Electronic Supplementary Material (ESI) for RSC Advances.

Sugar thiacrown-ether appended calix[4]arene as a selective chemosensor for Fe^{2+} and Fe^{3+} ions

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Supplementary Information

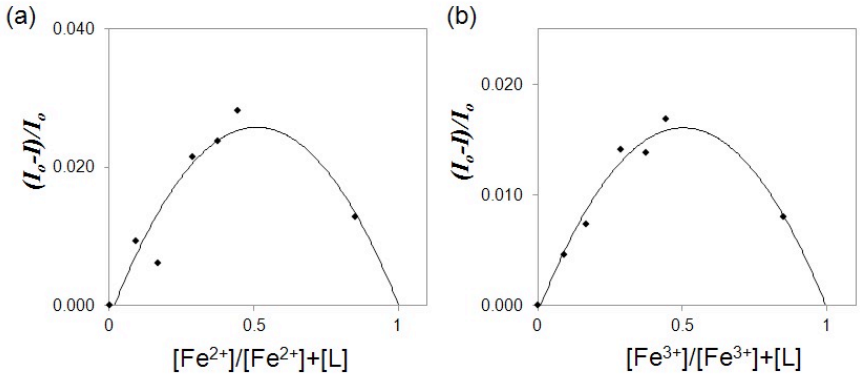

Fig. S1. Job's plot for (a) Fe^{2+} and (b) Fe^{3+} complex in MeCN:$CHCl_3$. Ligand, **9**, concentration is 1.0 x 10^{-5} M.

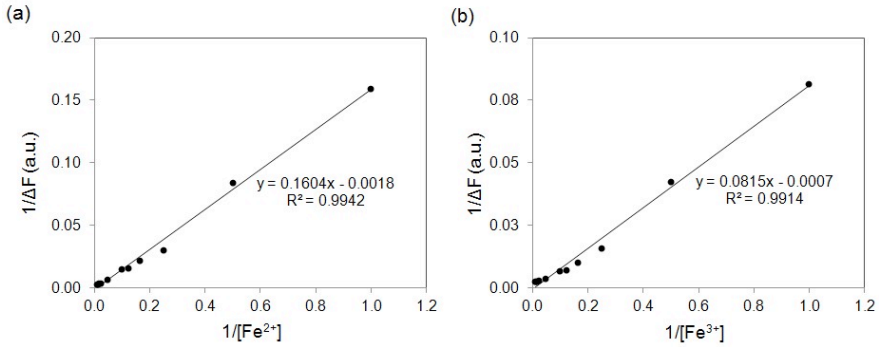

Fig. S2. The binding constants K_a for **9**-metal complexes were estimated to be 900 M^{-1} for Fe^{2+} and 875 M^{-1} for Fe^{3+}, obtained from the slope and intercept in the plot of $1/\Delta F$ against (a) $1/[Fe^{2+}]$ or (b) $1/[Fe^{3+}]$.

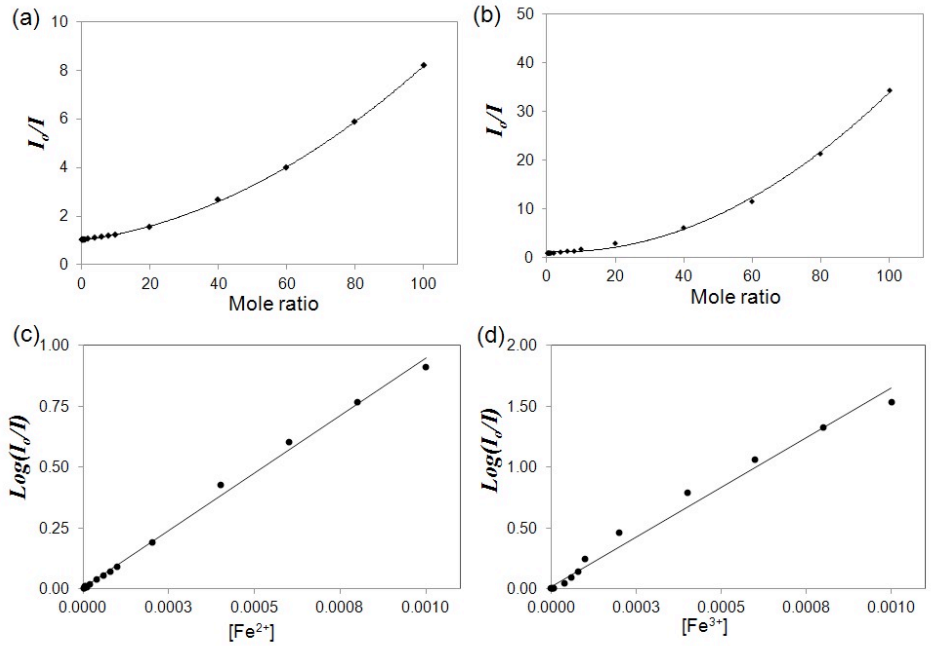

Fig S3. I_o/I versus (a) $[Fe^{2+}]$ and (b) $[Fe^{3+}]$ in MeCN/$CHCl_3$ (1:1, v/v), excitation at 343 nm. Modified Stern-Volmer relationship between **9** and Fe^{2+} (c) or Fe^{3+} (d).

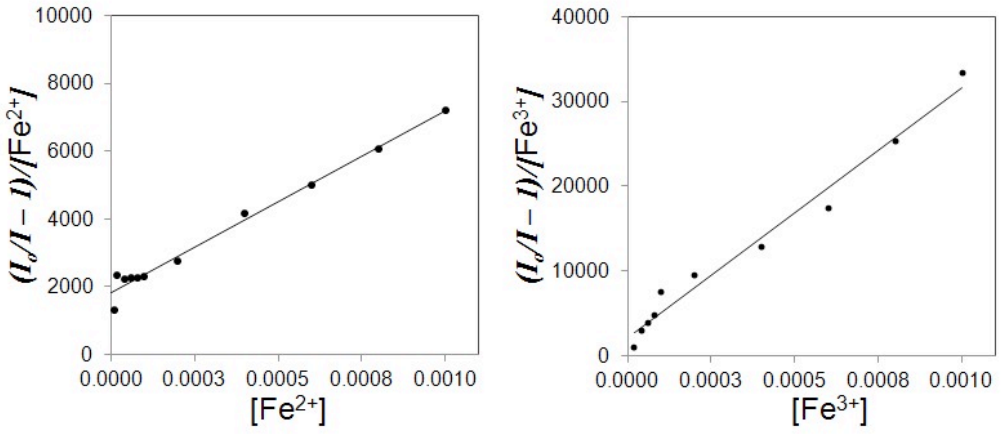

Fig S4. Plots of $(I_o/I - 1)/[Fe^{2+}]$ versus $[Fe^{2+}]$ and $(I_o/I - 1)/[Fe^{3+}]$ versus $[Fe^{3+}]$.