

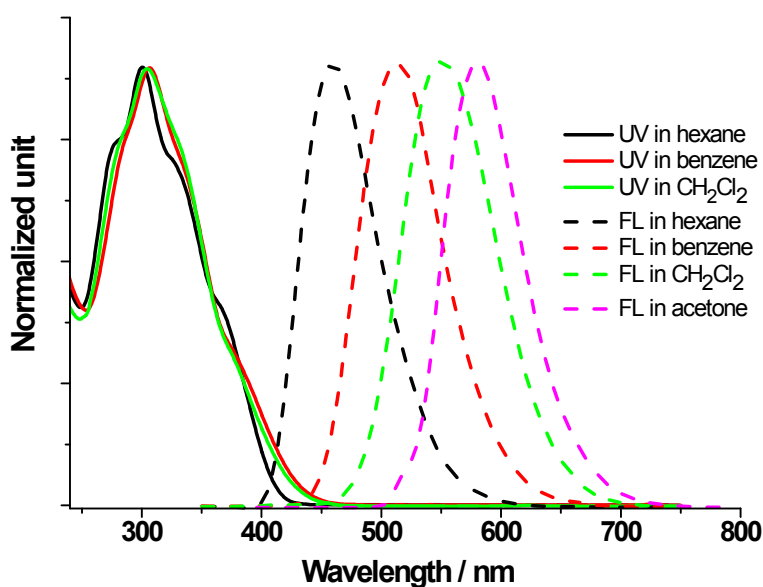
## *Electronic Supplementary Information (ESI)*

### **Multi-stimuli responses of a novel half-cut cruciform and its application as a security ink**

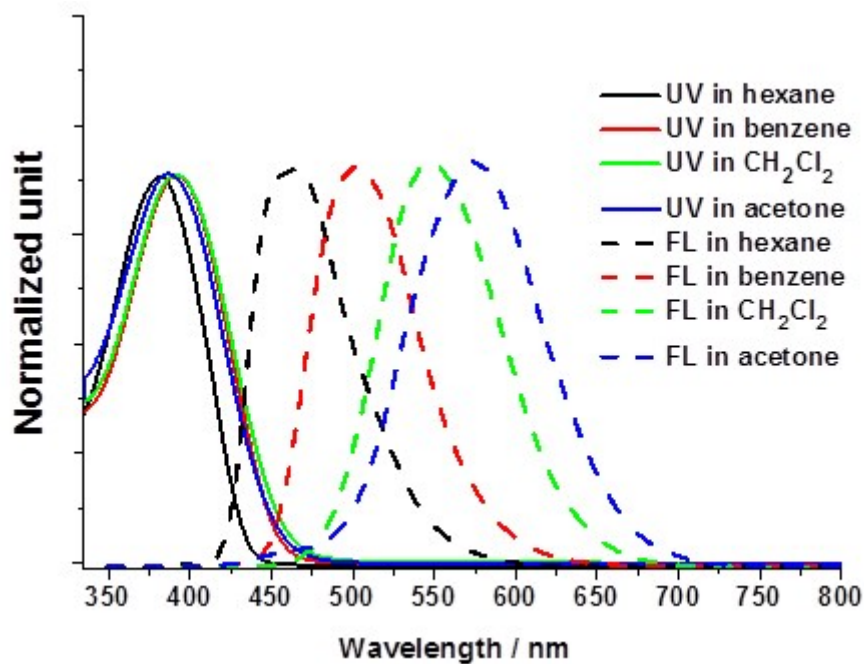
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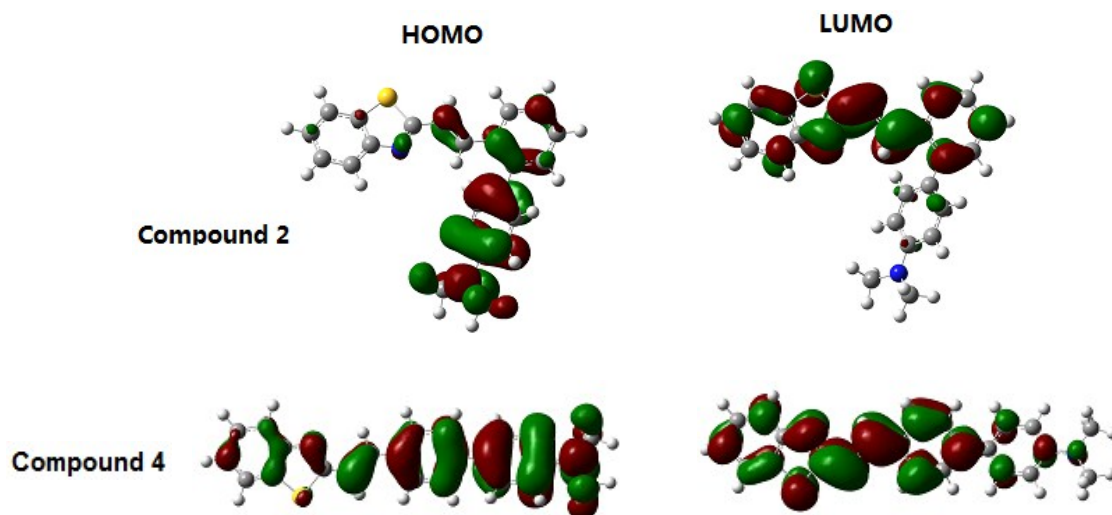
\*E-mail: [xiamin@zstu.edu.cn](mailto:xiamin@zstu.edu.cn)



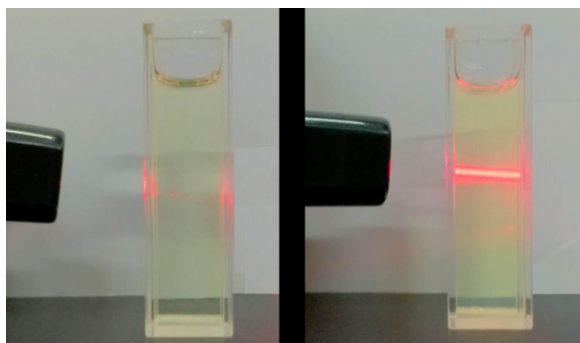
**Fig. S1** Absorption (solid lines) and emission (dash lines) spectra of **2** in different solvents



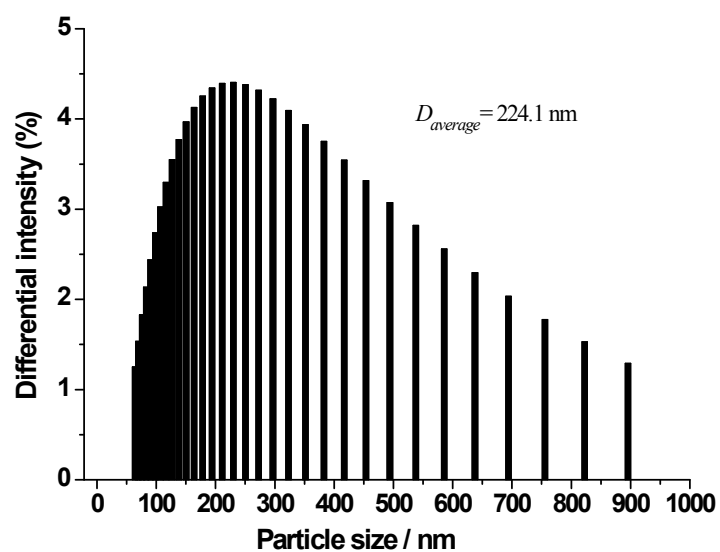
**Fig. S2** Absorption (solid lines) and emission (dash lines) spectra of **4** in different solvents



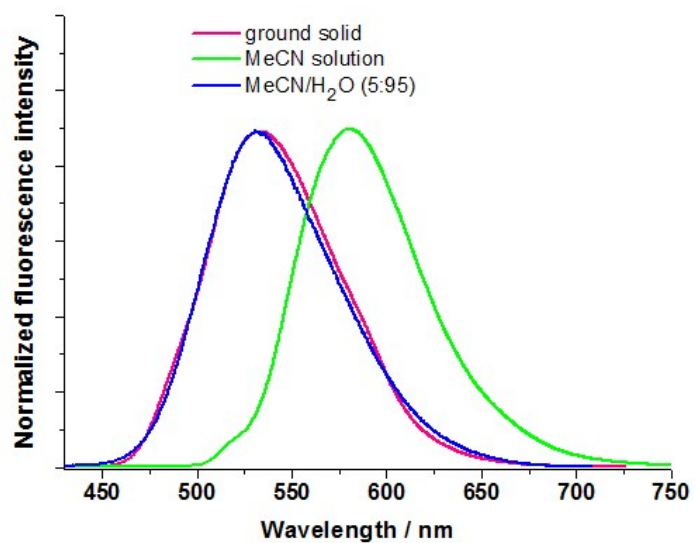
**Fig. S3** Electron distribution on HOMO and LUMO of compound **2** and **4** (based on DFT calculation using Gaussian 09 program package at B3LYP/6-31G (d, p) level)



**Fig. S4** Photos of compound **2** (20  $\mu\text{M}$ ) in MeCN solution (left) and MeCN/H<sub>2</sub>O mixture (v/v, 5 : 95) (right) irradiated by a laser pen under daylight



**Fig. S5** Size distribution of **2** aggregates (20  $\mu\text{M}$ ) in MeCN/H<sub>2</sub>O (5:95, v/v) mixture by DLS determination



**Fig. S6** Emission spectra of compound **2** in MeCN solution, MeCN/H<sub>2</sub>O mixture (v/v, 5 : 95) and ground solid

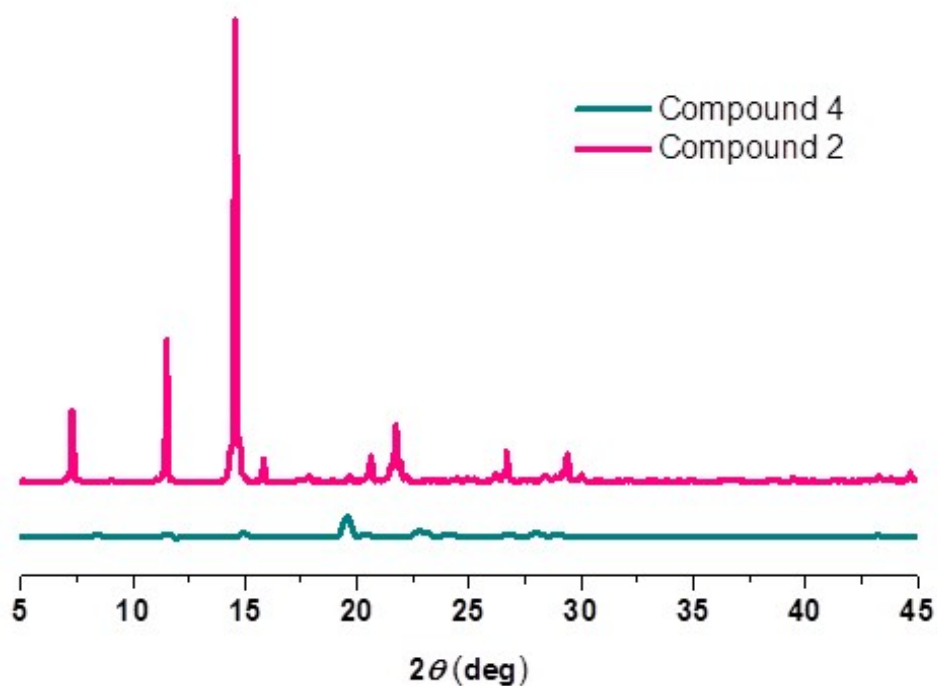


Fig. S7 PXRD patterns of compound 2 and 4 in as-prepared solid state

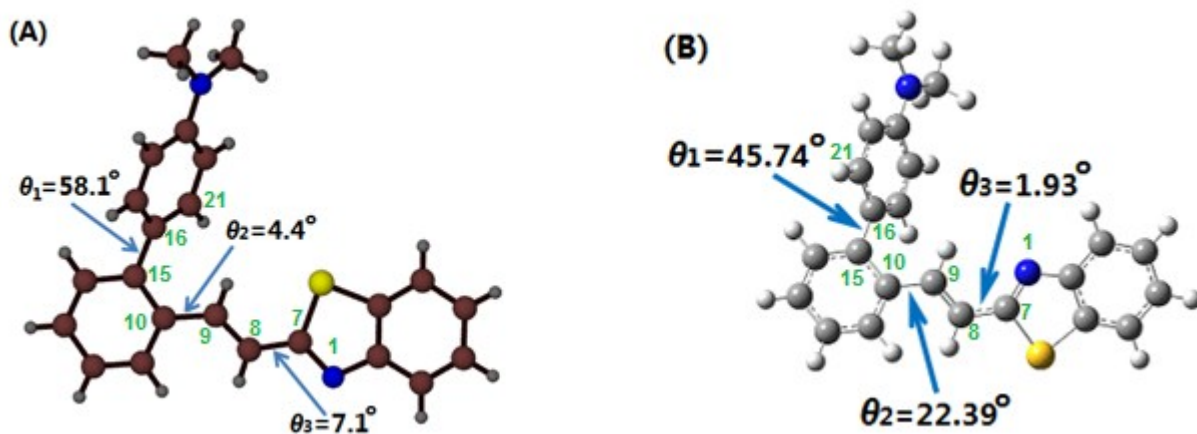


Fig. S8 Geometries of compound 2 in crystalline state (A) and in gas state (B) (based on DFT calculation using Gaussian 09 program package at B3LYP/6-31G (d, p) level)

