

Electronic Supplementary Information

Morphological evolutions from nano ribbon, ordered nano thread, tube to vesicle via manipulation of the self-assembly between an adamantane based gelator and cyclodextrin

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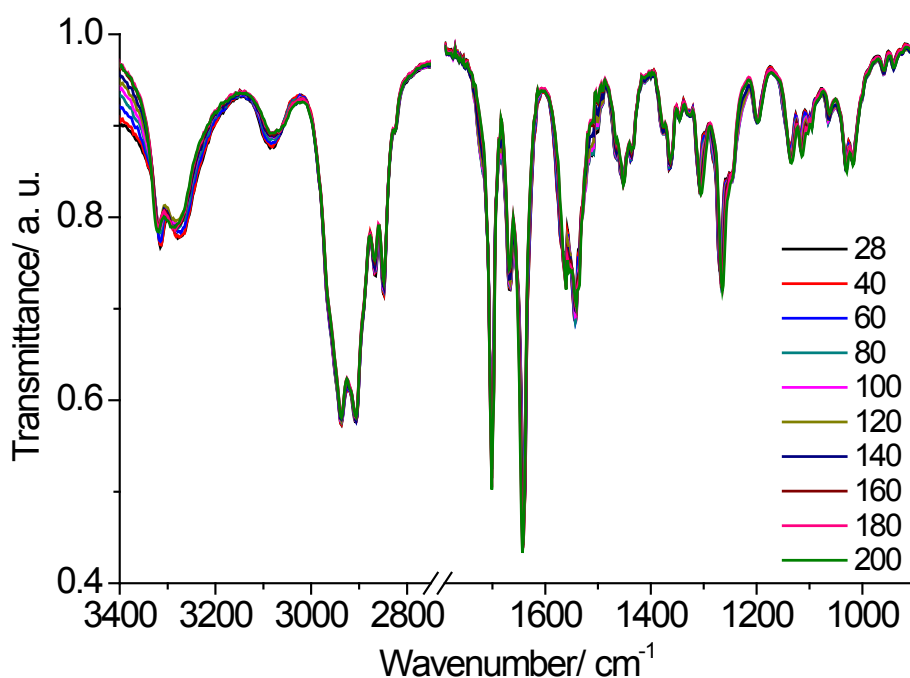


Fig. S1 Temperature dependent IR spectra of S-xerogel of **1** in the temperature range of 28-200 °C.

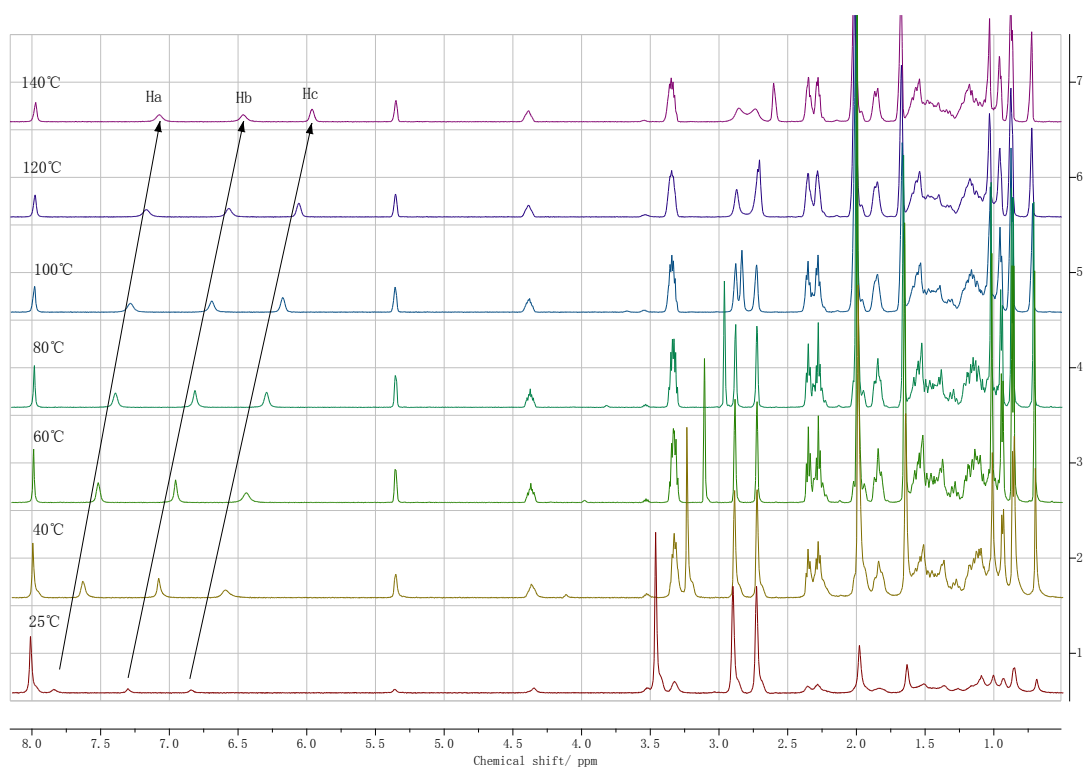


Fig. S2 Temperature dependent ^1H NMR spectra of gel **1** in DMF-d_7 (20 mg/mL).

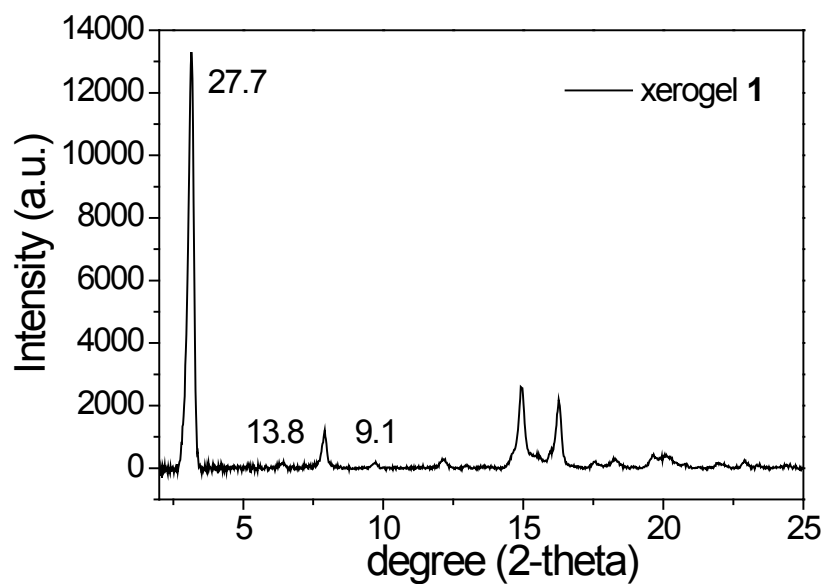


Fig. S3 XRD profile of S-xerogel of **1** in the 2θ range of 2 – 25° .

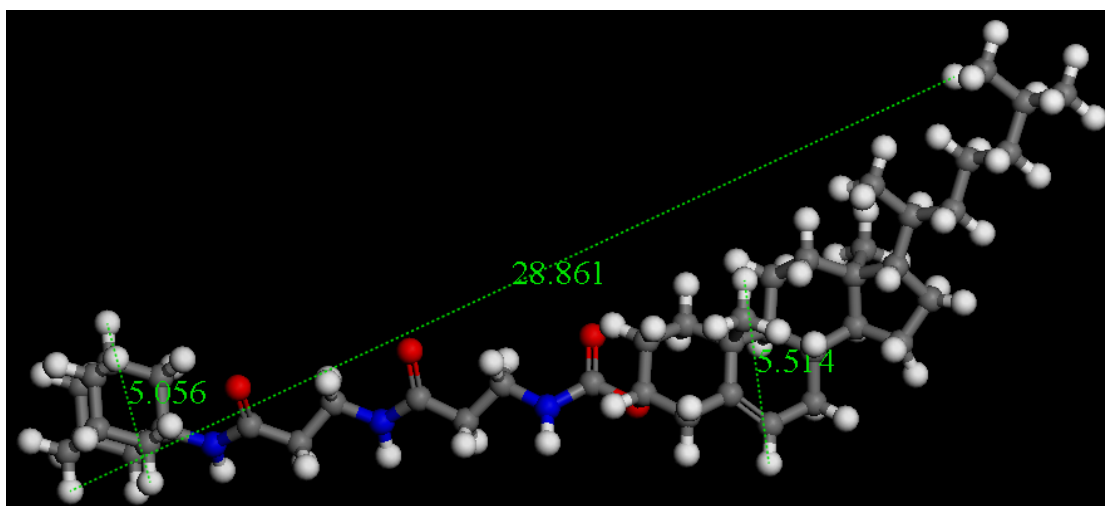


Fig. S4 Computer stimulation of molecule **1** by the materials studio

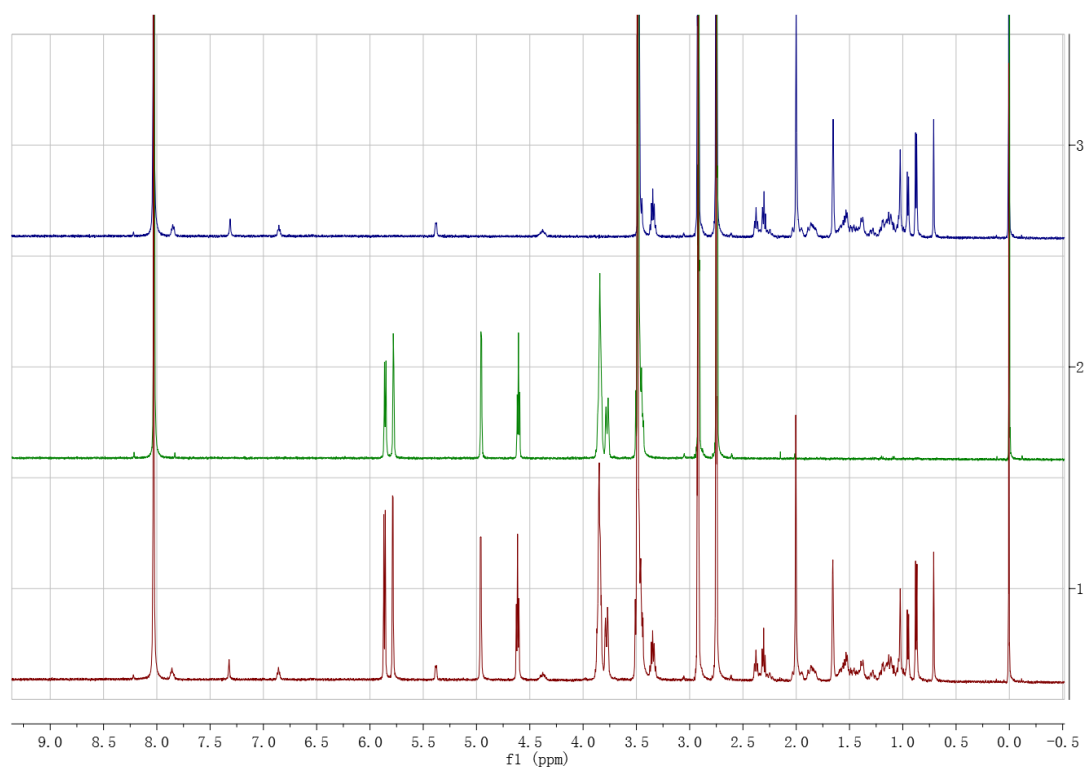


Fig.S5 the ¹H NMR spectra of Gel **1** (blue line); β-CD (green line); **1**+β-CD (red line) in DMF-d₇.

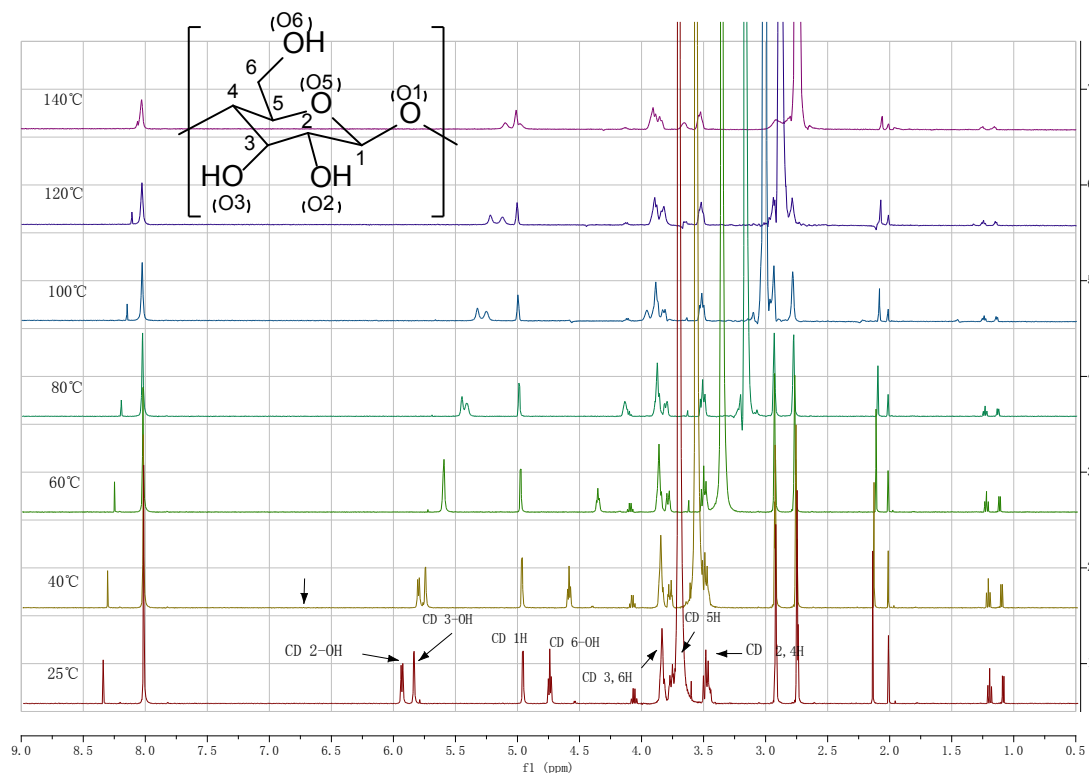


Fig. S6 Temperature dependent ^1H NMR spectra of β -CD in DMF- d_7 from 25 – 140 $^{\circ}\text{C}$.

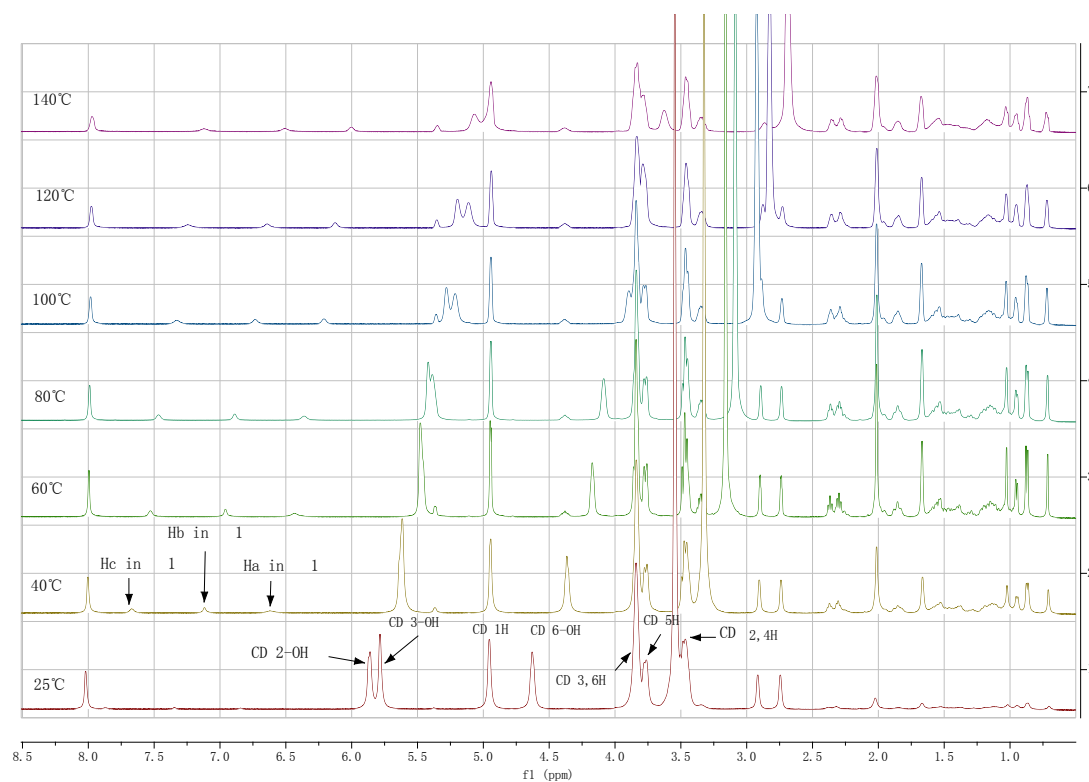


Fig. S7 Temperature dependence of the ^1H NMR spectra of Gel which formed by molecular **1** + β -CD in N,N-Dimethylformamide, heated and ultrasound. (20 mg/mL $T_g = 53.3$ $^{\circ}\text{C}$) 1, 25 $^{\circ}\text{C}$; 2, 40 $^{\circ}\text{C}$; 3, 60 $^{\circ}\text{C}$; 4, 80 $^{\circ}\text{C}$; 5, 100 $^{\circ}\text{C}$; 6, 120 $^{\circ}\text{C}$; 7, 140 $^{\circ}\text{C}$.

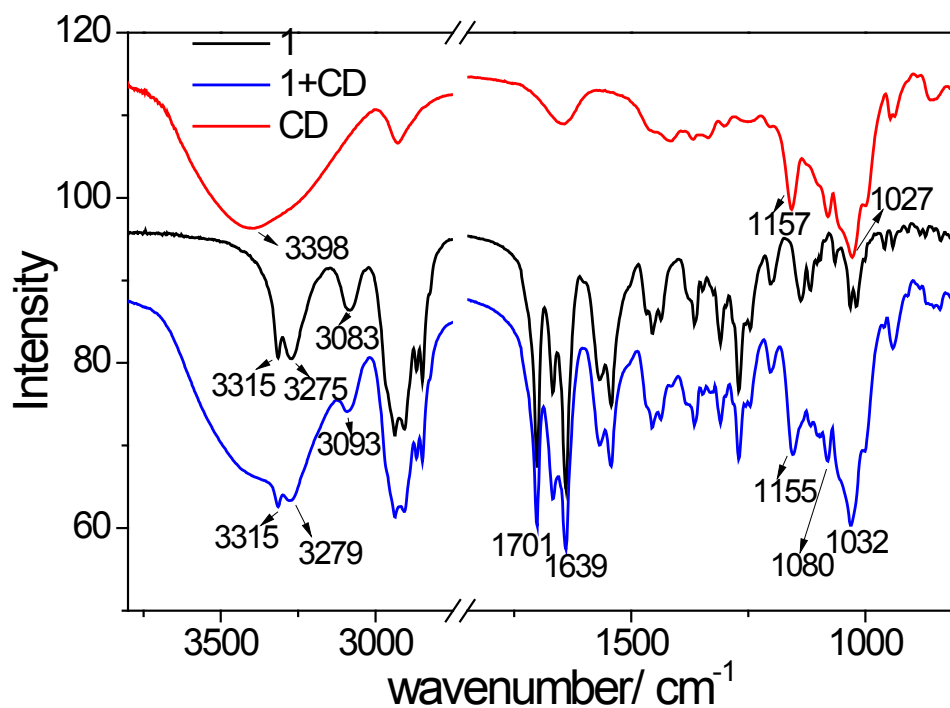


Fig. S8 IR spectra of S-xerogel of **1** and $1+\beta$ -CD treated by ultrasound.

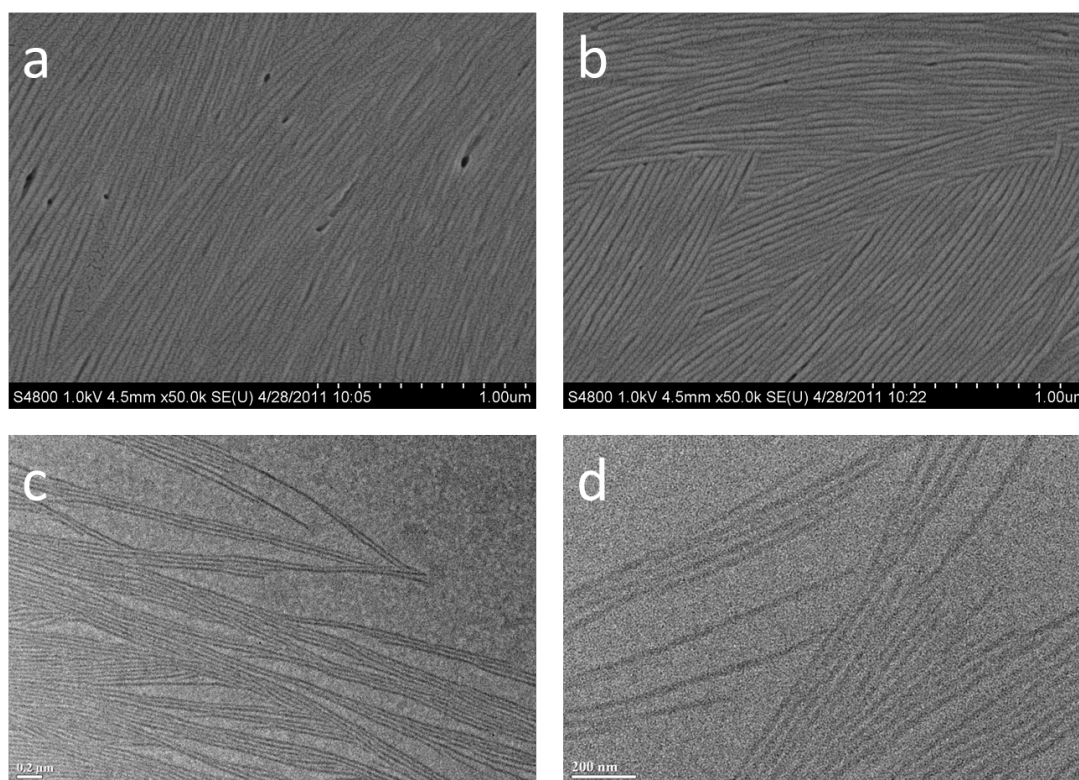


Fig. S9 SEM and TEM images of **1** in DMF with addition different kind of CD (a,c) α -CD; (b,d) γ -CD. Scale bar: 1000 nm, 1000 nm, 200 nm, 200 nm for a, b, c, d respectively.

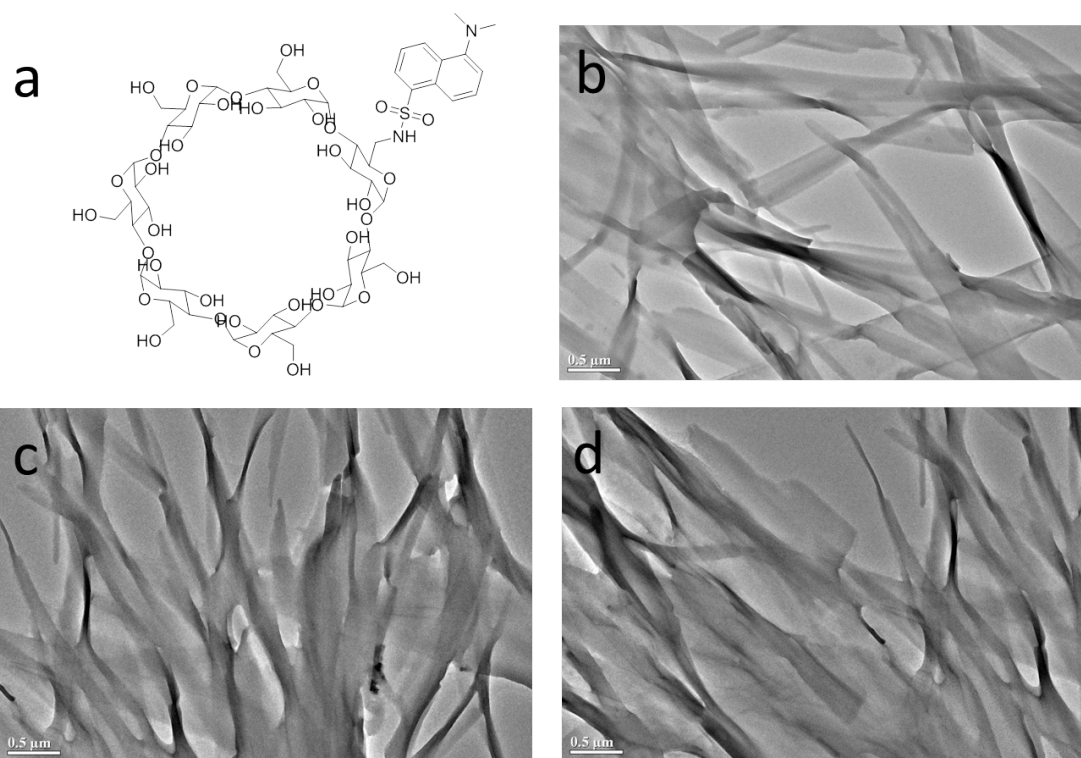


Fig. S10 (a) The structure of β -CD-DNS; (b, c, d) TEM images of **1** in DMF with addition β -CD-DNS. Scale bar: 500 nm for b, c, d.

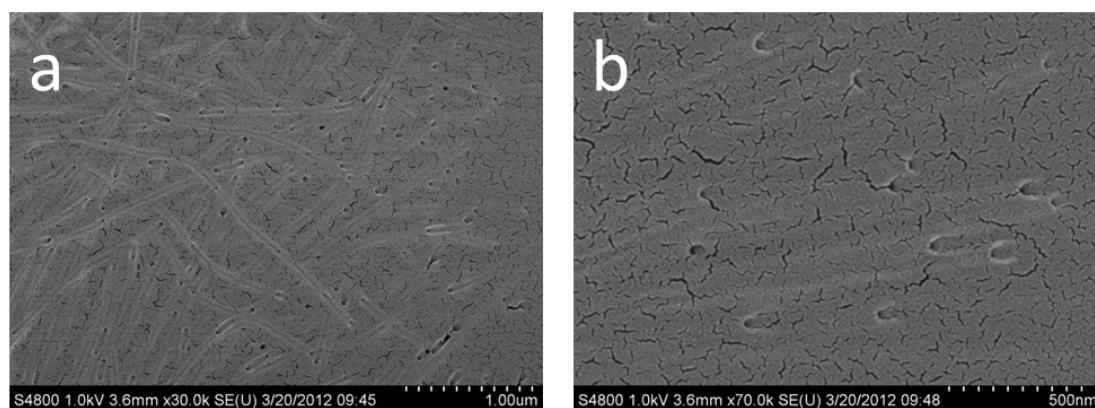


Fig. S11 SEM images of **1**+ β -CD in DMF with addition a certain amount of water with a volume ratio of DMF: H_2O (a,b) 1: 0.5, Scale bar: 1000, 500 nm for a, b respectively.

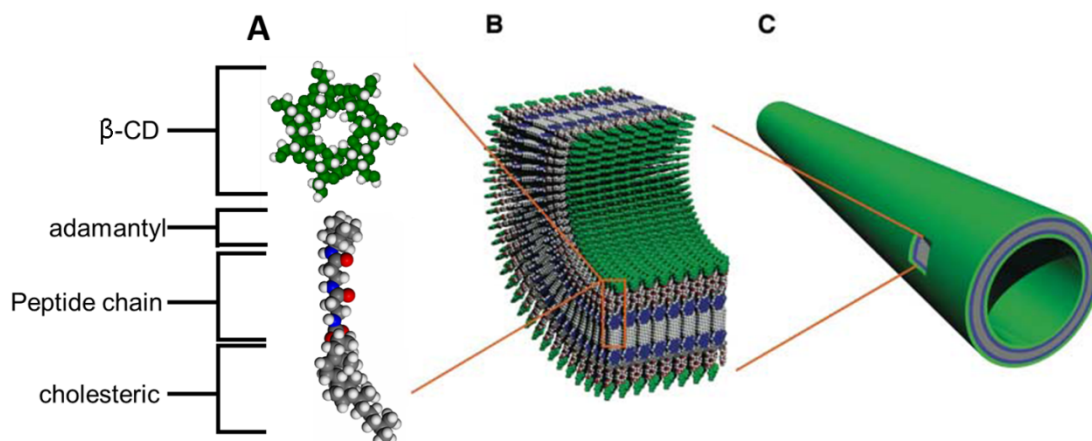


Fig. S12 The proposed structure of nanotube by 1+ β -CD with addition of water.

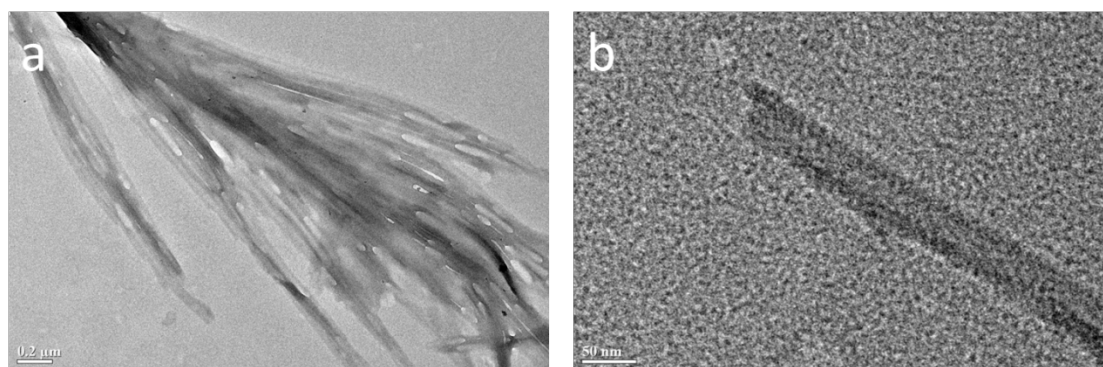


Fig. S13 TEM images of 1+ β -CD-DNS in DMF with addition a certain amount of water with a volume ratio of DMF: H₂O (a,b) 1: 0.5, Scale bar: 200, 50 nm for a, b respectively.

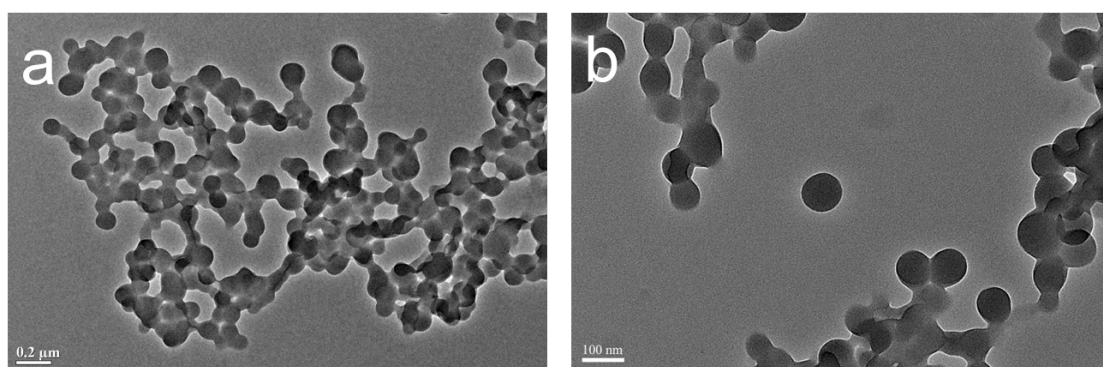


Fig. S14 TEM images of 1+ β -CD in DMF with addition a certain amount of water with a volume ratio of DMF: H₂O (a,b) 1: 1.5, Scale bar: 200, 100 nm for a, b respectively.