Supporting information

for

A PCT-based, Pyrene-armed Calix[4]crown Fluoroionophore

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Figure S1. Changes in the absorption spectra of **1** (6.0 μM) in MeCN as a function of $[Cu^{2+}]$.

Figure S2. Titration profiles for fluorescence emission spectra of (a) 2- Pb^{2+} and (b) 2- Cu^{2+} complexes in MeCN. The excitation wavelength was 343 nm. The ligand concentration was 6.0 μM .

Figure S3. Fluorescence intensity changes of **1** and **2** with increasing K^+ ion concentrations in CH_3CN .

Figure S4. Changes in the fluorescence emission for **2**• Pb^{2+} complex in MeCN upon addition of K^+ .

The excitation wavelength was 343 nm.

Figure S5. Changes in the fluorescence emission for **1**• Cu^{2+} complex in MeCN upon addition of K^{+} .

The excitation wavelength was 343 nm.

Figure S6. ^1H NMR spectrum of compound **1**.

Figure S7. ^{13}C NMR spectrum of compound **1**.

NMR Data of compound 1

^1H NMR (200 MHz, CDCl_3): δ 9.17 (br s, 2 H, NH) 8.19-7.84 (m, 16 H, ArH, pyrene), 7.65 (d, 2 H, ArH, pyrene, $J = 8.2$ Hz), 7.27 (d, 8 H, ArH_m, $J = 7.96$ Hz), 7.09 (t, 2 H, ArH_p, $J = 7.4$ Hz), 6.63 (t, 2 H, ArH_p, $J = 7.0$ Hz), 3.67 (s, 8 H, ArCH₂Ar), 3.60-3.71 (m, 4 H, ArOCH₂CO; 12 H, OCH₂CH₂O), 3.34-3.45 (m, 4 H, ArOCH₂CH₂O), 3.60 (s, 4 H, ArOCH₂CO). ^{13}C NMR (50 MHz, CDCl_3): 168.3, 157.8, 154.4, 154.3, 135.0, 133.3, 131.8, 131.2, 130.8, 130.4, 130.1, 129.2, 127.5, 127.2, 126.7, 126.0, 125.2, 124.9, 124.7, 124.4, 123.0, 122.3, 121.3, 73.6, 71.2, 37.6, 23.2, 10.2 ppm.