

**Synthesis and encapsulation of amphiphilic thermoresponsive star polymer  
with  $\beta$ -cyclodextrin and hyperbranched poly (oligo (ethylene glycol)  
methacrylate) as building blocks**

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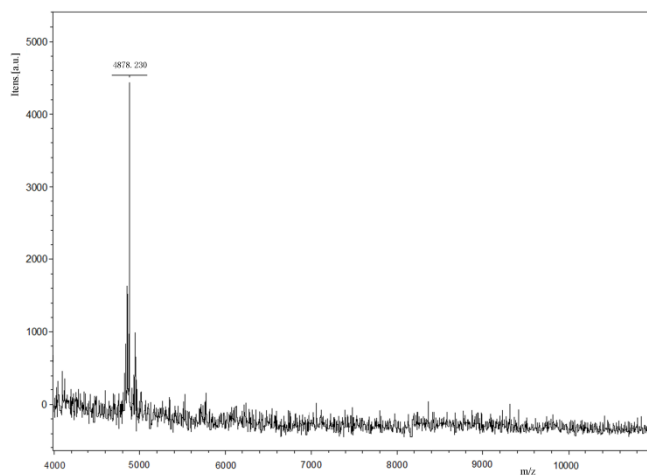


Fig. S1. MALDI-TOF spectrum of PE-CD.

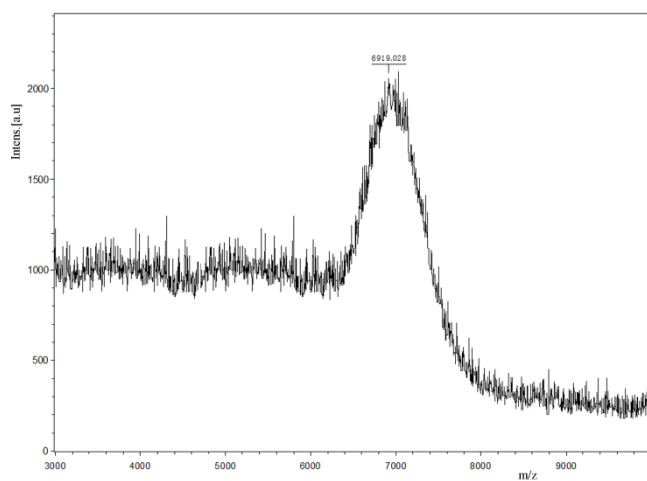


Fig. S2. MALDI-TOF spectrum of PE-CD-Br<sub>16</sub>.

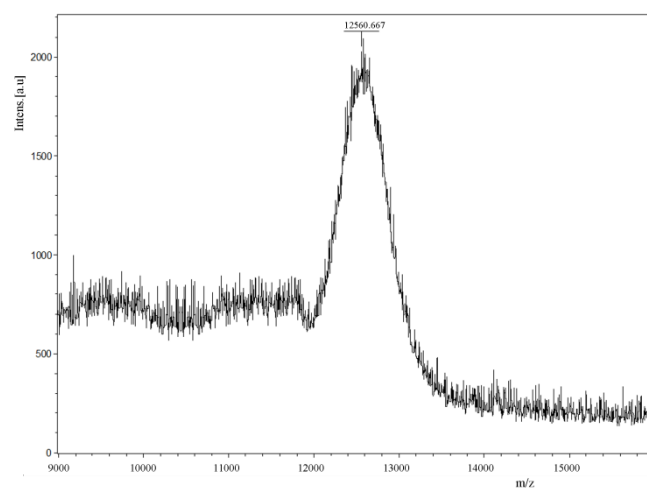


Fig. S3. MALDI-TOF spectrum of PE-CD-Br<sub>48</sub>.

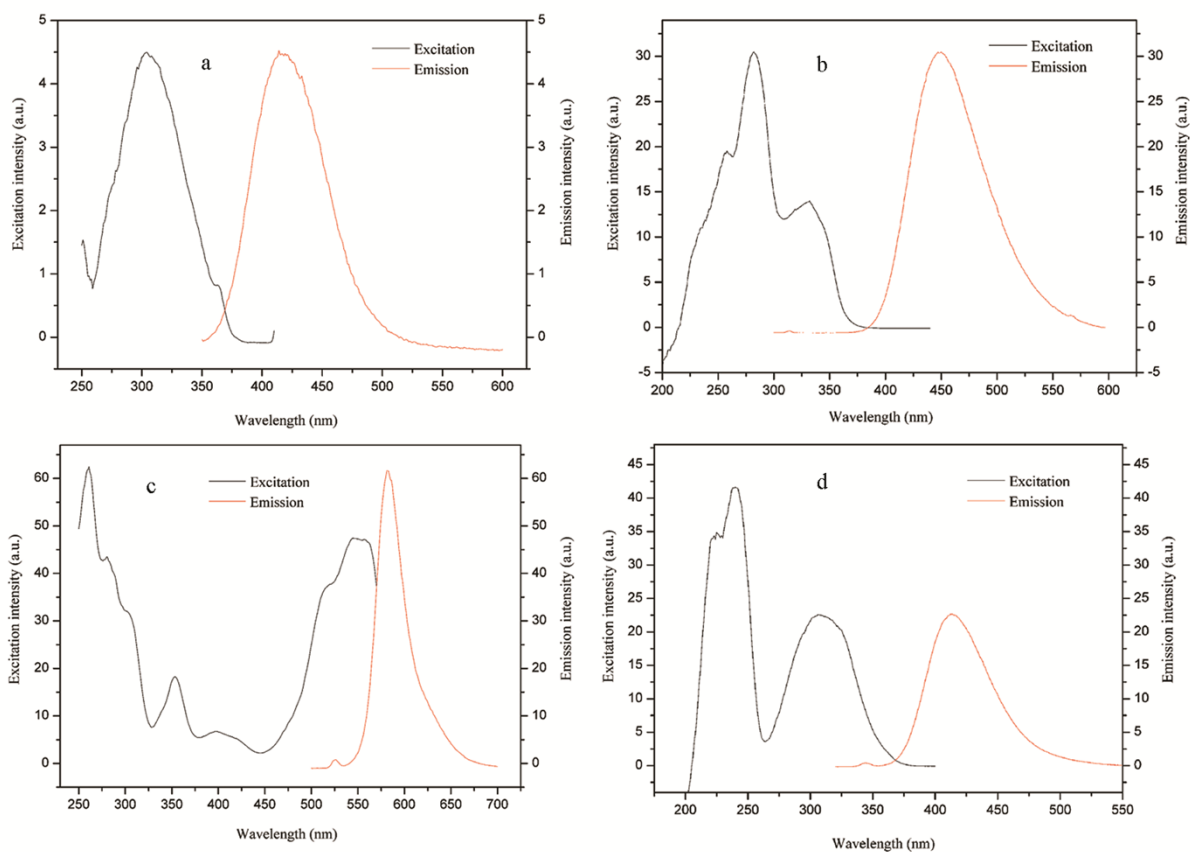


Fig. S4. Fluorescence excitation and emission spectra of RB, LL, Rh and CR in aqueous solution.

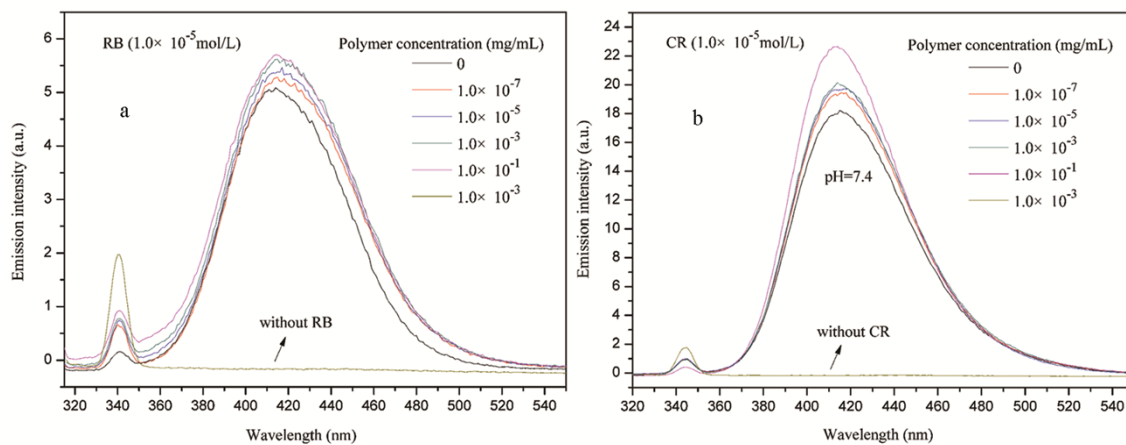


Fig. S5. Fluorescence emission spectra of RB, and CR solutions at pH= 7.4 in the presence of different  $P_2$  concentrations, separately.

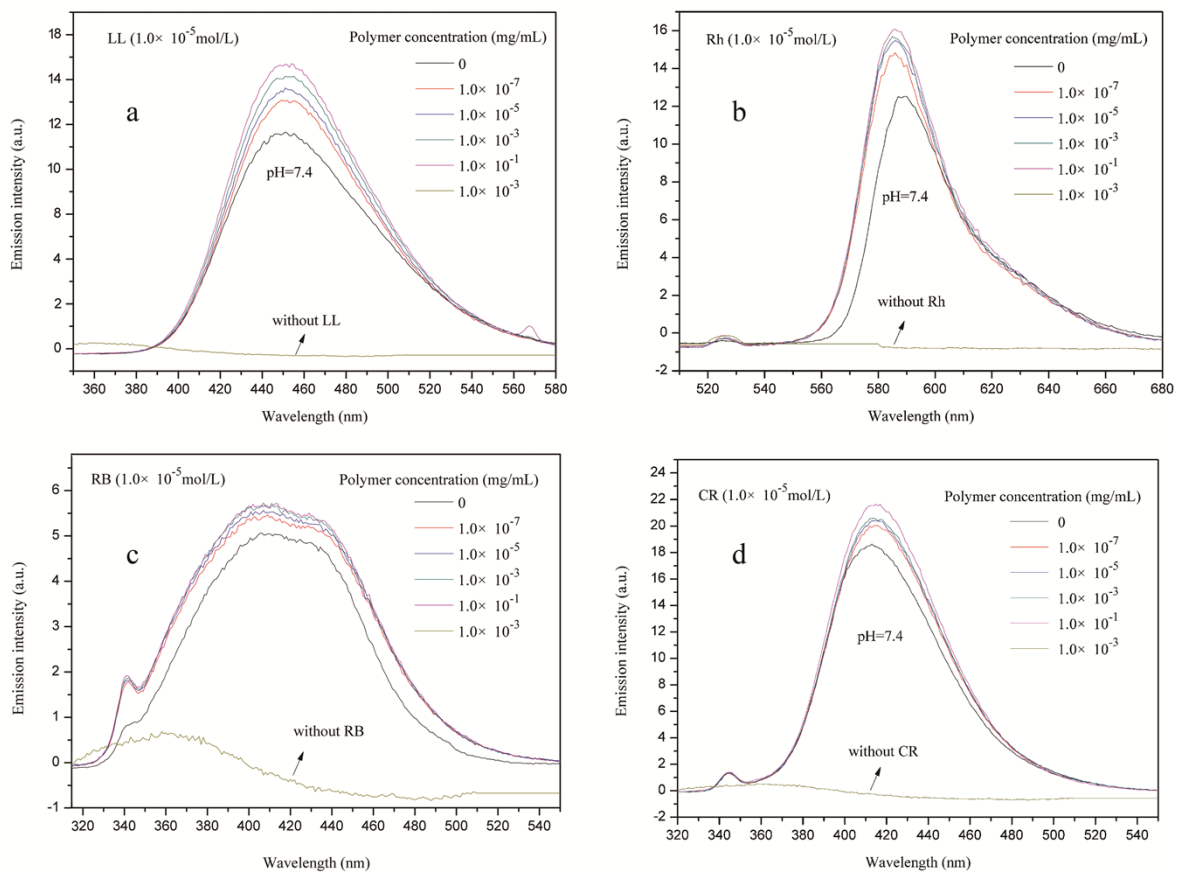


Fig. S6. Fluorescence emission spectra of LL, Rh, RB, and CR solutions at pH= 7.4 in the presence of different  $P_1$  concentrations, separately.

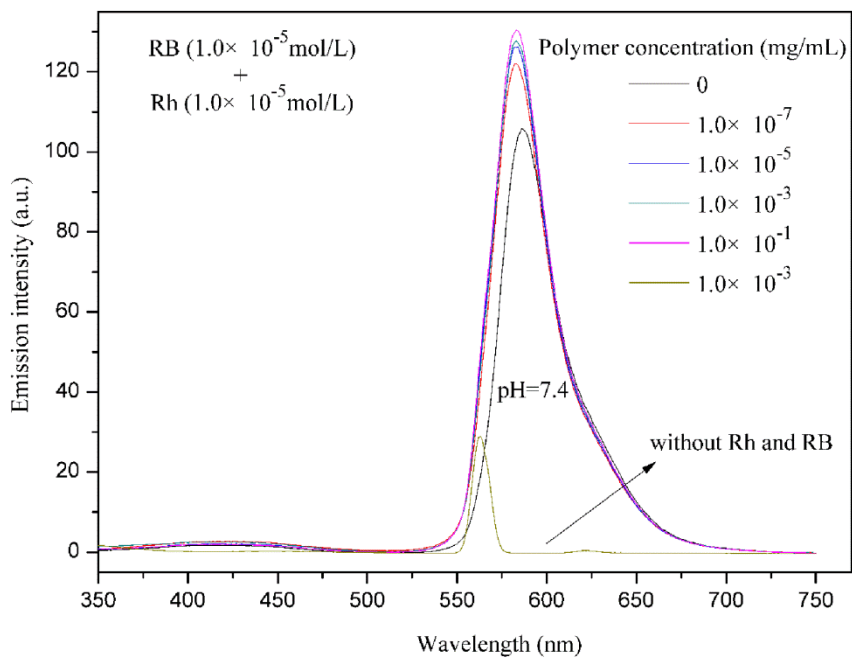


Figure. S7. Fluorescence emission spectra of RB+Rh at pH =7.4 in the presence of different  $P_2$  concentrations.

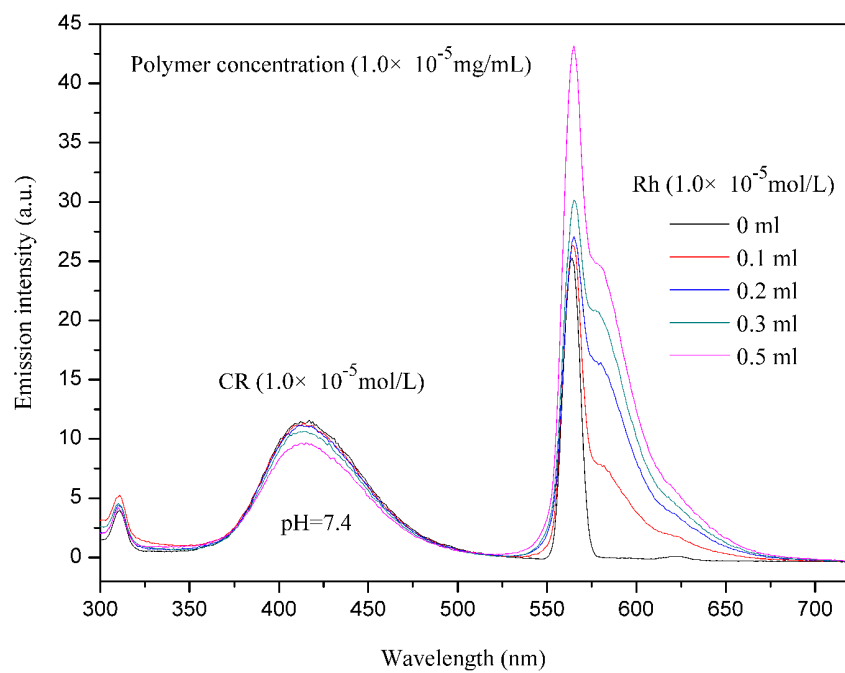


Figure. S8. Fluorescence emission spectra of CR +P<sub>2</sub> solutions with gradual adding of Rh solutions at pH = 7.4, respectively.

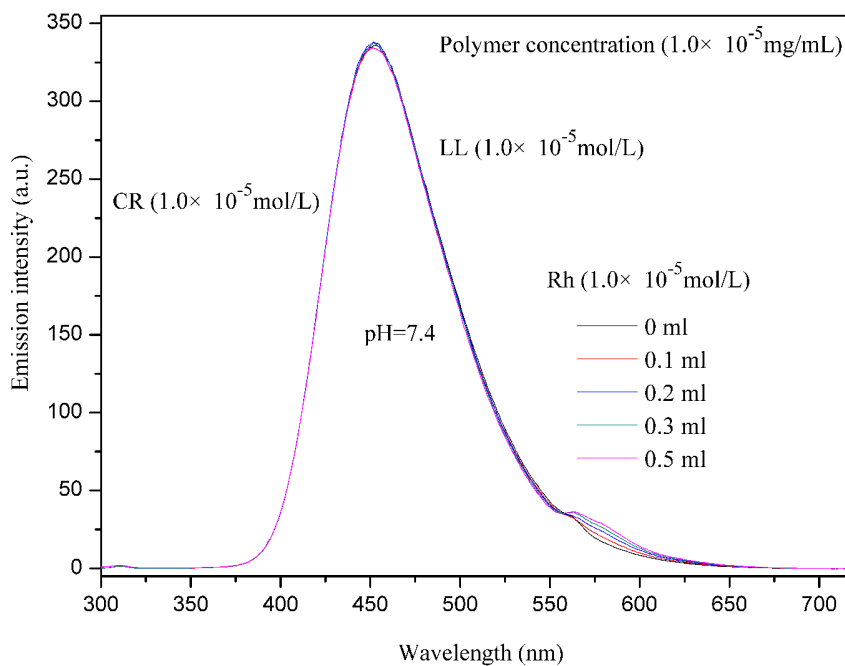


Figure. S9. Fluorescence emission spectra of CR+LL+P<sub>2</sub> solutions with gradual adding of Rh solutions at pH = 7.4, respectively.