

## Bodipy recognizes polyaromatic hydrocarbons via C-H...F type weak H-bonding

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Figure S1: (a) Absorption isosbestic formed between **D1** and dye **1-3** in ethanol. (b) Absorption isosbestic formed between **D3** and dye **1-3** in ethanol. Concentration of dyes ( $\mu\text{M}$ ): 0.00, 0.48, 0.92, 1.32, 1.68, 2.02, 2.33, 2.62, 2.88 and 3.13 at a fixed concentration of the **D** ( $39.3\mu\text{M}$ ) in ethanol.

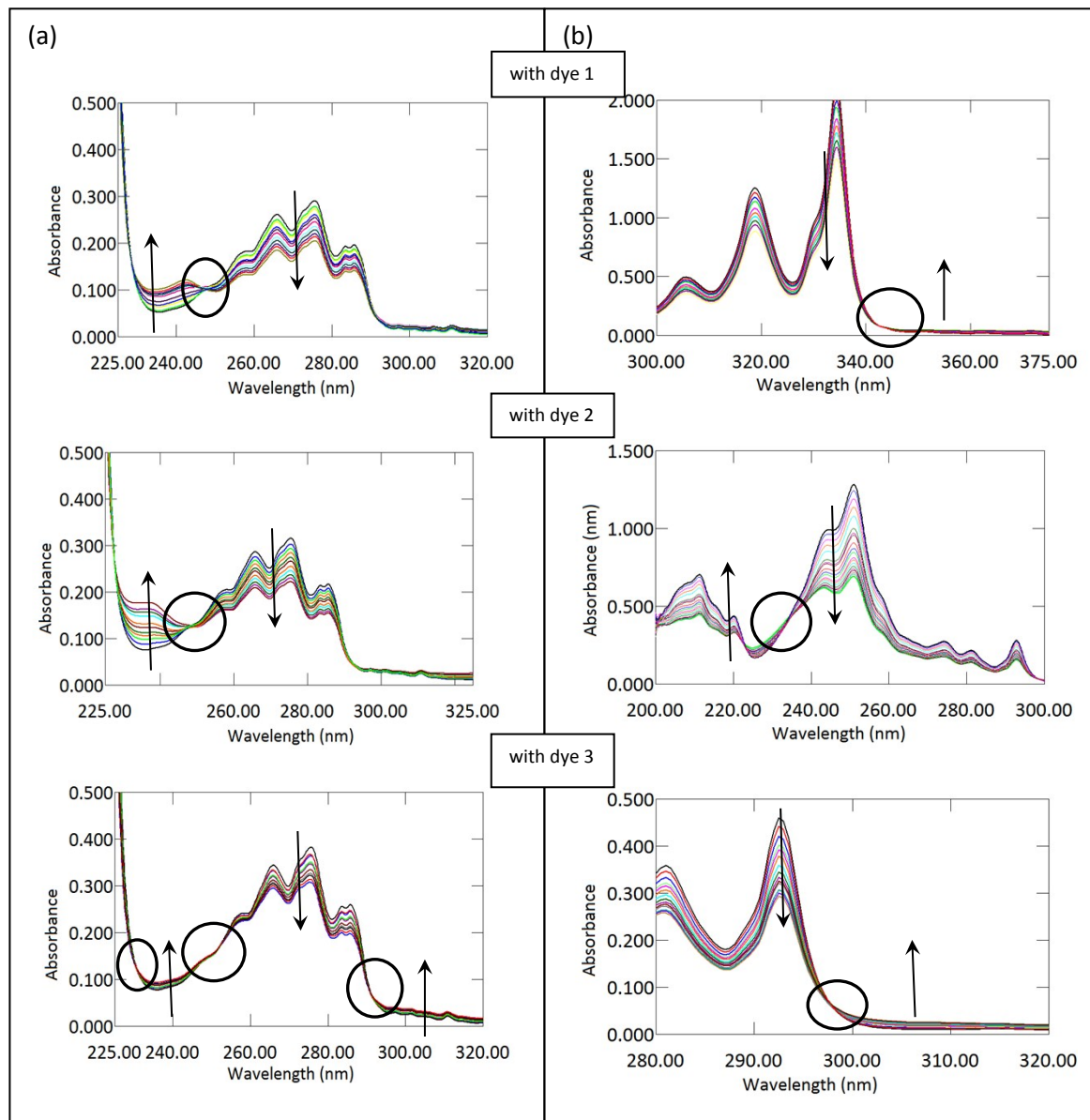


Figure S2: Fluorescence titration of Bodipy dye1 with PAHs (a) Titration of dye 1 with **D1**. (b) Titration of dye 1 with **D2**. (c) Titration of dye 1 with **D3**. Concentration of PAHs: 0.00, 20, 40, 60, 80, 100, 120, 140, 160, 180 and 200 at a fixed concentration of dye 1 (10  $\mu$ M) in ethanol.  $\lambda_{ex}$  = 485 nm.

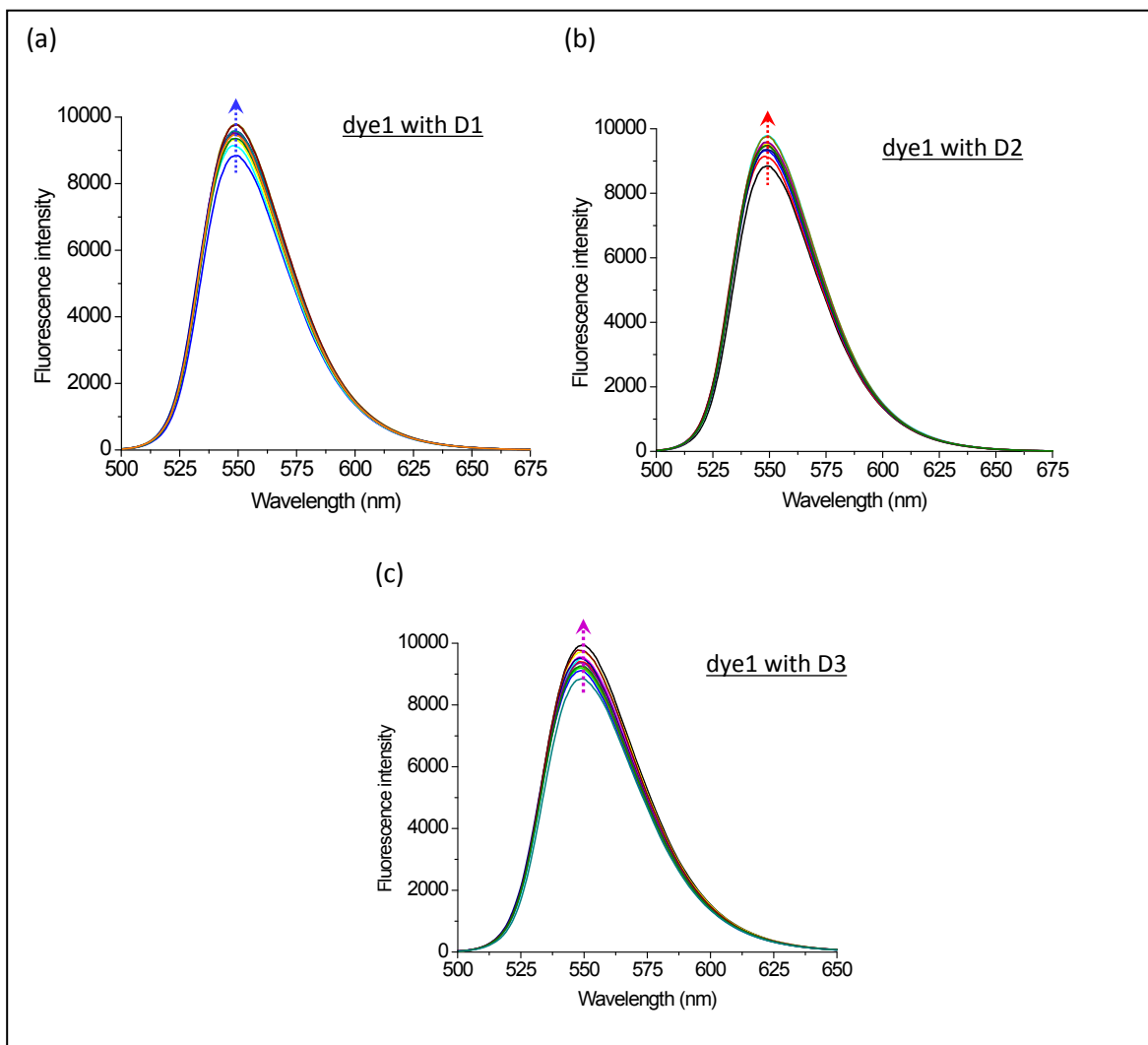
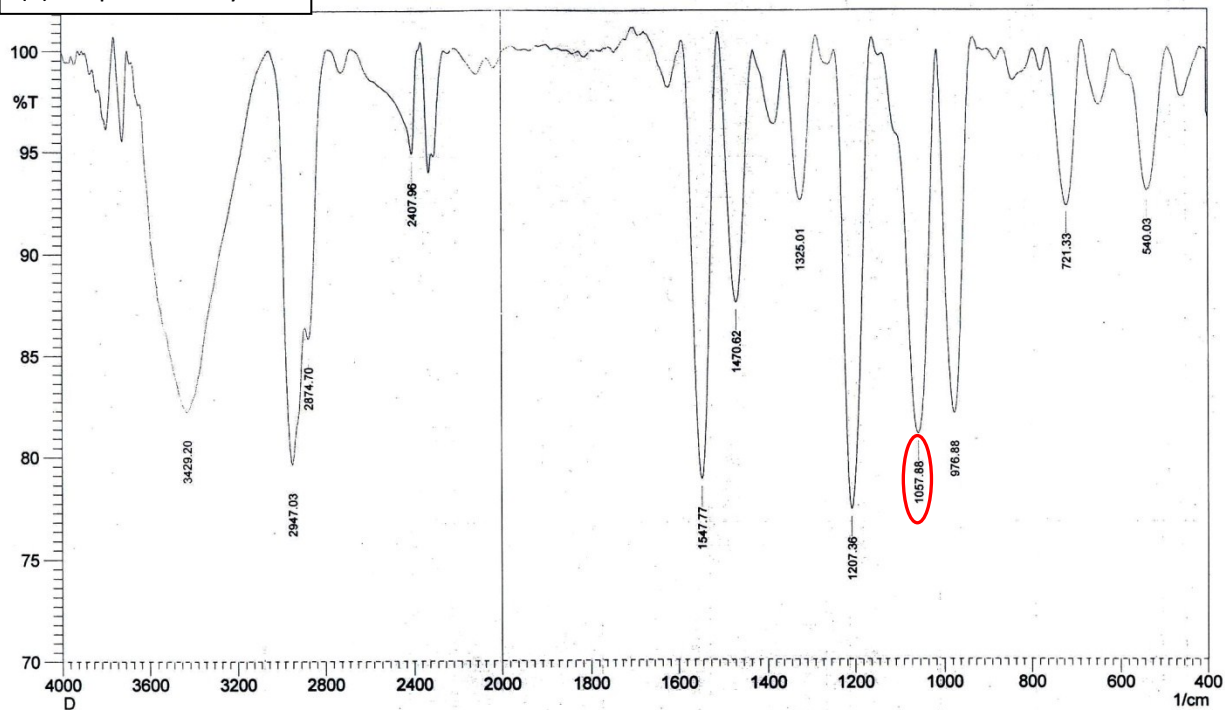


Figure S3: IR spectra of (a) dye 1 and (b) dye 1/D2 adduct.

(a) IR spectra of dye 1



(b) IR spectra of dye1-D2 (1:2) adduct

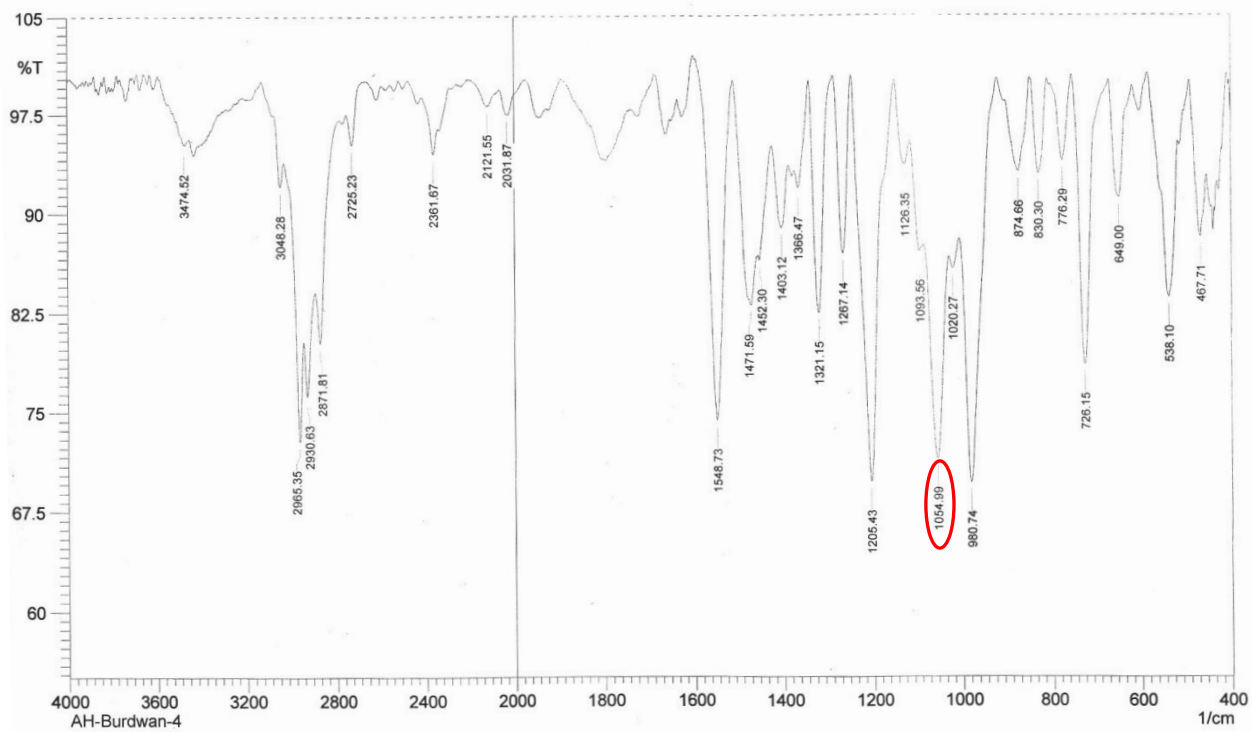


Figure S4: Combined  $^1\text{H}$  NMR spectra of dye **2**, **D2** and dye**2:D2** (1:2) adduct in  $\text{D}_4\text{-MeOH}$  (a) Full range from 0.9 to 9.0 ppm. (b) from 0.9 to 2.6 ppm. (c) from 6.8 to 8.5 ppm.

