

## Supplementary Information

# Thiophene functionalized naphthalene diimide for the sensitive detection of nitroaromatics

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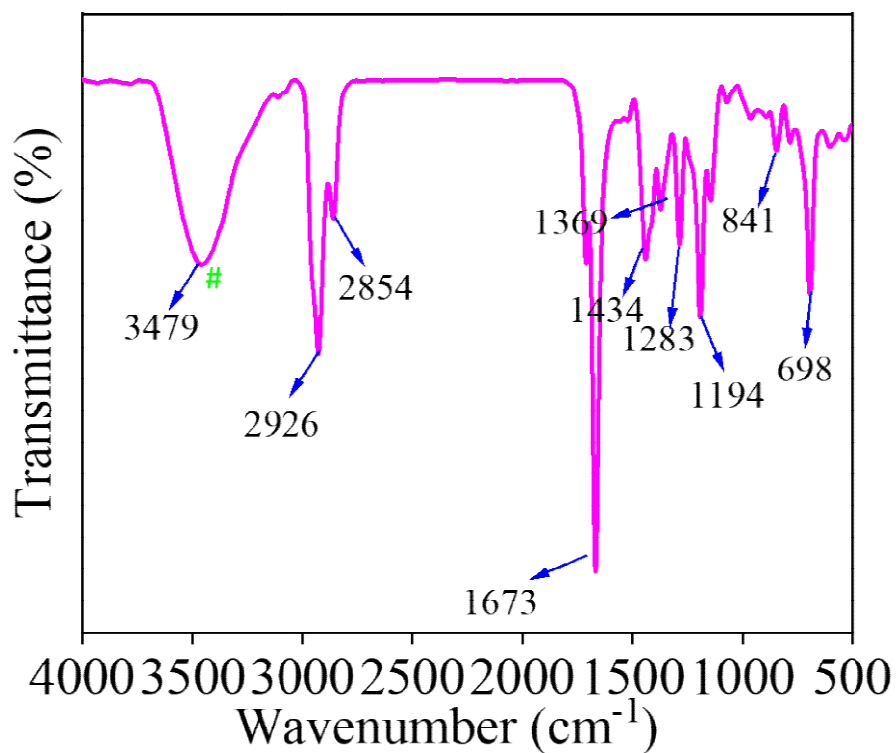
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**Figure S1.** FT-IR NDI-Th (# moisture)

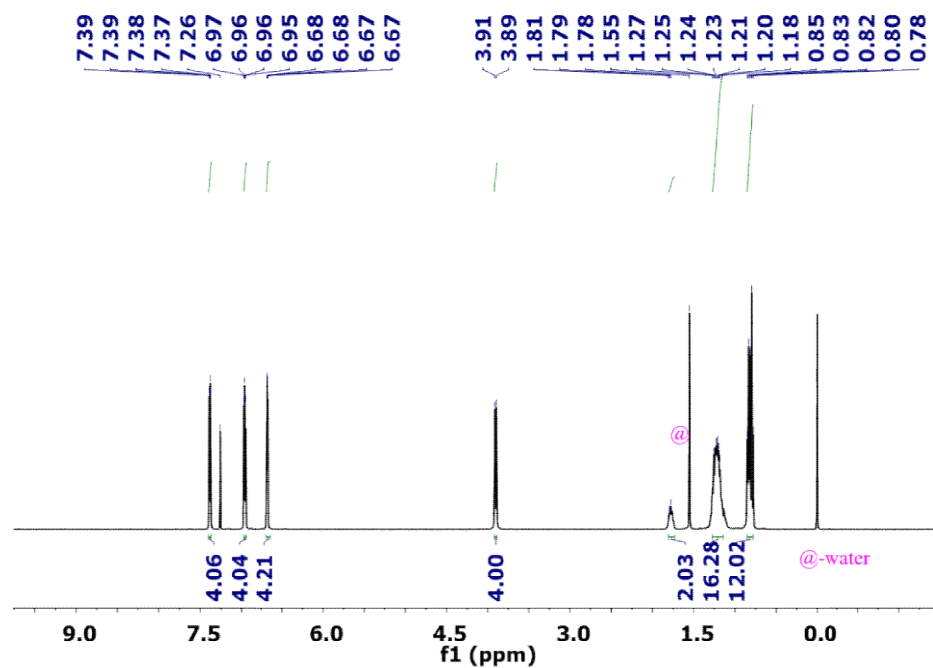


Figure S2.  $^1\text{H}$  NMR  $\text{CDCl}_3$  of compound NDI-Th (a)

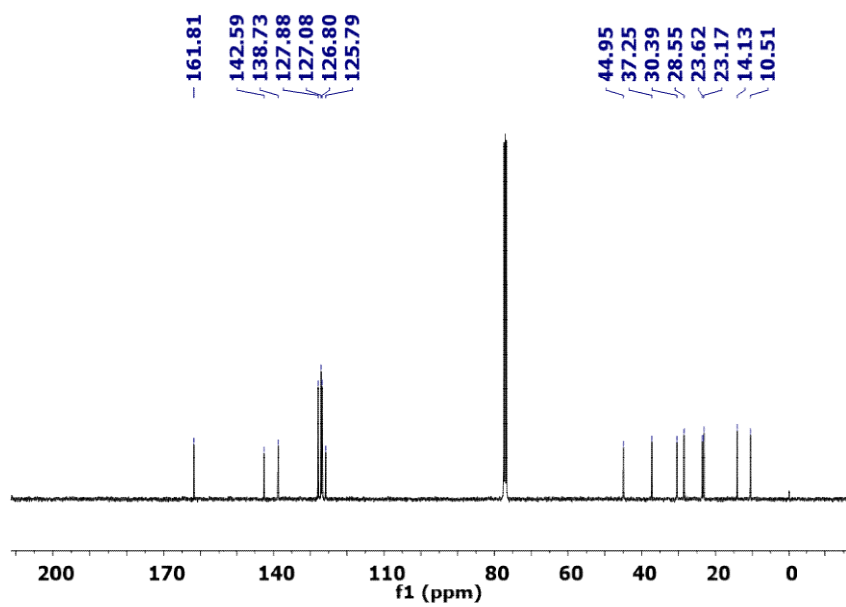
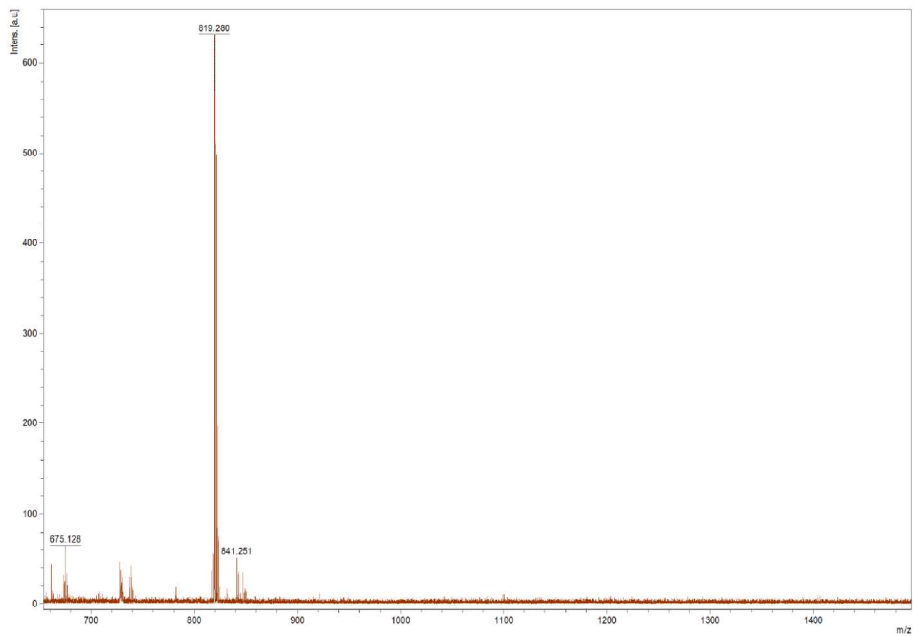
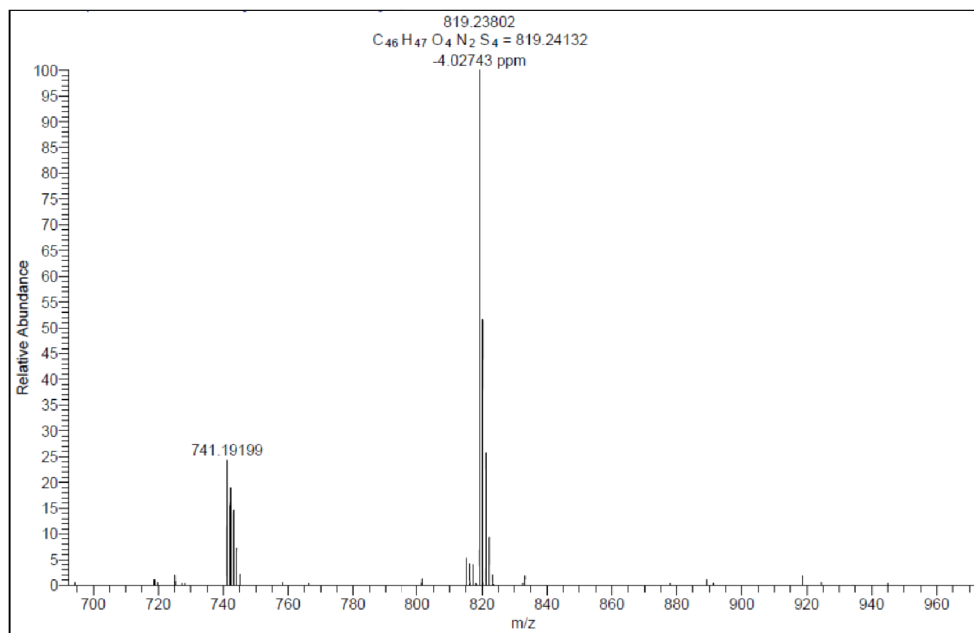


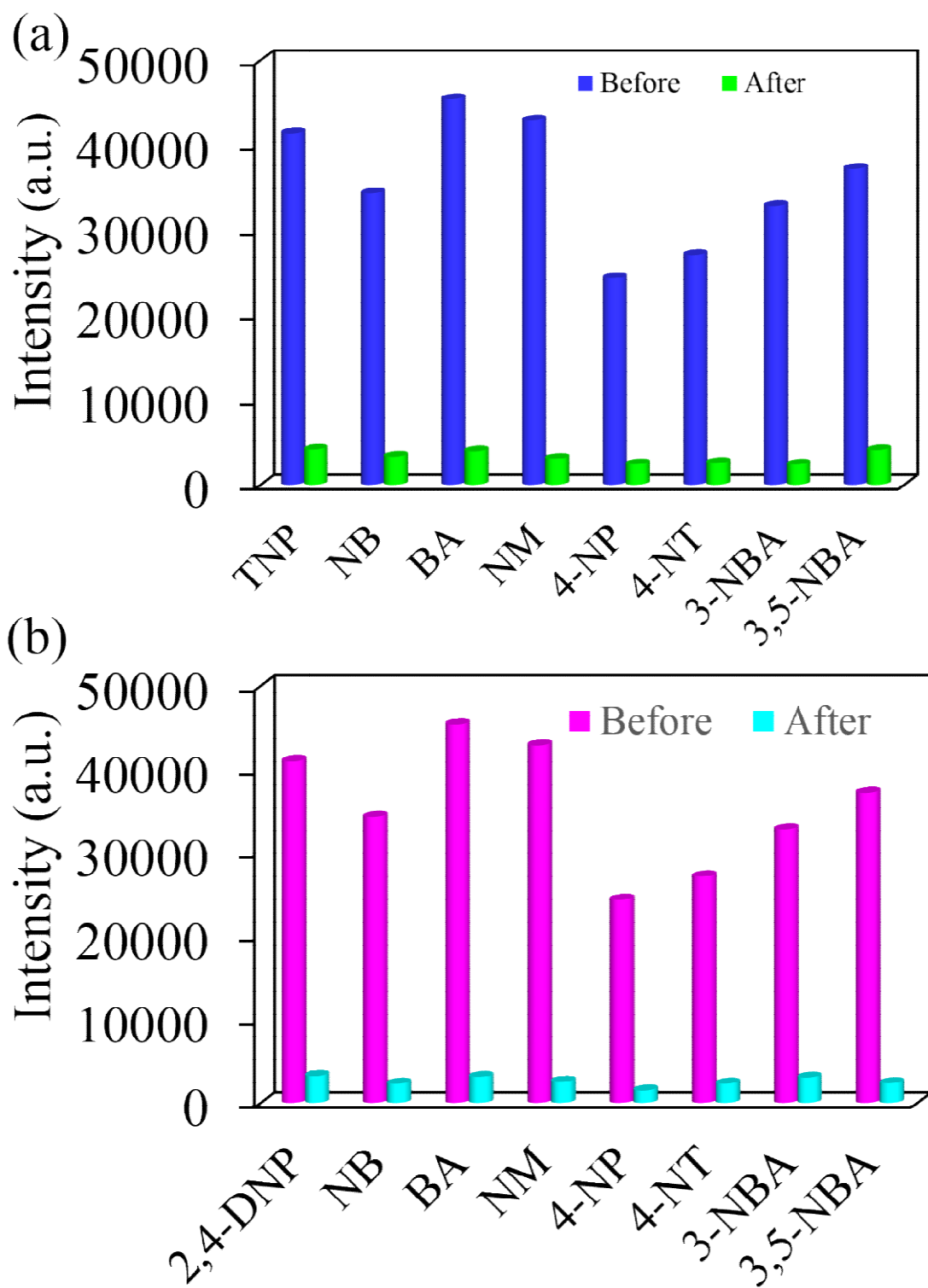
Figure S3.  $^{13}\text{C}$  NMR  $\text{CDCl}_3$  of compound NDI-Th



**Fig. S4.** MALDI-TOF of compound **NDI-Th**



**Fig. S5.** HRMS of compound **NDI-Th**



**Fig. S6.** (a) bar graph plot based on fluorescence emission intensity ( $\lambda_{\text{ex}} = 370 \text{ nm}$ ), changes of NDI-Th ( $1 \times 10^{-5} \text{ M}$ ) towards PA in the presence of other nitroaromatic analytes (180 eq); (b) bar graph plot based on fluorescence emission intensity ( $\lambda_{\text{ex}} = 370 \text{ nm}$ ), changes of NDI-Th ( $1 \times 10^{-5} \text{ M}$ ) towards 2,4-DNP in the presence of other nitroaromatic analytes (180 eq).