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## NIR fluorescence probe based on phenazine with large Stokes shift for detecting and imaging of endogenous $H_2O_2$ in RAW 264.7 cells

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Figure S1 Figure S1 The normalized excitation spectra and fluorescence spectra $S_{2}$ The comformation of PCN at calculated ground state ( $S_{2}$ ) and excite	ctra of <b>PCN</b> 2 ed state $(S_1)$ 2
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Figure S1. The normalized excitation spectra (the red line) and fluorescence spectra (the black line) of **PCN**.



Figure S2. The dihedral angle of benzene rings in **PCN** at calculated ground state  $(S_0)$  and excited state  $(S_1)$ 



ure S3. (A) The absorption spectra of **PCN-BP** towards to 20 eq  $H_2O_2$  at different time in PBS:DMF (v: v = 6:4, pH = 7.4). (B) Relation of Ratio  $A_{470}/A_{573}$  with time. (C) The fluorescence spectra of **PCN-BP** towards to 20 eq  $H_2O_2$  at different time in PBS:DMF (v: v = 6:4, pH = 7.4). (D) Relation of fluorescence at 680 nm with time.



Figure S4. The intensity of **PCN-BP** and **PCN** after exposed to white light for different time.



Figure S5. The cell viability of RAW 264.7 incubated with different concentration of **PCN-BP** for 24 h.



Figure S6. Mean intensity in cells of different group (RAW 264.7 were incubated with 0, 100  $\mu$ M, 200  $\mu$ M H<sub>2</sub>O<sub>2</sub>, n =20). The data are shown as the means ± SD. \*P < 0.05, \*\*P < 0.01, \*\*\*P < 0.001.



Figure S7. <sup>1</sup>H NMR spectrum of PCN in CDCl<sub>3</sub>.



Figure S8. <sup>13</sup>C NMR spectrum of PCN in CDCl<sub>3</sub>.



Figure S9. High resolution mass spectrum of PCN.



Figure S10. <sup>1</sup>H NMR spectrum of **PCN-BP** in CDCl<sub>3</sub>.



Figure S11. <sup>13</sup>C NMR spectrum of **PCN-BP** in CDCl<sub>3</sub>.

## **Elemental Composition Report**

Single Mas Tolerance = Element pre Number of is	ss Analysis 10.0 PPM / DBI diction: Off sotope peaks used	E: min = -1. I for i-FIT =	5, max = 50 3	).0						
Monoisotopic Mass, Even Electron Ions 27 formula(e) evaluated with 1 results within limits (up to 50 best isotopic matches for each mass) Elements Used: C: 0-45 H: 0-55 B: 0-1 N: 0-4 O: 0-3 JI -HUA										
HL-YYC-904 4	0 (0.442) Cm (37:44)							1	TOF MS ES+	
100 	599.32 598.3231 1997 - 1997 - 1997 1997 - 1997 - 1997 1997 - 1997 - 1997 1997 - 1997 - 1997 1997 - 1997 - 1997 - 1997 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 1997 - 1997	09 <sub>613.3370</sub>	635 4331 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 -	6 666.38 665.442 650 660	668.3953 72 669.3972 670.3994 670 680	713.4044 	723 4809 737.3 10101010101010 720 730	5039 761.5 740 750	5.246+004 5791_767.5121 գուղծուղու m/z 760	
Minimum: Maximum:		5.0	10.0	-1.5 50.0						
Mass	Calc. Mass	mDa	PPM	DBE	i-FIT	i-FIT (Norm)	Formula			
669.3972	669.3976	-0.4	-0.6	20.5	17.7	0.0	C42 H50	B N4 (	03	

Figure S12. High resolution mass spectrum of PCN-BP.