

Supporting Information

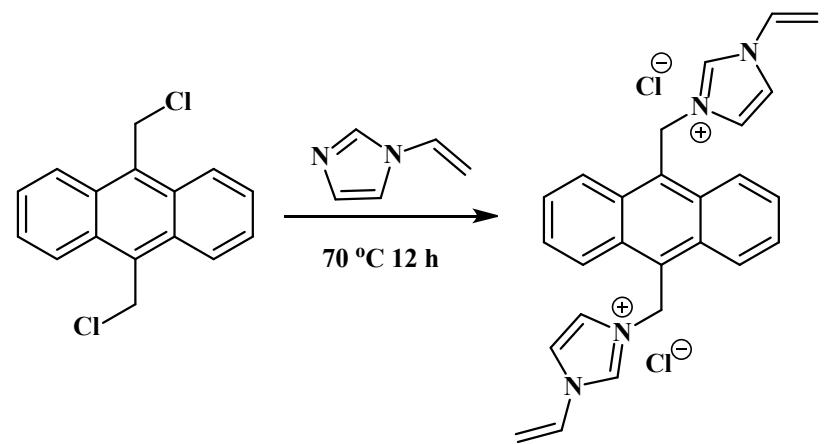
Highly sensitive determination of 2,4,6-trichlorophenol by using a novel SiO₂@MIPIL fluorescence sensor with a double recognition functional monomer

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Scheme S1 Synthesis of the ionic liquid functional monomer

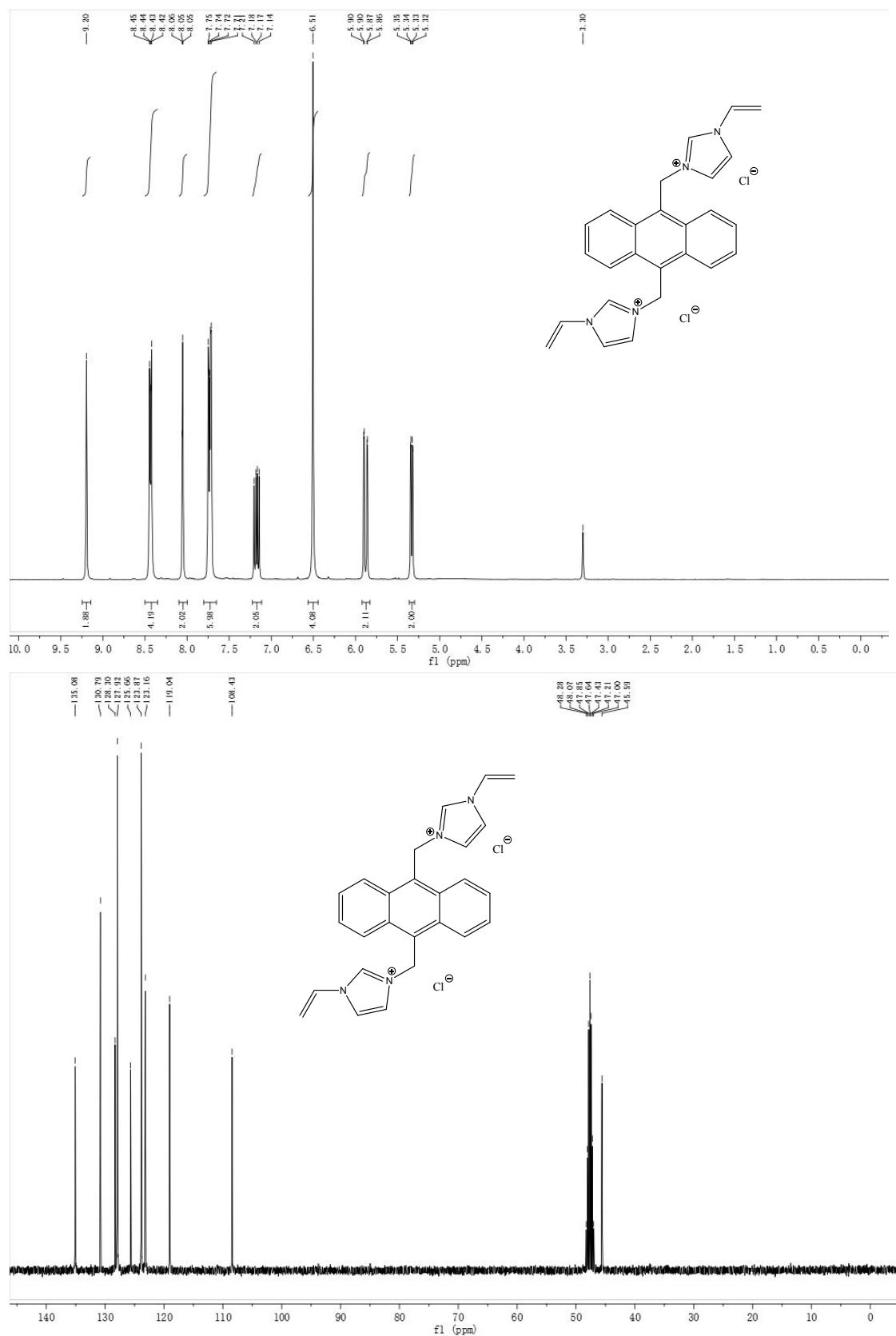


Fig.S1. ¹H NMR and ¹³C NMR spectra of 3,3'-(anthracene-9,10-diylbis (methylene)) bis(1-vinyl-1H-imidazol-3-ium) chloride

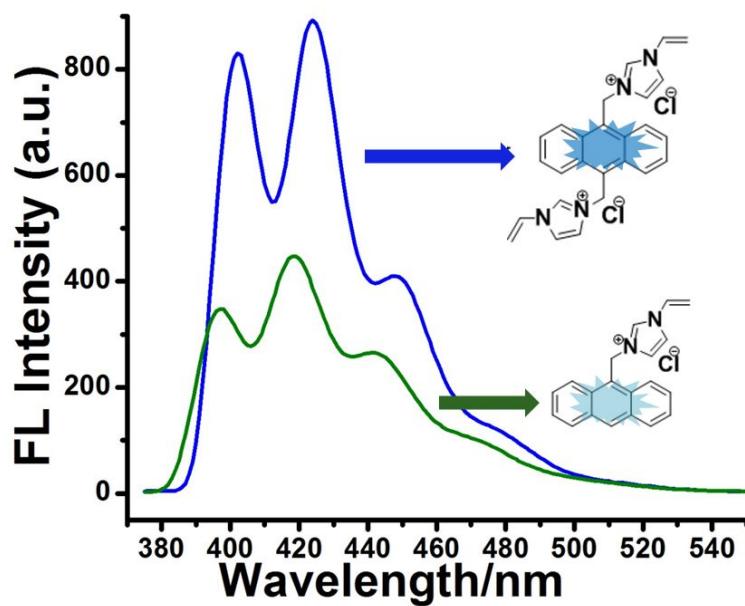


Fig. S2 Fluorescence spectra of 3,3'-(anthracene-9,10-diylbis(methylene))bis(1-vinyl-1H-imidazol-3-ium) chloride and 3-(anthracen-9-ylmethyl)-1-vinyl-1H-imidazole-3-ium chloride at the same concentration of 20 μM

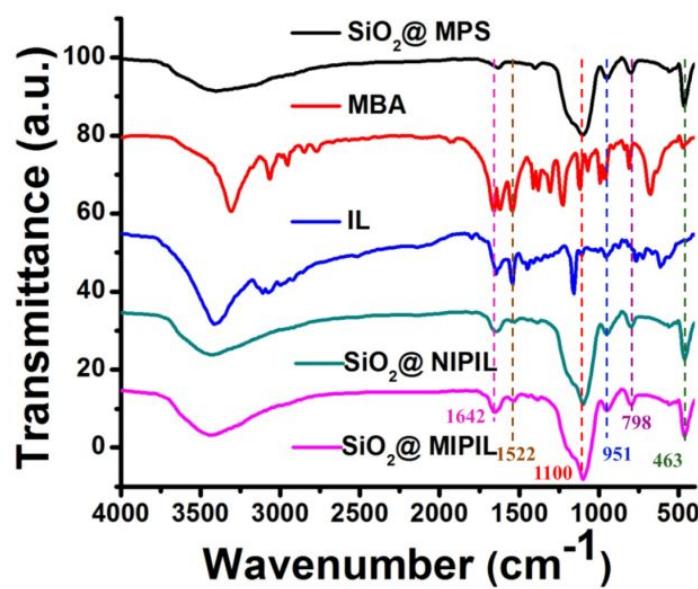


Fig. S3 FT-IR spectra of $\text{SiO}_2@\text{MPS}$, MBA, IL, $\text{SiO}_2@\text{NIPIL}$, and $\text{SiO}_2@\text{MIPIL}$

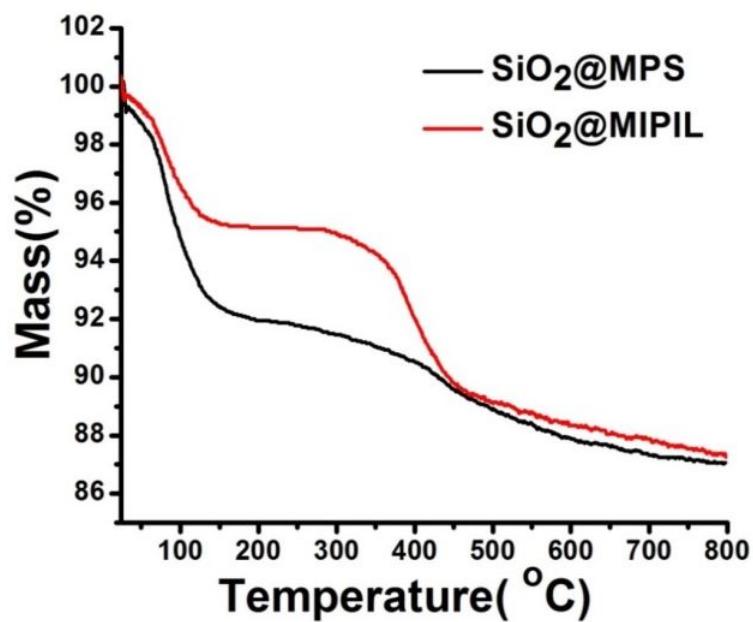


Fig. S4 TGA curves of $\text{SiO}_2@\text{MPS}$ and $\text{SiO}_2@\text{MIPIL}$

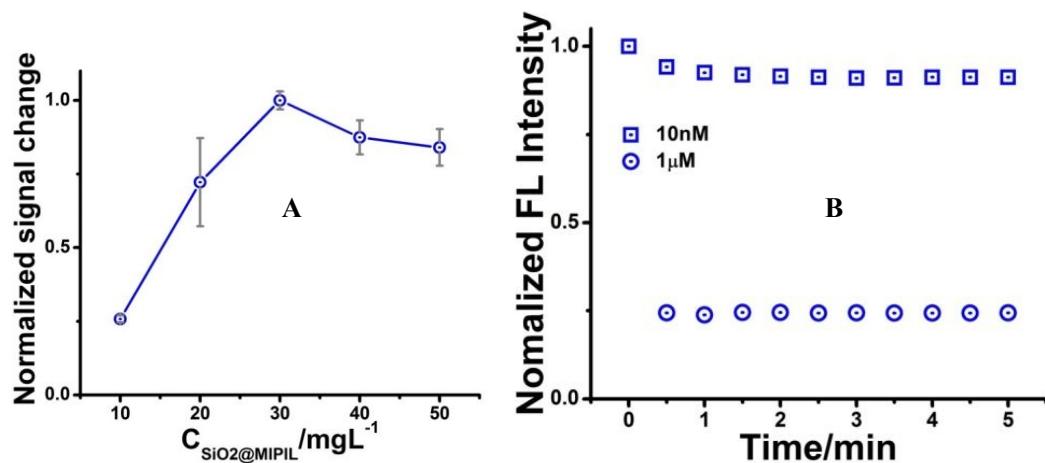


Fig. S5 (A) Effects of the $\text{SiO}_2@\text{MIPIL}$ aqueous solution concentration on the fluorescence quenching rate; (B) Effects of detection time on fluorescence quenching rate.

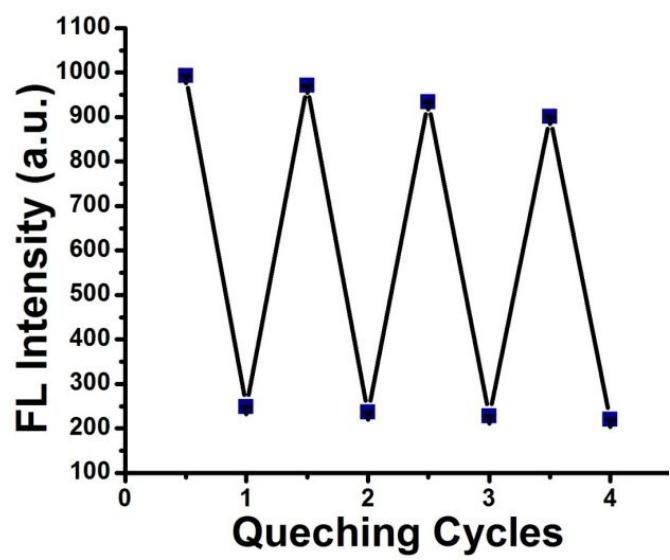


Fig. S6 Reuse of the $\text{SiO}_2@\text{MIPIL}$ sensor