

Supplementary Information

Fast Responsive, Reversible Colorimetric Nanoparticle-Hydrogel Complexes for pH Monitoring

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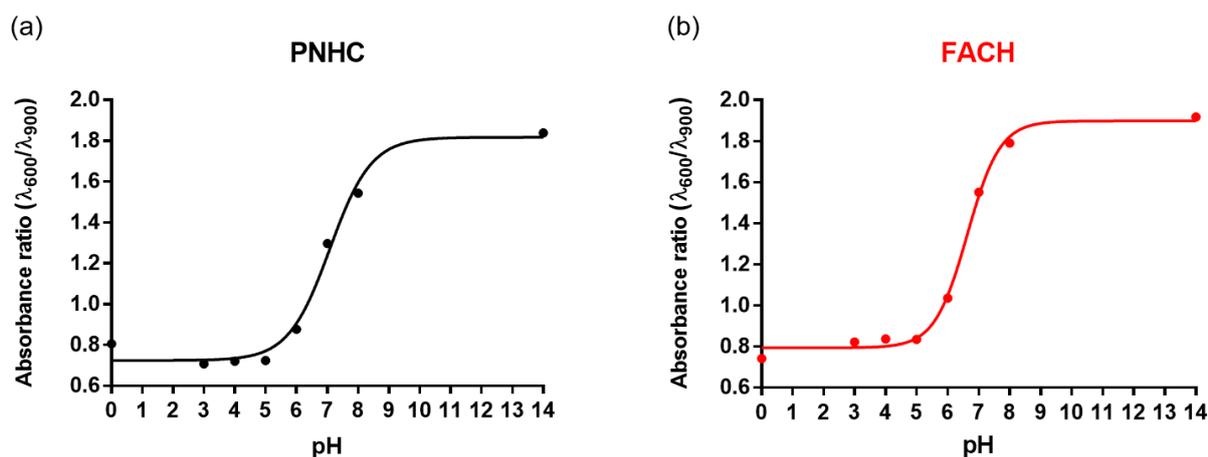


Figure S1. Absorbance ratio ($\lambda_{600}/\lambda_{900}$) including pH 0 and 14 conditions of (a) PNHC and (b) FACH. Hydrogels were treated with various pH solutions for a sufficient time (1 h) for chemical reactions.

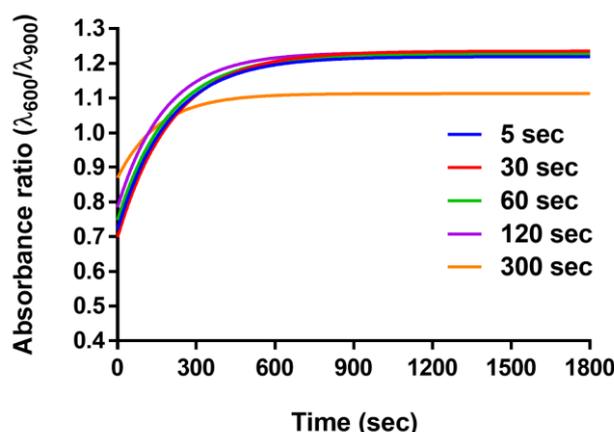


Figure S2. Measurement of FACH reaction rate according to ferrocene treatment time (5, 30, 60, 120, and 300 s). To the pH 3 hydrogels treated with ferrocene for different times, 2 mL of PBS (pH 8) was added, and the absorbance ratio ($\lambda_{600}/\lambda_{900}$) was observed for 30 min.