

## Binding induced destruction of excimer in anthracene linked benzimidazole diamide: A case toward selective detection of organic sulphonic acids and metal ions

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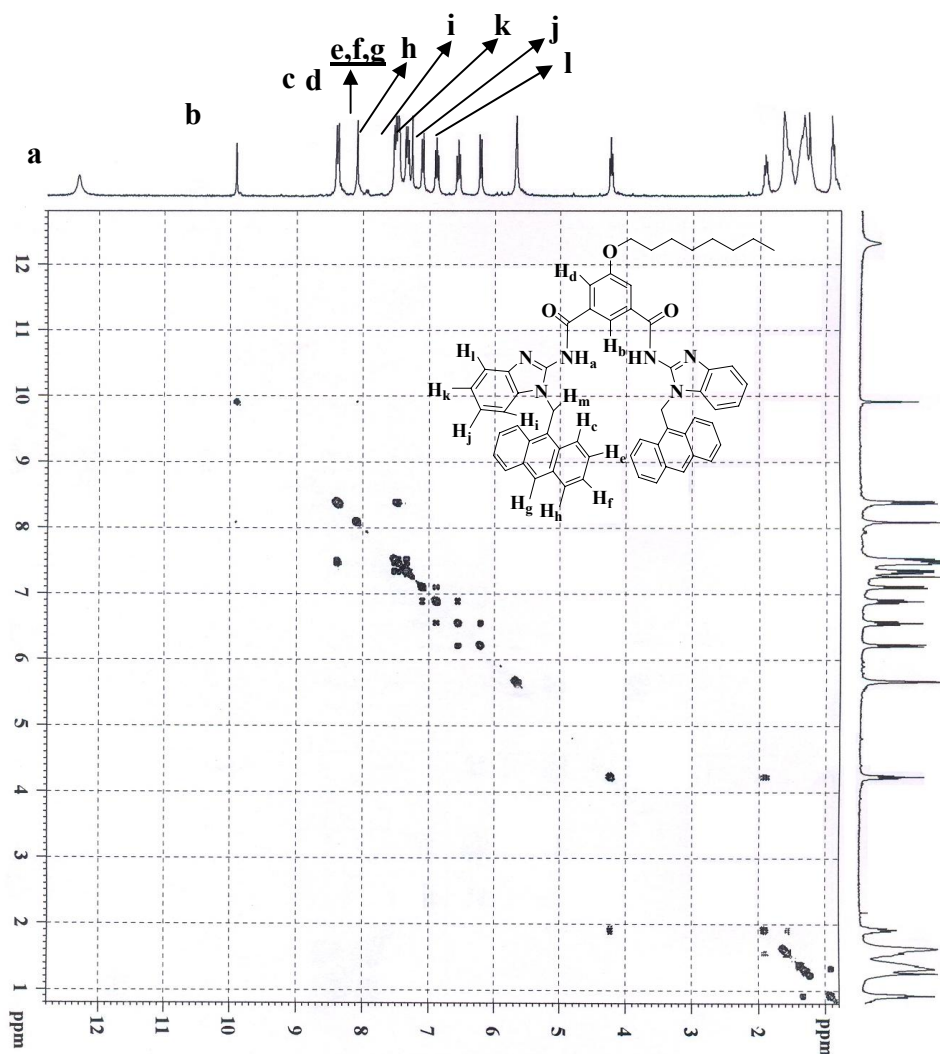
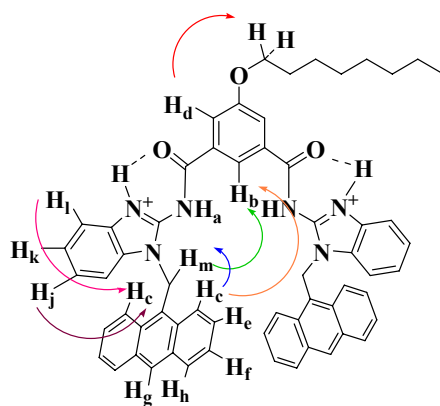
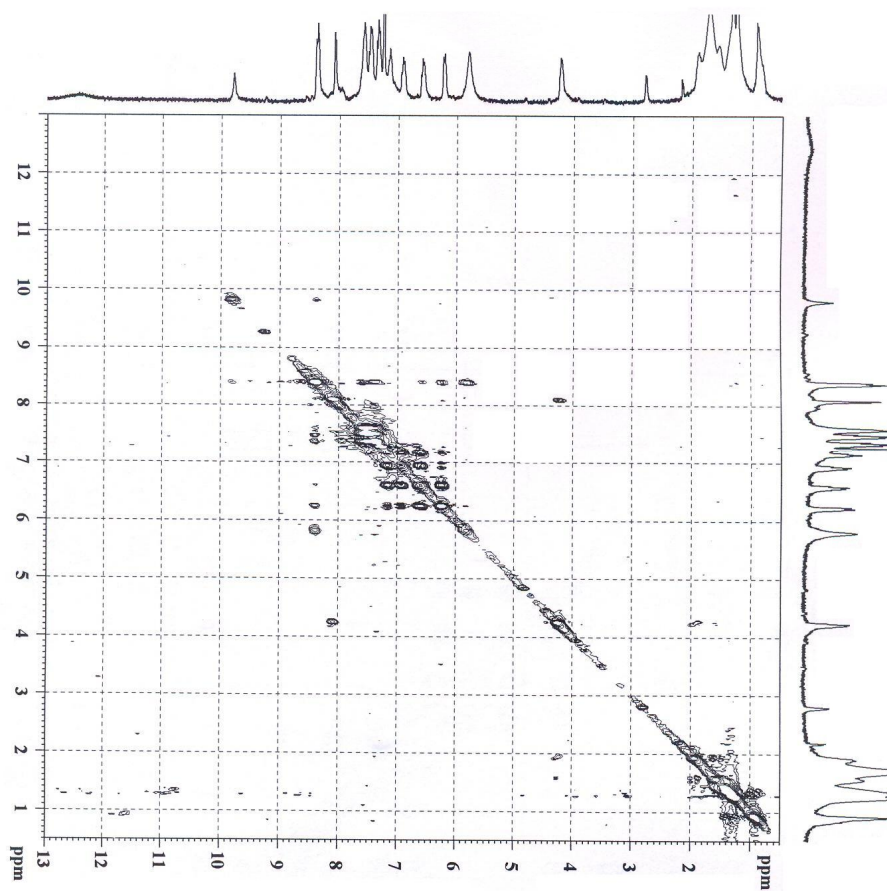
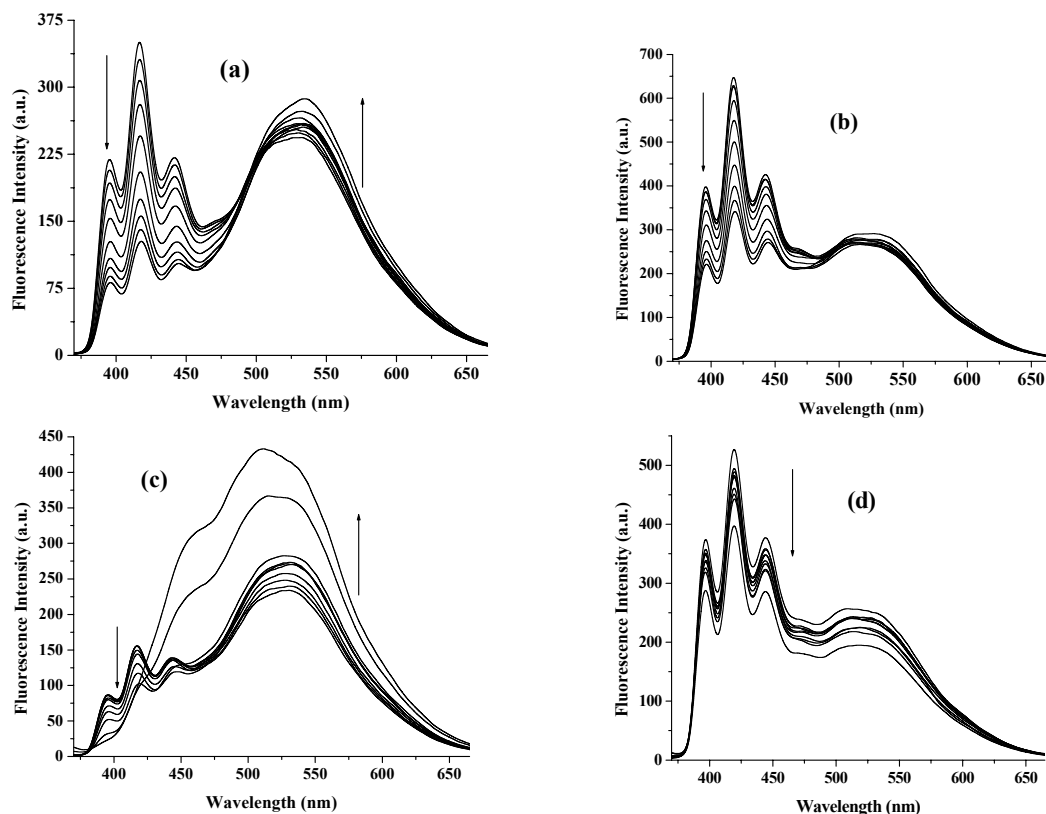


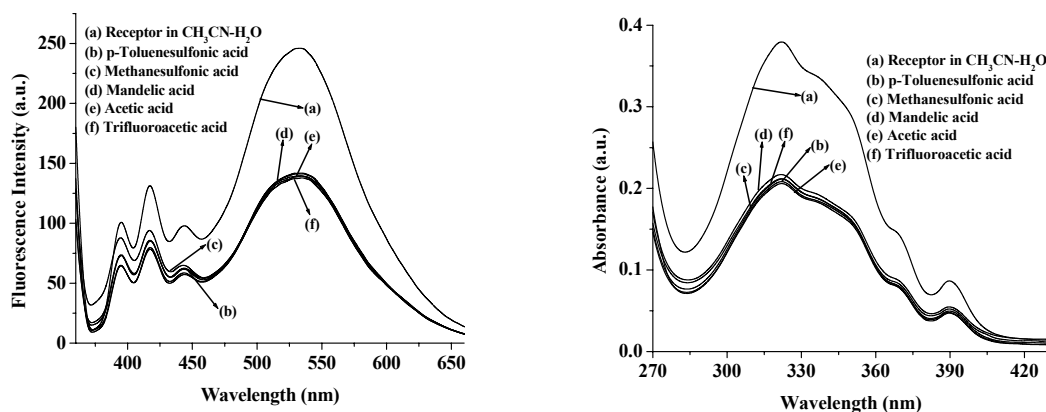
Fig. S1 COSY spectrum (300 MHz) of **1** in CDCl<sub>3</sub>.



**Fig. S2** ROESY spectrum (300 MHz) of **1** in presence of equivalent amount of  $\text{CH}_3\text{SO}_3\text{H}$  in  $\text{CDCl}_3$ .



**Fig. S3** Effect of addition of water on the emission spectra of **1** in different solvents (a)  $\text{CH}_3\text{CN}$ , (b)  $\text{CHCl}_3$ , (c)  $\text{CH}_3\text{OH}$  and (d) THF.



**Fig. S4** Emission spectra of **1** ( $c = 9.95 \times 10^{-6} \text{ M}$ ) in aq.  $\text{CH}_3\text{CN}$  upon addition of 40 equivalent amounts of the acids ( $\lambda_{\text{ex}} = 350 \text{ nm}$ ).

**Fig. S5** Absorption spectra of **1** ( $c = 9.95 \times 10^{-6} \text{ M}$ ) in aq.  $\text{CH}_3\text{CN}$  upon addition of 40 equivalent amounts of the acids ( $\lambda_{\text{ex}} = 350 \text{ nm}$ ).

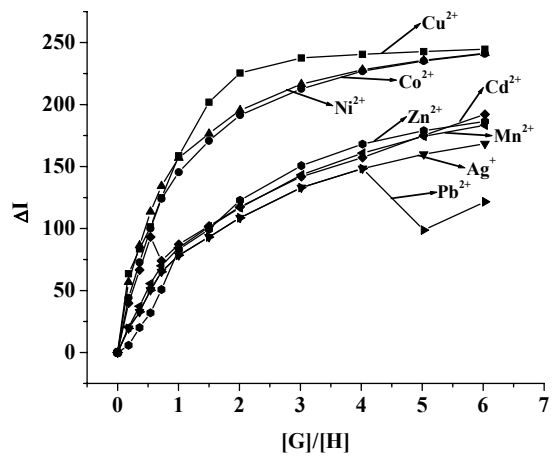


Fig. S6 Stoichiometry plots of receptor 1 with metal ions in CH<sub>3</sub>CN.