

Supplementary Information

One-pot synthesis of iniferter-bound polystyrene core nanoparticles for the controlled grafting of multilayer shells

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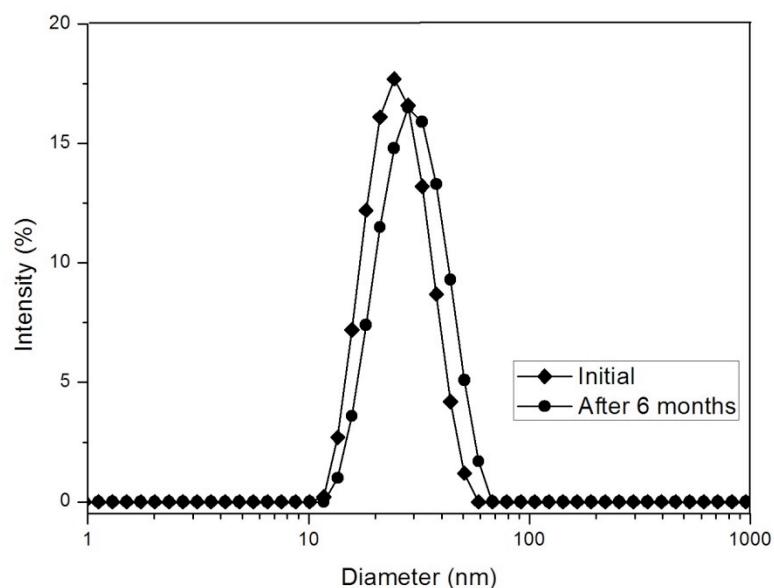


Figure S1. Size distribution, as measured by dynamic light scattering of fluorescent PS cores immediately after synthesis and after 6 months storage at 8 °C.

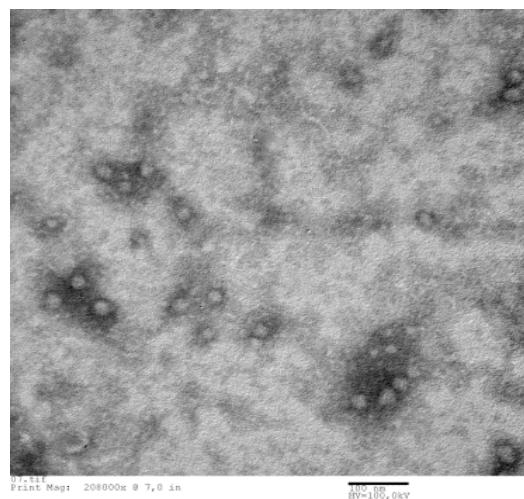
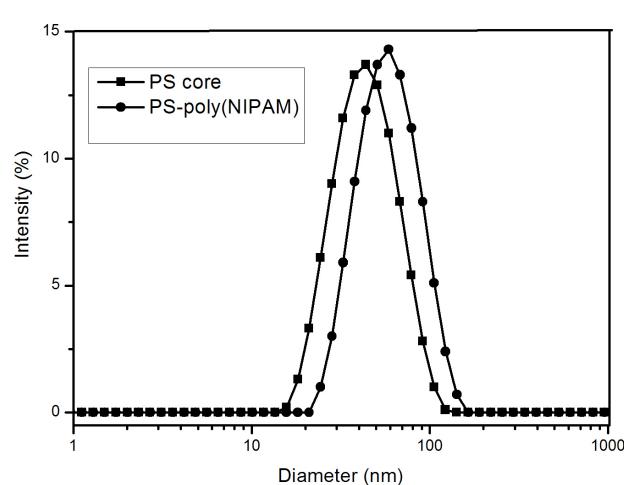


Figure S2. Size distributions, as measured by dynamic light scattering of the increase in size of PS core after grafting of linear poly(NIPAM) shell (left). TEM image of PS core-poly(NIPAM) shell, the scale represents 100 nm (right).

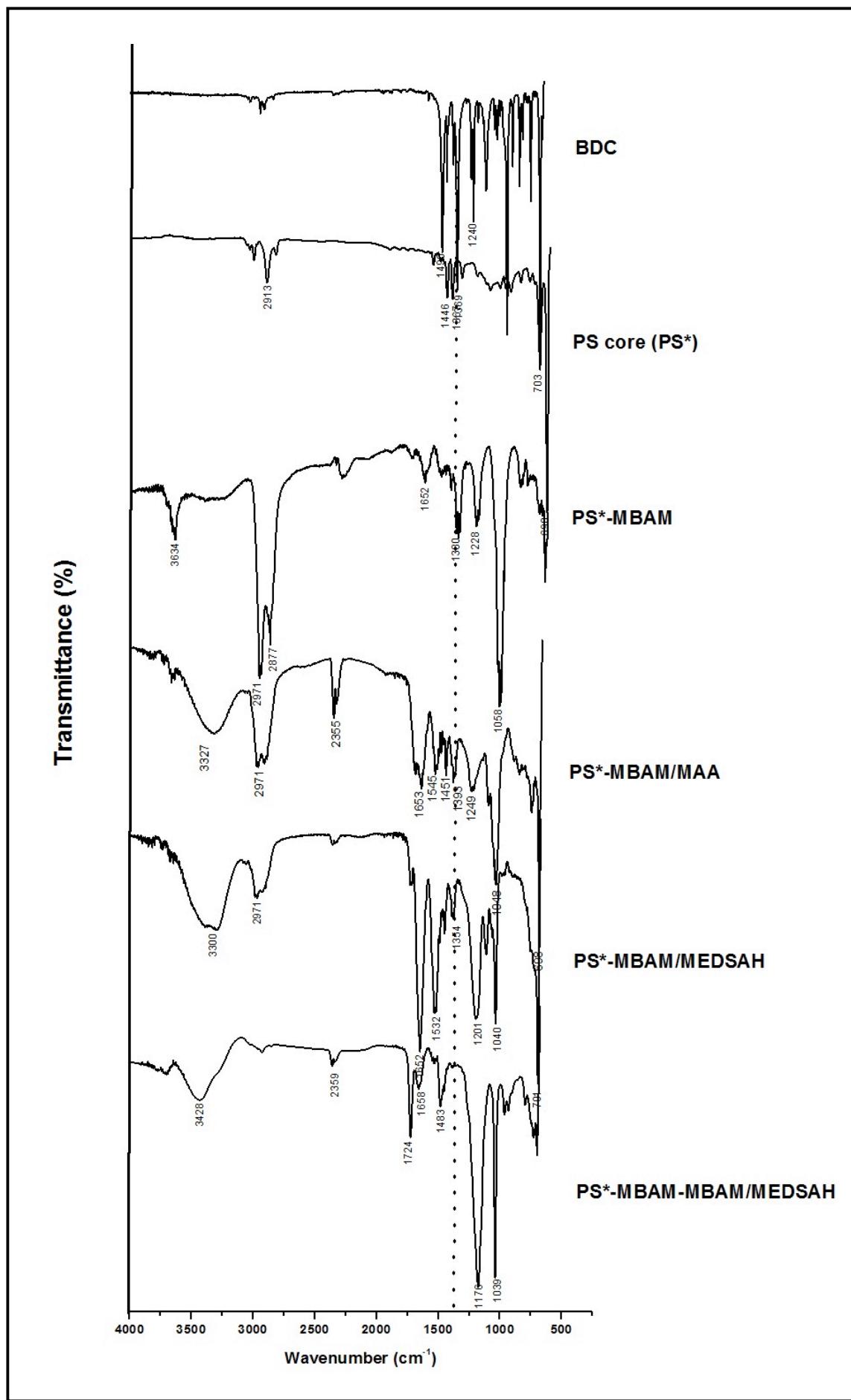


Figure S3. FT-IR spectra of BDC, PS core, PS-MBAM/MAA and PS-MBAM-MBAM/MEDSAH nanoparticles. The dotted line indicates the C=S stretching at 1367 cm^{-1} .

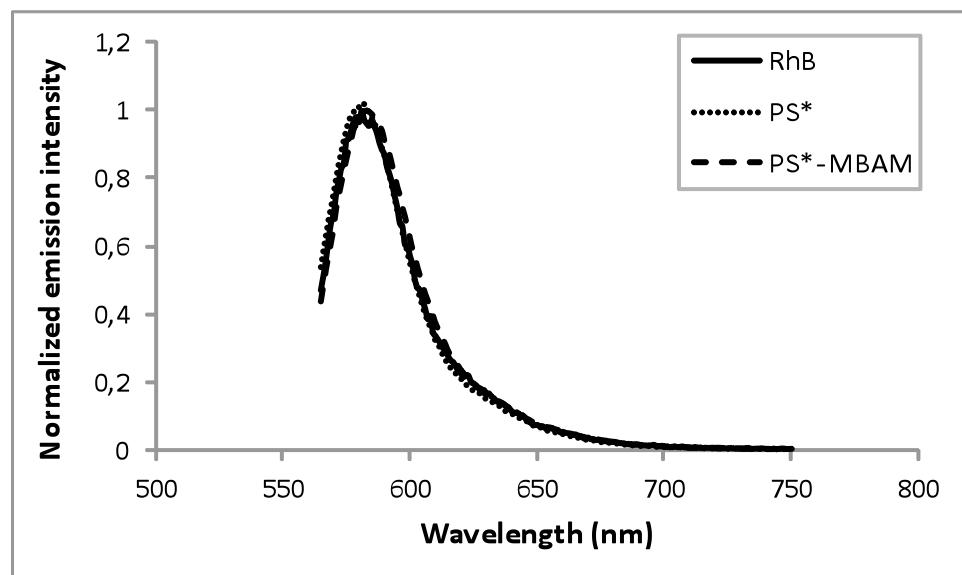


Figure S4. Normalised fluorescence emission intensities of RhB, fluorescent PS core (PS*) and PS*-MBAM NPs in water. Excitation wavelength is 556 nm.

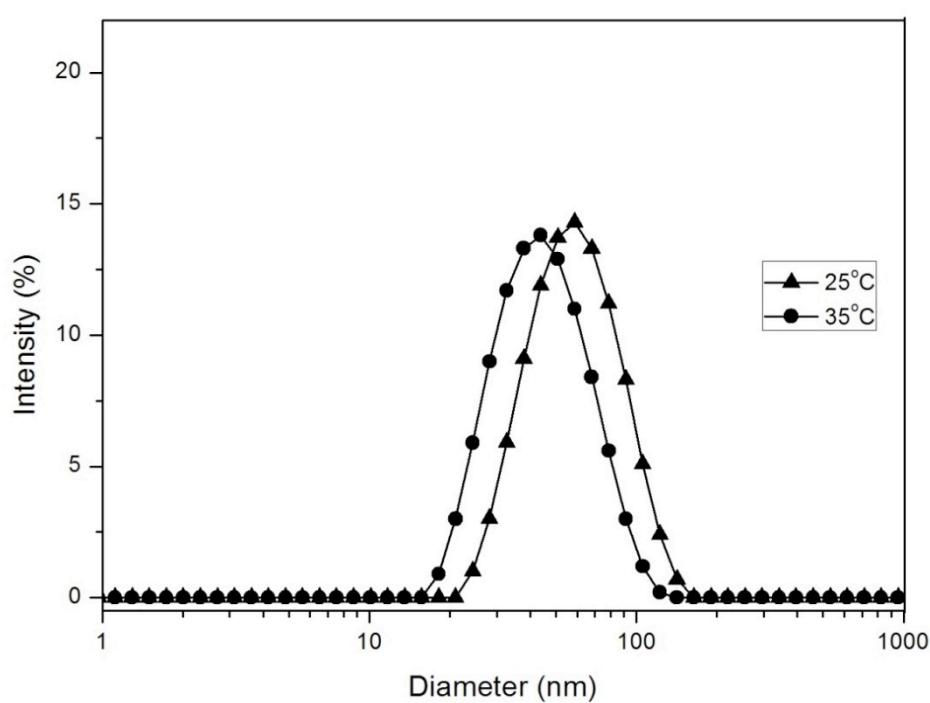


Figure S5: Size distributions, as measured by dynamic light scattering showing thermoresponsivity of PS-MBAM/NIPAM. Sizes are 61 and 47 nm at 25 °C and 35 °C respectively.