

Supporting Information

Manipulation of Multiple-responsive Fluorescent Supramolecular Materials Based on Inclusion Complexation of Cyclodextrins With Tyloxapol

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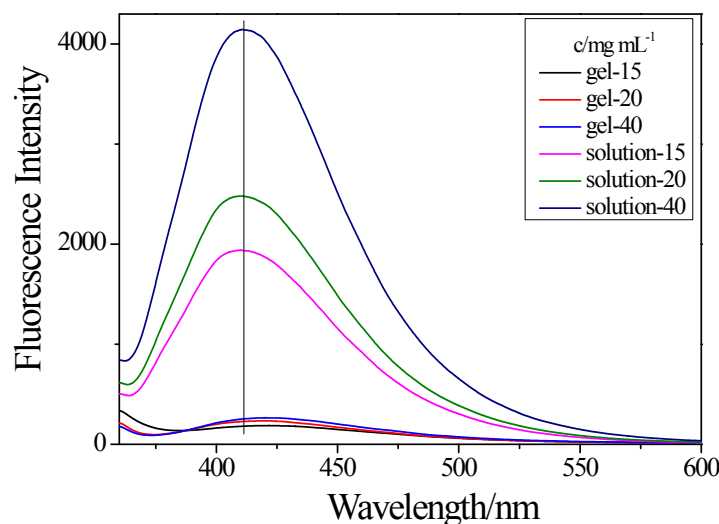


Figure S1 Fluorescence spectra of Tyloxapol solutions at varying concentration and the hydrogels after 100 mg mL⁻¹ α -CD was added.

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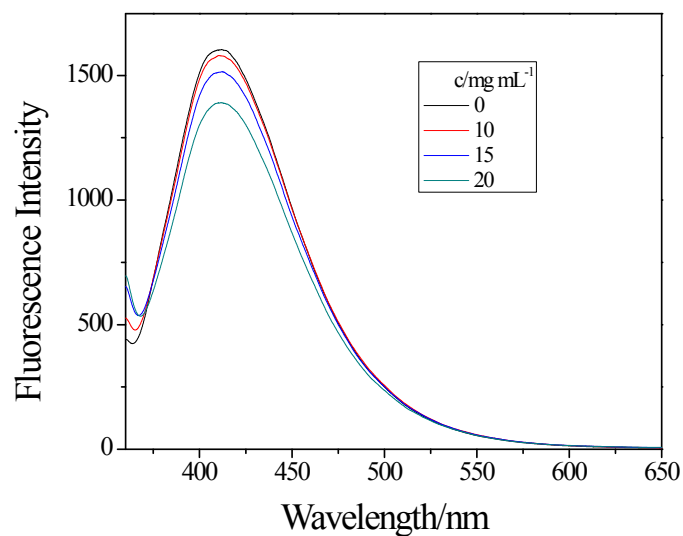


Figure S2 Fluorescence spectra of 15 mg mL⁻¹ Tyloxapol aqueous solutions with different concentrations of α -CD.

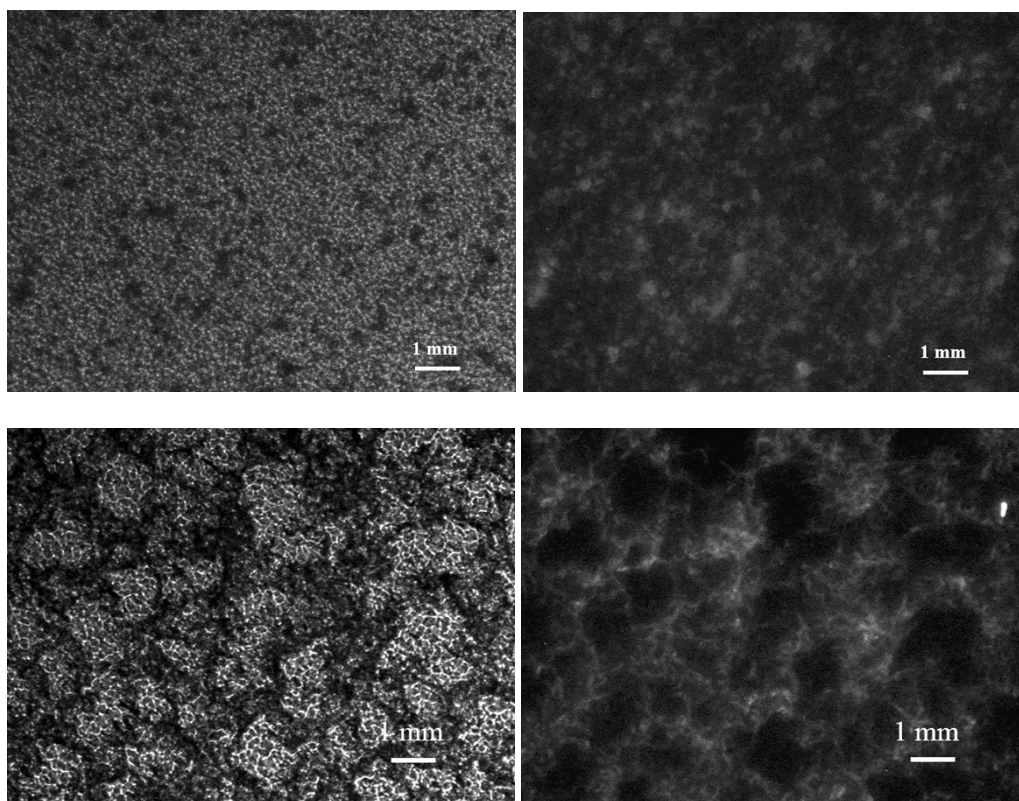


Figure S3 The original microscopy images of supramolecular hydrogel formed by 100 mg mL⁻¹ α -CD/15 mg mL⁻¹ Tyloxapol (A, B) and 100 mg mL⁻¹ α -CD/40 mg mL⁻¹ Tyloxapol (C, D) under white (A, C) and UV (B, D) light, respectively.

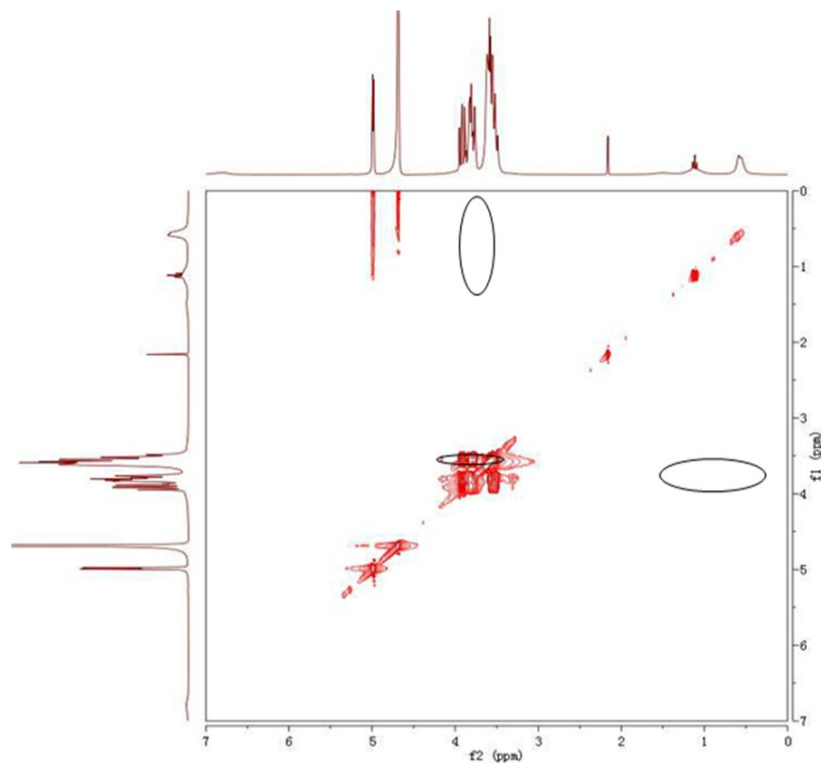


Figure S4 2D ^1H - ^1H ROESY NMR result of 10 mg mL^{-1} α -CD/ 6 mg mL^{-1} Tyloxapol mixed system in D_2O .

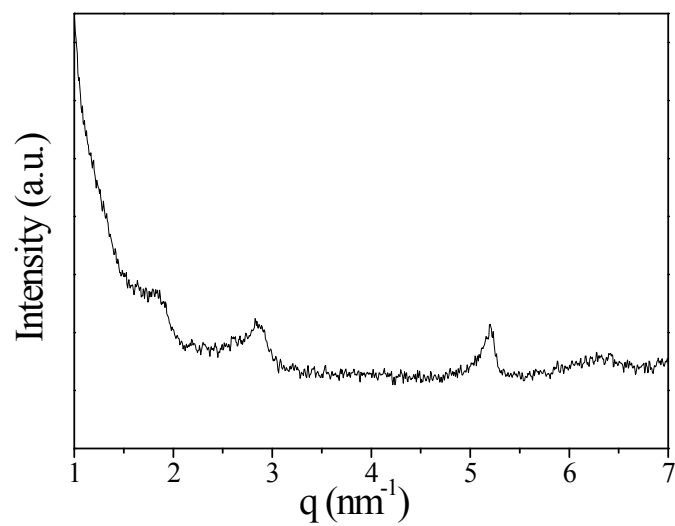


Figure S5 SAXS result of freeze-dried hydrogels of 100 mg mL^{-1} α -CD/ 40 mg mL^{-1} Tyloxapol

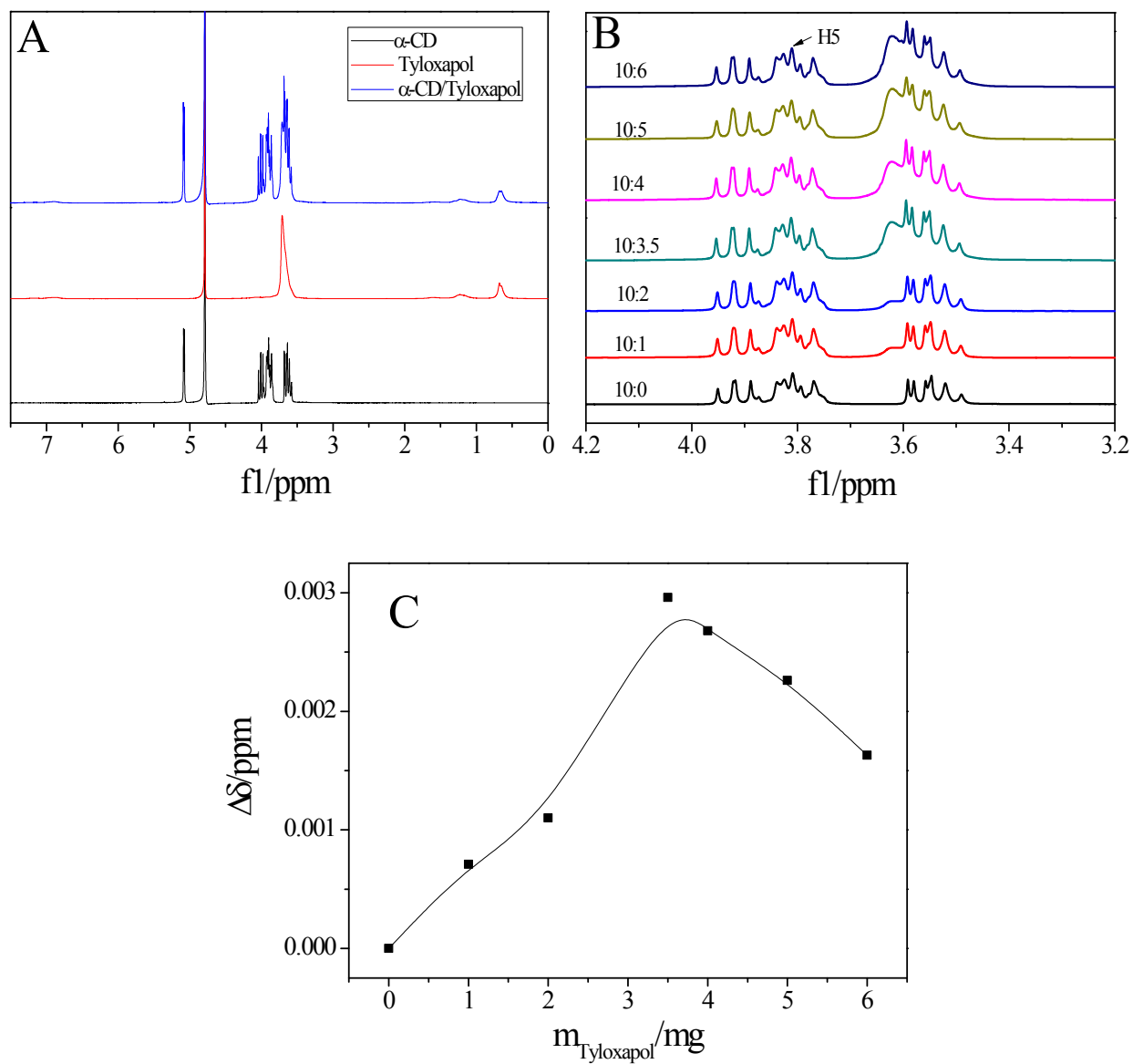


Figure S6 ^1H NMR results of (A) α -CD, Tyloxapol and α -CD/Tyloxapol in D_2O , (B) The amplification part of A (3.2-4.2 ppm of ^1H NMR results). (C) The chemical shifts change of α -CD H5 versus Tyloxapol concentration ($C_{\alpha\text{-CD}} = 10 \text{ mg mL}^{-1}$).

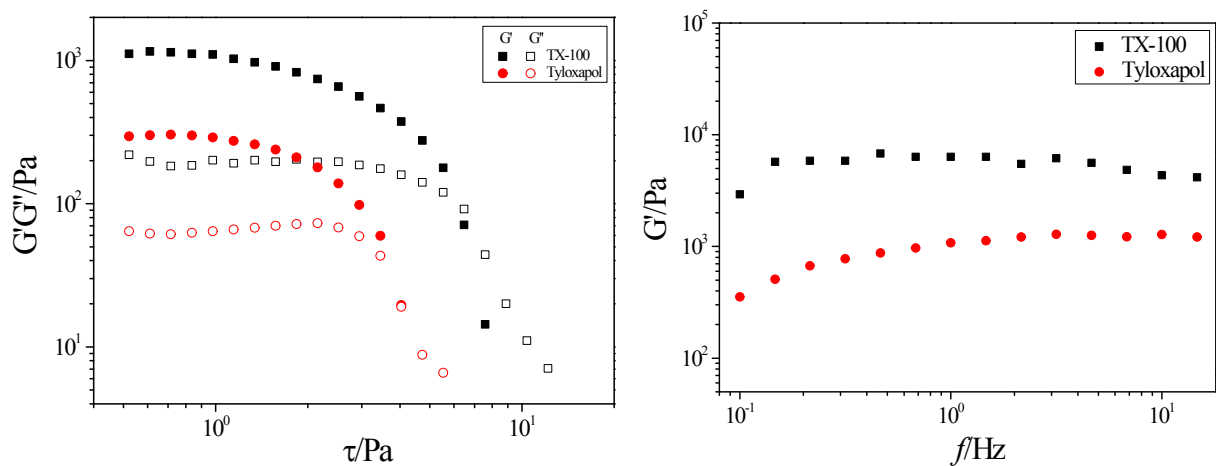


Figure S7 Rheological results of hydrogels with 15 mg mL^{-1} of TX100 or Tyloxapol and fixed concentration of α -CD at 100 mg mL^{-1} : (A) G' and G'' as a function of the applied stress at a constant frequency (1.0 Hz) and (B) variation of G' as a function of frequency.

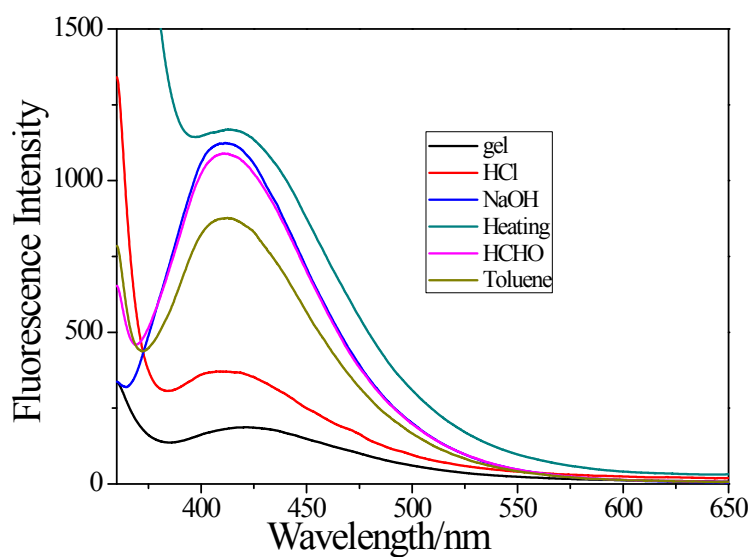


Figure S8 Fluorescence spectra of 100 mg mL^{-1} α -CD/ 15 mg mL^{-1} Tyloxapol hydrogels with different additives as indicated inset.