Electronic Supplementary Information for

Rational Design of Multistimuli Responsive Organogels by Alternation of Hydrogen-bonding and Amphiphilic Properties

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Experimental section

Materials. Methyl 3,4,5-trihydroxybenzoate were purchased from Alfa Aesar. All other reagents and solvents (standard grade) were used as received unless otherwise stated.

Characterization Techniques. ^{1}H-NMR and ^{13}C-NMR spectra were recorded with a Bruker AVANCE-400 spectrometer. MS spectra were measured on a Agilent 6310 MS spectrometer and a Q-TOF MS spectrometer. Absorption spectra were recorded in a U-4100 HITACHI spectrophotometer.

The SEM image was measured with a Hitachi S-4800 field emission scanning electron microscope operated at 5 kV and JEOL-5600LV, operated at 15 kV. The sample was prepared as follows: a few drops of organogel were deposited on a clean Si substrate, and after the evaporation of the solvent the sample was sputtered with gold.

Syntheses. The synthetic route to **G1** was shown in Figure S1. The intermediates compound **2**, **3** and **4** were synthesized according to literatures [1, 2].

Synthesis of compound G1. Compound **4** (157.0mg, 0.7mmol) and **3** (482.4mg, 0.7mmol) were mixed in ethanol (20mL) and the solution was stirred under reflux conditions for 72 hours. After cooling to room temperature, the yellow precipitate was filtrated, washed with ethanol three times, then recrystallized with ethanol to get yellow powdery product **G1** (536.8mg, 0.60mmol) in 85% yield. ^{1}H-

NMR (400 MHz, $CDCl_3$): δ = 11.54 (1H, s), 9.20 (1H, s), 8.60 (1H, s), 7.97 (1H, m), 7.89 (1H, s), 7.87 (2H, s), 7.50 (3H, m), 7.04 (2H, s), 4.01 (6H, m), 1.78 (6H, m), 1.26 (54H, s), 0.88 (9H, m); ^{13}C-NMR (100MHz, $CDCl_3$): δ = 153.27, 152.37, 154.70, 141.91, 130.64, 129.09, 126.95, 126.60, 126.35, 122.60, 118.10, 117.57, 106.03, 73.63, 69.42, 31.94, 30.37, 29.76, 29.73, 29.71, 29.68, 29.61, 29.45, 29.38, 26.10, 22.70, 14.11; MALDI-TOF-MS m/z calc. for $C_{56}H_{88}N_4O_5$[M+Na^+]: 919.6652, found: 919.6685.

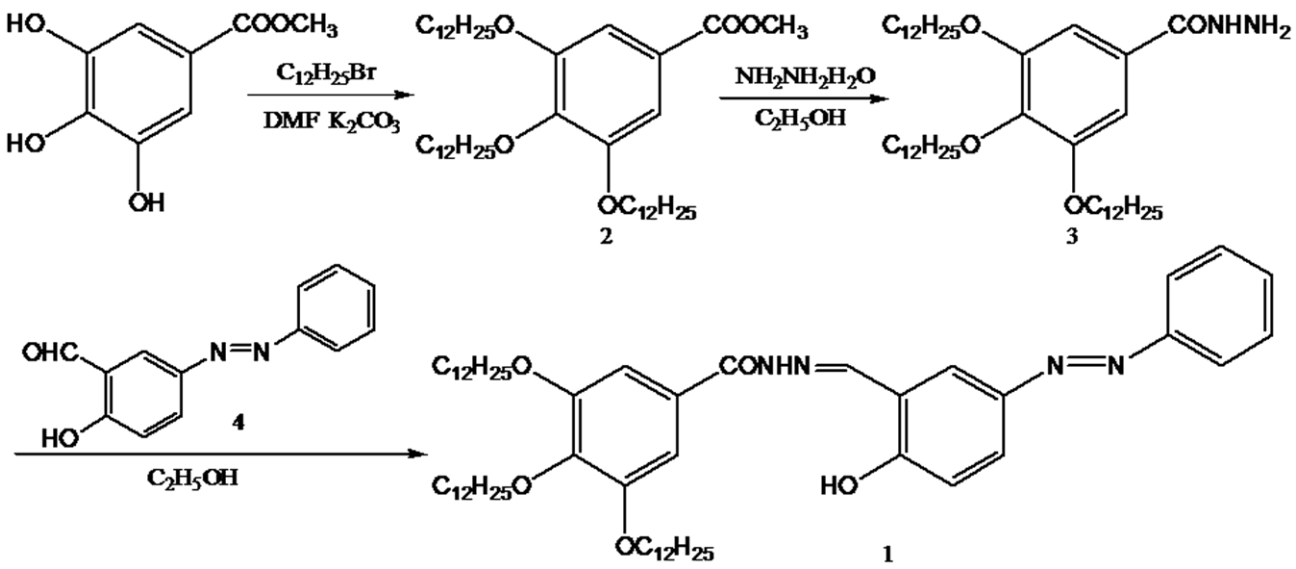

Figure S1. Synthetic route to **G1**.

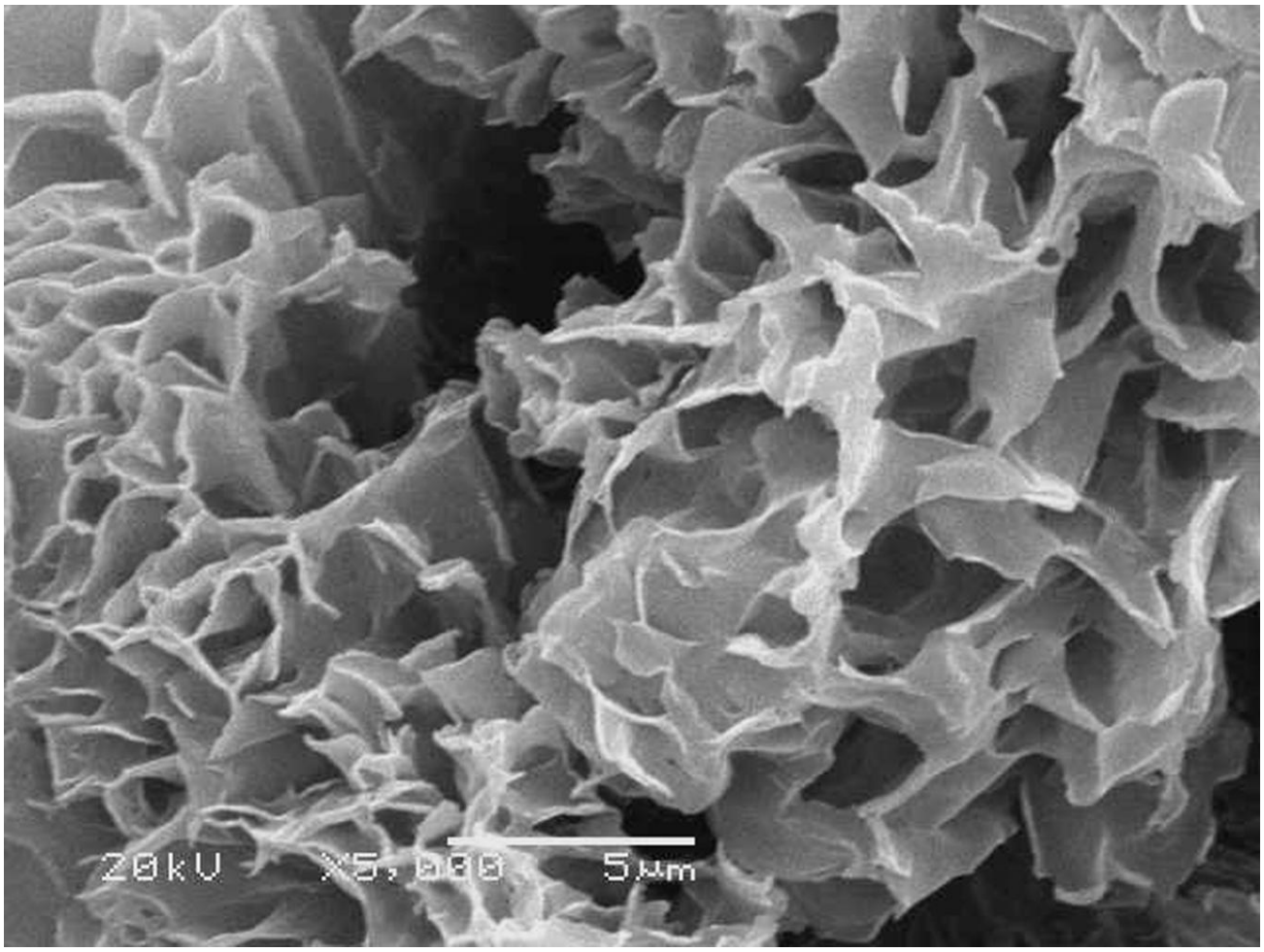

Figure S2. SEM image of the xerogel **G1**.

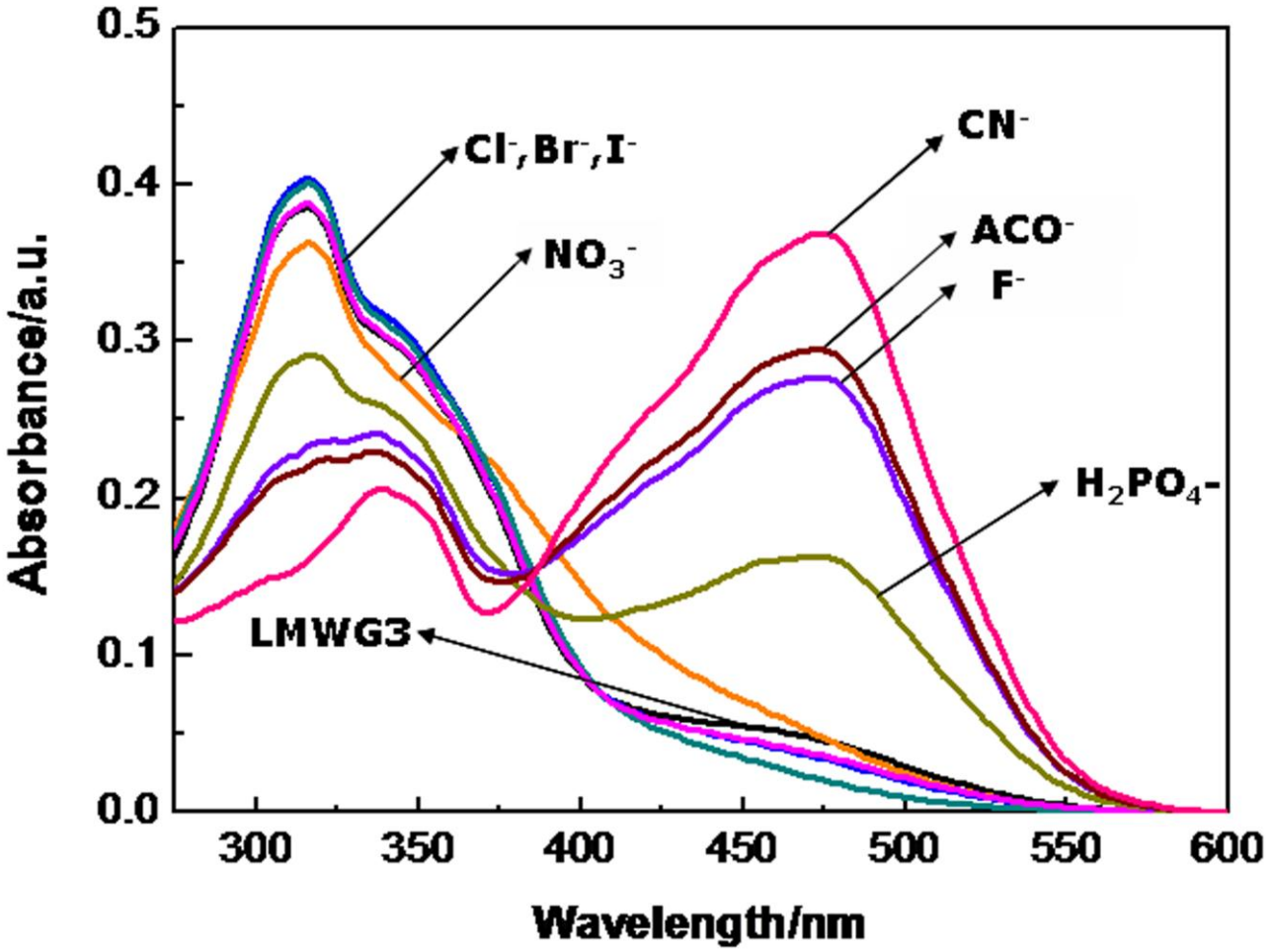

Figure S3. UV-Vis absorption spectra of **G1** (1×10^{-5}M) in the presence of 5 equiv of various anions in MeCN at room temperature.

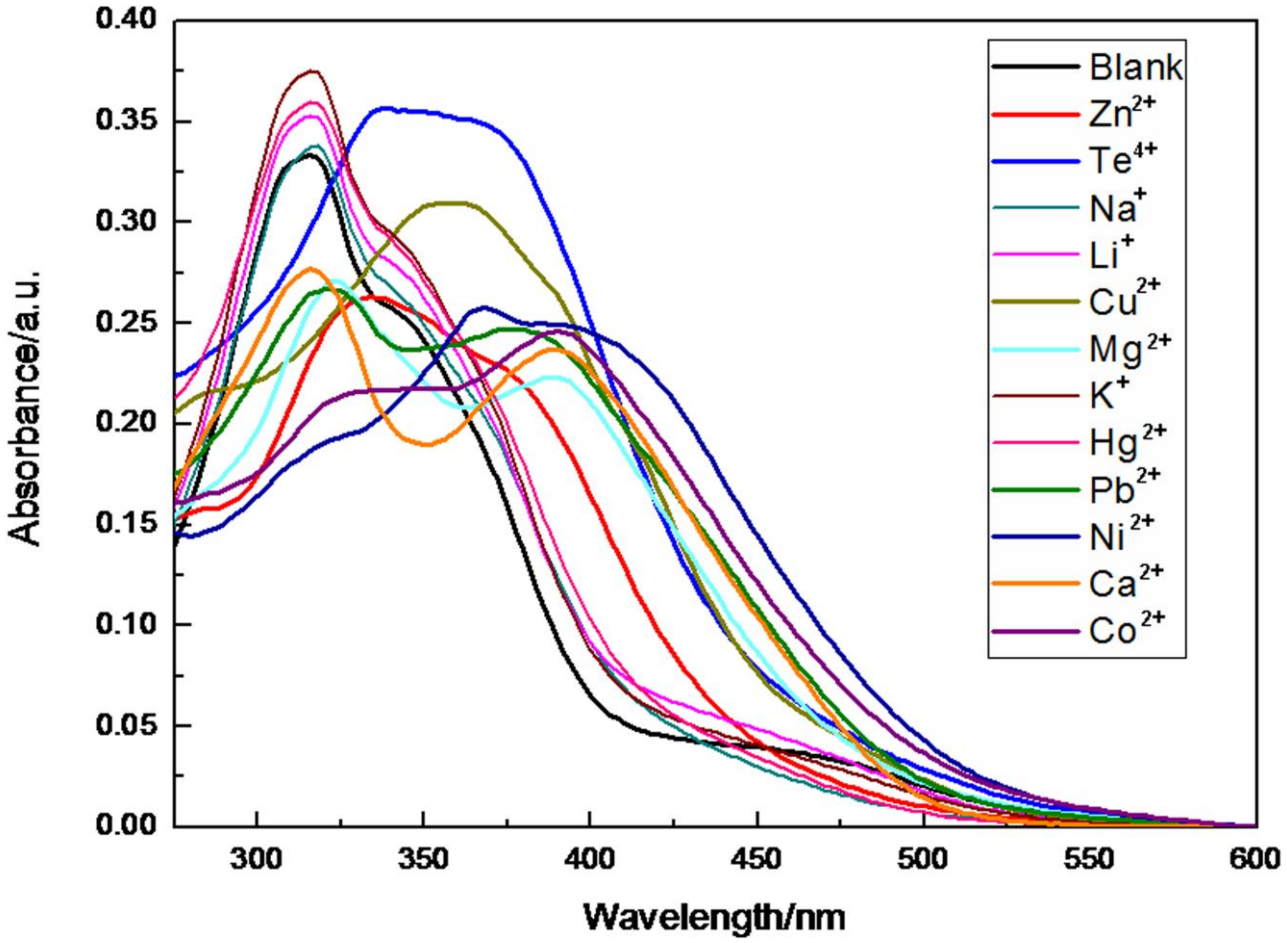

Figure S4. UV-Vis absorption spectra of **G1** (1×10^{-5}M) in the presence of 5 equiv. of various metal ions in MeCN at room temperature.

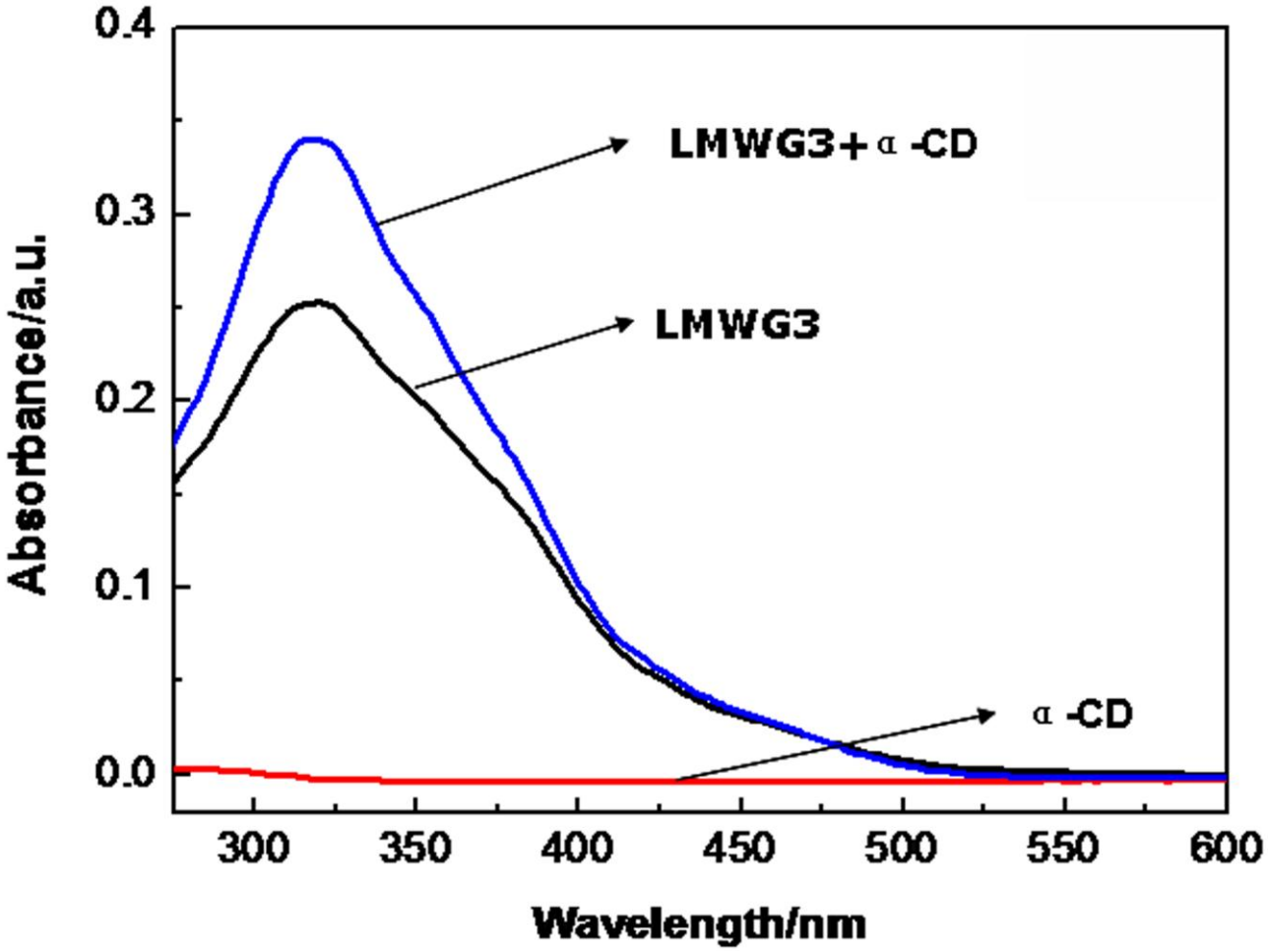

Figure S5. UV-Vis absorption of **G1** (1×10^{-5}M) in the presence of 5 equiv. of α-CD in DMSO at room temperature.

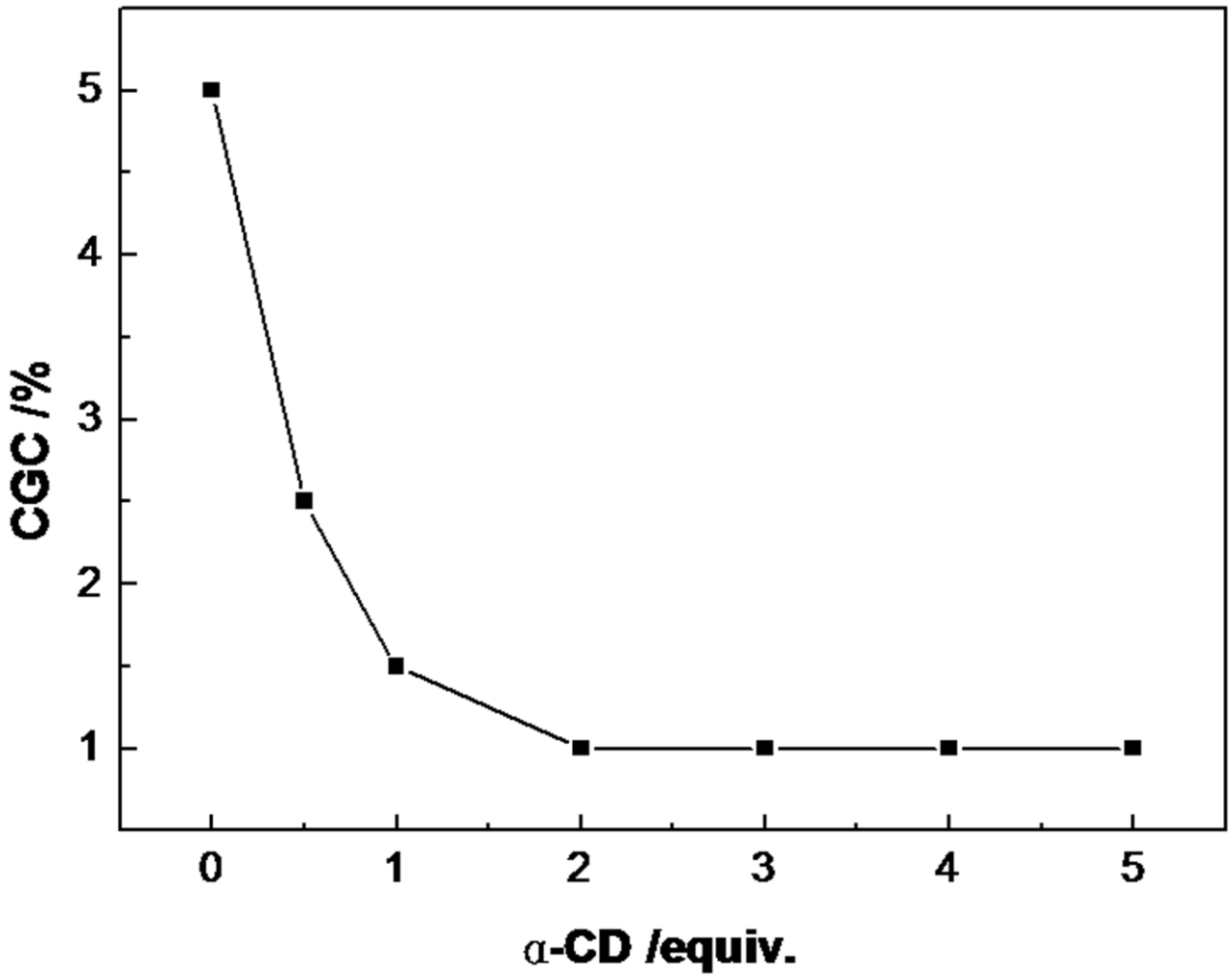

Figure S6. Influence of Gelation properties of **G1** on adding α-CD.

References

1. V. Percec, M. Peterca, Y. Tsuda, B. M. Rosen, S. Uchida, M. R. Imam, G. Ungark and P. A. Heiney, *Chem. Eur. J,*. 2009, **15**, 8994.
2. X. Zhang and M. Li, *Journal of Molecular Structure,* 2008, **892**, 490.