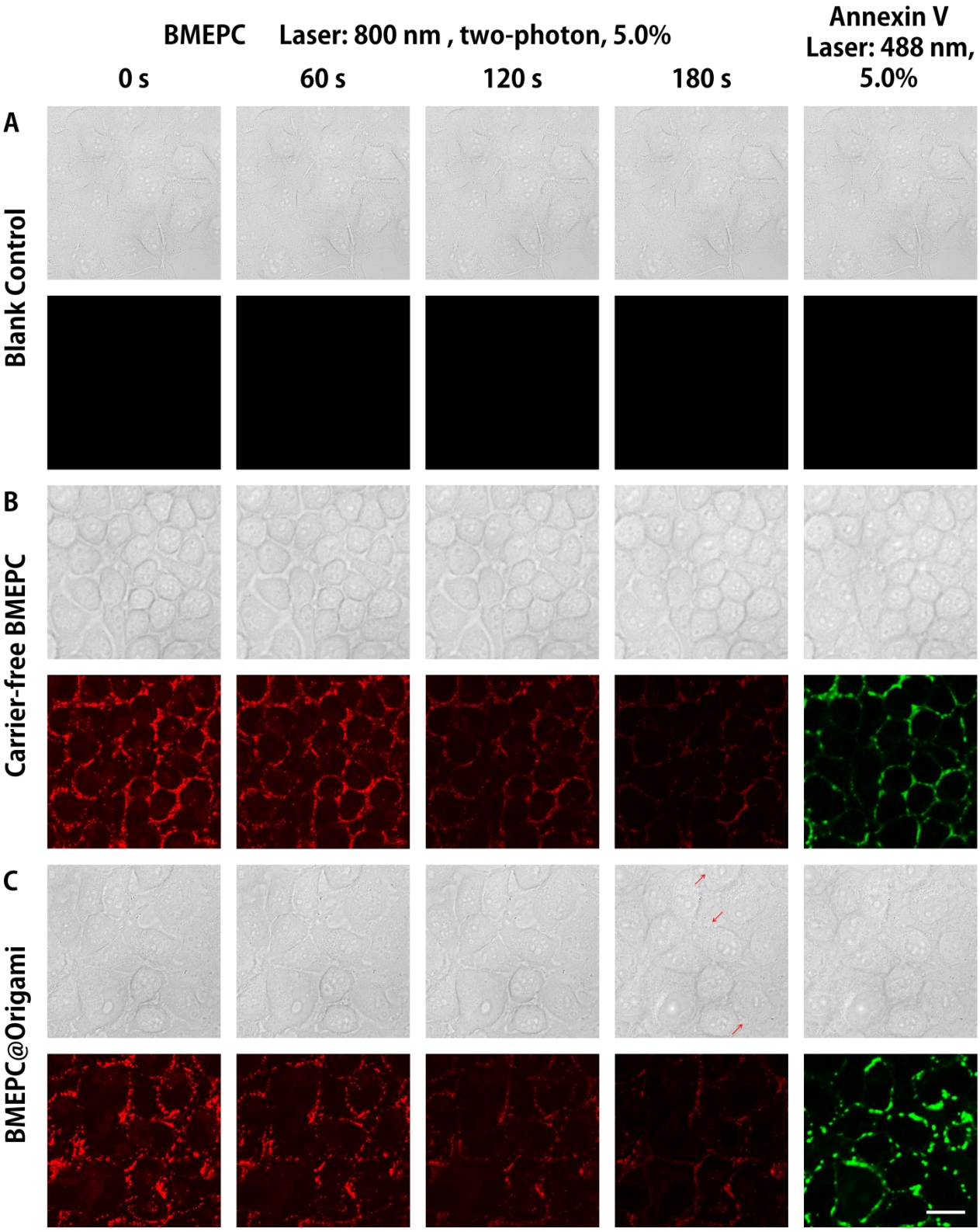

Figure S6. Two-photon induced CLSM imaging and irradiating at 800 nm excitation. Adhered MCF-7 cells (A) were incubated with 20 μM carrier-free BMEPC (B) and 1 nM (20 μM BMEPC-loaded) DNA origami complex (C) individually for 12 h in DMEM and then irradiated for 180 s in DMEM (phenol red free). The scale bar is 25 μm.

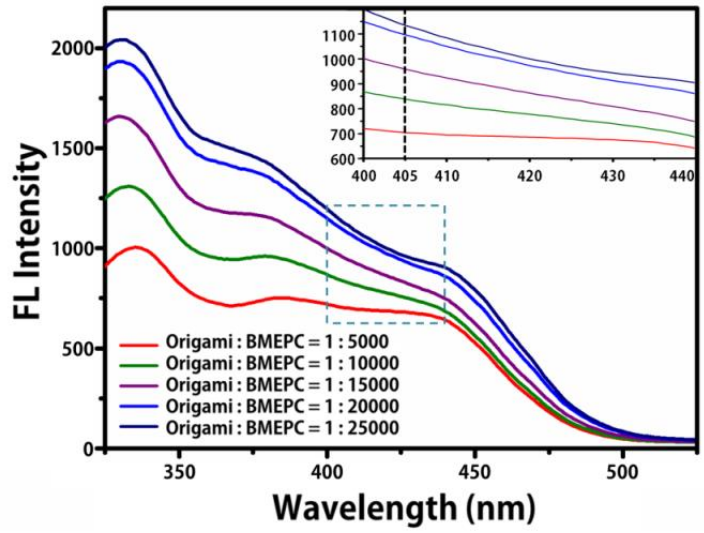

Figure S7. Excitation spectra of BMEPC-loaded DNA origami in ddH_2O.

Table S1. The imaging parameters of all confocal laser scanning microscopes.

confocal laser scanning microscope	Excitation Wavelength	Emission Wavelength Range	Exposure Time
Carl Zeiss (Figure 3)	405 nm	510-585 nm	Shown in the images
	488 nm	520-530 nm	
Perkin-Elmer (Figure 4)	440 nm	510-585 nm	Shown in the images
	488 nm	520-530 nm	
Leica (Figure S6)	800 nm two-photon	575-630 nm	Shown in the images
	488 nm one-photon	520-530 nm	