Electronic Supporting Information

Thermoresponsive AIE polymers with fine-tuned response temperature

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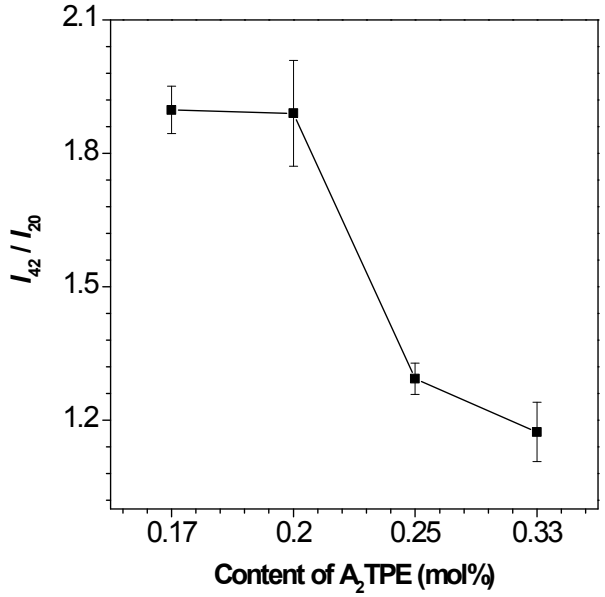
Polymer Synthesis

All the polymerization reactions and manipulations were carried out under nitrogen using Schlenk techniques in a vacuum-line system except for the purification of the resulting polymers. Typical experimental procedure for the polymerization is given below using the synthesis of P**1d** as an example. NIPAM (241.5 mg, 2.13 mmol), OEGMA (30.6 μl, 0.066 mmol), 4, 4'-tetraphenyl ethylene acrylate (1.7 mg, 3.7 μmol) and AIBN (3.3 mg) were added in a 10 mLSchlenk tube. The tube was evacuated under vacuum and flushed with dry nitrogen three times. 2 mL distilled dry THF was injected and heated to 70 °C for 10 h. After cooled to room temperature, the mixture dissolved in a small amount of THF and precipitated in diethyl ether (200 mL) for two times. White precipitate was collected by filtration and drying. P**1d**: (yield: 85%) M_w: 21 000; M_w/M_n: 1.31 (Table 1). IR (KBr), ν (cm^{-1}): 3442, 3302, 3090, 1719, 1650, 1556, 1461.^{1}H NMR (600MHz, DMSO), δ (TMS, ppm): 7.20, 3.83, 3.50, 3.23, 1.95, 1.44, 1.04.

Cell culture and imaging

HeLa cells were seeded on a sterilized glass cover slide in DMEM medium containing 10% fetal bovine serum at 37 °C and 5% CO_2 inside a 30 mm glass culture dishes and were allowed to adhere for 24 h. The stock solution of P**2c** was then added into each well to reach a final concentration of 200 μg mL^{-1}. The cells were incubated for another 1.5 h and the glass slides with cells were washed with PBS. Confocal image was taken on an Olympus IX71 inverted fluorescence microscope equipped with a DP72 color CCD. The excitation wavelength was 360 nm and detected wavelength range was 415–510 nm.



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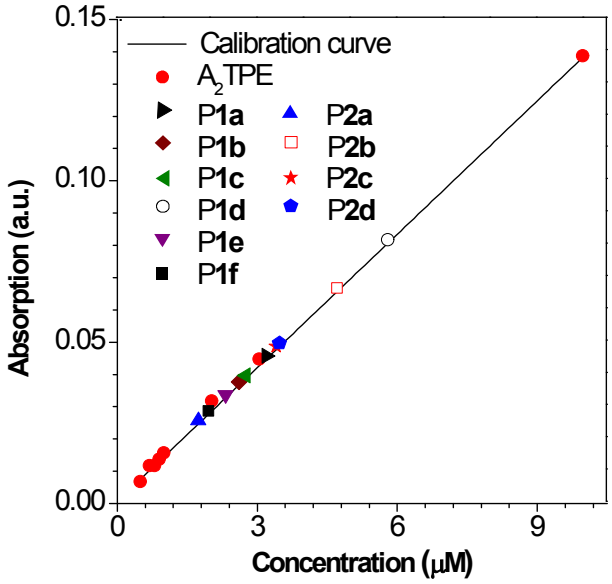

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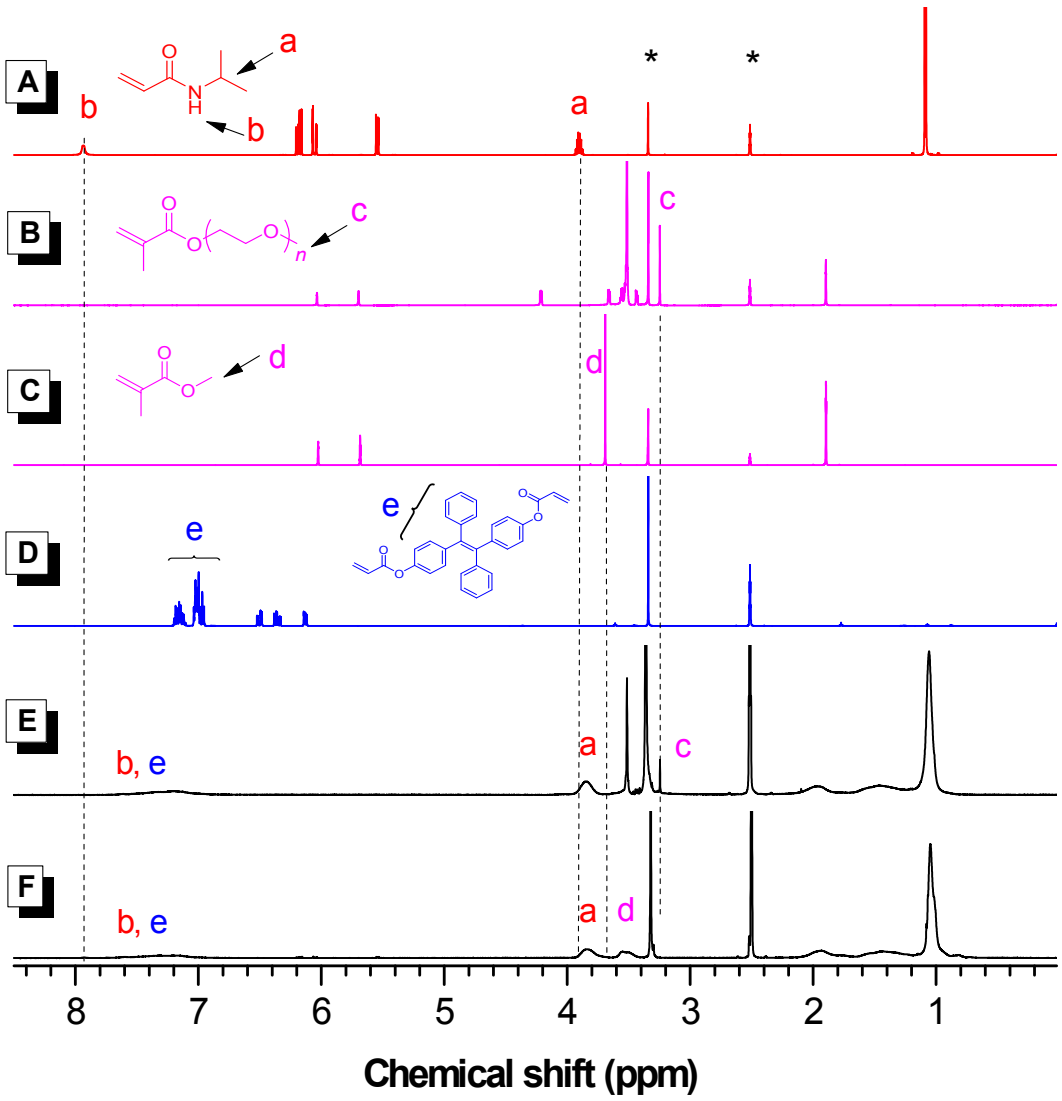

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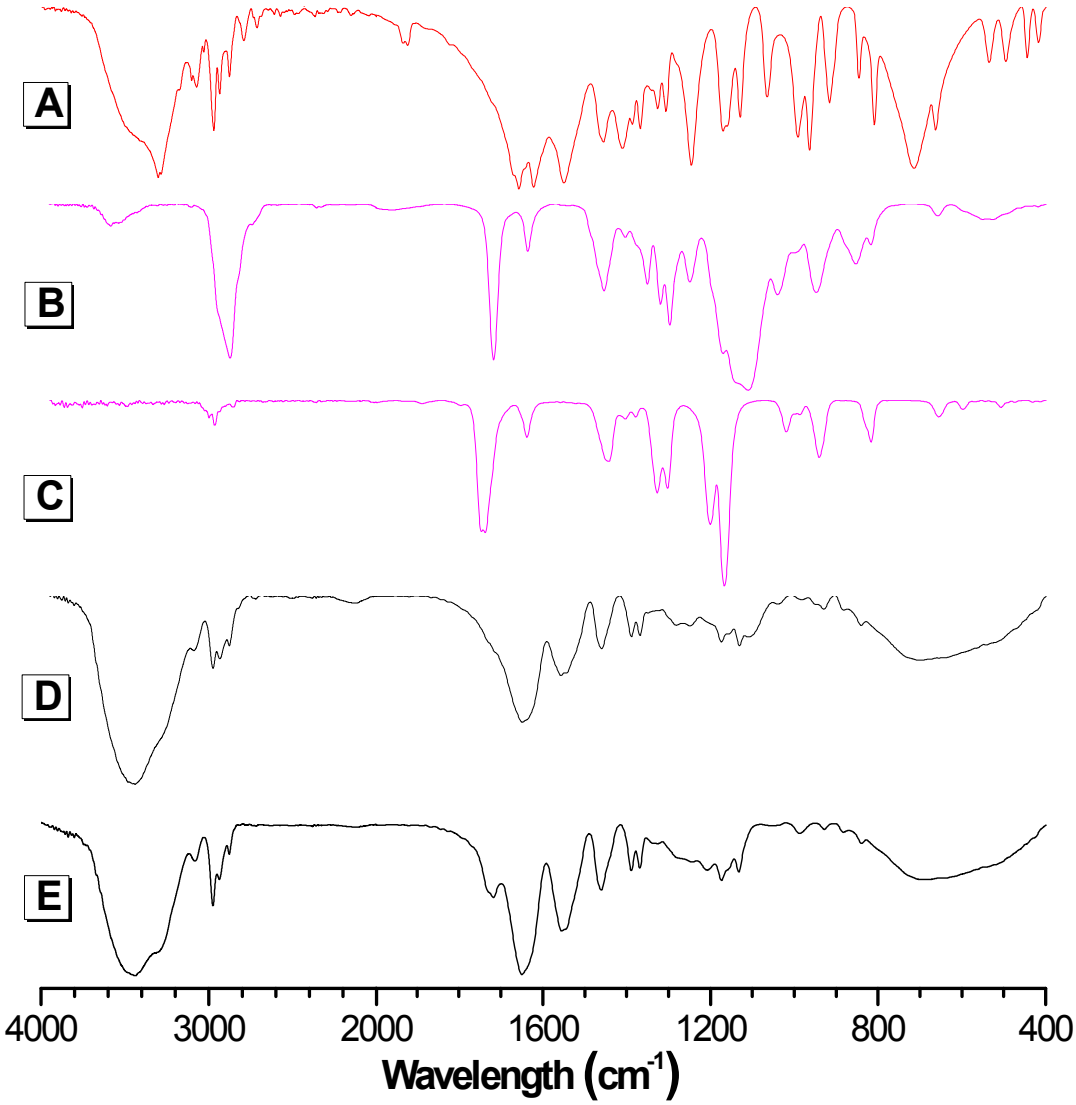

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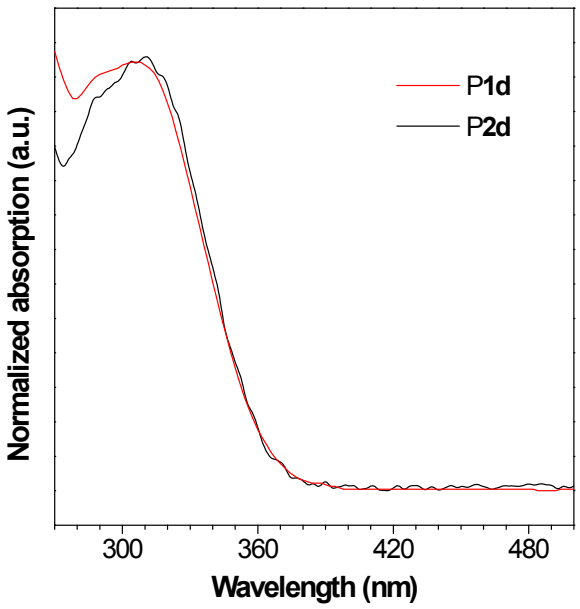

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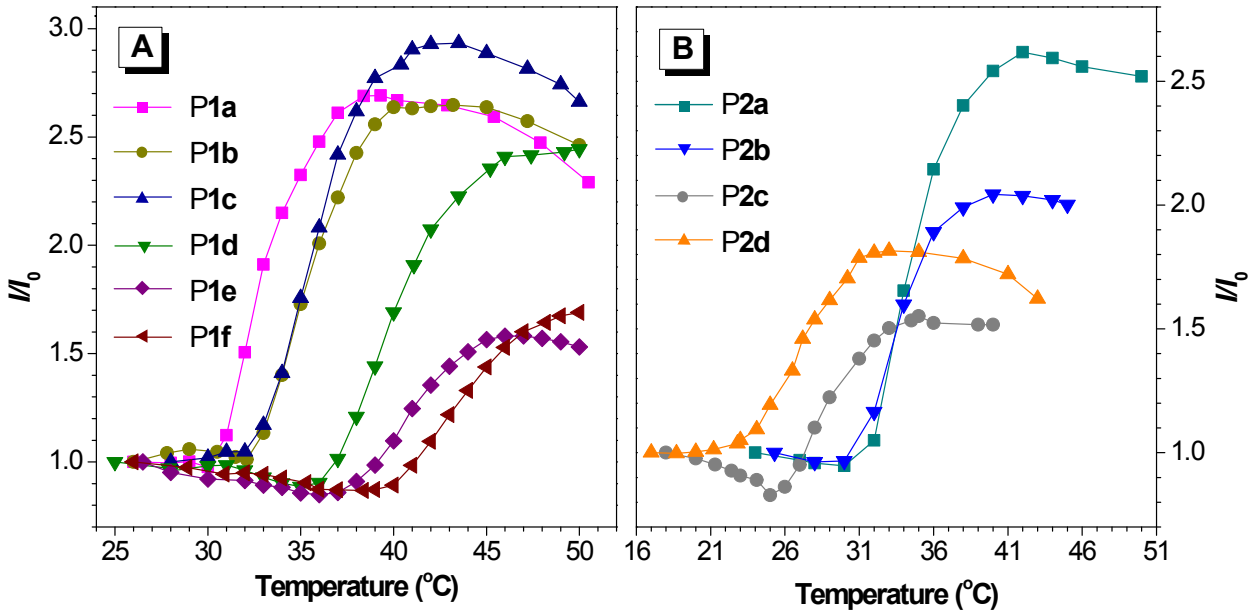

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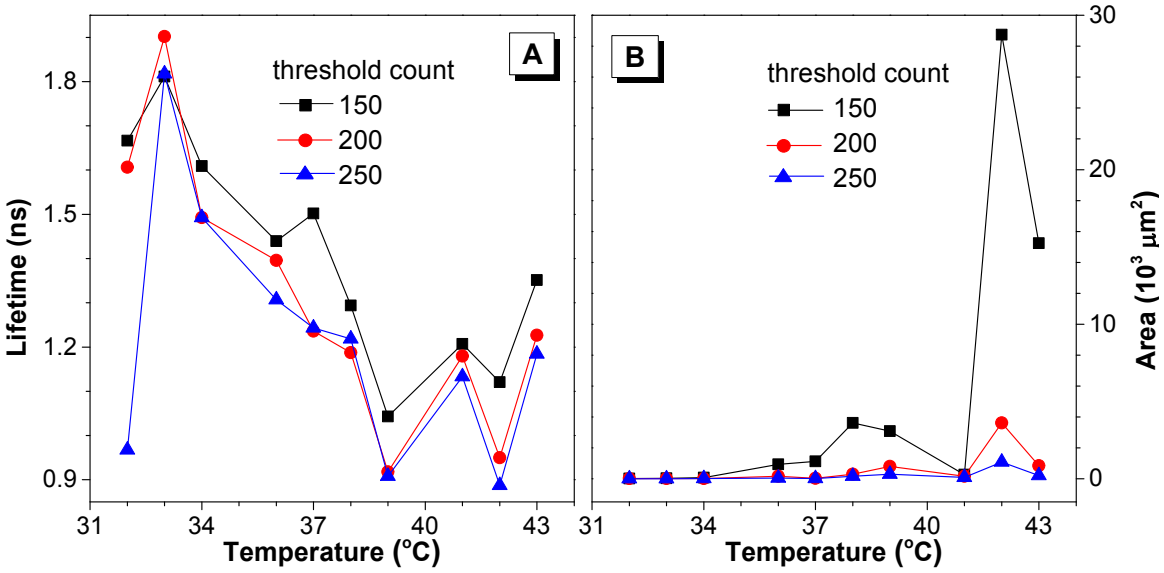

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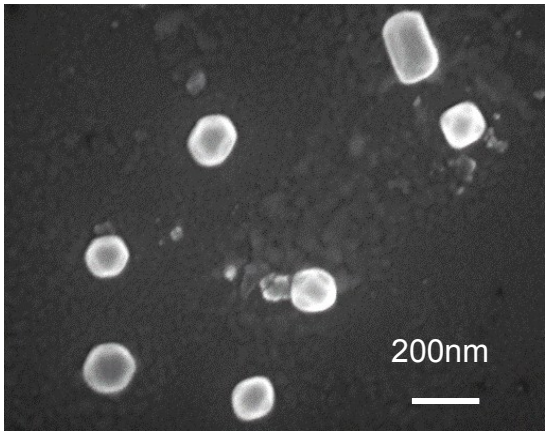

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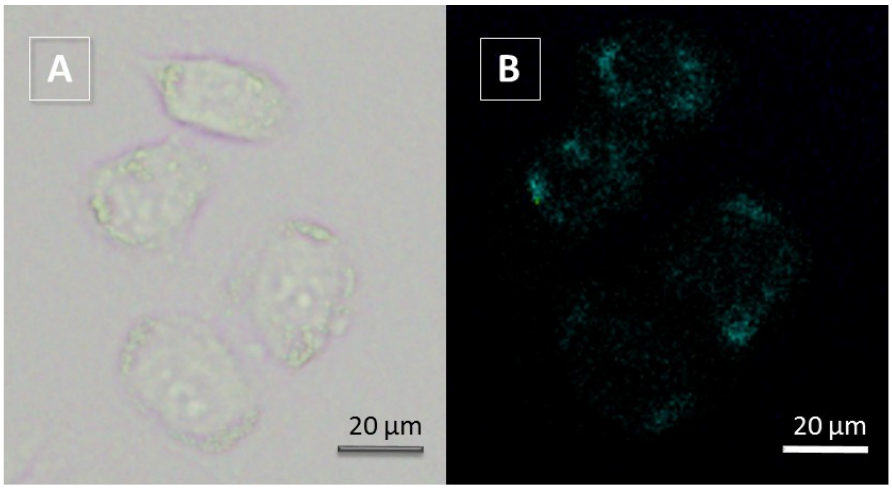

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