Supporting Information

Visible and Near-Infrared Chemosensor for Colorimetric and Ratiometric Detection of Cyanide

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Figure S1. Color changes of 2 (20 μM in DMF/H₂O = 99/1 v/v) in the presence of 5.0 molequiv. of anions after 1 hour at 60 °C. From left: no anion, CN⁻, F⁻, AcO⁻, H₂PO₄⁻, Cl⁻, Br⁻, I⁻, NO₃⁻ and HSO₄⁻.

(a)

(b)

Figure S2. (a) Color changes of 3 (10 μM) in DMF/H₂O solution (99:1 v/v) in the presence of 2 equivalents of anions. From left: CN⁻, F⁻, Cl⁻, Br⁻, I⁻, H₂PO₄⁻, HSO₄⁻, NO₃⁻, and no anion. (b) Color contrast of 3 in DMF/H₂O solution (99:1 v/v) in the presence of 2 equivalents of CN⁻ (0.5 μM, 1 μM, 5 μM, 10 μM, 50 μM and 100 μM). Left is the blank solution of 3.
Figure S3. Partial $^1$H NMR spectral change (300 MHz, 10 mM, CDCl$_3$, 25 °C) of model compound 4: (a) before and (b) after addition of 4 molequiv. of tetrabutylammonium cyanide.
Figure S4. $^{13}$C NMR spectral change (100 MHz, a: CDCl$_3$, b: $d_8$-THF, 25 °C) of model compound 4 (a) before and (b) after addition of 4 molequiv. of tetrabutylammonium cyanide.
Figure S5. FTIR spectral change of model compound 4 (a) before and (b) after addition of 4 molequiv. of tetrabutylammonium cyanide.