

Supporting Information

A novel fast-response and highly selective AIEgen fluorescent probe for visualizing peroxynitrite in living cells, *C. elegans* and inflammatory mice

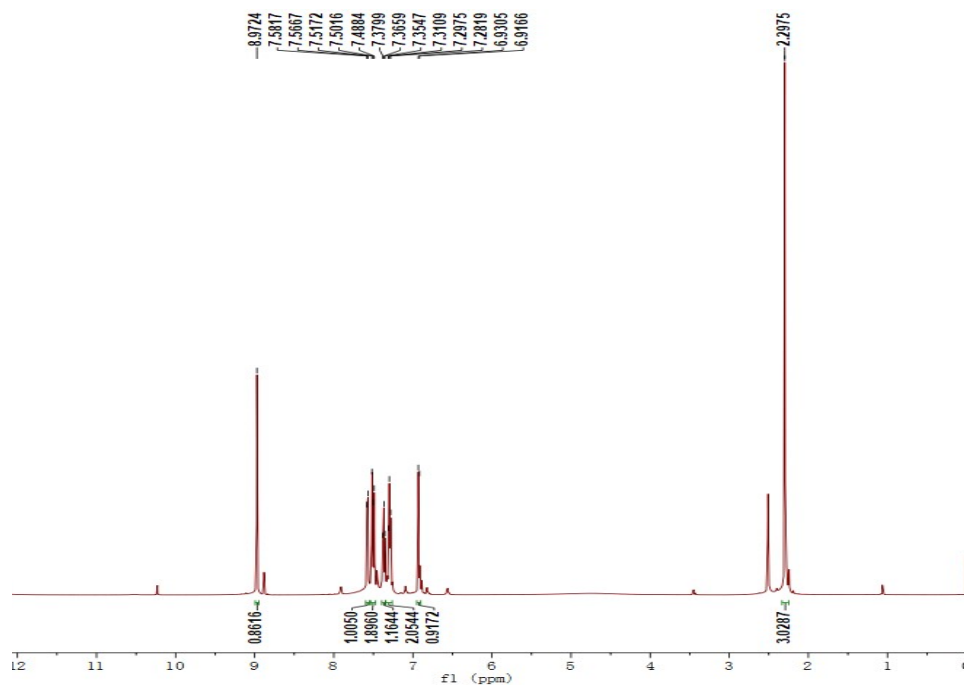
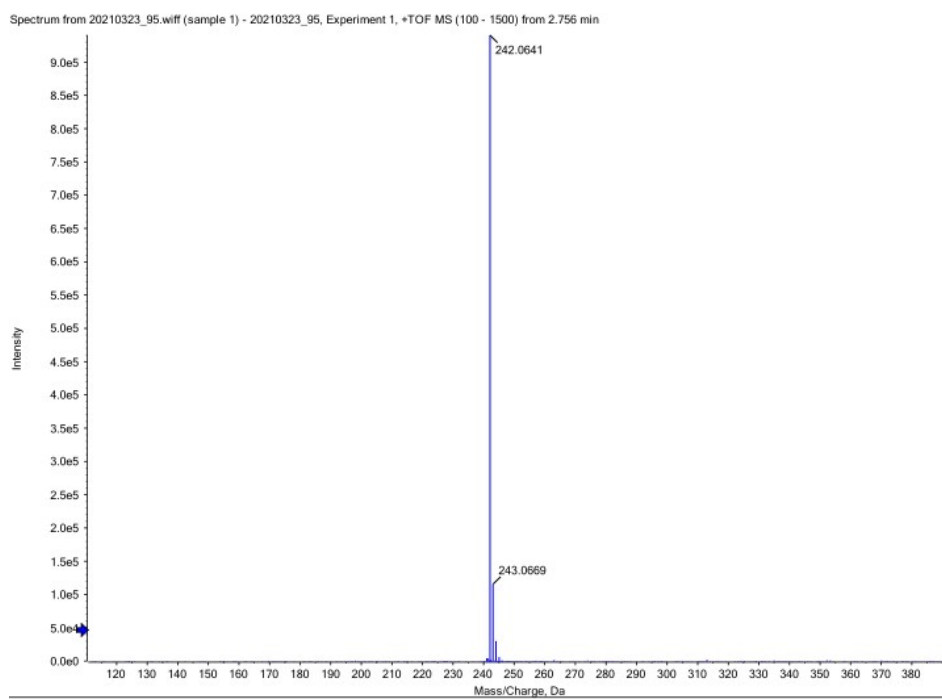


Fig. S1. ^1H NMR spectra of **1** ($\text{DMSO}-d_6$).

Fig. S2. TOF-MS of **1** for $\text{C}_{14}\text{H}_{11}\text{NOS} [\text{M}]^+$, 241.3; found 242.0641



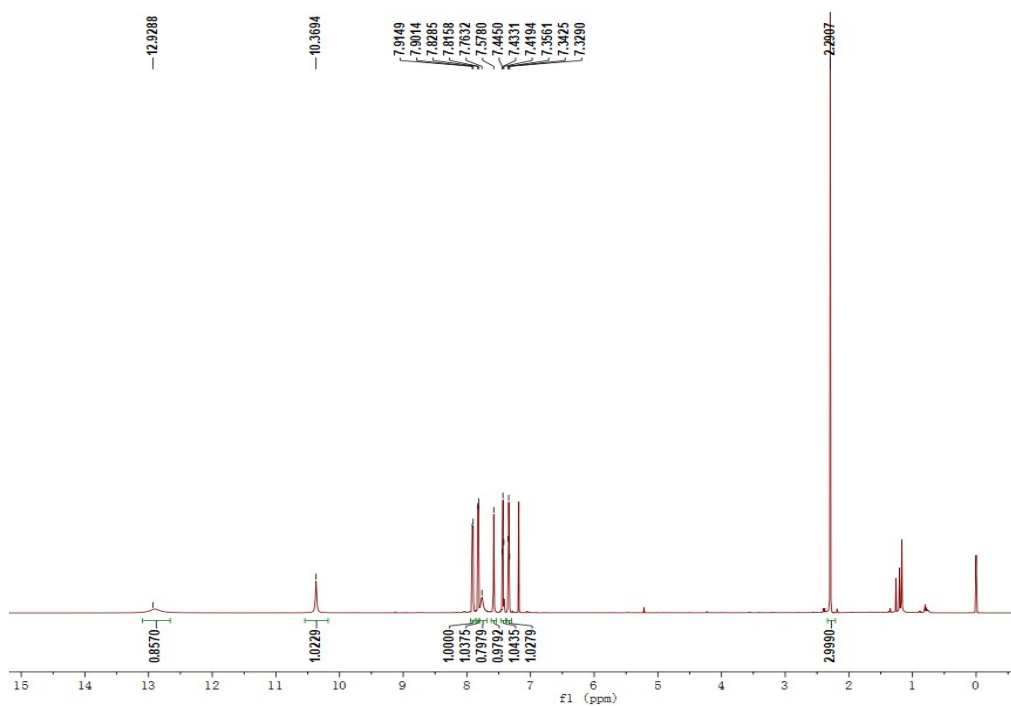


Fig. S3. ^1H NMR spectra of **2** (CDCl_3).

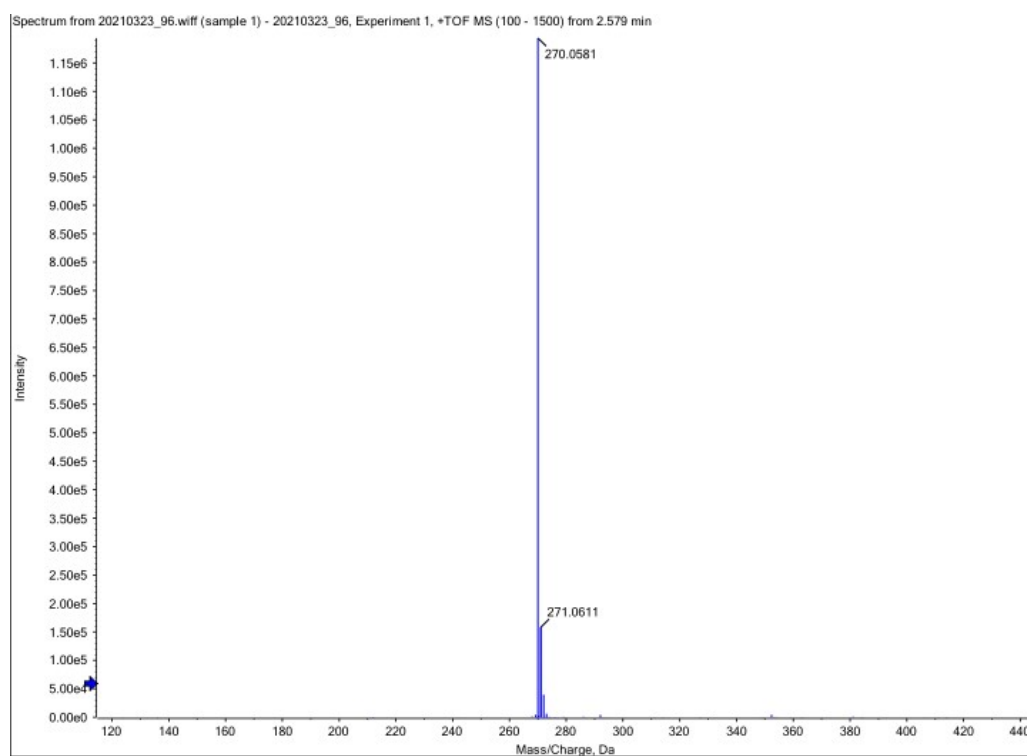


Fig. S4. TOF-MS of **2** for $\text{C}_{15}\text{H}_{11}\text{NO}_2\text{S} [\text{M}]^+$, 269.3; found 270.0581.

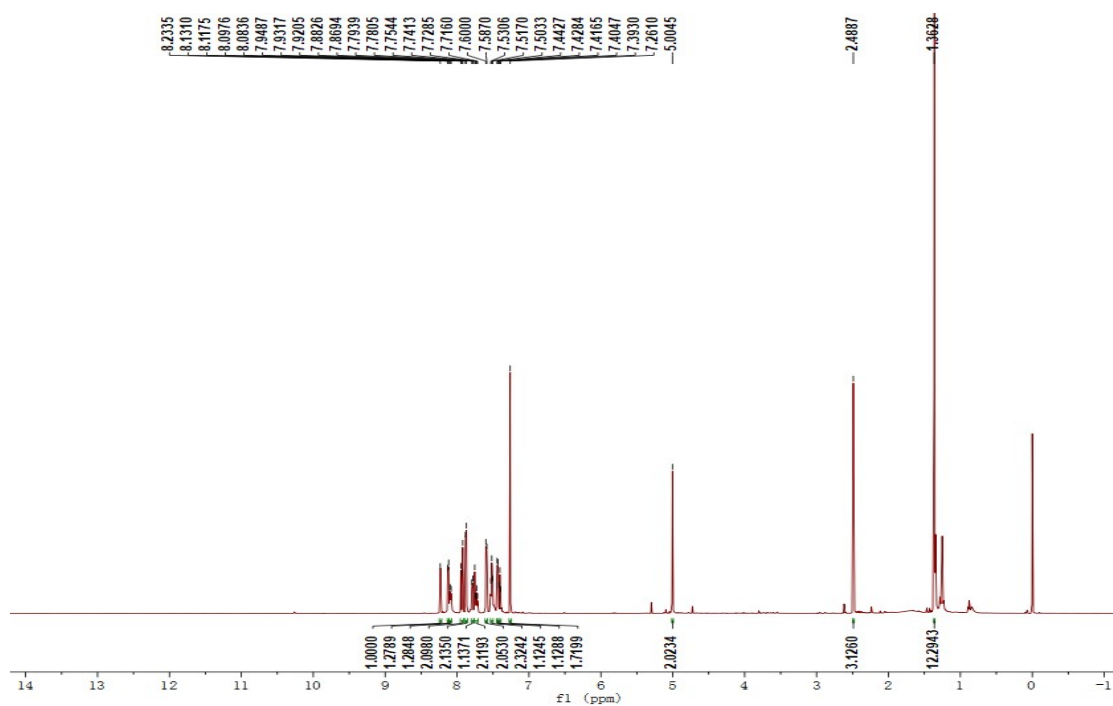


Fig. S7. ¹H NMR spectra of PE-XY (CDCl₃).

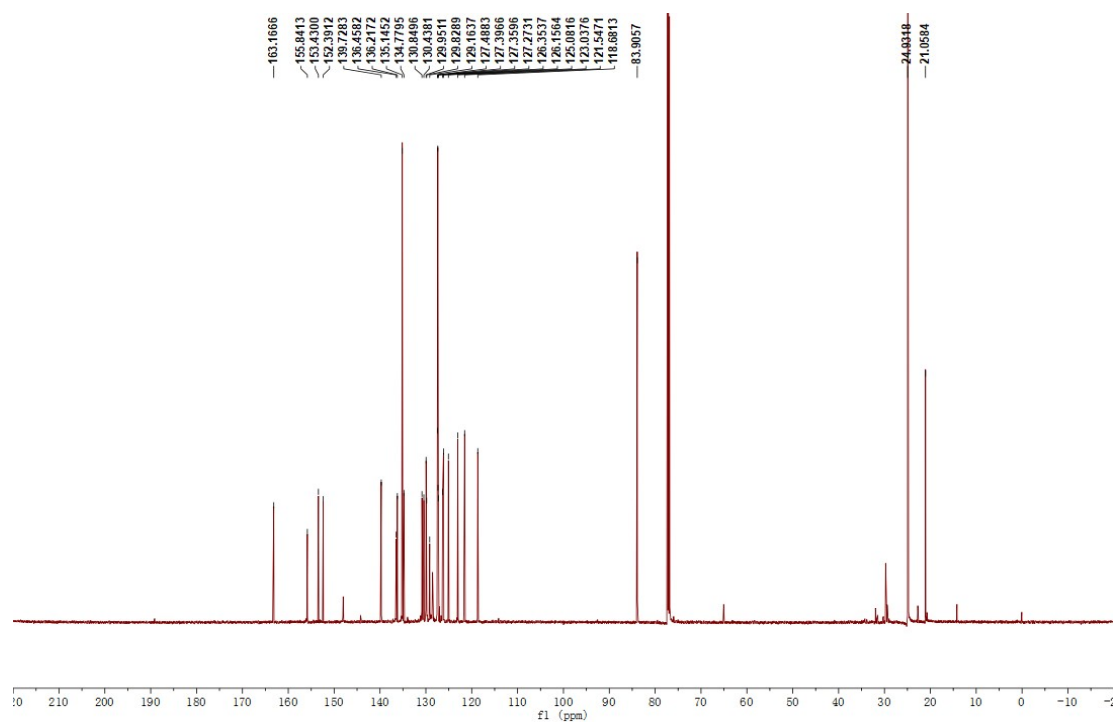


Fig. S8. ¹³C NMR spectra of PE-XY (CDCl₃).

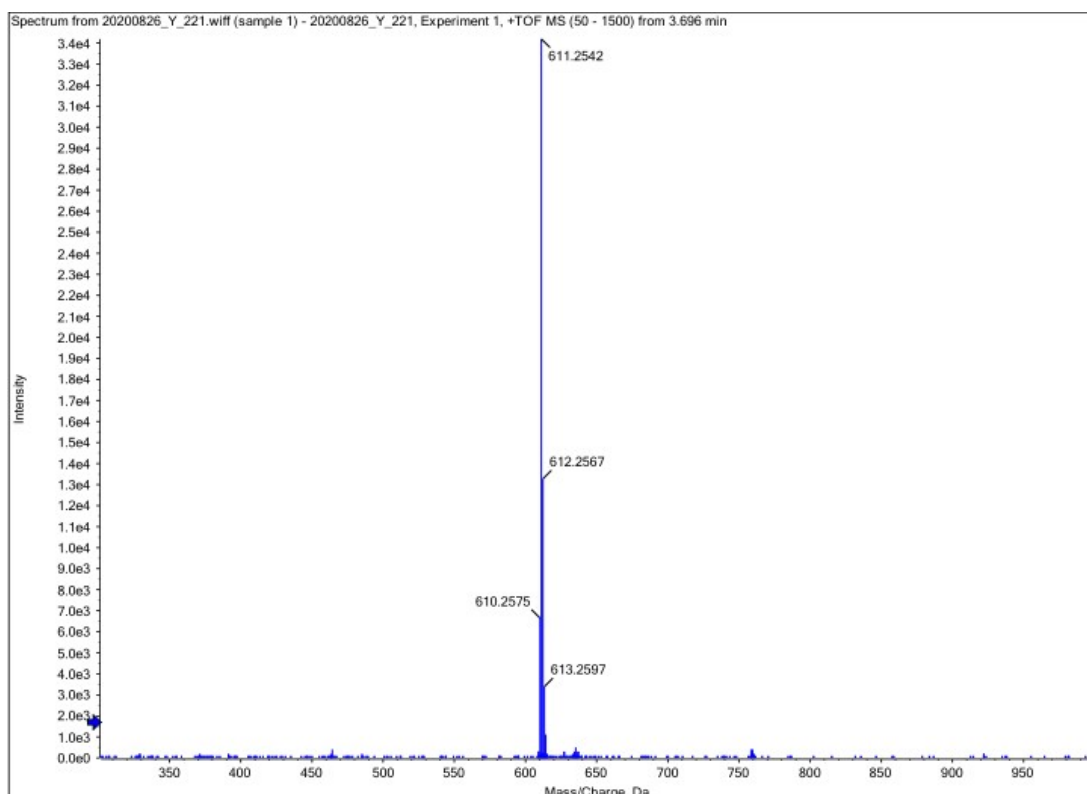
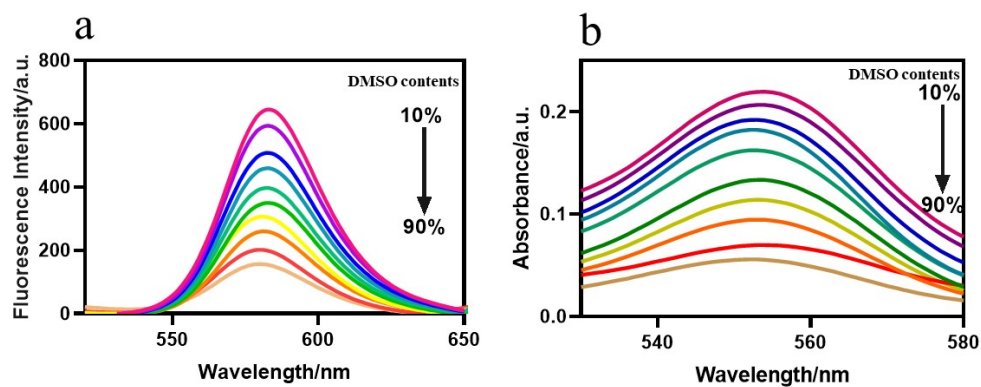


Fig. S9. TOF-MS of **PE-XY** calculated for $\text{C}_{38}\text{H}_{35}\text{BN}_2\text{O}_3\text{S} [\text{M}]^+$, 611.6; found



611.2542

Fig. S10. (a) Fluorescence spectra of **Rhodamine B** (10 μM) in PBS buffer at pH 7.4 containing different concentrations of DMSO; (b) Absorption spectra of **Rhodamine B** (10 μM) in PBS buffer at pH 7.4 containing different concentrations of DMSO.

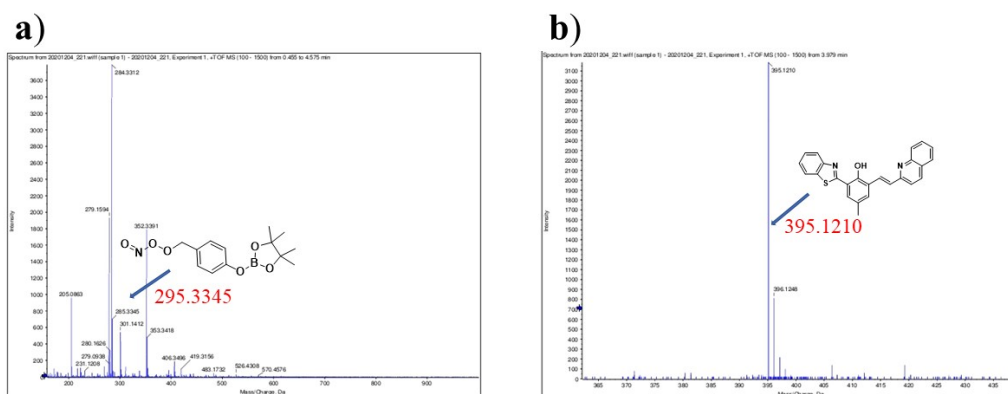
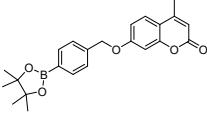
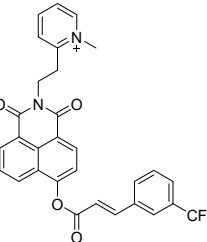
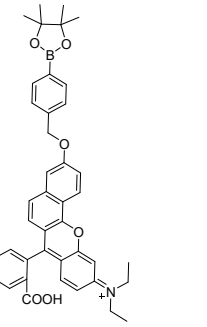
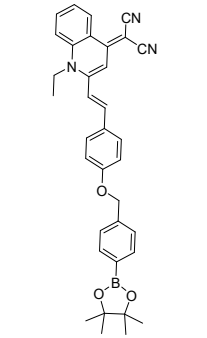
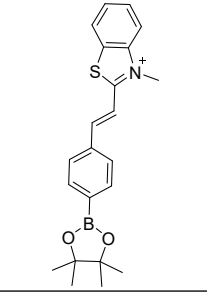
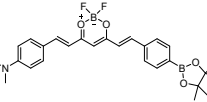
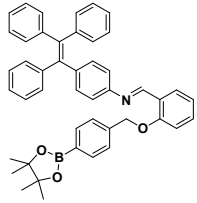
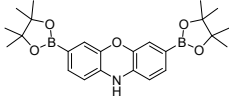
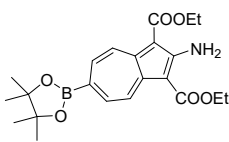
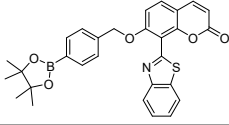
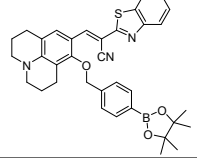
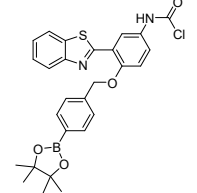
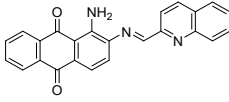
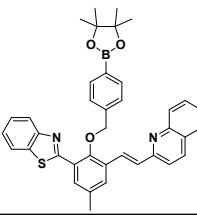


Table.1 The comparison of reported work with this work

Probe	AIE/ ACQ	Ex/Em (nm)	δ	LOD	Time	Application	ref
	ACQ	$\lambda_{\text{ex}}=322 \text{ nm};$ $\lambda_{\text{em}}=385/450 \text{ nm}$	0.31	29.8 nM	5 min	in buffer, living cells, zebrafish, and mouse.	¹
	ACQ	$\lambda_{\text{ex}} = 390 \text{ nm};$ $\lambda_{\text{em}}=558/454 \text{ nm}$	/	120 nM	25 min	in buffer, living cells	²
	ACQ	$\lambda_{\text{ex}}=480 \text{ nm};$ $\lambda_{\text{em}}=630/560 \text{ nm}$	/	0.9 nM	5s	in buffer, living cells	³
	AIE	$\lambda_{\text{ex}}= 430 \text{ nm},$ $\lambda_{\text{em}}=620 \text{ nm}$	/	27.5 nM	4 min	in buffer, living cells	⁴
	ACQ	$\lambda_{\text{ex}}= 520 \text{ nm},$ $\lambda_{\text{em}}=569 \text{ nm}$	0.097	16 nM	<1 min	in buffer, living cells	⁵
	ACQ	$\lambda_{\text{ex}}= 550 \text{ nm},$ $\lambda_{\text{em}}=625 \text{ nm}$	/	19.8 nM	10 min	in buffer, living cells	⁶

	AIE	$\lambda_{\text{ex}}=540\text{ nm},$ $\lambda_{\text{em}}=604\text{ nm}$	/	21 nM	30 min	in buffer, living cells and mouse	7
	ACQ	$\lambda_{\text{ex}}=550\text{ nm},$ $\lambda_{\text{em}}=590\text{ nm}$	0.75	1 μM	/	in buffer and living cells	8
	ACQ	$\lambda_{\text{ex}}=350/800\text{ nm},$ $\lambda_{\text{em}}=483\text{ nm}$	0.01	21.7 nM	/	in buffer, living cells and tissues	9
	ACQ	$\lambda_{\text{ex}}=421\text{ nm},$ $\lambda_{\text{em}}=500\text{ nm}$	0.106	70.8 nM	< 2 s	in buffer and living cells	10
	ACQ	$\lambda_{\text{ex}}=430\text{ nm},$ $\lambda_{\text{em}}=540\text{ nm}$	0.62	2.5 μM	10 min	in buffer and living cells	11
	ACQ	$\lambda_{\text{ex}}=370\text{ nm},$ $\lambda_{\text{em}}=481/405\text{ nm}$	/	21.4 nM	withi n seco nds	in buffer and living cells	12
	ACQ	$\lambda_{\text{ex}}=510\text{ nm},$ $\lambda_{\text{em}}=590\text{ nm}$	0.08	13 nM	5 s	in buffer and living cells	13
	AIE	$\lambda_{\text{ex}}=478\text{ nm},$ $\lambda_{\text{em}}=580\text{ nm}$	0.81	8.58 nM	< 50 s	in buffer, living cells, C. elegans and mouse	our wor k

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