Supplementary Material (ESI) for New Journal of Chemistry

Supporting Information for:

D-sorbitol, a structurally simple, low molecular-mass gelator

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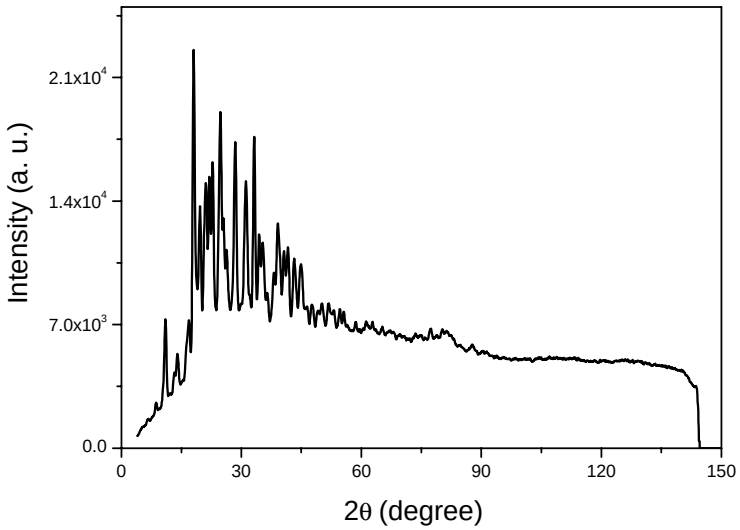

Figure S1. X-rays diffraction pattern of neat D-sorbitol powder.

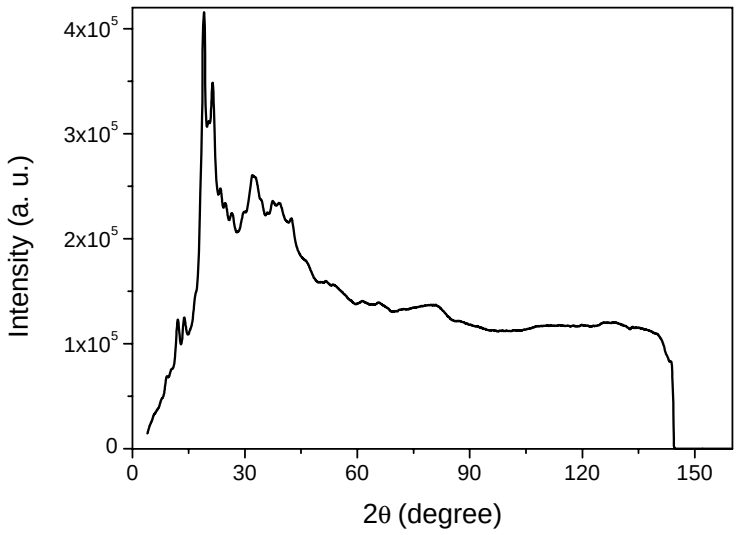

Figure S2. X-Ray diffraction pattern of D-sorbitol one day after being heated above its melting point and cooled to room temperature.

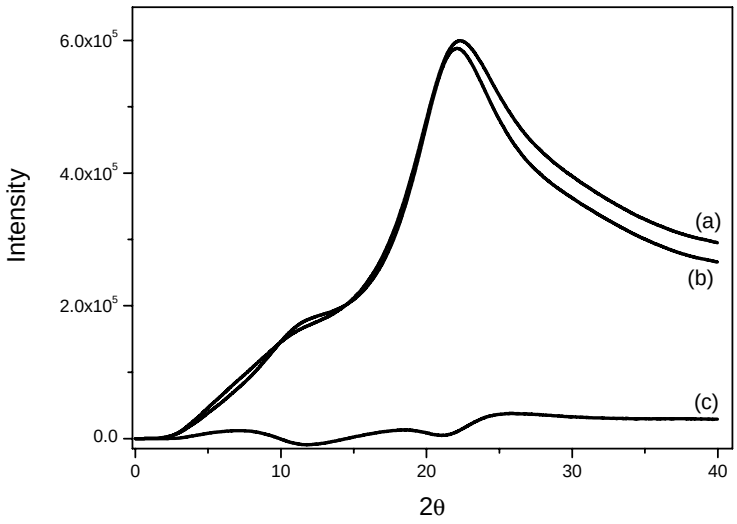

Figure S3. X-ray diffraction patterns at room temperature of (a) a 2.5 wt% D-sorbitol gel in ethanol, (b) neat ethanol, and (c) the result from subtraction of diffractogram (b) from diffractogram (a).

Although there must be some reorganization of the fibers during the 10 h periods of data collection to obtain the diffractograms in Figs. S1-S3, it is reasonable to assume that the packing arrangement within the fibers does not change. After empirical subtraction of the diffractogram of neat ethanol (Figure S3b) from that of the gel (Figure S3a), the diffractogram of primarily the D-sorbitol SAFIN was obtained (Figure S3c). The diffractogram of neat D-sorbitol (Figure S1) and of D-sorbitol that had been melted and cooled (Figure S2) are well structured. Figure S3c yields no definitive structural information—it lacks sharp diffraction peaks—that can be correlated with that of neat sorbitol. Possible explanations of this observation are included in the main text.

Table S1. Ratio of the intensities of the fluorescence peaks at ca. 505 and 420 nm (y_2/y_1) observed at 2 different excitation wavelengths as a function of time for a solution of 0.5 wt% of D-sorbitol in ethanol.

Time (h)	y_2/y_1 λ_{ex} = 330 nm	y_2/y_1 λ_{ex} = 370 nm
0	1.23	4.1
1	1.25	4.24
2	1.25	4.11
3	1.21	4.09
4	0.67	3.84
5	1.24	3.59
6	1.25	3.69
7	1.23	3.69
8	1.23	3.7
9	1.22	3.69
10	1.18	3.72
11	1.17	3.73
12	1.18	3.72
13	1.16	3.69
14	1.16	3.72
15	1.15	3.7
16	1.16	3.67
17	1.15	3.68
18	1.2	3.65
19	1.19	3.63
20	1.27	3.6
21	1.26	3.58
22	1.27	3.57
23	1.26	3.57
24	1.25	3.58
48	1.27	3.53
72	1.2	3.6
96	1.12	3.58
120	1.15	3.65
144	1.18	3.63
168	1.14	3.7
336	0.83	2.9
504	0.87	2.91
672	0.87	2.88

Table S2. Ratio of the intensities of the fluorescence peaks at ca. 505 and 420 nm (y_2/y_1) observed at 2 different excitation wavelengths as a function of time for a solution of 3.5 wt% of D-sorbitol in ethanol (Figure 12 of the paper). The first and the second column report the values of the Relative Intensities (y_2/y_1) collected with an excitation wavelength of 370 nm and 330 nm respectively.

Time (h)	y_2/y_1 λ_{ex} = 330 nm	y_2/y_1 λ_{ex} = 370 nm
0	0.43	1.71
1	0.44	1.72
2	0.44	1.66
3	0.41	1.53
4	0.32	1.43
5	0.31	1.42
6	0.39	1.34
7	0.39	1.39
8	0.35	1.4
9	0.35	1.42
10	0.35	1.43
11	0.35	1.44
12	0.35	1.44
13	0.35	1.45
14	0.34	1.44
15	0.36	1.45
16	0.36	1.46
17	0.35	1.45
18	0.35	1.46
19	0.35	1.47
20	0.36	1.47
21	0.36	1.48
22	0.36	1.48
23	0.36	1.48
24	0.36	1.47
48	0.36	1.52
72	0.36	1.51
96	0.38	1.52
120	0.38	1.51
144	0.35	1.52
168	0.39	1.46
336	0.4	1.4
504	0.39	1.32
672	0.37	1.31

Table S3. Ratio of the intensities of the fluorescence peaks at ca. 505 and 420 nm (y_2/y_1) observed at 2 different excitation wavelengths as a function of time for a gel containing 3.5 wt% D-sorbitol in ethanol (Figure 13).

Time (h)	y_2/y_1 λ_{ex} = 330 nm	y_2/y_1 λ_{ex} = 370 nm
0	0.46	1.19
1	0.46	1.19
2	0.46	1.19
3	0.46	1.2
4	0.44	1.2
5	0.44	1.21
6	0.44	1.2
7	0.44	1.21
8	0.44	1.2
9	0.44	1.2
10	0.45	1.21
11	0.43	1.2
12	0.44	1.2
13	0.43	1.2012
14	0.44	1.2
15	0.44	1.21
16	0.44	1.2
17	0.43	1.2
18	0.42	1.2
19	0.42	1.2
20	0.4	1.2
21	0.42	1.21
22	0.41	1.21
23	0.42	1.2
24	0.42	1.2
0	0.46	1.19
1	0.46	1.19
2	0.46	1.19
3	0.46	1.2
4	0.44	1.2
5	0.44	1.21
6	0.44	1.2
7	0.44	1.21
8	0.44	1.2

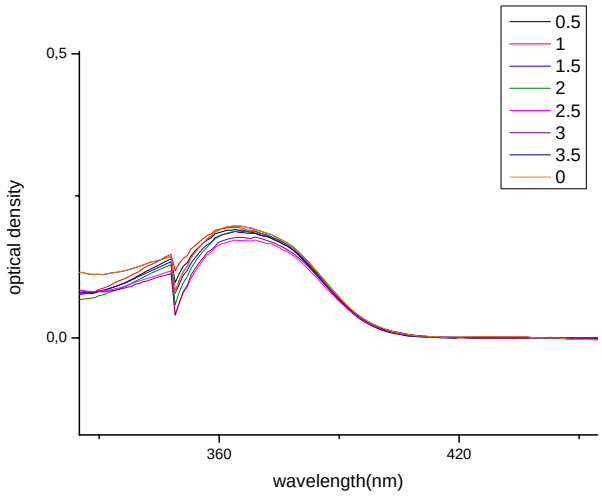

Figure S4. UV-vis absorption spectra of 10^{-3} M 3,2-HNA and different wt%s of D-sorbitol (as indicated in the inset) in ethanol. The dip at 350 nm is due to an instrumental artefact.