

## Supporting information

for

### A highly selective turn-on fluorescent sensor for fluoride and its application in imaging of living cells

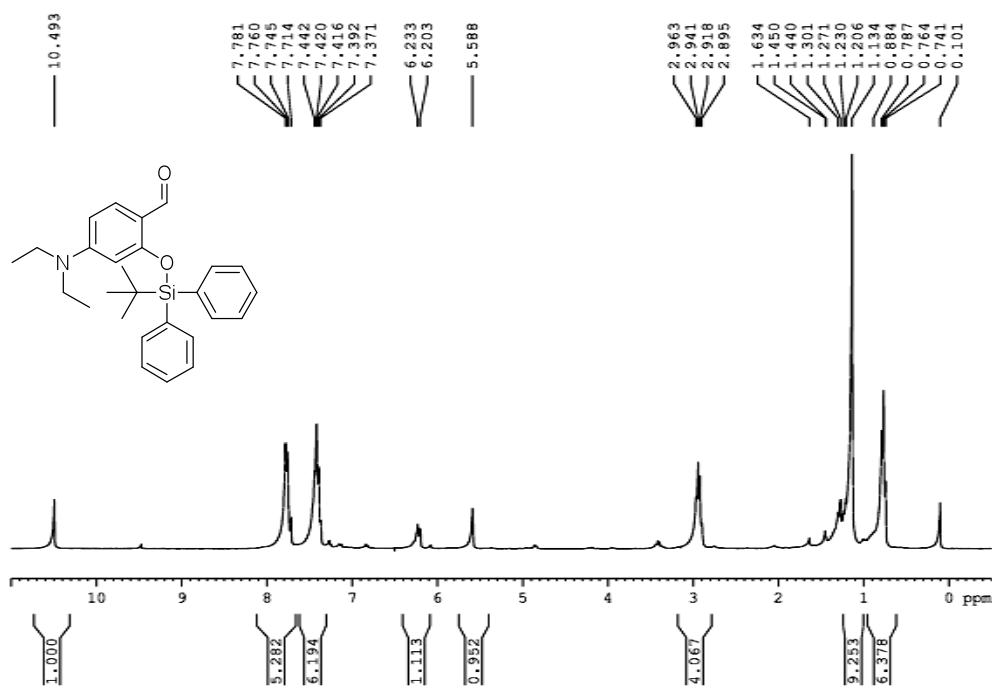
Jiun-Ting Yeh, Parthiban Venkatesan, Shu-Pao Wu\*

Department of Applied Chemistry, National Chiao Tung University, Hsinchu, Taiwan

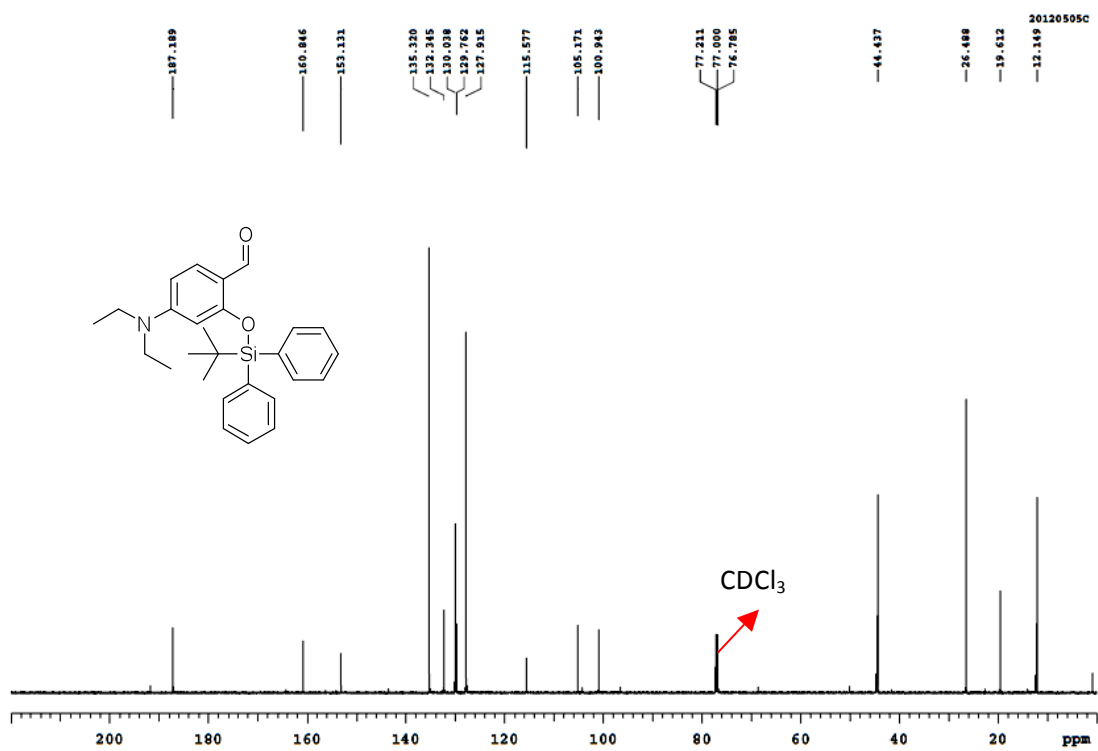
300, Republic of China

#### Content:

1. **Figure S1.**  $^1\text{H}$  NMR spectra (300 MHz) of **1** in  $\text{CDCl}_3$
2. **Figure S2.**  $^{13}\text{C}$  NMR spectra (125 MHz) of **1** in  $\text{CDCl}_3$ .
3. **Figure S3.**  $^1\text{H}$  NMR spectra (300 MHz) of **FS** in  $\text{CDCl}_3$ .
4. **Figure S4.**  $^{13}\text{C}$  NMR spectra (125 MHz) of **FS** in  $\text{CDCl}_3$ .
5. **Figure S5.**  $^1\text{H}$  NMR (300 MHz,  $\text{CDCl}_3$ ) spectra of the product of **FS** react with  $\text{F}^-$
6. **Figure S6.** FTIR spectrum of **FS**.
7. **Figure S7.** Calibration curve of chemosensor **FS** (10  $\mu\text{M}$ ) with  $\text{F}^-$ .



**Figure S1.** <sup>1</sup>H NMR spectra (300 MHz) of **1** in CDCl<sub>3</sub>.



**Figure S2.** <sup>13</sup>C NMR spectra (125 MHz) of **1** in CDCl<sub>3</sub>.

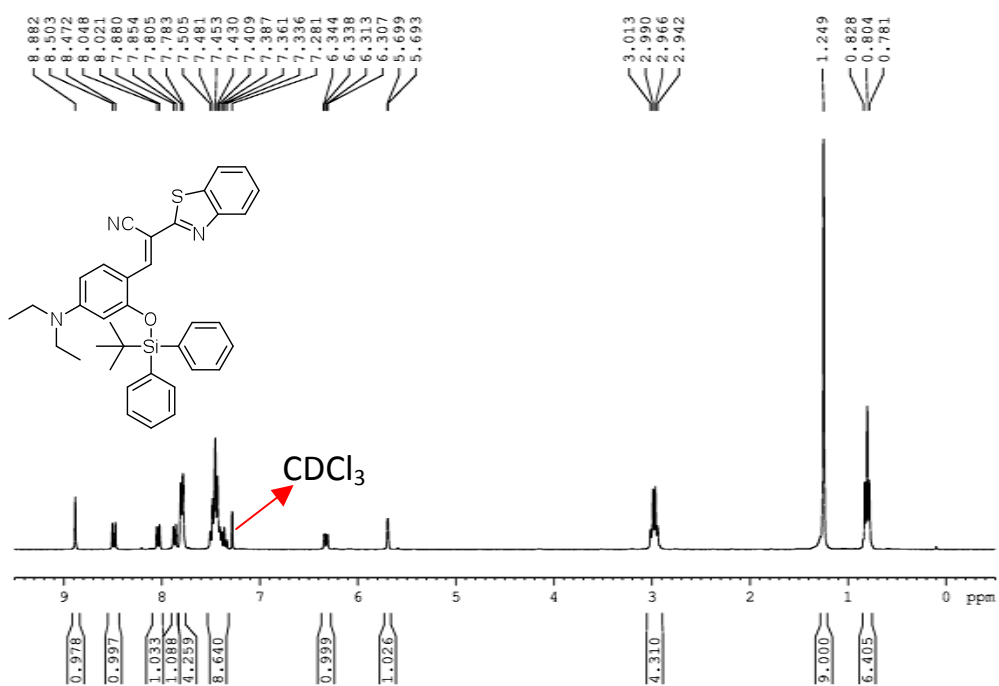
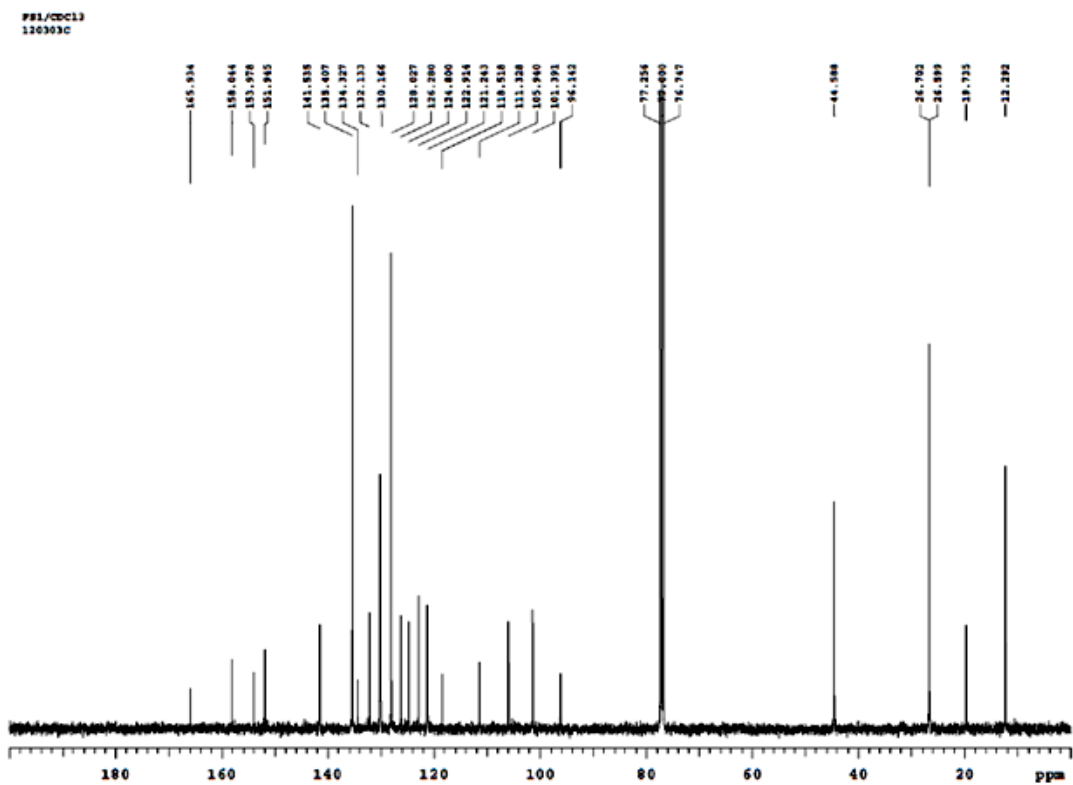
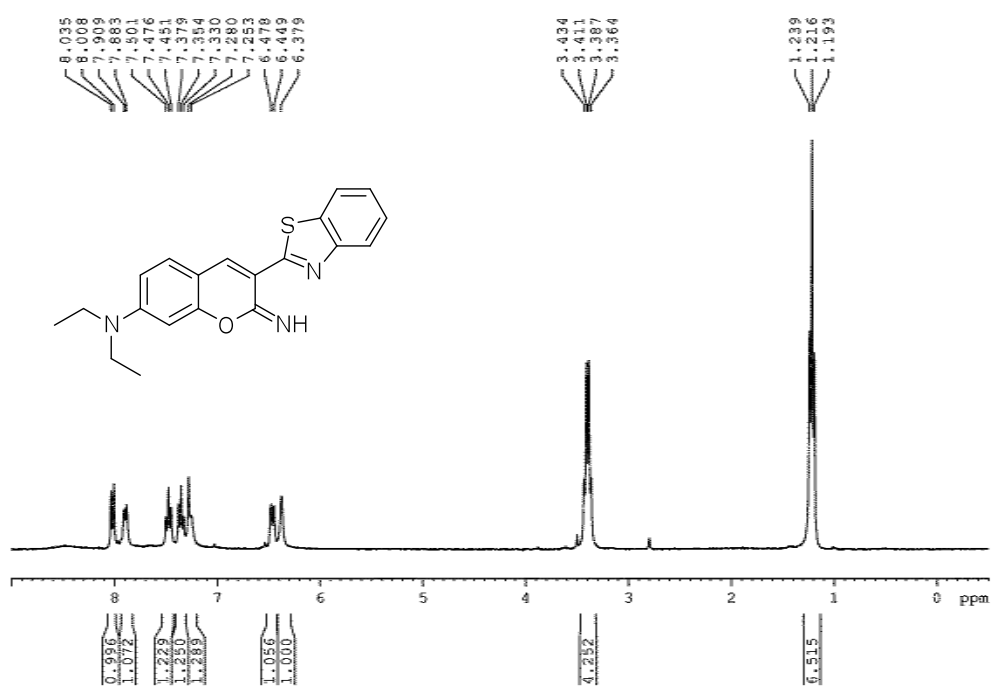


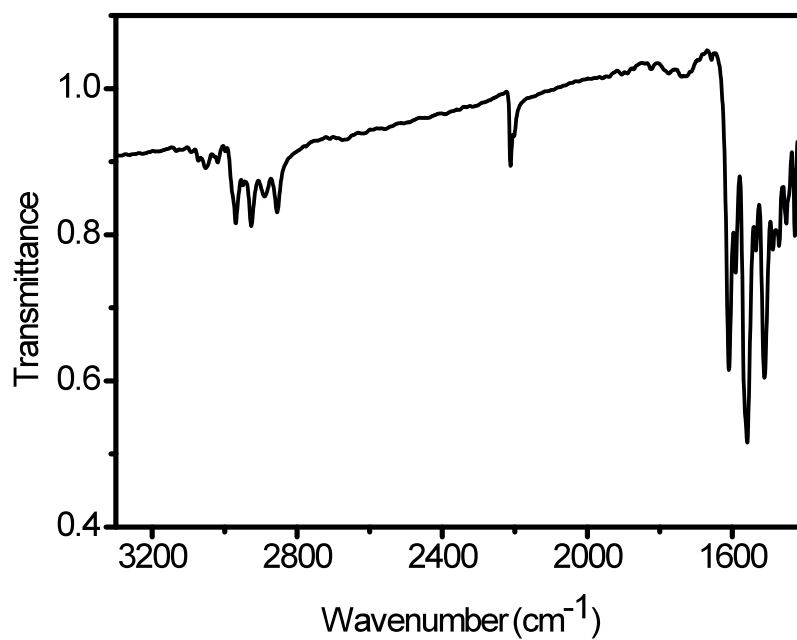
Figure S3.  $^1\text{H NMR}$  spectra (300 MHz) of FS in  $\text{CDCl}_3$ .



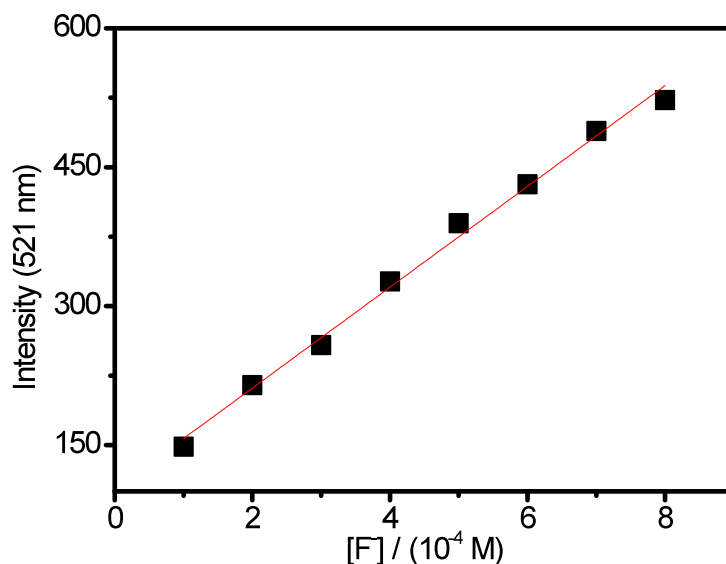
**Figure S4.**  $^{13}\text{C}$  NMR spectra (125 MHz) of **FS** in  $\text{CDCl}_3$ .



**Figure S5.**  $^1\text{H}$  NMR (300 MHz,  $\text{CDCl}_3$ ) spectra of the product of FS react with  $\text{F}^-$



**Figure S6.** FTIR spectrum of FS.



**Figure S7.** Calibration curve of chemosensor **FS** (10  $\mu\text{M}$ ) with  $\text{F}^-$ . The excitation wavelength was 465 nm.

Linear Regression Data:

$$Y = A + S * X$$

Parameter	Value	Error	R	SD	N	P
A	102.52857	8.29516	0.99728	10.64583	8	<0.0001
S	544630.95238	16426.8647				

The detection limit (DL) of  $\text{F}^-$  ions using chemosensor **FS** was determined from the following equation:

$$\text{DL} = K * S_b / S$$

Where  $K = 3$ ;  $S_b$  is the standard deviation of the blank solution;  $S$  is the slope of the calibration curve.  $\text{DL} = 3 * 0.263039 / 544630.95238 = 1.45 * 10^{-6} \text{ M}$