

# Supporting Information

## A real-time ratiometric fluorescent probe for imaging of SO<sub>2</sub> derivatives in mitochondria of living cells

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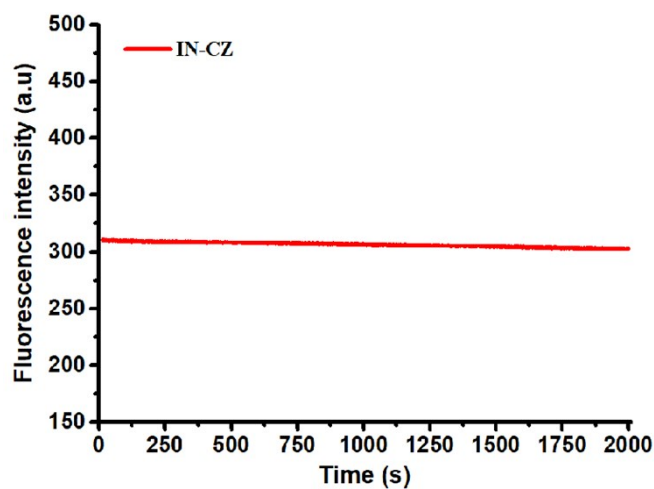
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### Contents

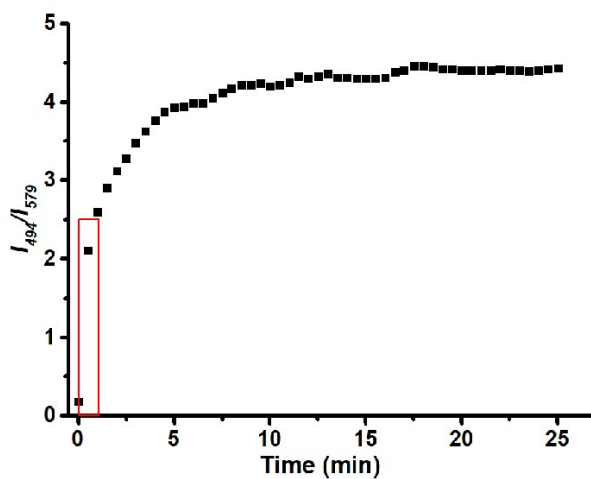
1. The photostability of IN-CZ.
2. The respond time of IN-CZ.
3. The effect of pH.
4. The characterization data of IN-CZ.

## 1. The photostability of IN-CZ.



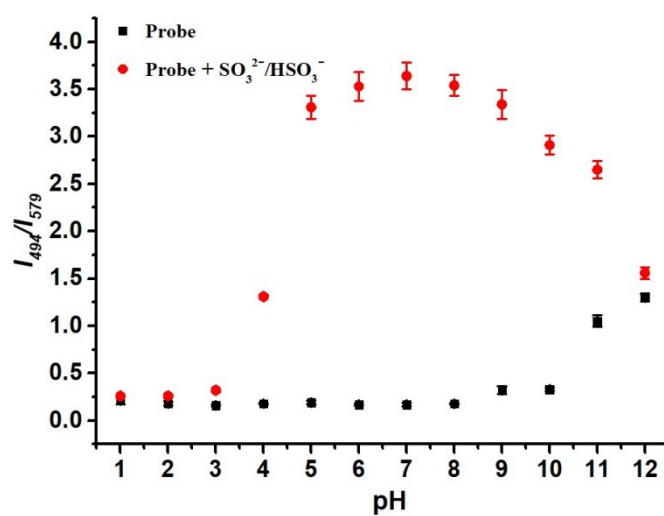
**Fig.S1.** The photostability of IN-CZ (10  $\mu$ M) upon continuous laser excitation at 420 nm. (pH = 7.4, PBS = 10 mM)

## 2. The respond time of IN-CZ.



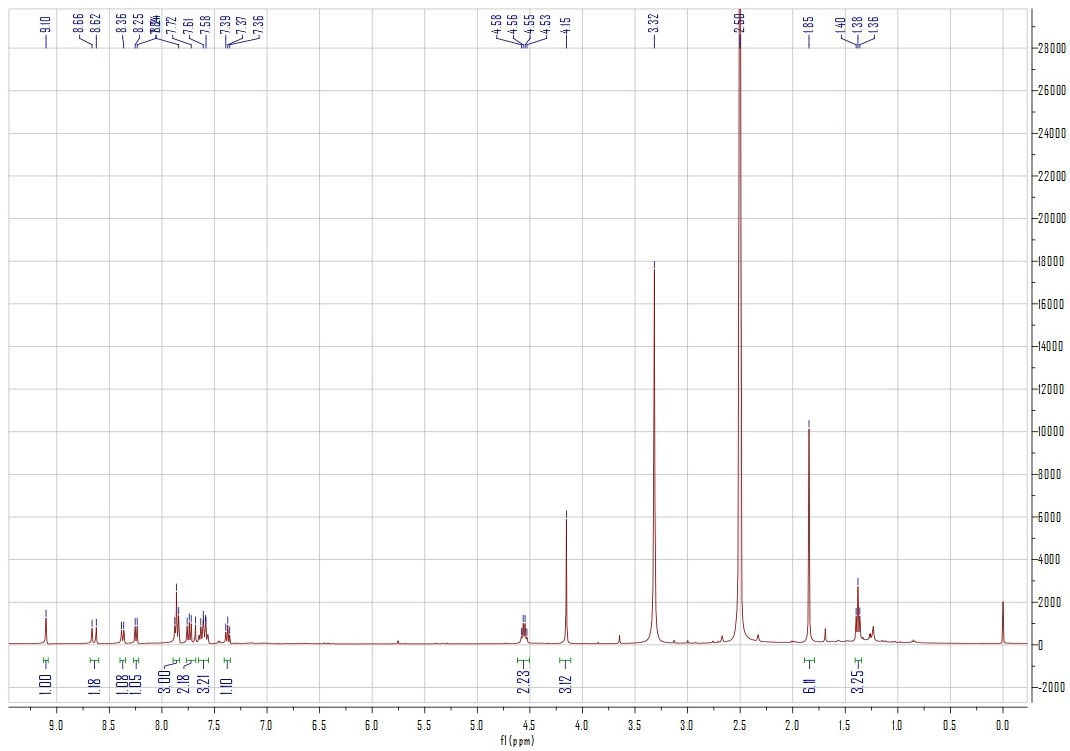
**Fig.S2.** Fluorescence intensity ratio of IN-CZ (10  $\mu$ M) at  $I_{494}/I_{579}$ , after interaction with  $\text{SO}_3^{2-}/\text{HSO}_3^-$  (50  $\mu$ M). The reaction was performed in PBS solution (pH = 7.4, 10 mM). Excitation at 420 nm.

### 3. The effect of pH.

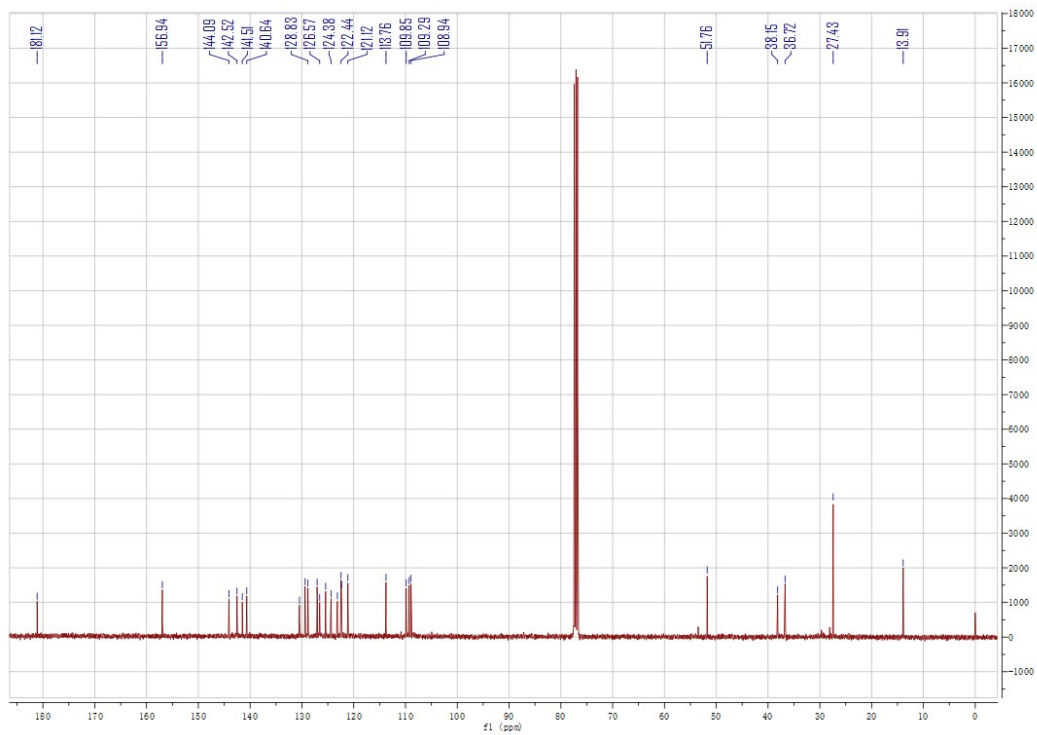


**Fig.S3.** The relative fluorescence intensity of probe IN-CZ (10  $\mu$ M) in the absence and presence of  $\text{SO}_3^{2-}/\text{HSO}_3^-$  (100  $\mu$ M) with different pH value (1-12) of PBS buffer solution (PBS = 10 mM). Excitation at 420 nm.

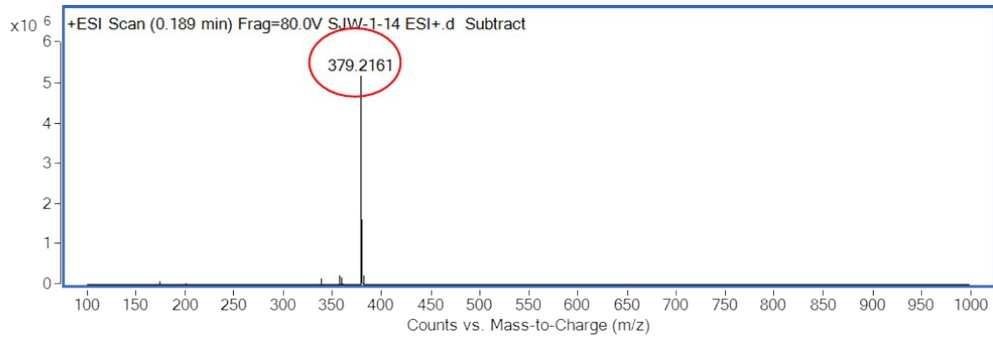
### 4. The characterization data of IN-CZ.



IN-CZ <sup>1</sup>H NMR



# IN-CZ <sup>13</sup>C NMR



ESI- MS spectrum of probe **IN-CZ**