Supplementary Materials: A Smart pH-Responsive Three Components Luminescent Hydrogel

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1. Photos of Different Mole Ratio Gels

![Figure S1](image1.png)

**Figure S1.** Optical images of the multicomponent gel for different mole ratio, (a) NVPD:RF:MM = 1:0.3:2, [NVPD] = 6.7 × 10^{-3} mol/L, [RF] = 2 × 10^{-6} mol/L, [MM] = 1.3 × 10^{-2} mol/L; (b) NVPD:RF:MM = 1:1:2, [NVPD] = 6.7 × 10^{-3} mol/L, [RF] = 6.7 × 10^{-3} mol/L, [MM] = 1.3 × 10^{-2} mol/L; (c) NVPD: RF : MM = 1:2:2, [NVPD] =6.7 × 10^{-3} mol/L, [RF] =1.3 × 10^{-2} mol/L, [MM] =1.3 × 10^{-2} mol/L; (d) NVPD:RF:MM = 1:2:3, [NVPD] = 6.7 × 10^{-3} mol/L, [RF] = 1.3 × 10^{-2} mol/L, [MM] = 2 × 10^{-2} mol/L.

2. Addition Photos of the Two-Component Gelator Solution

![Figure S2](image2.png)

**Figure S2.** Optical images of the multicomponent gel for different ratio without ultrasound at the room temperature, (a) RF: MM = 2:2; (b) NVPD:MM =1:2; (c) NVPD: RF =1:2.
3. Addition Photos of the Three-Component Gel with Different Ratio

Figure S3. Optical images of the multicomponent gel for different ratio without ultrasound at the room temperature, (a) NVPD:RF:MM = 1:0.3:2; (b) NVPD:RF:MM = 1:1.2; (c) NVPD:RF:MM = 1:2.2; (d) NVPD:RF:MM = 1:2.3.

4. Addition Photos of the Three-Component Gel under 365nm UV Lamp with the Transition Gel-to-Sol Process

Figure S4. Fluorescence images of the gel ([NVPD] = 10^{-4} M) under 365 nm UV lamp of the transition process.

5. FT-IR Data

Figure S5. FT-IR spectra diluted with KBr for a NVPD/RF/MM= 1/2/2 xerogel (blue), NVPD (green), MM (black), RF (red).
6. Optical Images of the Different Mole Ratio Gel Reversible Process by Adjusting the pH

**Figure S5.** Optical images of the multicomponent gel for different ratio reversible process. (a) NVPD:RF:MM = 1:0.3:2; (b) NVPD:RF:MM = 1:1:2; (c) NVPD:RF:MM = 1:2:3.