

# A Novel Indole Derivative with Superior Photophysical Performance for Fluorescent Probe, pH-Sensing, and Logic Gates

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**Table S1** Crystallographic Data for **PI**.

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Formula sum	C <sub>19</sub> H <sub>21</sub> N <sub>1</sub> O <sub>1</sub>
Space-group	Cc
Cell parameters	a=13.659 Å b=15.138 Å c=8.158 Å α=90° β=111.075(2)° γ=90°

CCDC deposition number: 1842009

**Table S2** Crystallographic Data for **NI**.

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Formula sum	C <sub>19</sub> H <sub>22</sub> N <sub>2</sub>
Space-group	Cc
Cell parameters	a=13.634 Å b=15.386 Å c=8.332 Å $\alpha=90^\circ$ $\beta=117.504(4)^\circ$ $\gamma=90^\circ$

CCDC deposition number: 1842008

**Table S3** Crystallographic Data for **TI**.

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Formula sum	C <sub>29</sub> H <sub>26</sub> N <sub>2</sub>
Space-group	P21/c
Cell parameters	a=11.26 Å b=14.997 Å c=13.15 Å $\alpha=90^\circ$ $\beta=92.035(3)^\circ$ $\gamma=90^\circ$

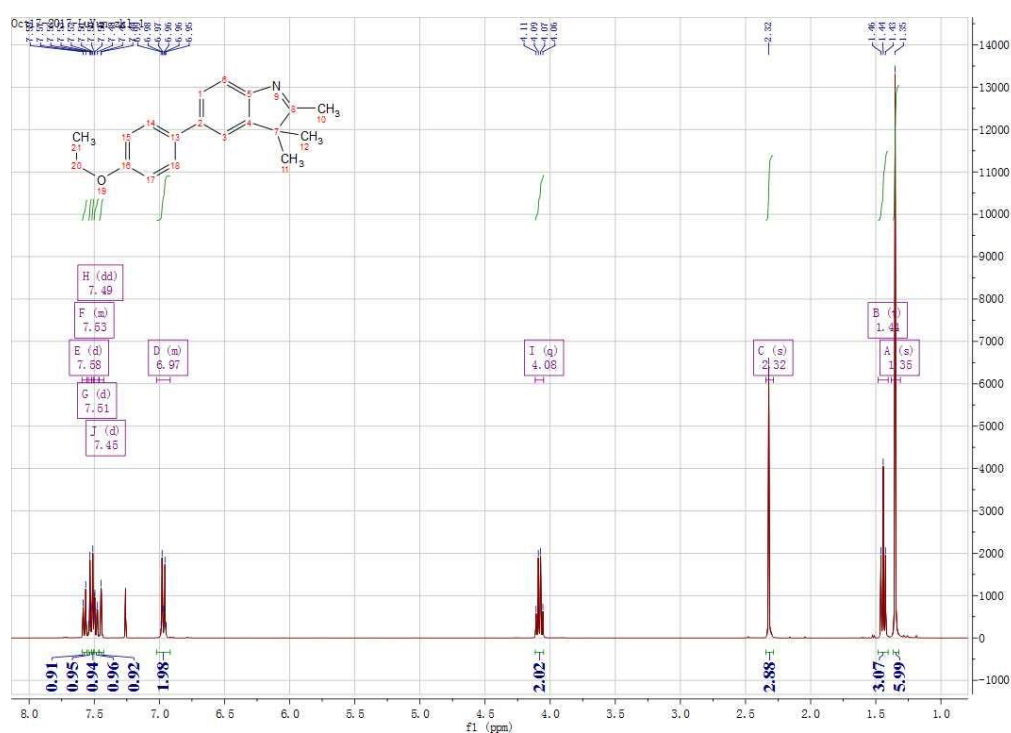
CCDC deposition number: 1842010

**Table S4** Crystallographic Data for **FI**.

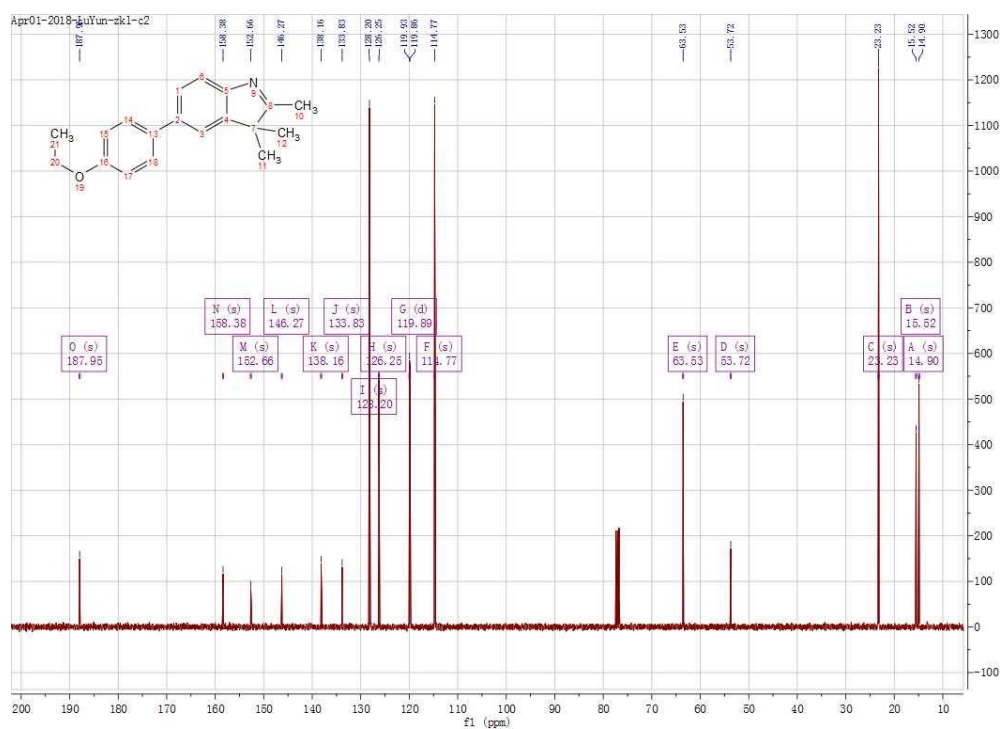
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Formula sum	C <sub>18</sub> H <sub>16</sub> F <sub>3</sub> N <sub>1</sub>
Space-group	C2/c
Cell parameters	a=30.843 Å b=6.528 Å c=17.909 Å $\alpha=90^\circ$ $\beta=122.058(3)^\circ$ $\gamma=90^\circ$

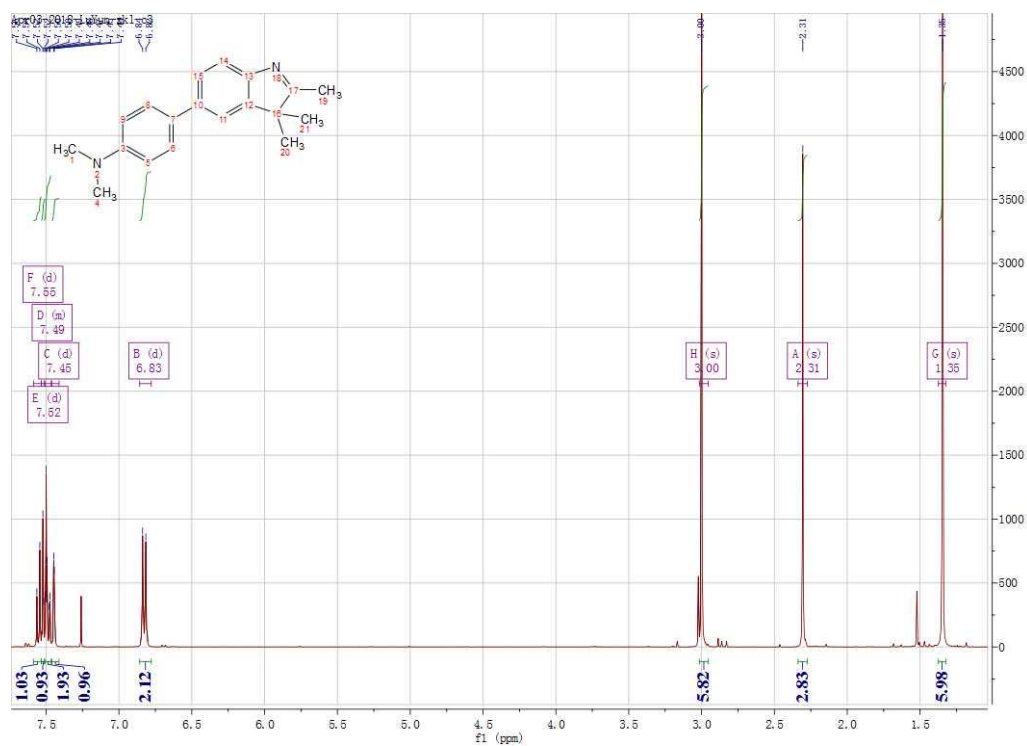
CCDC deposition number: 1842007



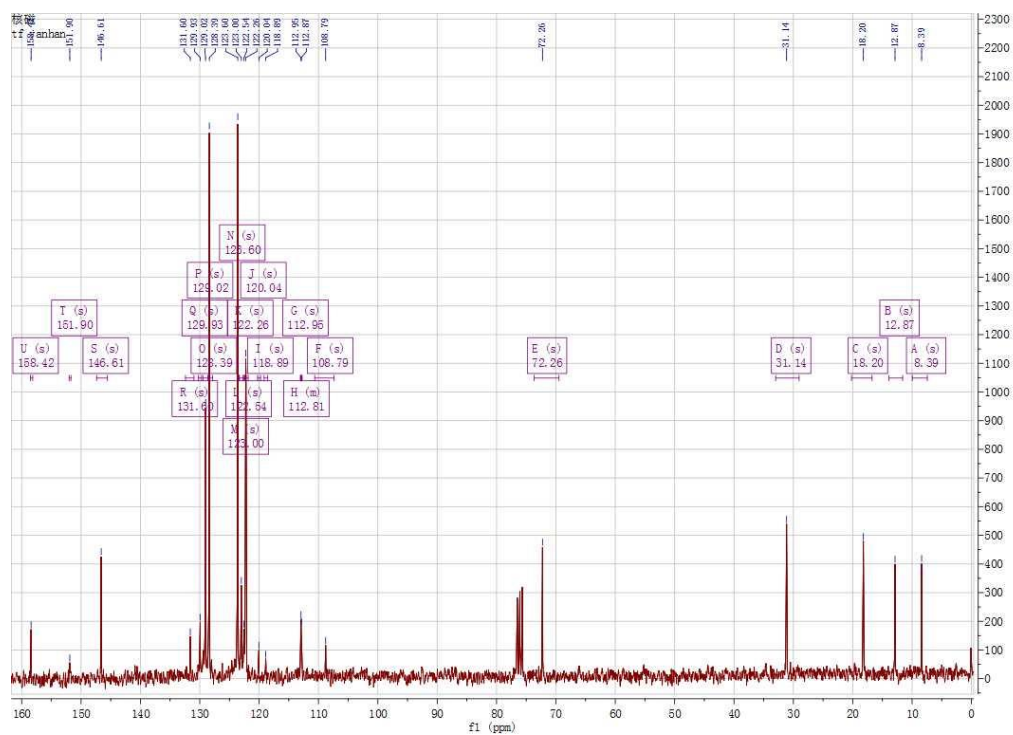
**Figure S1. The  $^1\text{H}$  NMR spectrum of PI.**



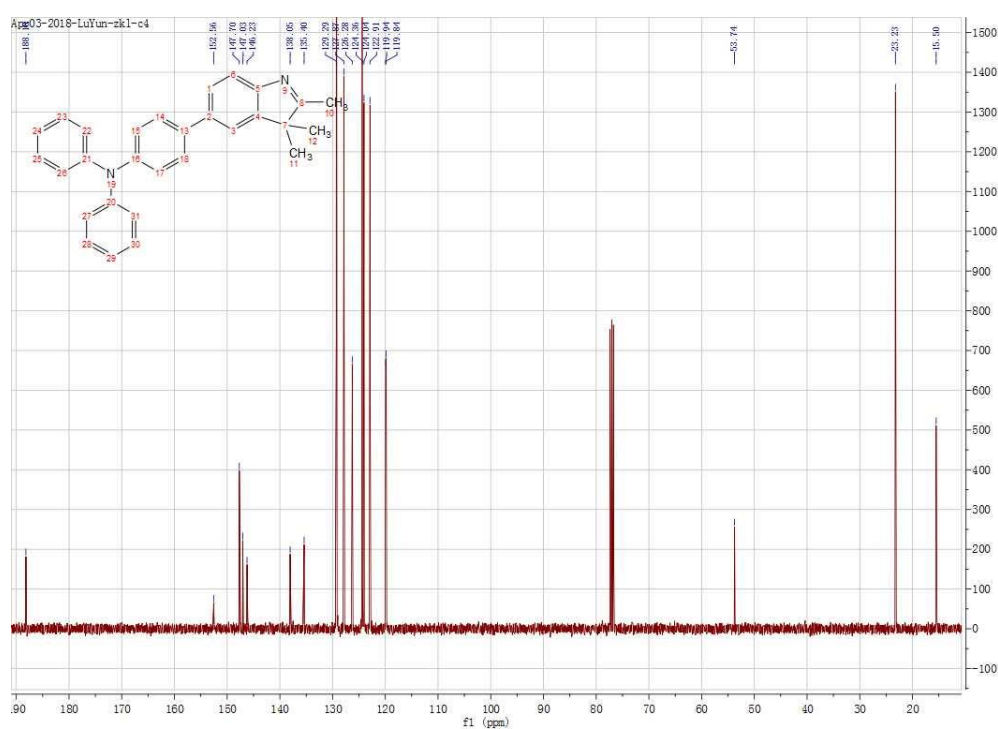
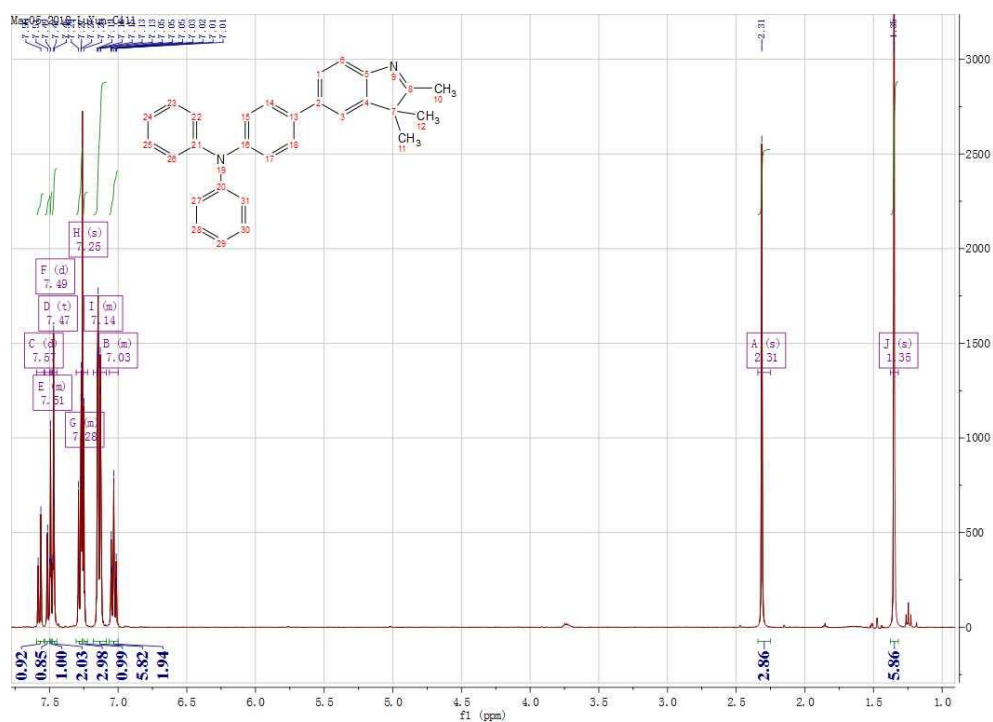
**Figure S2. The  $^{13}\text{C}$  NMR spectrum of PI.**

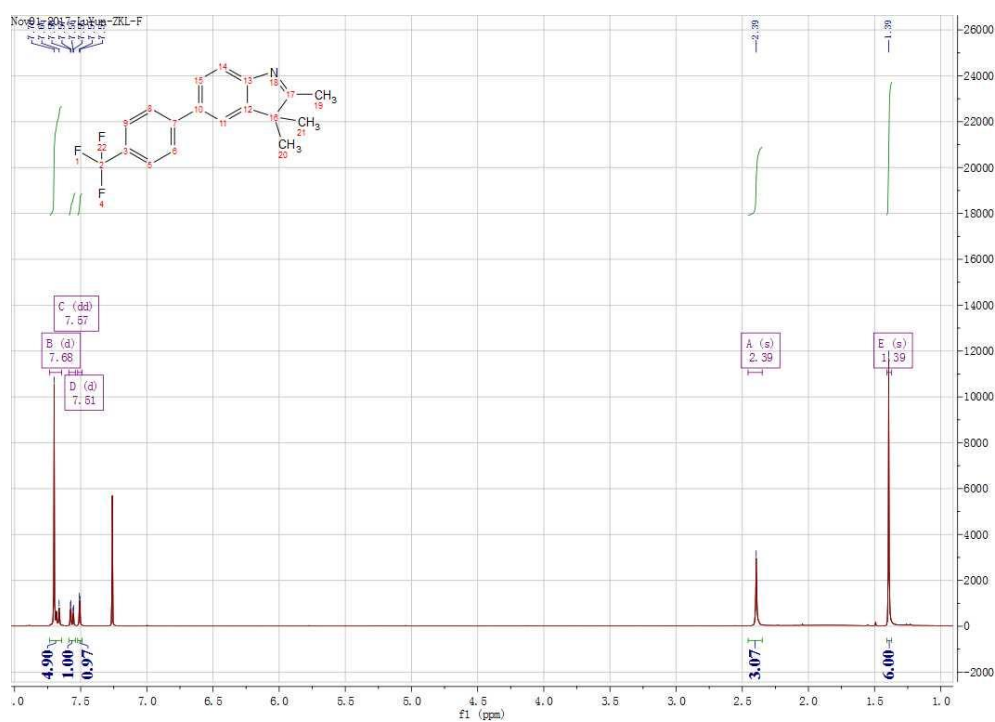


**Figure S3** The  $^1\text{H}$  NMR spectrum of NI.

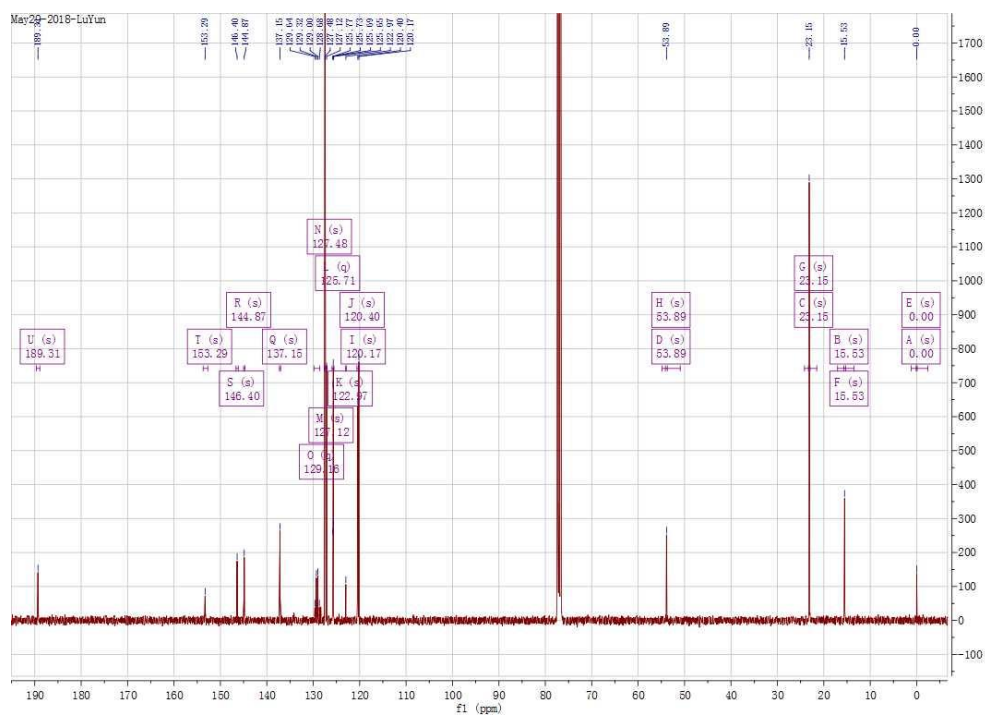


**Figure S4.** The  $^{13}\text{C}$  NMR spectrum of NI.





**Figure S7.** The  $^1\text{H}$  NMR spectrum of **FI**.



**Figure S8.** The  $^{13}\text{C}$  NMR spectrum of **FI**.