

Accessory Material

The formation of fluorescent alkali metal and alkaline earth complexes by 1-phenyl-4-(2-{10-[2-(4-phenylpiperazino)ethyl]-9-anthryl}ethyl)piperazine and alkaline earth complexes by 4-{2-[10-(2-morpholinoethyl)-9-anthryl]ethyl}thiomorpholine in acetonitrile

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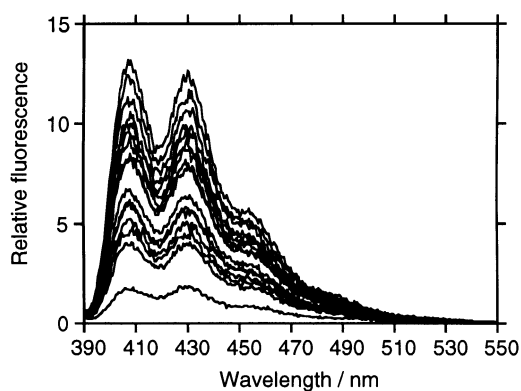


Fig. S1. The increase in emission of (1) ($3.00 \times 10^{-6} \text{ mol dm}^{-3}$) with $[\text{Na}^+]_{\text{total}}$ (1.00×10^{-5} – $5.00 \times 10^{-3} \text{ mol dm}^{-3}$) in acetonitrile at $I = 0.05 \text{ mol dm}^{-3}$ (NEt_4ClO_4) and 298.2 K when excited at 378 nm. The lowest emission spectrum is that of (1) alone.

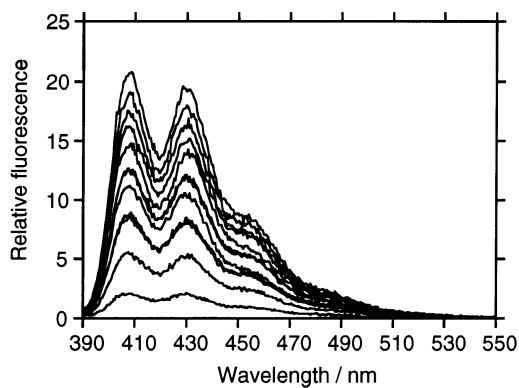


Fig. S2. The increase in emission of (1) ($3.00 \times 10^{-6} \text{ mol dm}^{-3}$) with $[\text{K}^+]$ (5.00×10^{-5} - $5.00 \times 10^{-3} \text{ mol dm}^{-3}$) in acetonitrile at $I = 0.05 \text{ mol dm}^{-3}$ (NEt_4ClO_4) and 298.2 K when excited at 377 nm. The lowest emission spectrum is that of (1) alone.

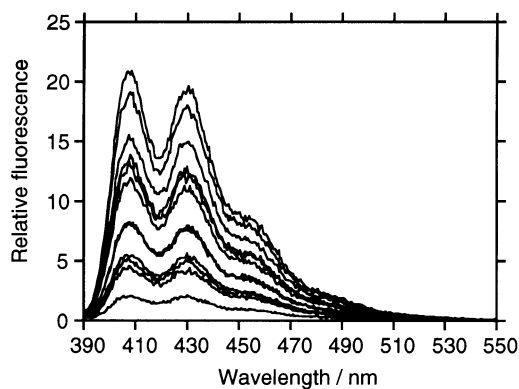


Fig. S3. The increase in emission of (1) ($3.00 \times 10^{-6} \text{ mol dm}^{-3}$) with $[\text{Rb}^+]$ (5.00×10^{-5} - $4.00 \times 10^{-3} \text{ mol dm}^{-3}$) in acetonitrile at $I = 0.05 \text{ mol dm}^{-3}$ (NEt_4ClO_4) and 298.2 K when excited at 377 nm. The lowest emission spectrum is that of (1) alone.

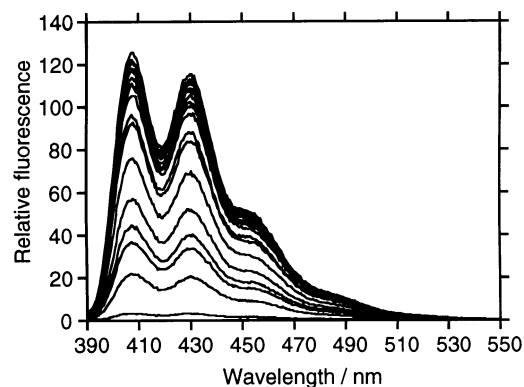


Fig. S4. The increase in emission of (1) ($3.00 \times 10^{-6} \text{ mol dm}^{-3}$) with $[\text{Mg}^{2+}]$ (1.00×10^{-6} - $1.00 \times 10^{-4} \text{ mol dm}^{-3}$) in acetonitrile at $I = 0.05 \text{ mol dm}^{-3}$ (NEt_4ClO_4) and 298.2 K when excited at 379 nm. The lowest emission spectrum is that of (1) alone.

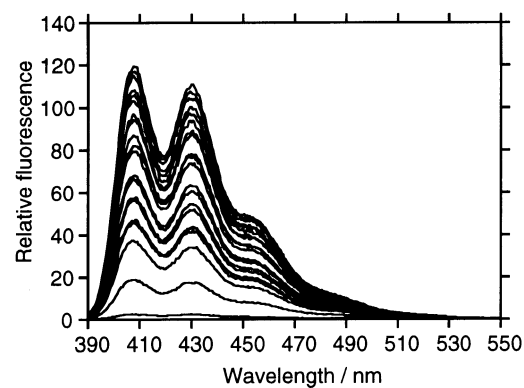


Fig. S5. The increase in emission of (1) ($3.00 \times 10^{-6} \text{ mol dm}^{-3}$) with $[\text{Sr}^{2+}]$ (1.00×10^{-6} - $3.00 \times 10^{-3} \text{ mol dm}^{-3}$) in acetonitrile at $I = 0.05 \text{ mol dm}^{-3}$ (NEt_4ClO_4) and 298.2 K when excited at 377 nm. The lowest emission spectrum is that of (1) alone.

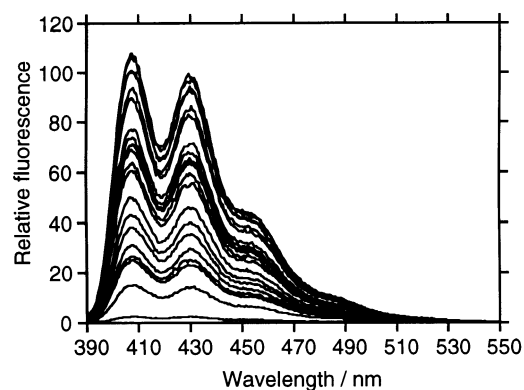


Fig. S6. The increase in emission of (1) ($3.00 \times 10^{-6} \text{ mol dm}^{-3}$) with $[\text{Ba}^{2+}]$ (1.00×10^{-6} - $3.00 \times 10^{-3} \text{ mol dm}^{-3}$) in acetonitrile at $I = 0.05 \text{ mol dm}^{-3}$ (NEt_4ClO_4) and 298.2 K when excited at 377 nm. The lowest emission spectrum is that of (1) alone.

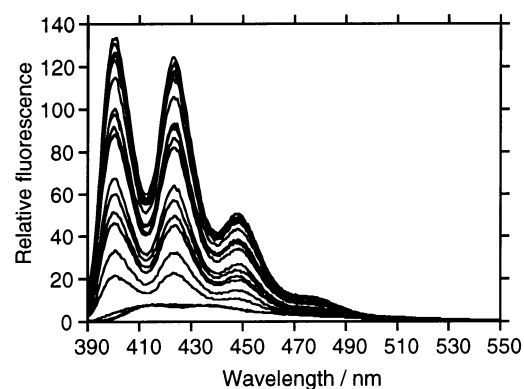


Fig. S7. The increase in emission of (2) ($3.00 \times 10^{-6} \text{ mol dm}^{-3}$) with $[\text{Mg}^{2+}]$ (1.00×10^{-6} - $3.00 \times 10^{-3} \text{ mol dm}^{-3}$) in acetonitrile at $I = 0.05 \text{ mol dm}^{-3}$ (NEt_4ClO_4) and 298.2 K when excited at 377 nm. The lowest emission spectrum is that of (2) alone.

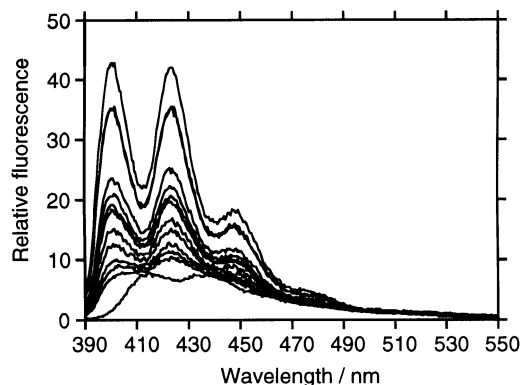


Fig. S8. The increase in emission of (2) ($3.00 \times 10^{-6} \text{ mol dm}^{-3}$) with $[\text{Sr}^{2+}]$ (1.00×10^{-5} - $6.00 \times 10^{-3} \text{ mol dm}^{-3}$) in acetonitrile at $I = 0.05 \text{ mol dm}^{-3}$ (NEt_4ClO_4) and 298.2 K when excited at 377 nm. The lowest emission spectrum is that of (2) alone.

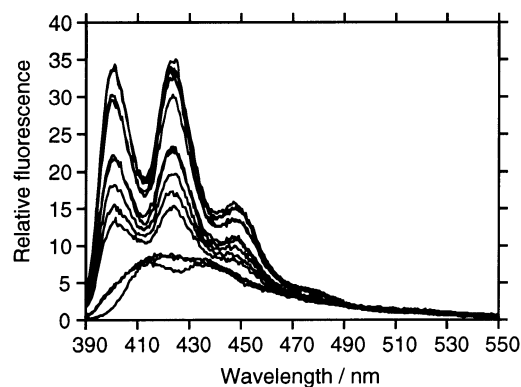


Fig. S9. The increase in emission of (2) ($3.00 \times 10^{-6} \text{ mol dm}^{-3}$) with $[\text{Ba}^{2+}]$ (5.00×10^{-5} - $6.00 \times 10^{-3} \text{ mol dm}^{-3}$) in acetonitrile at $I = 0.05 \text{ mol dm}^{-3}$ (NEt_4ClO_4) and 298.2 K when excited at 377 nm. The lowest emission spectrum is that of (2) alone.