## Supporting Information

Controlled synthesis of water-compatible molecularly imprinted polymer microspheres with ultrathin hydrophilic polymer shells via surface-initiated reversible addition-fragmentation chain transfer polymerization

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**Fig. S1** The photographs for the dispersion of the ungrafted MIP (a), B-MIP-12h (b), and H-MIP-12h (c) microspheres in pure water (1 mg/mL) at 20 °C (after settling down for 2 h).



**Fig. S2** Fluorescence microscopy images of the ungrafted MIP microspheres after their control Rhodamine B-labeling treatment (a) and the unlabeled B-MIP-24h microspheres (b).



**Fig. S3** <sup>1</sup>H NMR spectrum (solvent: DMSO-d6) of the free PHEMA ( $M_{n,NMR} = 1.59 \times 10^4$ ) generated during the surface-initiated RAFT polymerization of HEMA.