

Supporting Information

**An ATP responsive fluorescent supramolecular
assembly based on polyelectrolyte and AIE active
tetraphenylethylene derivative**

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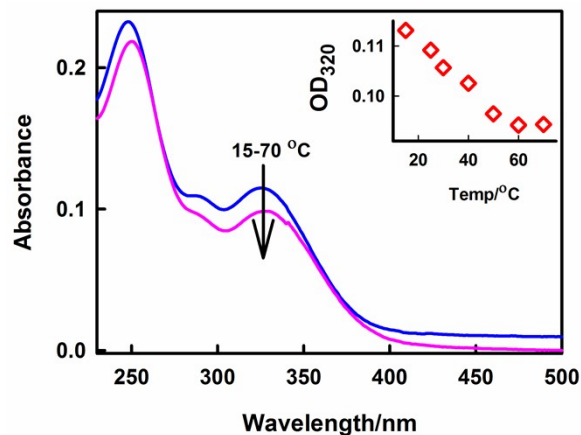


Figure S1: Ground state absorption spectra of Su-TPE (9.5 μM)-PAH (0.17 μM) at 15°C (blue line) and 70°C (pink line). **Inset:** Variation of absorbance at 320 nm with increase in temperature.

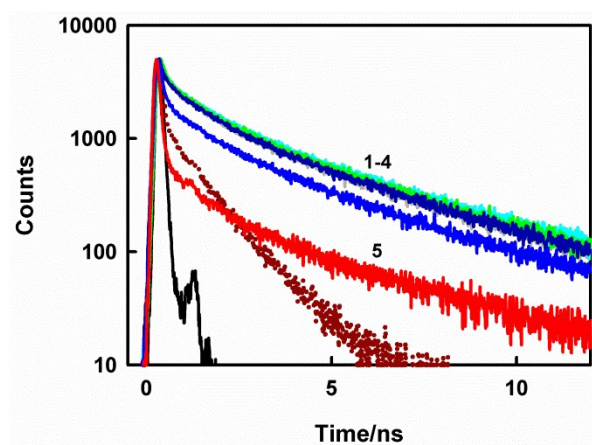


Figure S2: Transient decay trace (λ_{ex} =374 nm, λ_{em} =470 nm) of Su-TPE (9.5 μM)-PAH (0.054 μM) on interaction with various analytes at same concentration (1) ADP (2) AMP (3) Na_2HPO_4 (4) PPI (5) ATP. Dotted line represents decay traces of Su-TPE in water. The solid black line represents instrument response function (IRF).

LOD Determination

1. The fluorescence emission spectra of 10 blank measurements (Su-TPE-PAH aggregate, without the analyte of interest, which is ATP here) were recorded and fluorescence emission intensity at 470 nm was noted.
2. The standard deviation (σ) of the fluorescence intensity at 470 nm (aggregate emission band) was calculated using the standard formula.

3. The slope (S) was found from the linear regression equation of the calibration curve
4. The LOD is calculated using the formula $LOD=3.3(\sigma/S)$ which uses standard deviation of the 10 blank measurements (σ) and the slope of the calibration curve (S).