Electronic Supplementary Material (ESI) for New Journal of Chemistry.

Naphthalimide-based Fluorescent Nanoprobes for the Detection of Saccharide

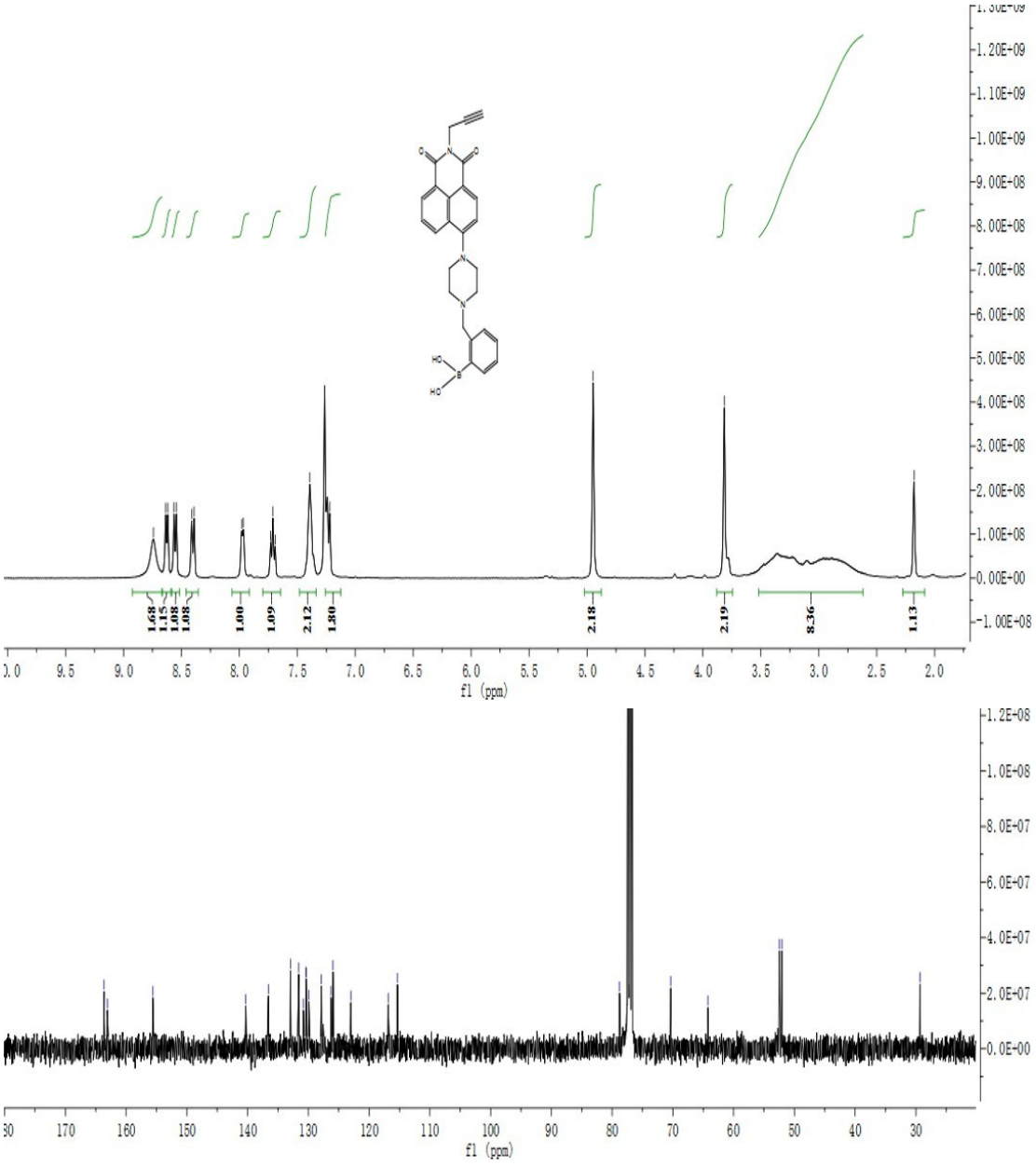
Zichun Qiao, Zhaoyang Chen, Shuo Zhang, Zepeng Cui, Zhuoran Xu, Weibing Zhang*, Junhong Qian*

Shanghai Key Laboratory of Functional Materials Chemistry, School of Chemistry & Molecular Engineering, East China University of Science and Technology, Shanghai 200237, China

E-mail: junhongqian@ecust.edu.cn

Tel: +86-21-64252331; Fax: +86-21-64233161

Supporting Information



Monoisotopic Mass, Even Electron Ions
30 formula(e) evaluated with 1 results within limits (up to 1 closest results for each mass)
Elements Used:
C: 0-26 H: 0-25 11B: 0-1 N: 0-3 O: 0-4

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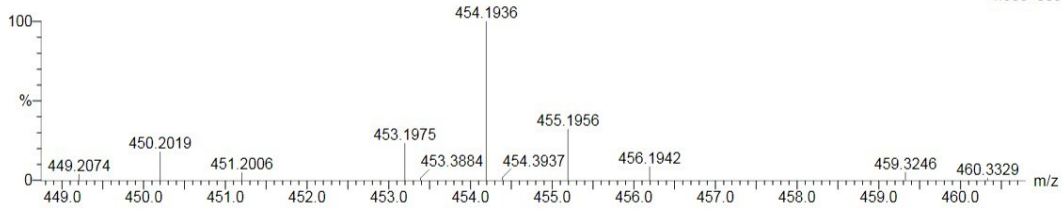
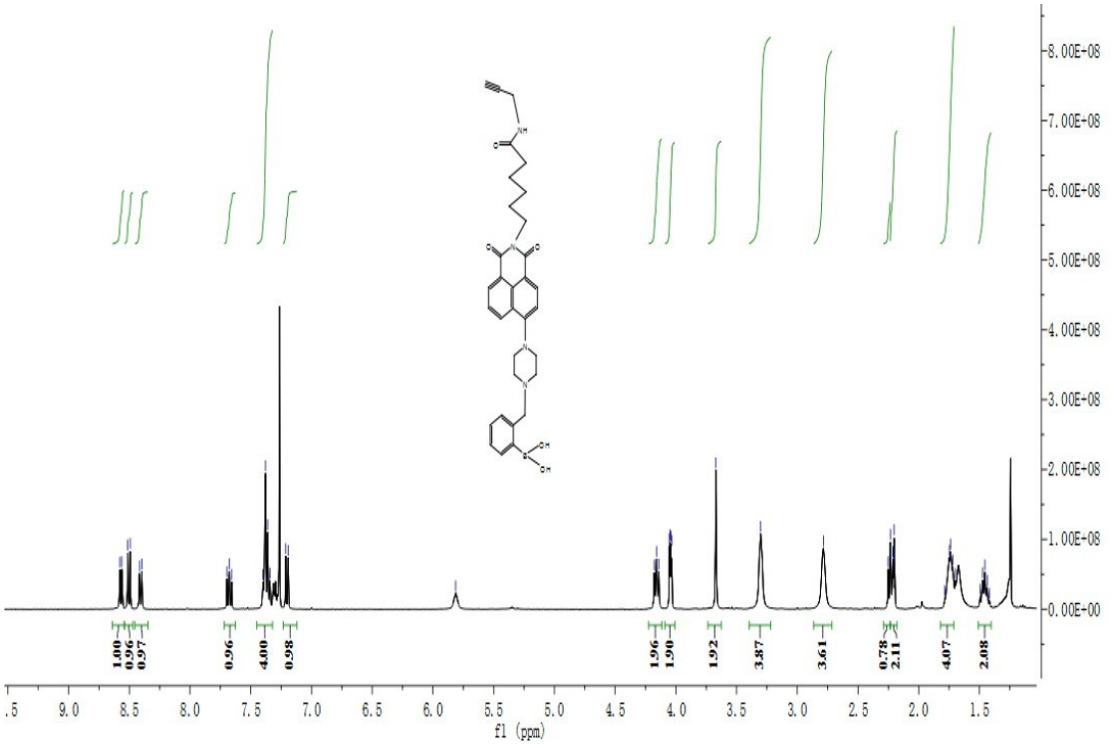
ZWB-CZY-24 19 (0.205) Cm (17:19) 1: TOF MS ES+ 4.33e+003



Minimum:				-1.5			
Maximum:		300.0	50.0	100.0			
Mass	Calc. Mass	mDa	PPM	DBE	i-FIT	i-FIT (Norm)	Formula
454.1936	454.1938	-0.2	-0.4	16.5	16.7	0.0	C26 H25 11B N3 O4

Fig. S1 ^{1}H-NMR, ^{13}C-NMR and HR-MS spectra of NP-A.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6.00E-08
5.00E-08
4.00E-08
3.00E-08
2.00E-08
1.00E-08
0.00E-00
1.00
0.96
0.97
0.96
4.00
0.98
1.96
1.90
1.92
3.87
3.61
0.78
2.11
4.07
2.08
9.0
8.5
8.0
7.5
7.0
6.5
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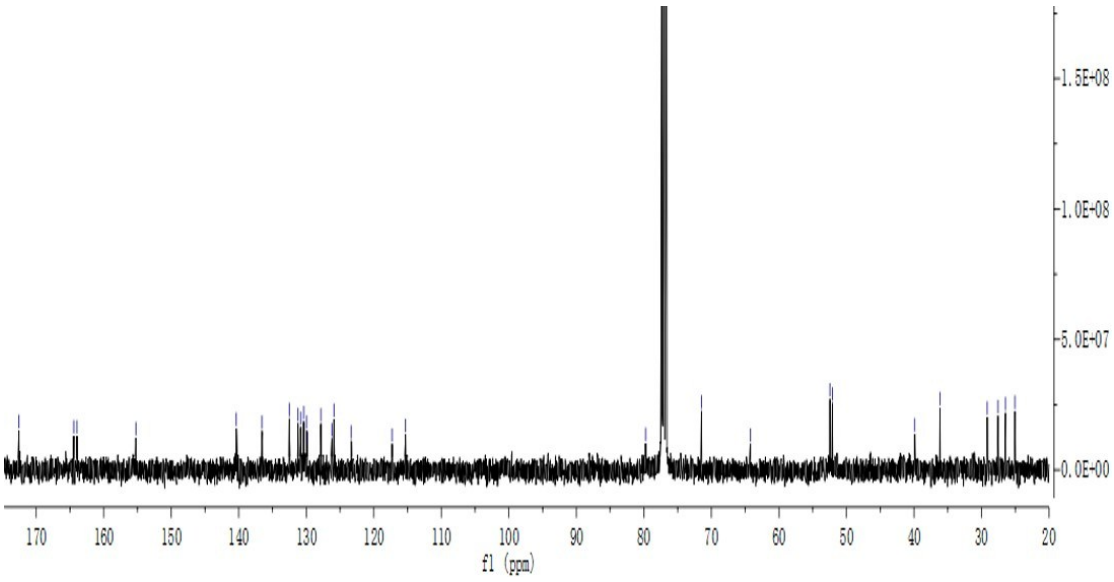
4.5
4.0
3.5
3.0
2.5
2.0
1.5
f1 (ppm)


1.5E-08
1.0E-08
5.0E-07
0.0E-00
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
f1 (ppm)

Monoisotopic Mass, Even Electron Ions
43 formula(e) evaluated with 6 results within limits (up to 1 closest results for each mass)
Elements Used:
C: 0-35 H: 0-37 N: 0-6 O: 0-5 B: 1-1

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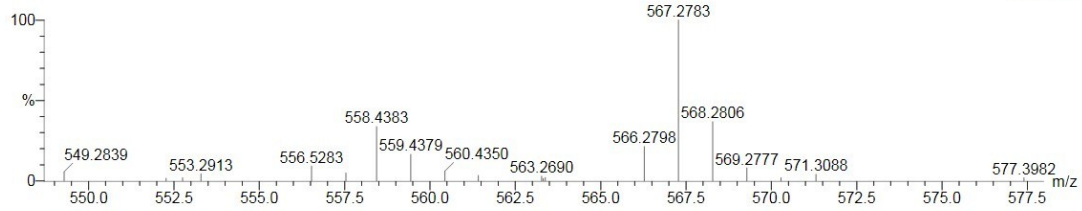
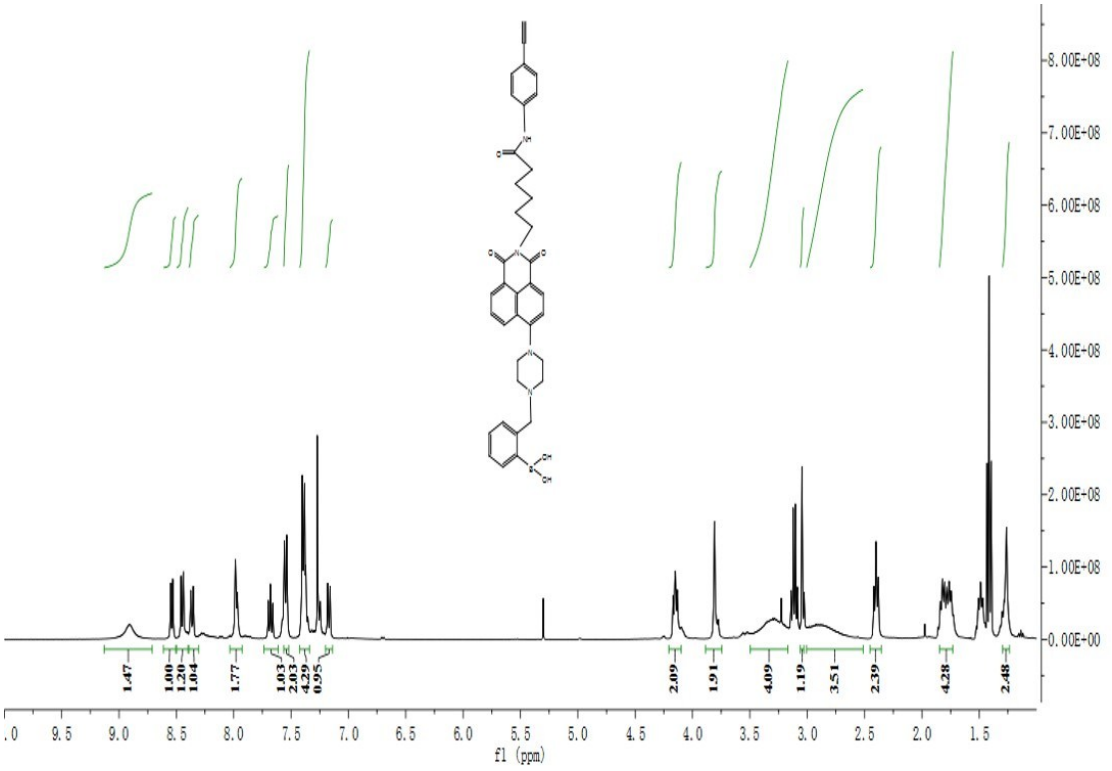
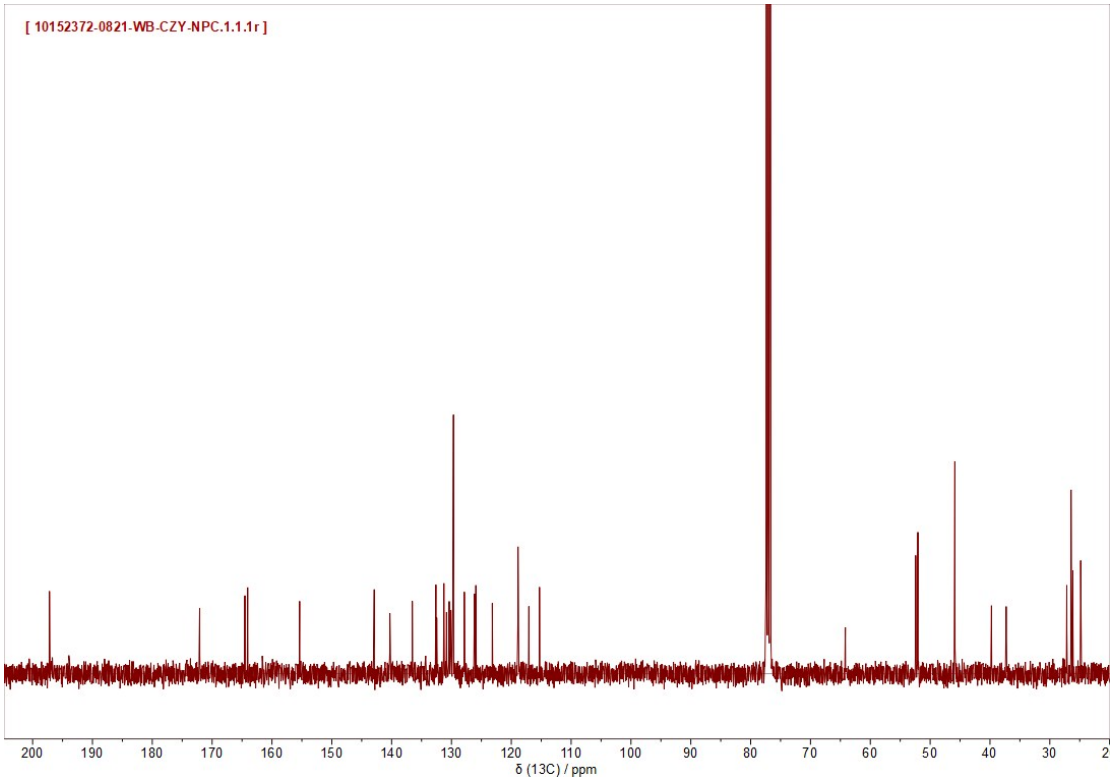
WB-CZY-36 54 (1.758) Cm (53:56) 1: TOF MS ES+ 3.17e+003



Minimum:				-1.5			
Maximum:		300.0	50.0	100.0			
Mass	Calc. Mass	mDa	PPM	DBE	i-FIT	i-FIT (Norm)	Formula
567.2783	567.2779	0.4	0.7	17.5	18.6	0.0	C32 H36 N4 O5 B

Fig. S2 ^{1}H-NMR, ^{13}C-NMR and HR-MS spectra of NP-B.


1.47
1.00
1.20
1.04
1.77
1.03
2.03
4.29
0.95
2.09
1.91
4.09
1.19
3.51
2.39
4.28
2.48
f1 (ppm)


[10152372-0821-WB-CZY-NPC.1.1.1r]
δ (13C) / ppm

Monoisotopic Mass, Even Electron Ions
21 formula(e) evaluated with 1 results within limits (up to 1 best isotopic matches for each mass)
Elements Used:
C: 0-37 H: 0-40 B: 1-1 N: 0-4 O: 0-5

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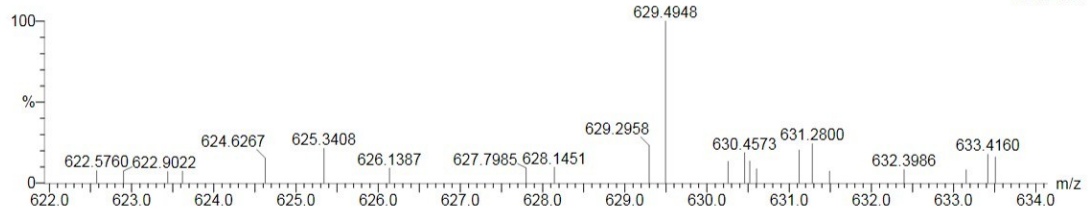
WB-CZY-51 4 (0.200) Cm (4) 1: TOF MS ES+ 5.54e+001



Minimum:				-1.5			
Maximum:		300.0	500.0	100.0			
Mass	Calc. Mass	mDa	PPM	DBE	i-FIT	i-FIT (Norm)	Formula
629.2958	629.2935	2.3	3.7	21.5	44.1	0.0	C37 H38 B N4 O5

Fig. S3 ^{1}H-NMR and HR-MS spectra of NP-C.

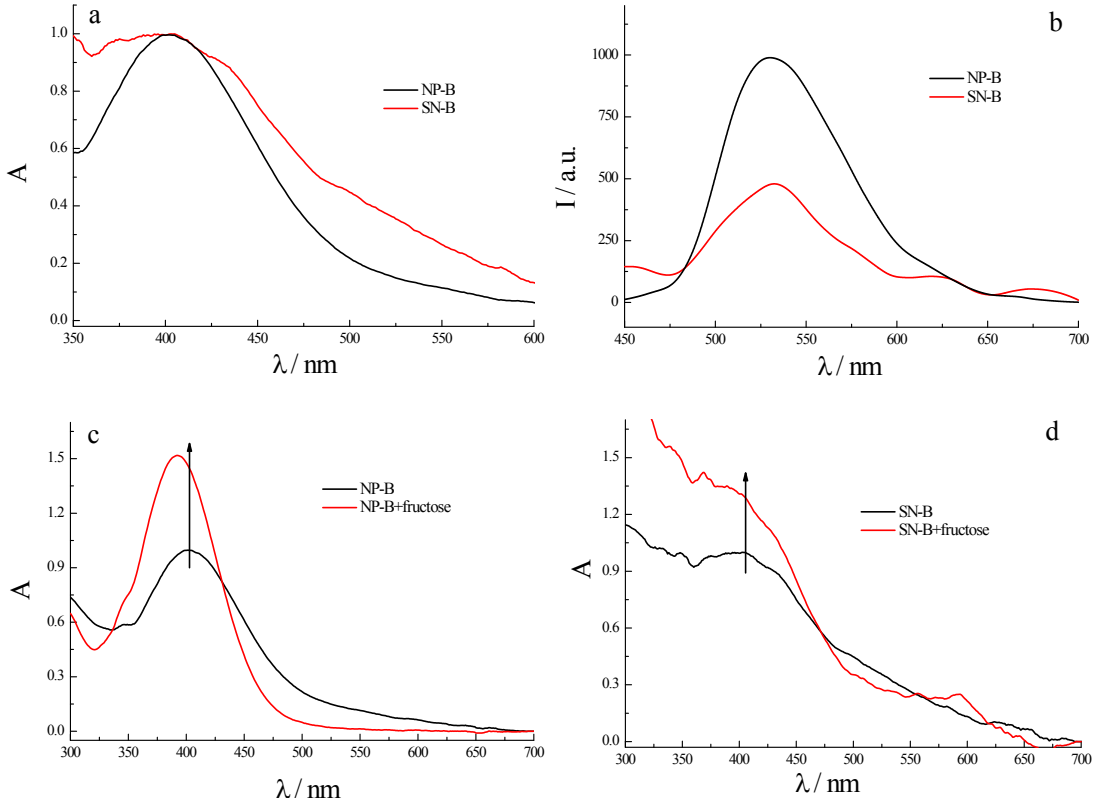


Fig. S4 The absorption (a) and emission (b) spectra of NP-B and SN-B; effect of fructose on the UV-vis spectra of probes NP-B (c) and SN-B (d).

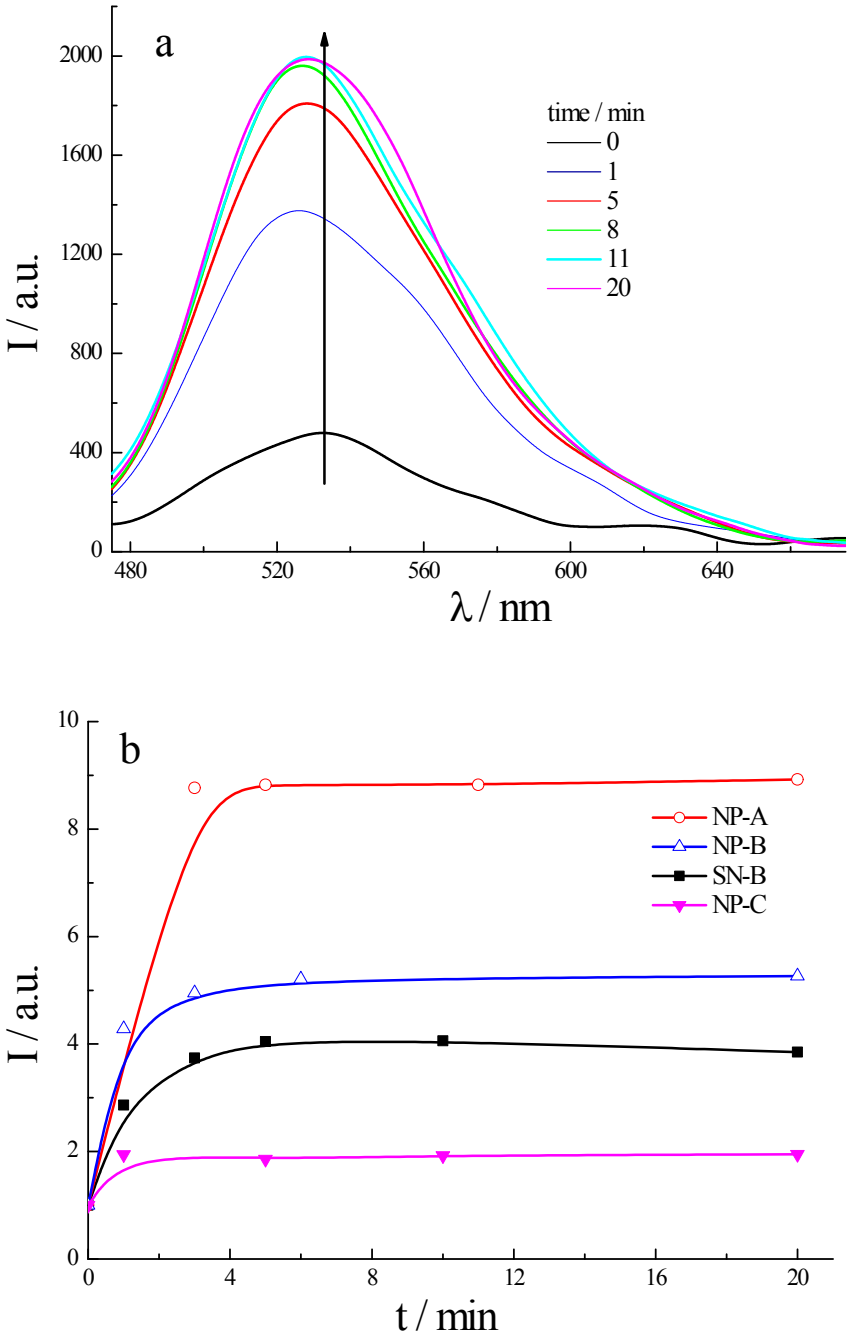


Fig. S5 (a) Time-dependent emission spectra of SN-B in the presence of 100 mM fructose; and (b) the plots of fluorescence intensities as a function of time.

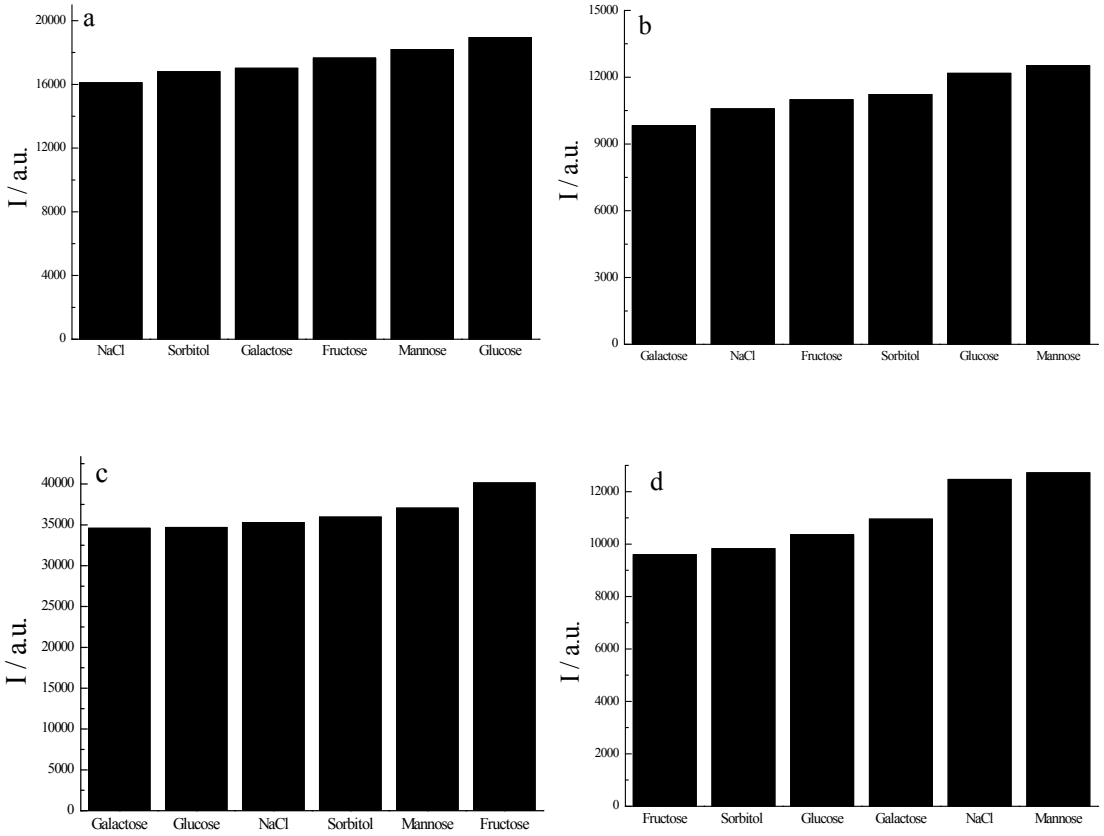


Fig. S6 Effects of other additives on the spectral responses of NP-B (a, c) and SN-B (b, d) toward fructose (a, b) and sorbitol (c, d). [NP-B] = 5 μM, [SN-B] = 0.5 mg/mL, [fructose] = [sorbitol] = 100 mM, [additive] = 100 mM.