Electronic Supplementary Information (ESI)

Bright and Biocompatible AIE Polymeric Nanoparticles Prepared from Miniemulsion for Fluorescence Cell Imaging

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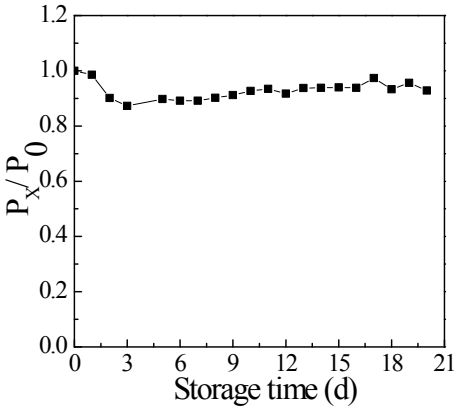

Fig. S1 Particle sizes of MNP-20 at various storage time (P_X and P_0 referred to the particle sizes of MNP-20 at day X and day 0, respectively).

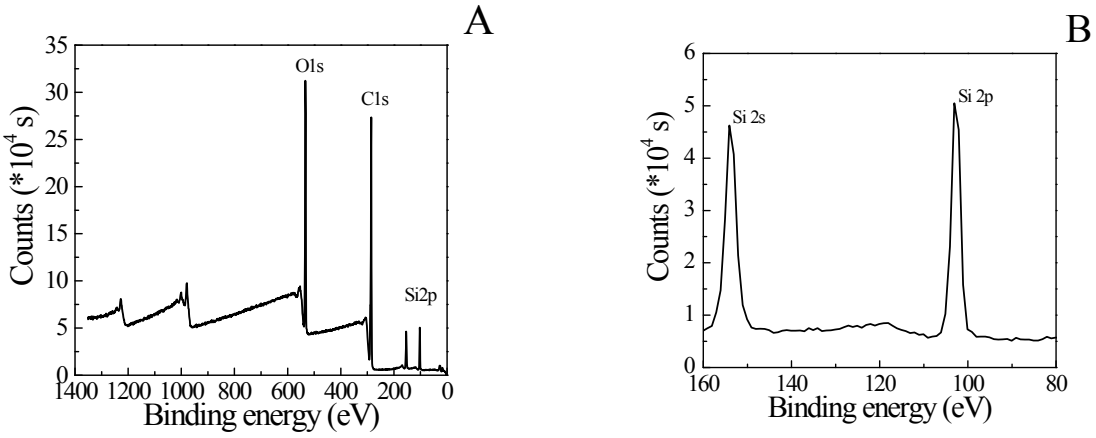

Fig. S2 XPS spectra of PMA-20 (A, survey; B, Si).

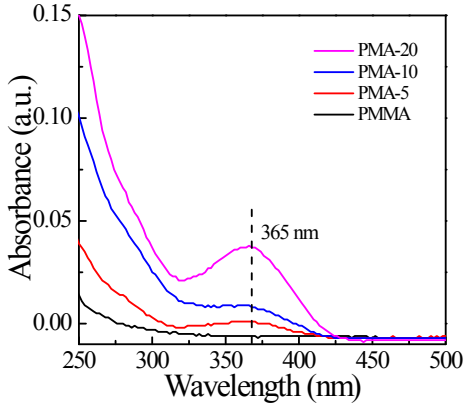

Fig. S3 UV–vis spectra of PMMA and PMAs with various AMTPS contents.

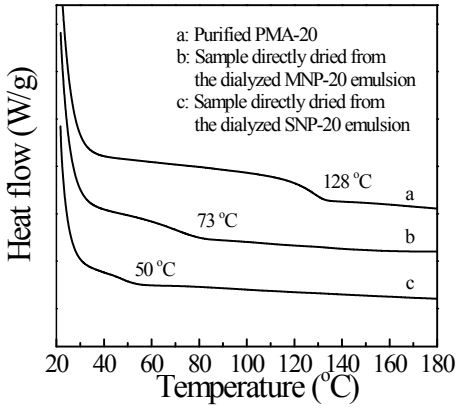

Fig. S4 DSC thermograms of the purified PMA-20 and the samples directly dried from the dialyzed MNP-20 and SNP-20 emulsions.

Evaluation of photostabilities of MNP-20 and AMTPS.

Photostabilities of MNP-20 and AMTPS were evaluated under the time scan mode on a Hitachi F-7000 spectrofluorometer. The sample of MNP-20 was prepared as follows: 10 μL of the MNP-20 emulsion was diluted with 2 mL of water. The sample of AMTPS was prepared as follows: 5 mg of AMTPS was firstly dissolved in 342.5 μL of THF, and then 10 μL of THF solution of AMTPS was added to 2 mL of water. The excitation and emission wavelengths were set at 350 nm and 473 nm, respectively. The scanning time was 30 min. The widths of the excitation slit and emission slit were 5.0 nm, and the voltage of the photomultiplier tube was 300 V.

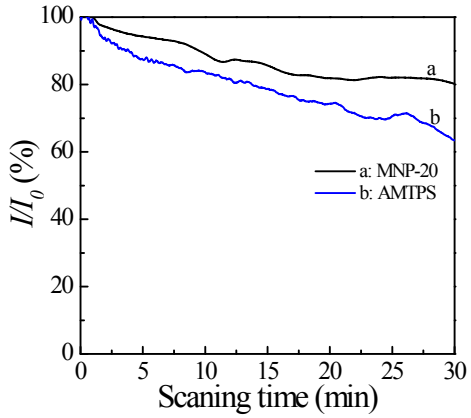

Fig. S5 Fluorescence loss of MNP-20 and AMTPS under a 30-minute continuous UV light irradiation (I_0 and I referred to the PL intensity at 473 nm at time 0 and t, respectively.).

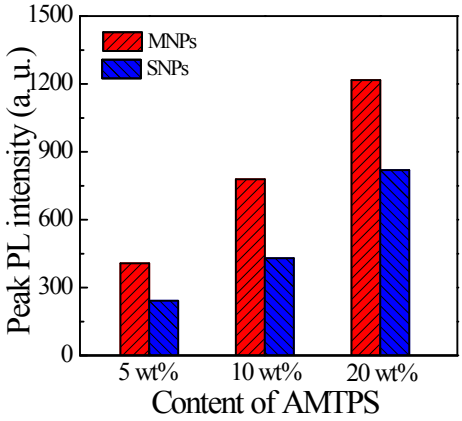

Fig. S6 Peak PL intensity of MNPs and SNPs at 473 nm at various AMTPS contents under the same measurement conditions.

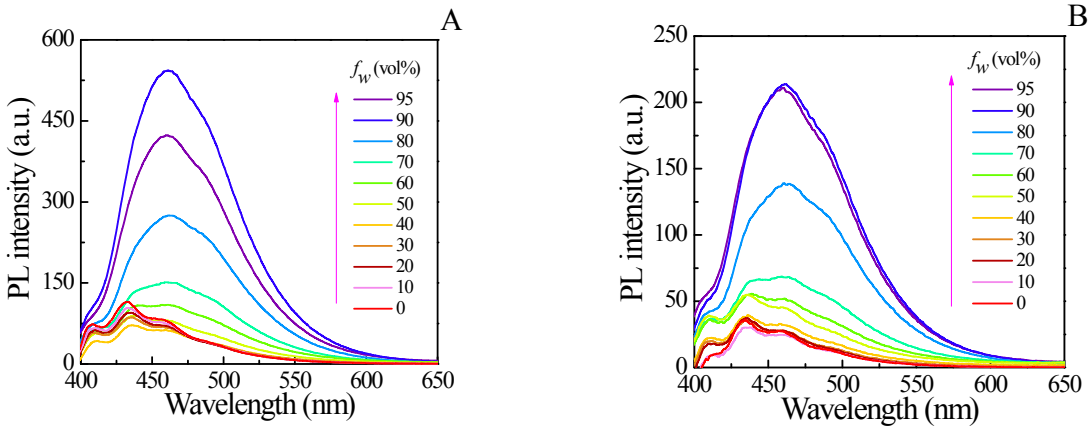

Fig. S7 PL spectra of PMA-10 (A) and PMA-5 (B) in the THF/water solvents with various f_ws.

Experimental procedure for photo-stability of MNP-20

Photostability of MNP-20 in HeLa cells was measured under excitation at 405 nm with 100% laser power and statistically analyzed using image processing software (Image J, National Institutes of Health, USA). The data were obtained from replicate experiments (n = 3).

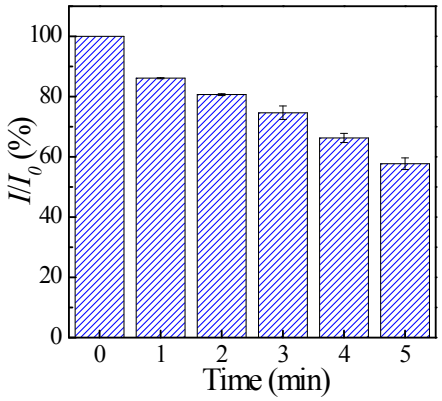

Fig. S8 Fluorescence loss of HeLa cells stained with MNP-20 NPs (1000 μg mL^{-1}) under continuous light irradiation for 5 min (100% laser power).