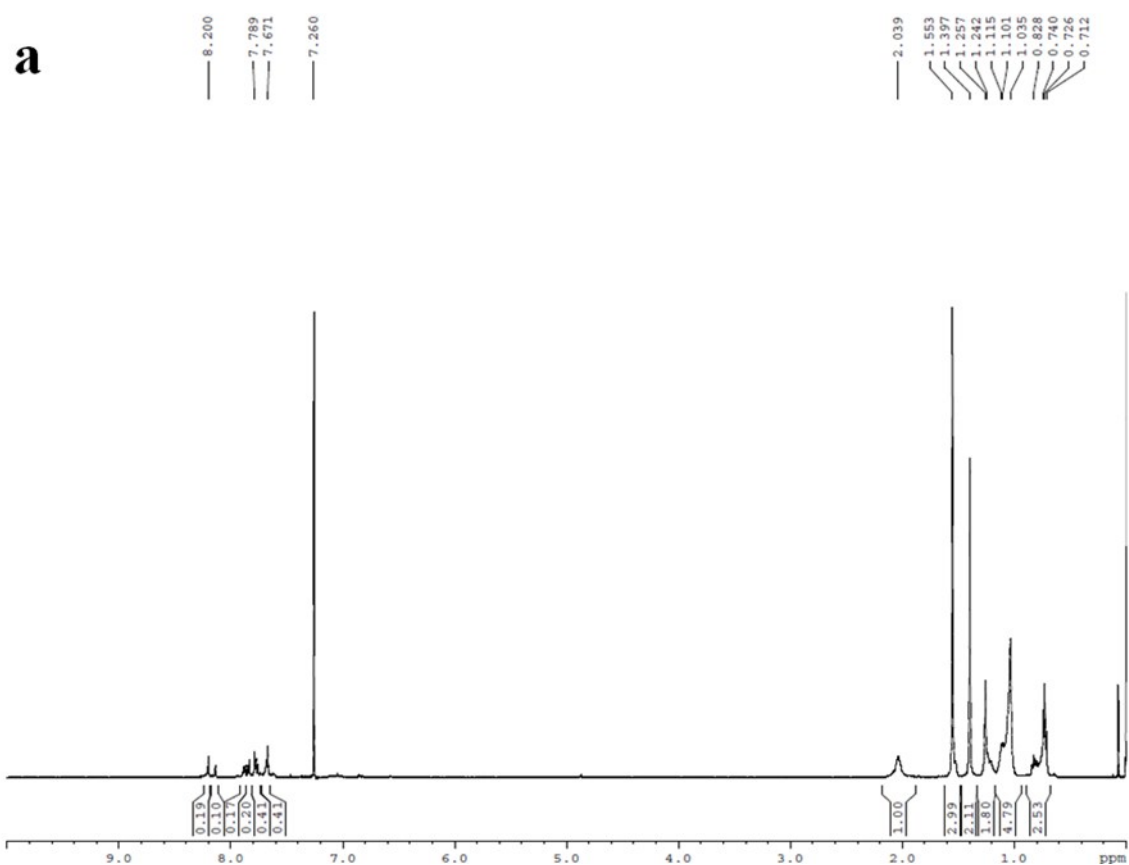


Supporting Information for

**Borate Ester Endcapped Fluorescent Hyperbranched
Conjugated Polymer for Trace Peroxide Explosive Vapor
Detection**

Lei Chen^{a,b}, Yixun Gao^{a,b}, Yanyan Fu^a, Defeng Zhu^a, Qingguo He^a*, Huimin
Cao^a and Jiagong Cheng*

Figures and Tables



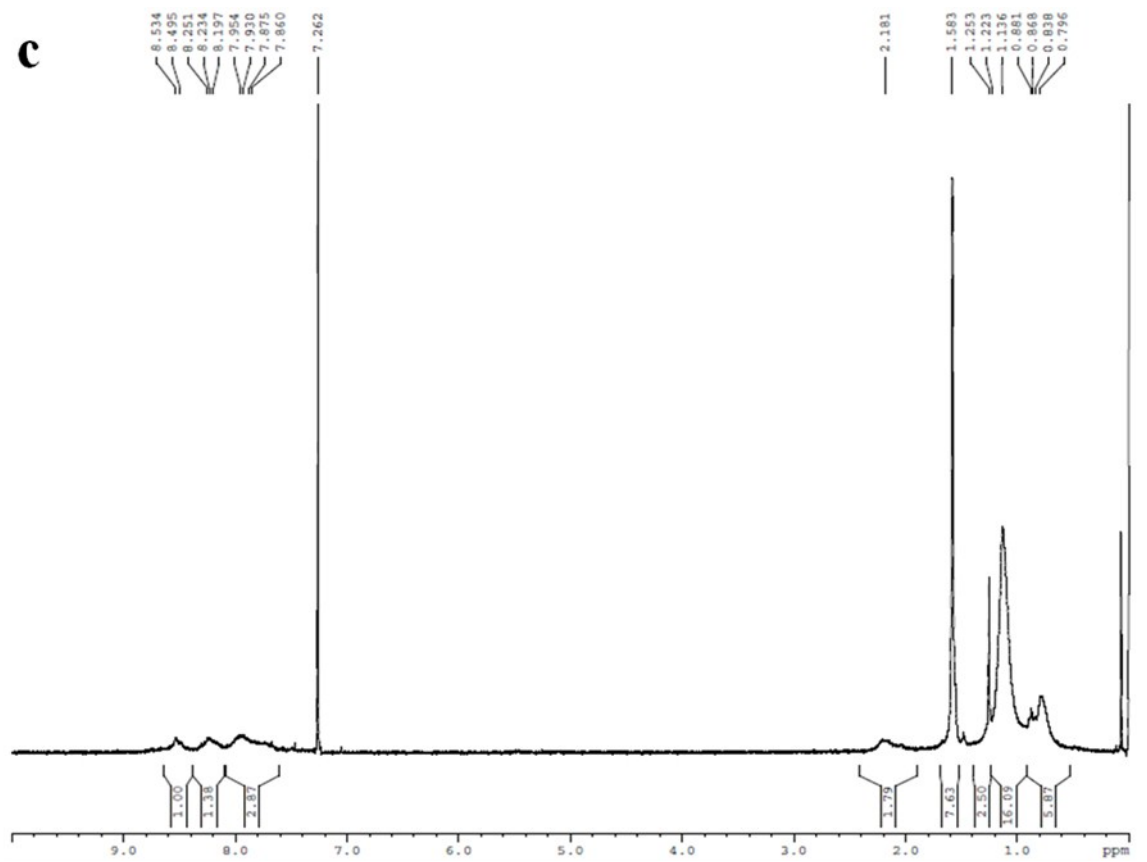
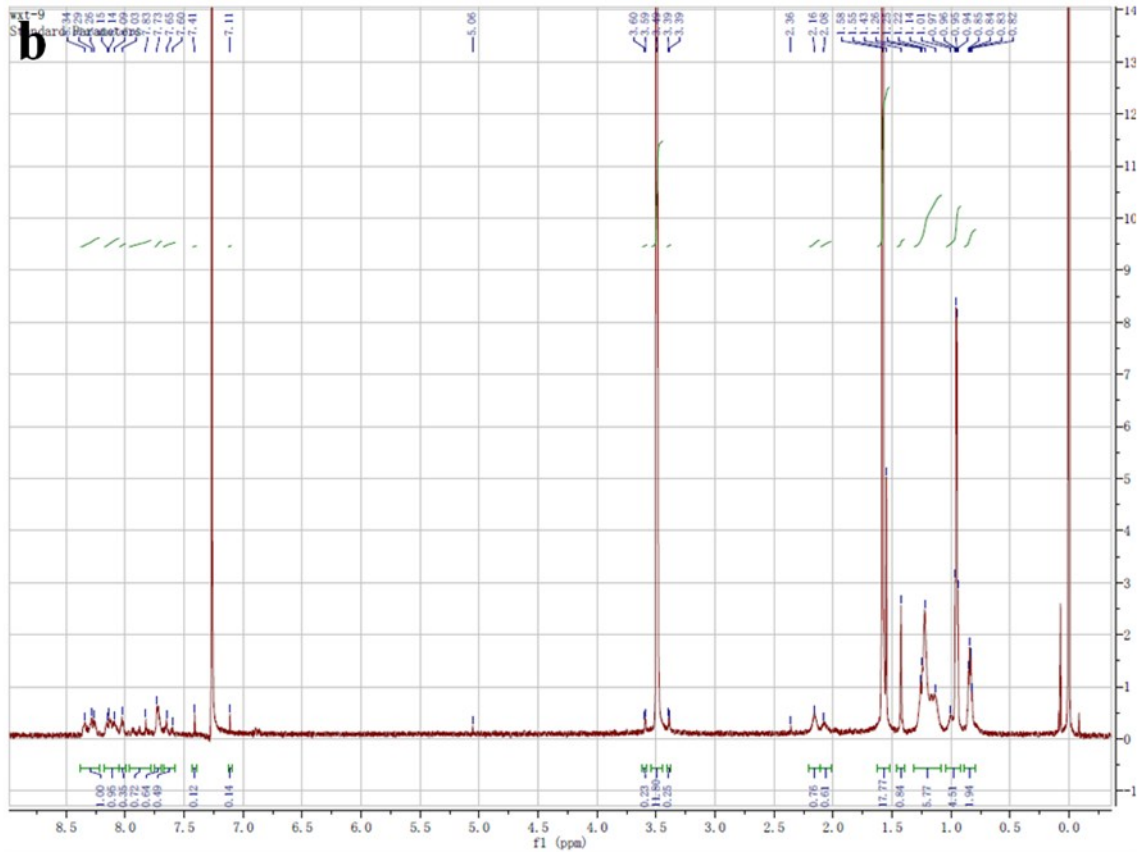


Figure S1. The ^1H -NMR spectrum of S1 (a), S2 (b), S3 (c).

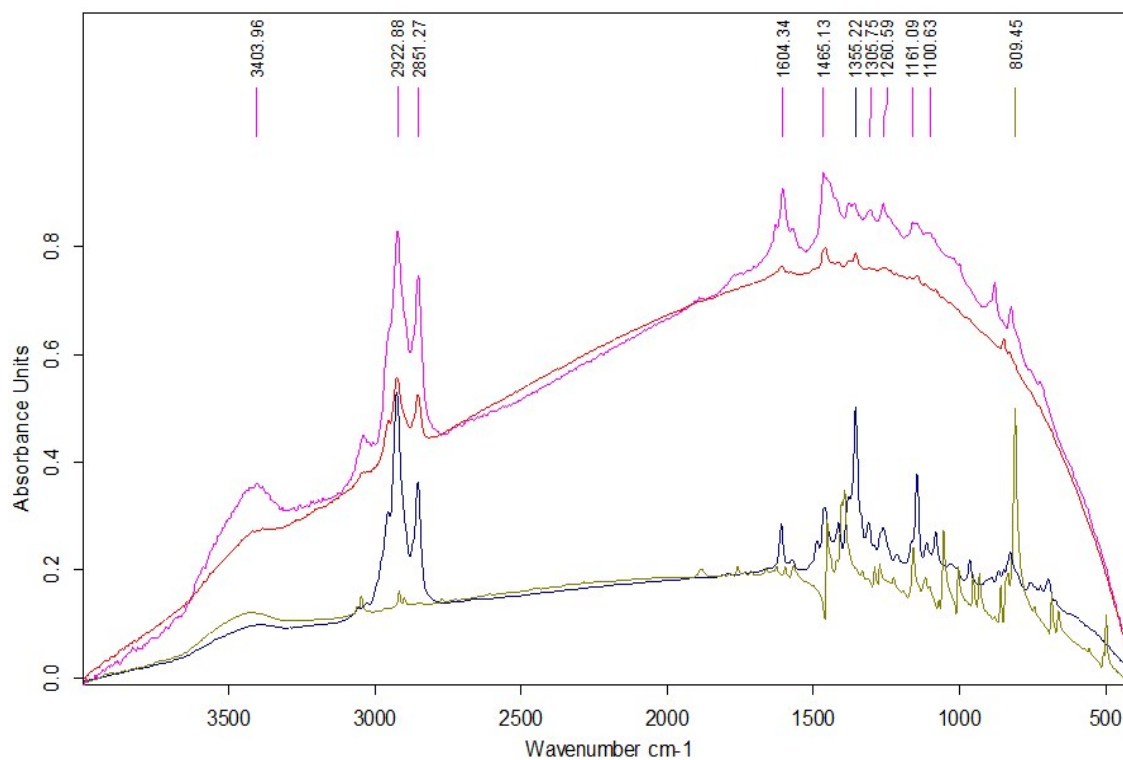
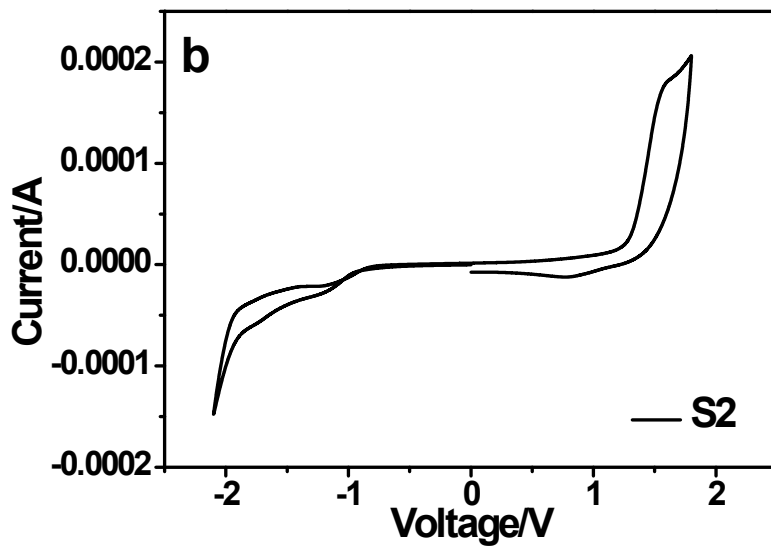
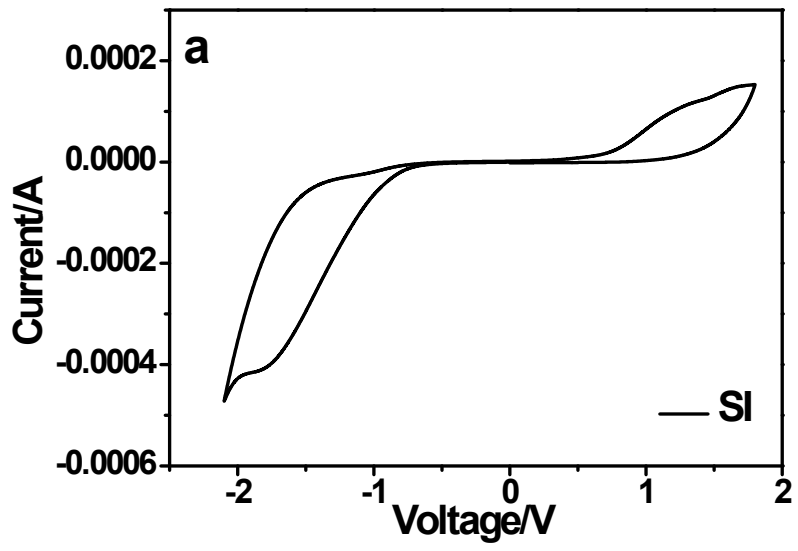


Figure S2. Fourier transform infrared spectra of S3, S2, S1 and the contrast (from up to down in the figure)

Table S1. The GPC results of S1-S3 polymer

	Mn (Da)	Mw (Da)	MP	Mz (Da)	Mz+1(Da)	Polydispersity
S1			78641			
	2875	3514	2739	4946	8140	1.222262
S2	4819	6981	5171	10520	15953	1.448601
S3	8278	27905	13575	73388	126930	3.370933



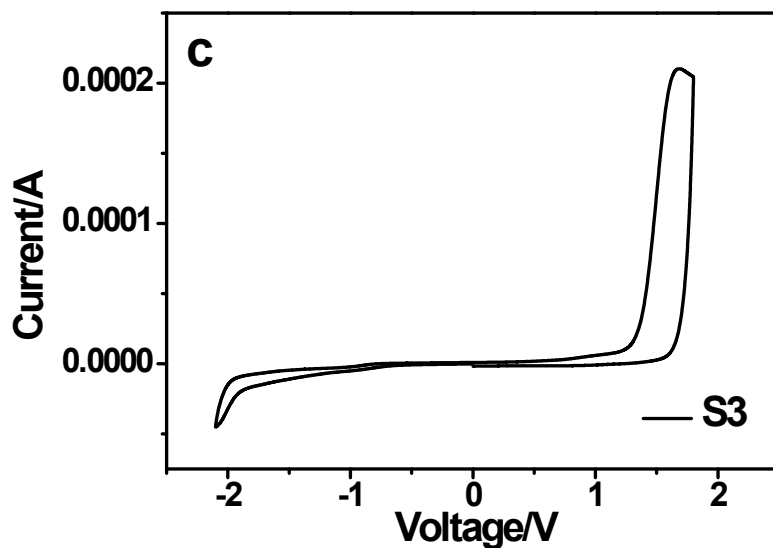


Figure S3. The CV curves of S1 (a), S2 (b), S3 (c) in CH₃CN solution at a sweep rate of 100mV/s.

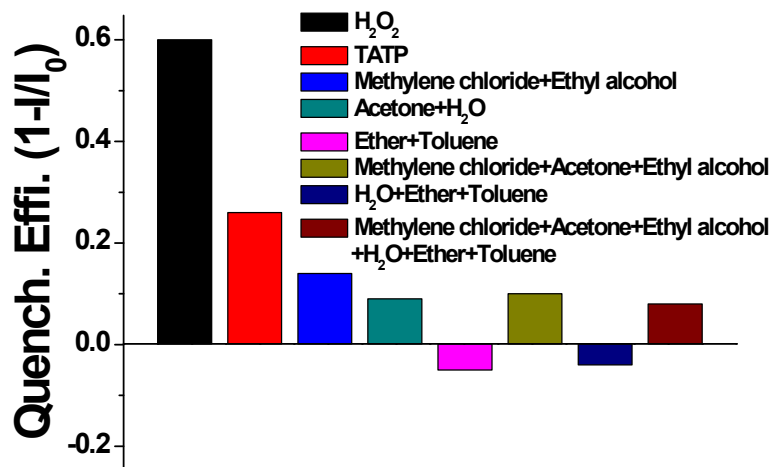


Figure S4. Fluorescence responses of S1 film on ZnO nanorod array to some reaction mixtures saturated vapor after an exposure of 300s.

Table S2 The quenching efficiency (1-I/I₀) of S1 film on ZnO nanorod array to different vapor pressure of H₂O₂ after an exposure of 300s.

Diluted Times	Vapor Pressure (ppm)	Quenching Efficiency
1	225	0.6
5	37.5	0.3
10	18.8	0.25
90	1	0.1