

Supporting Information

Interface Assisted Synthesis of Complex Hydrogel Particles

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FTIR spectra of pNIPAm hydrogel particles synthesized at high temperature is shown in Figure S1(a). The spectrum exhibits the characteristic absorption peaks at $\sim 3310\text{ cm}^{-1}$ (N–H) and $\sim 1650\text{ cm}^{-1}$ (C=O). Additionally, the characteristic stretching vibration peaks for $-\text{CH}_3$, and N–H groups can be observed at $\sim 2970\text{ cm}^{-1}$, $\sim 1530\text{ cm}^{-1}$, respectively, confirming the structures of the pNIPAm hydrogel particles. The FTIR spectra in Figure S1(b–e) show pNIPAm hydrogel particles doped with various NPs were also successfully polymerized. Furthermore, pHEMA spectrum (Figure S1(f)) exhibits the main characteristic absorption peaks of O–H and C=O at ~ 3436 , $\sim 1650\text{ cm}^{-1}$, respectively, proving pHEMA hydrogel particles were successfully polymerized.

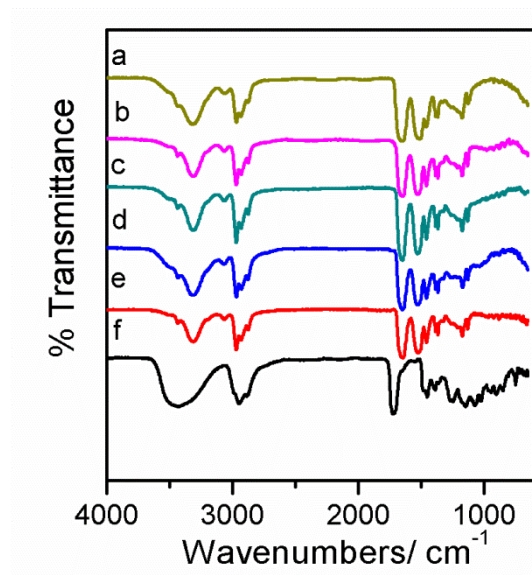


Figure S1. FTIR spectra of (a) pNIPAm hydrogel particles synthesized at $65\text{ }^{\circ}\text{C}$; pNIPAm hydrogel particles doped with (b) Au, (c) Ag, (d) Co NPs and (e) FITC; (f) pHEMA hydrogel particles.

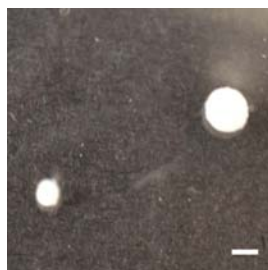


Figure S2. Photograph of pNIPAm hydrogel particles prepared at 65 °C at room temperature. Scale bar=1mm.