Supplementary Material

Selective Identification of Phenylalanine Using Cucurbit[7,8]uril-Based Fluorescent Probes

Xiao-Xia Li,[A] Wei-Tao Xu,[A] Xin-Yu Deng,[A] Li-Fei Tian,[A] Ying Huang,[B,C] and Zhu Tao[A,C]

[A]Key Laboratory of Macrocyclic and Supramolecular Chemistry of Guizhou Province, Guizhou University, Guiyang 550025, China.

[B]The Engineering and Research Center for Southwest Bio-Pharmaceutical Resources of National Education Ministry of China, Guizhou University, Guiyang 550025, China.

[C]Corresponding authors. Email: 467992759@qq.com; gzutao@263.net
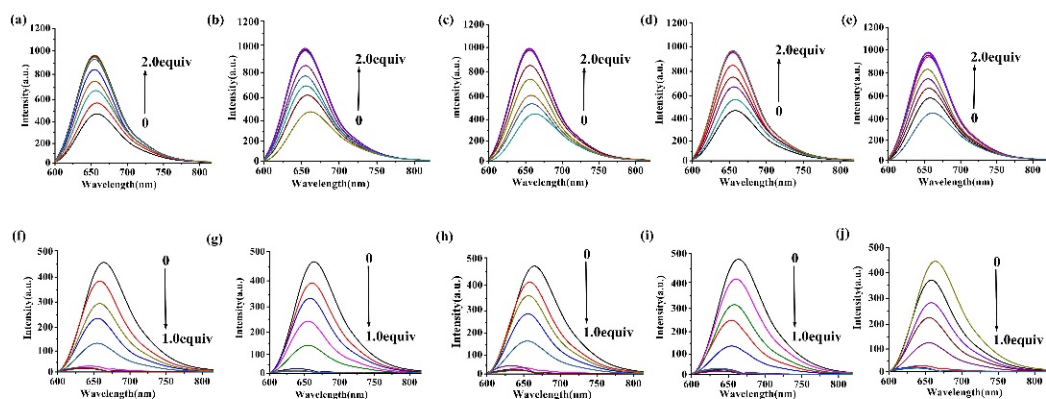
LIST OF FIGURES

Figure S1. Fluorescence spectra of TB (20 μM) upon increasing the amount of Q[7] from 0 to 40 μM at pH 3(a), pH 4(b), pH 5(c), pH 6(d) and pH 7(e); Fluorescence spectra of TB (20 μM) upon increasing the amount of Q[8] from 0 to 20 μM at pH 3(f), pH 4(g), pH 5(h), pH 6(i) and pH 7(j), respectively.
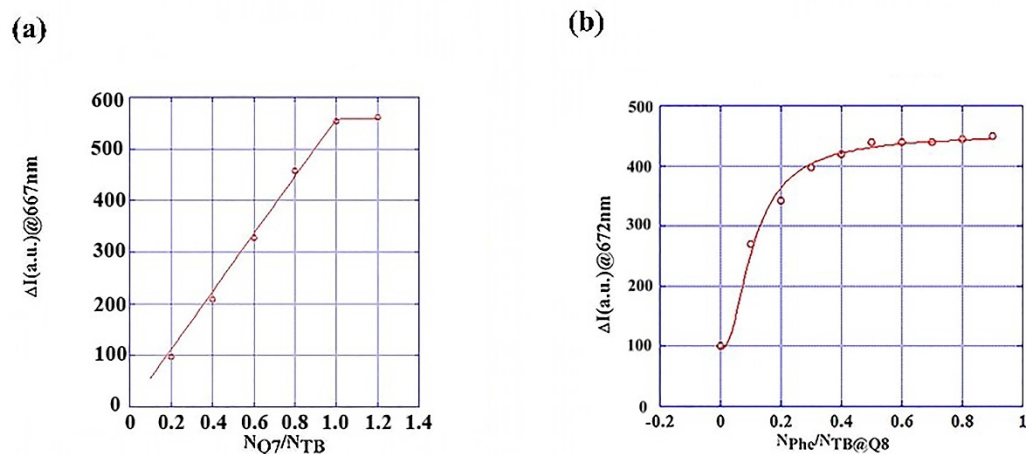

Figure S2. Non-.linear fitting curves for changes in the fluorescence intensity at pH=4.5 of TB (20 μM) in the presence of different concentrations of Q[7];(b) fluorescence intensity at pH=4.5 of TB (20 μM) in the presence of different concentrations of Q[8].
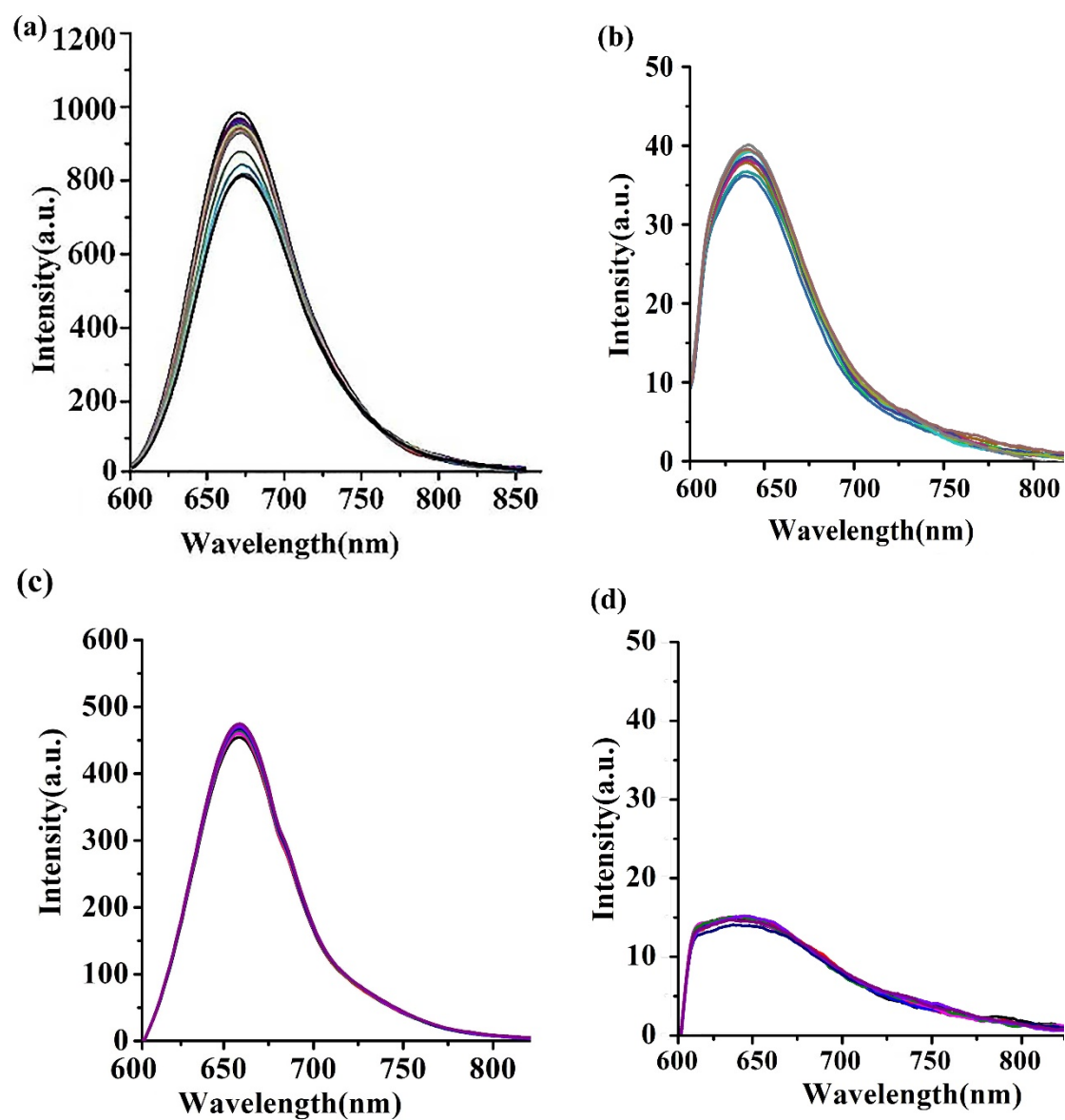
Figure S3. The effect of amino acids (50 equiv. of host-guest complex) on the relative fluorescence response of (a)

TB@Q[7] (1:1, 20 μM) (λem =667 nm) at pH=2; (b) TB@Q[8] (2:1, 10 μM) (λem =643 nm) at pH=2;(c)

TB@Q[7] (1:1, 20 μM) (λem =663 nm) at pH=12;(d) TB@Q[8] (2:1, 10 μM) (λem =643 nm) at pH=12.

$\Delta F = 200.63C + 194.86$
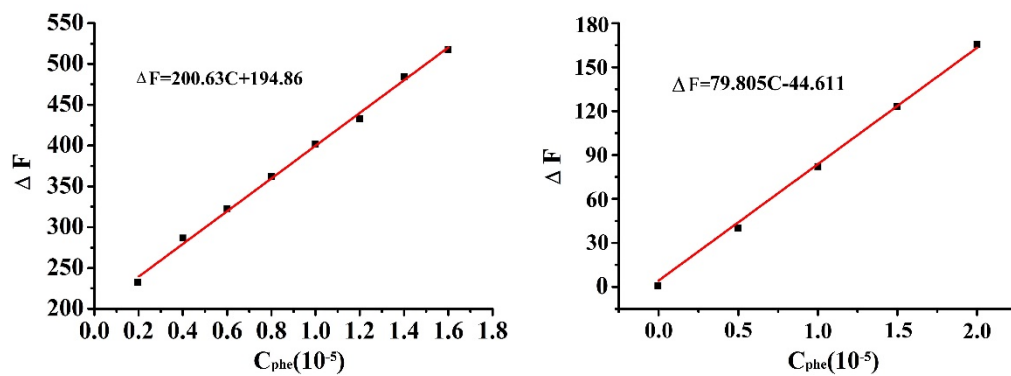
$\Delta F = 79.805C - 44.611$

Figure S4. Non-linear fitting curves for changes in the fluorescence intensity at pH=4.5 of TB@ Q[7] (20 μM) in the presence of different concentrations of Phe,(b) fluorescence intensity at pH=4.5 of TB@ Q[8] (10 μM) in the presence of different concentrations of Phe.