

Supporting Information

Selective Fluorescence Sensing of Polynitroaromatic Explosives by Triaminophenylbenzene Scaffolds

Pratap Vishnoi, Mrinalini G. Walawalkar, Saumik Sen, Anindya Datta, G. Naresh Patwari, and Ramaswamy Murugavel*

Department of Chemistry,
Indian Institute of Technology Bombay, Mumbai, India-400 076
E-mail; rmv@chem.iitb.ac.in

Fig. S1 Absorption and emission spectra of TAPB

Fig. S2 Fluorescence quenching profile of TAPB (1.0 μM in acetonitrile) with TNT.

Fig. S3 Fluorescence quenching profile of TAPB (1.0 μM in acetonitrile) with *m*-DNB.

Fig. S4 Fluorescence quenching profile of TAPB (1.0 μM in acetonitrile) with DNT.

Fig. S5 Fluorescence quenching profile of TAPB (1.0 μM in acetonitrile) with *p*-DNB.

Fig. S6 Time resolved fluorescence decays for acetonitrile solution of TAPB with PNAC compounds

Fig. S7 Control quenching experiment of TAPB with chlorobenzene.

Fig. S8 Control quenching experiment of TAPB with benzonitrile.

Fig. S9 Control quenching experiment of TAPB with 1,2,4,5-tetrafluorobenzene.

Fig. S10 Control quenching experiment of TAPB with hexafluorobenzene.

Fig. S11 Job's plot

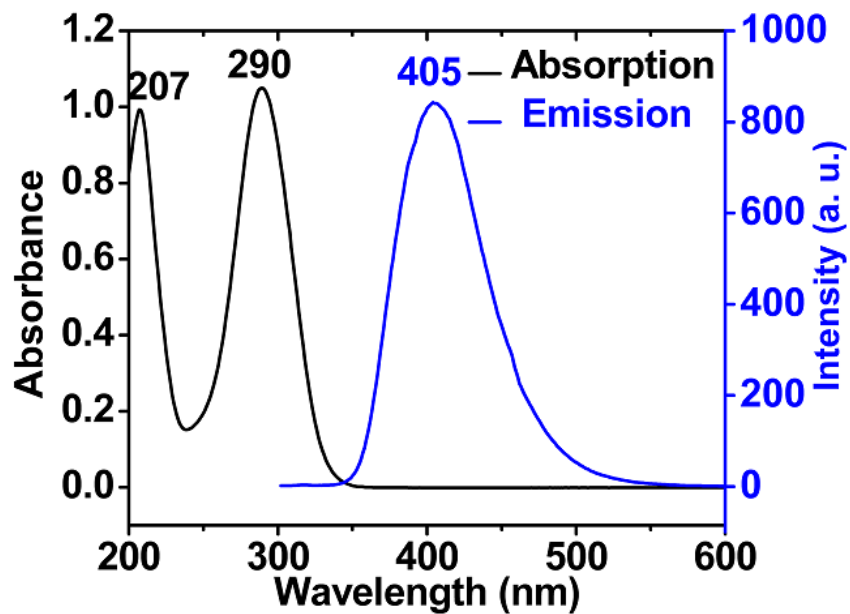


Fig. S1 UV-Vis absorption spectrum in acetonitrile (16 μM); $\lambda_{\text{max}} = 207$ ($\epsilon = 61875$) and 290 ($\epsilon = 65913$) nm and emission spectrum (1.0 μM) of TAPB.

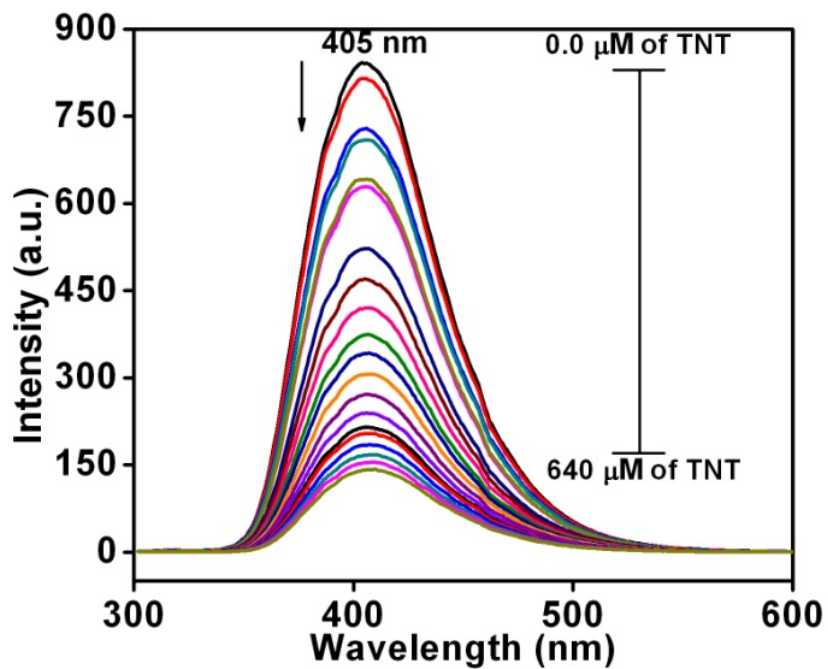


Fig. S2 Fluorescence quenching profile of TAPB (1.0 μM in acetonitrile) with TNT.

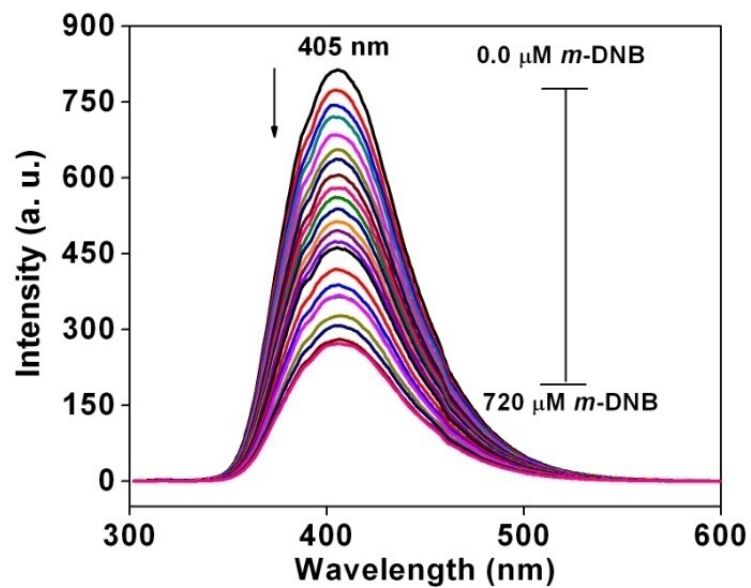


Fig. S3 Fluorescence quenching profile of TAPB (1.0 μM in acetonitrile) with *m*-DNB.

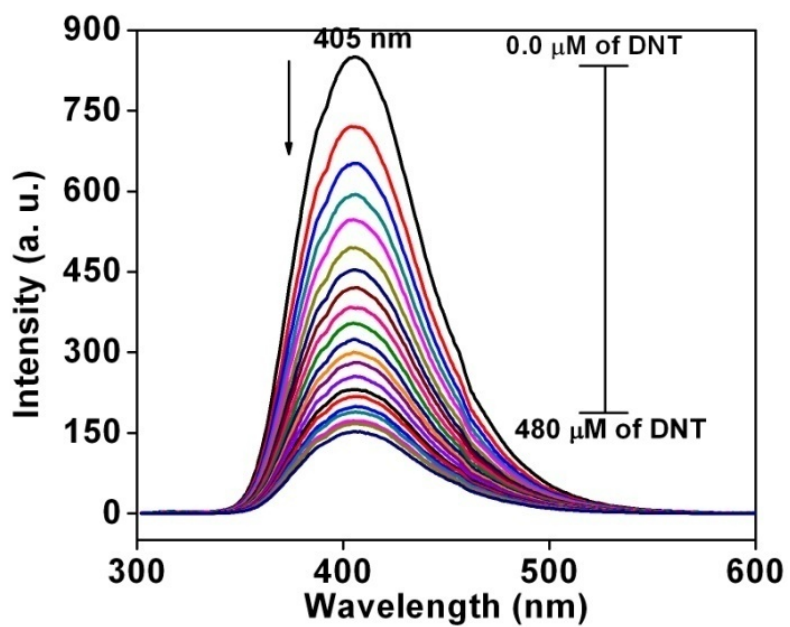


Fig. S4 Fluorescence quenching profile of TAPB (1.0 μM in acetonitrile) with DNT.

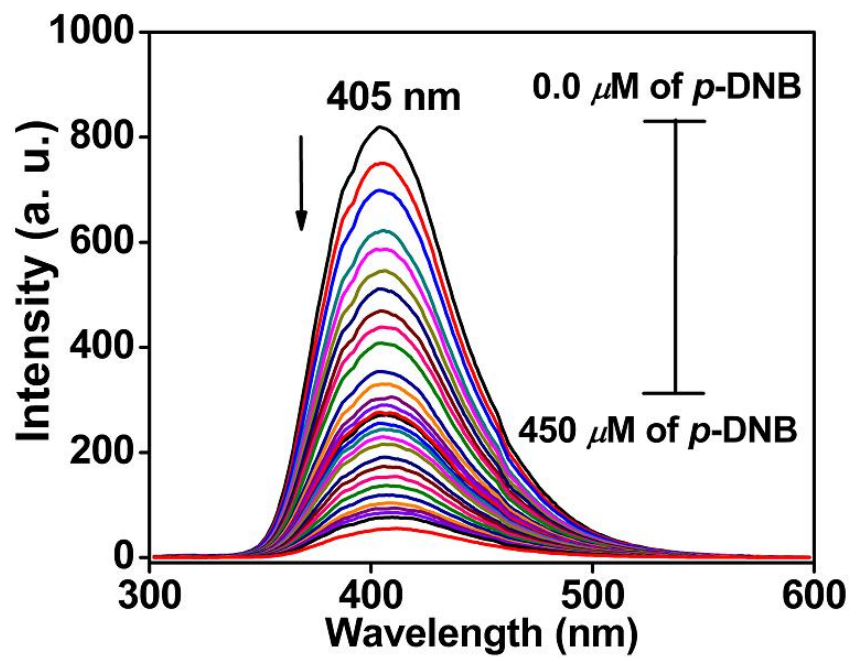


Fig. S5 Fluorescence quenching profile of TAPB (1.0 μM in acetonitrile) with *p*-DNB.

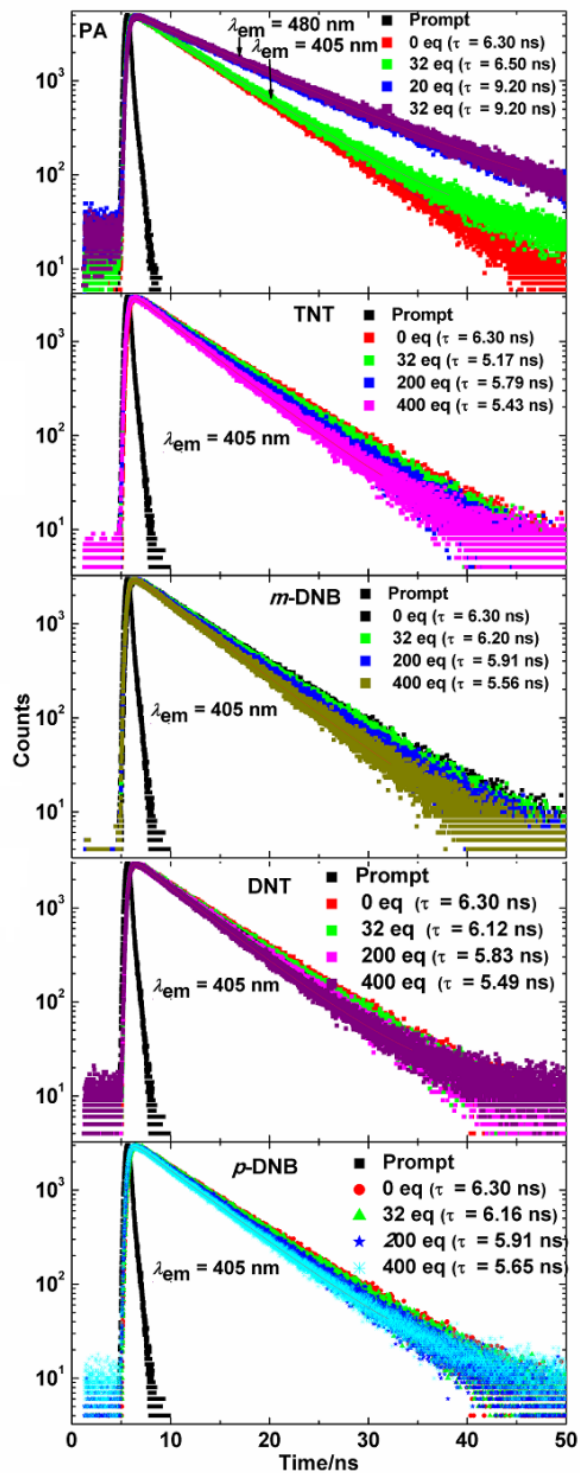


Fig. S6 Time resolved fluorescence decays for acetonitrile solution of TAPB before and after multiple additions of known concentrations of PA, TNT, *m*-DNB, DNT and *p*-DNB. Single exponential fits to the decays are included as solid lines.

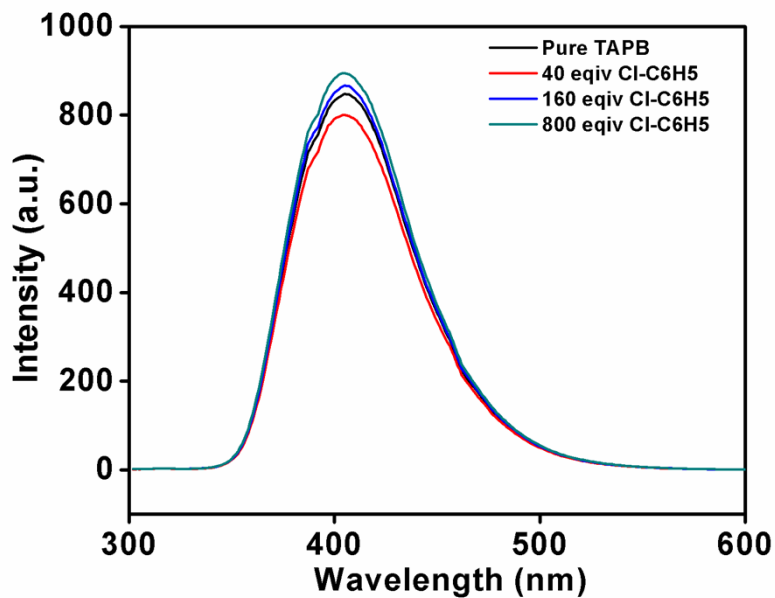


Fig. S7 Control quenching experiment of TAPB (1.0 μM in acetonitrile) with chlorobenzene.

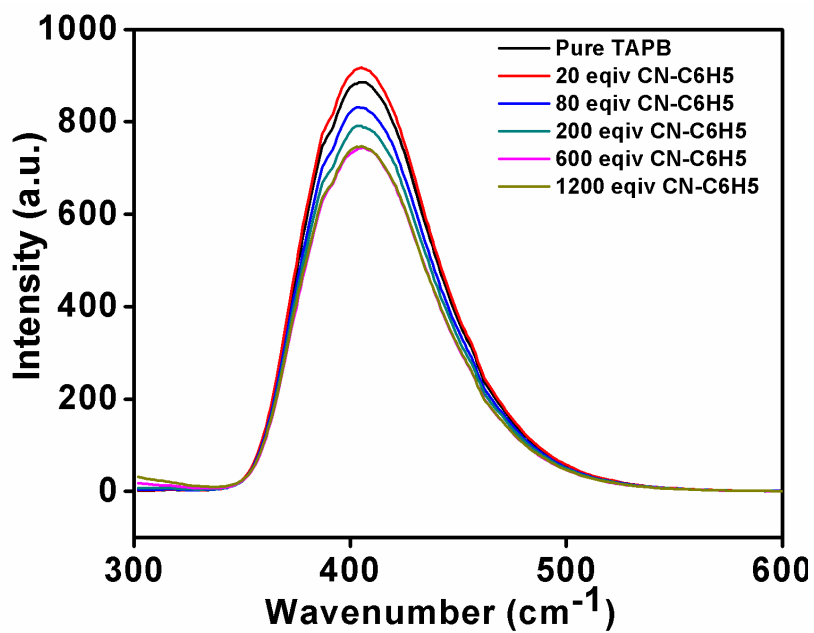


Fig. S8 Control quenching experiment of TAPB (1.0 μM in acetonitrile) with benzonitrile.

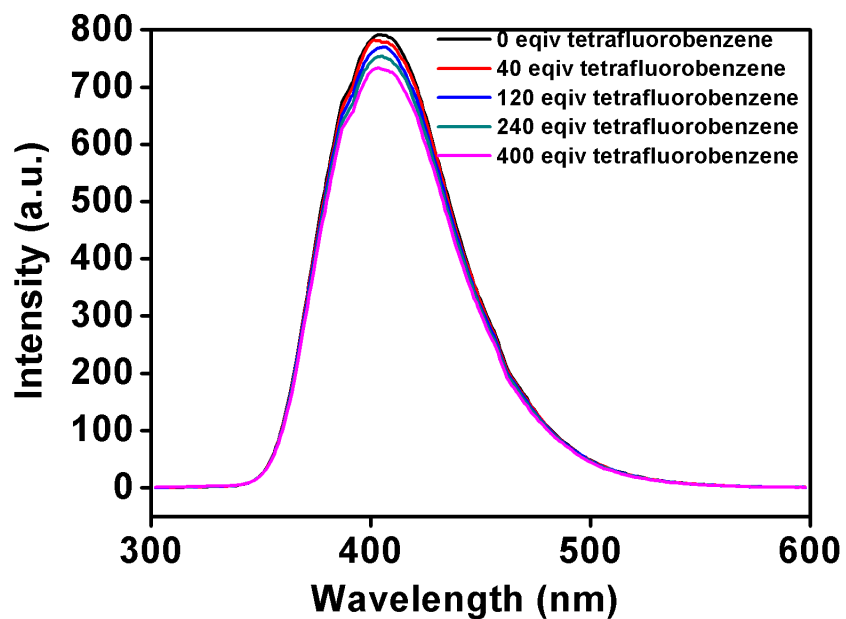


Fig. S9 Control quenching experiment of TAPB (1.0 μM in acetonitrile) with 1,2,4,5-tetrafluorobenzene.

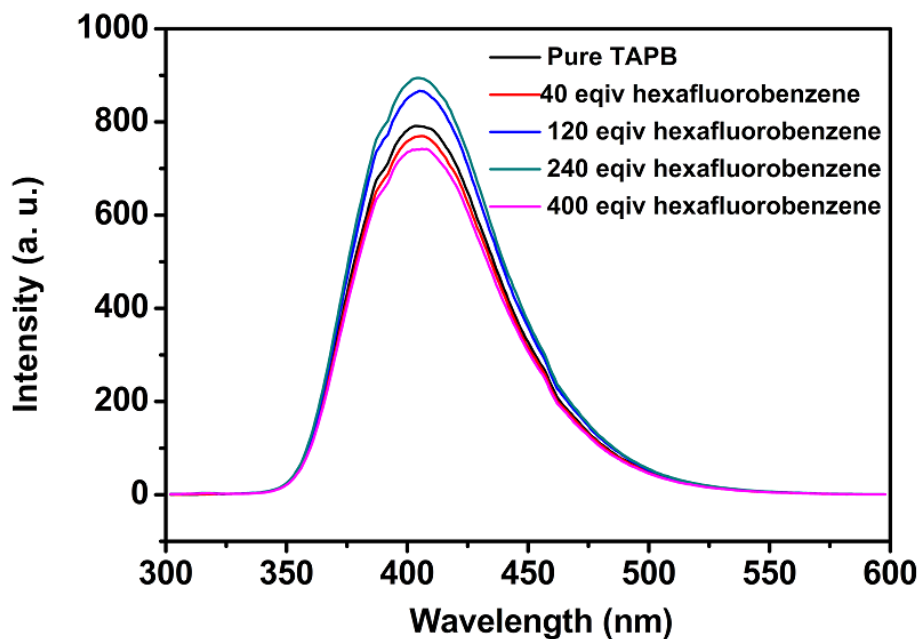


Fig. S10 Control quenching experiment of TAPB (1.0 μM in acetonitrile) with hexafluorobenzene.

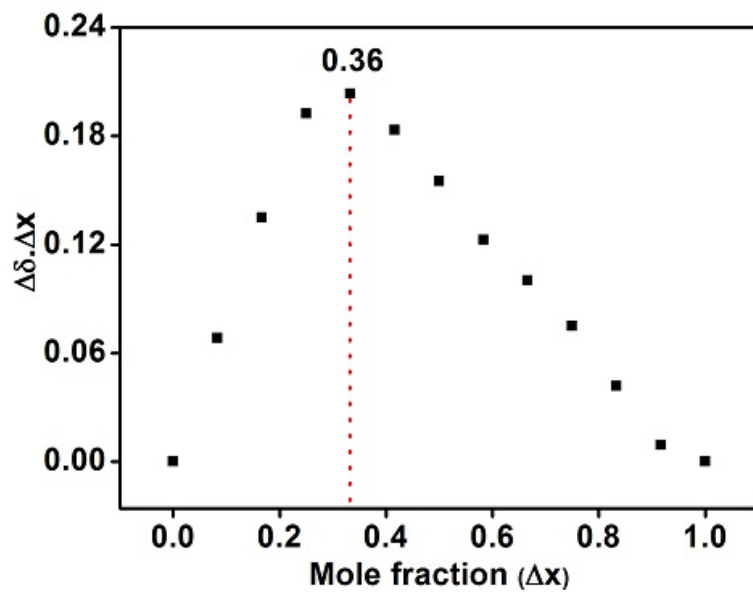


Fig. S11 Job's plot of TAPB with PA, where deviation in chemical shifts and mole fraction of TAPB are represented as $\Delta\delta$ and Δx , respectively.