

Electronic Supporting Information

Self-Assembly of a Water Soluble Perylene and Surfactant into Fluorescent Supramolecular Ensembles Sensitive to Acetylcholinesterase Activity

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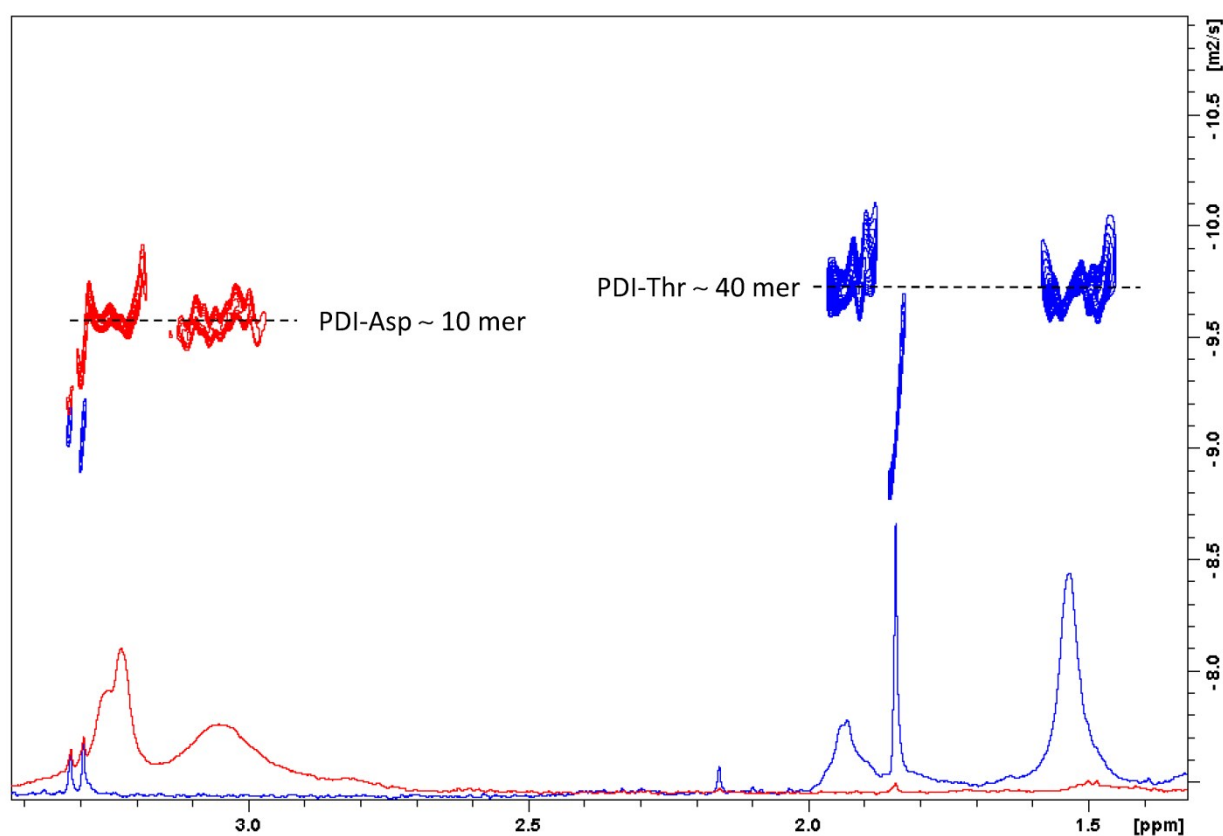


Figure S1. Overlay of a selected region of 2D DOSY spectra of 0.5 mM PDI-Thr (blue) and 0.5 mM PDI-Asp (red) recorded at 500 MHz at 25°C. ¹H 1D spectra of the two samples are reported with the same color code.

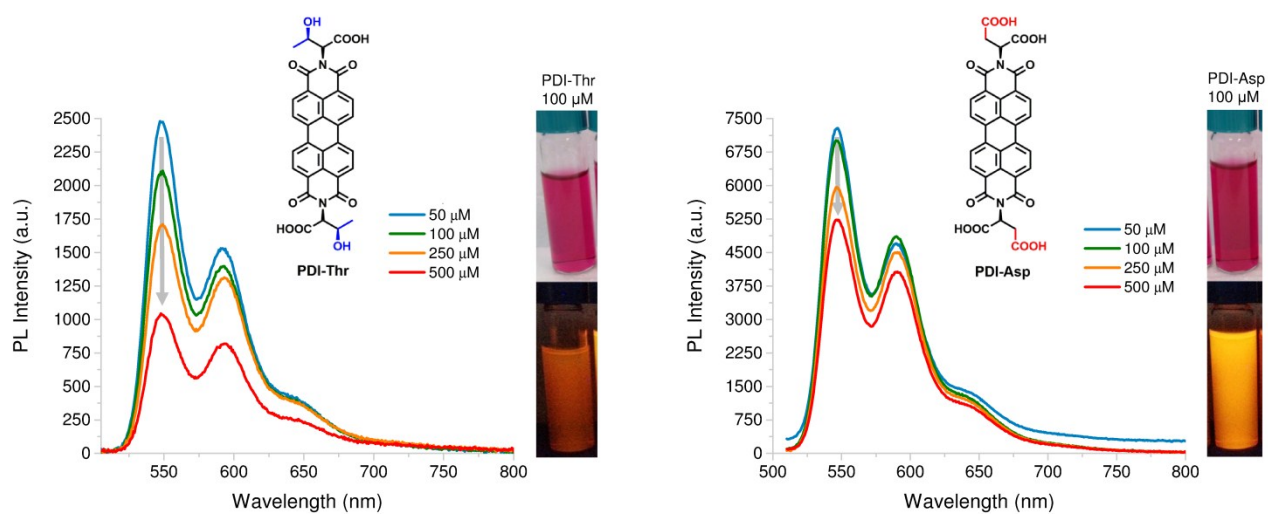


Figure S2. PL comparison between PDI-Thr and PDI-Asp aqueous solutions at pH 8. The grey arrows on PL spectra evidence the concentration-dependent quenching. For each compound, the digital photograph of a 100 μ M solution seen under ambient light (top) and under UV lamp ($\lambda = 365$ nm, bottom) is also shown.

The visual comparison evidences that, at the same concentration, the fluorescence emission of PDI-Asp solutions are more intense than those of PDI-Thr, indicating a bigger aggregation tendency of the latter.

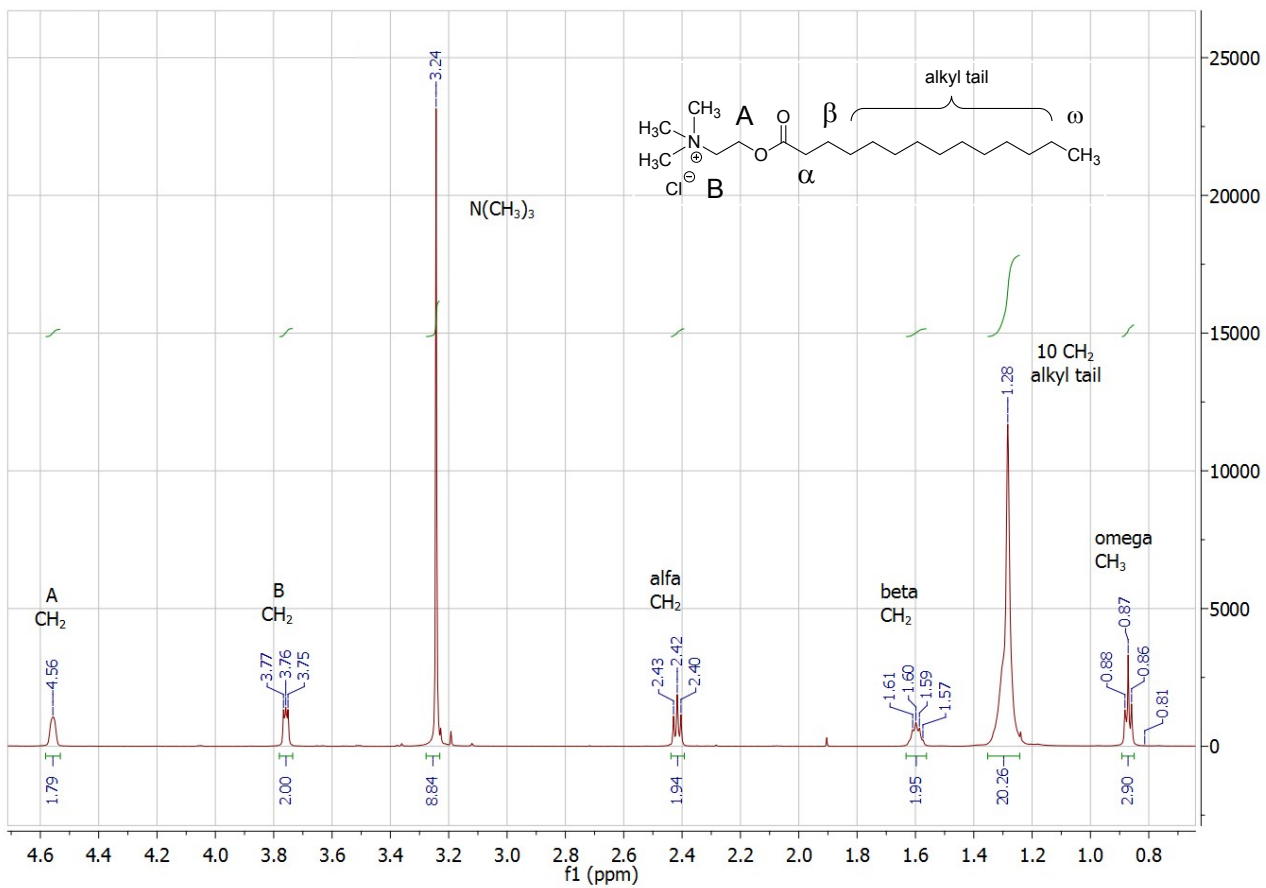


Figure S3. ^1H NMR assignment of MyrCh 3.0 mM in D_2O .

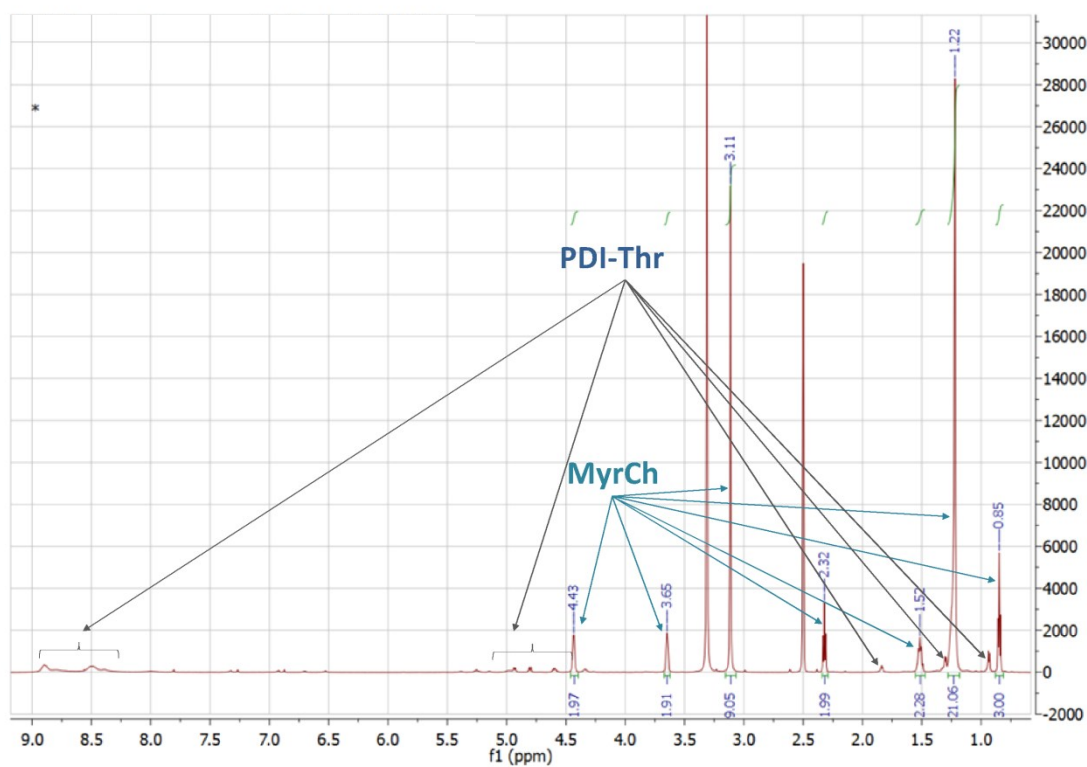
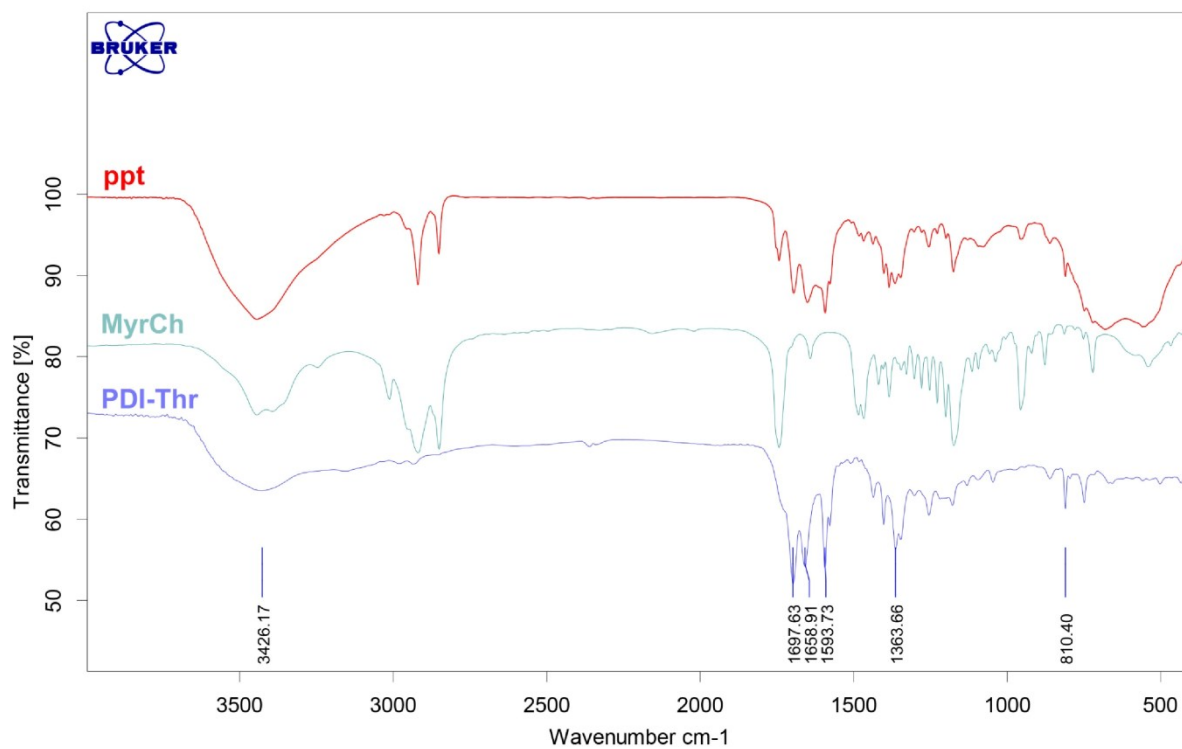


Figure S4. IR (top) and ¹H NMR (bottom) spectroscopy analysis of the insoluble hetero-aggregate (ppt) formed at dye/surfactant composition \approx 1:2. For IR analysis, the ppt dry powders were dispersed in KBr pellets; for NMR analysis, they were dissolved in deuterated DMSO.

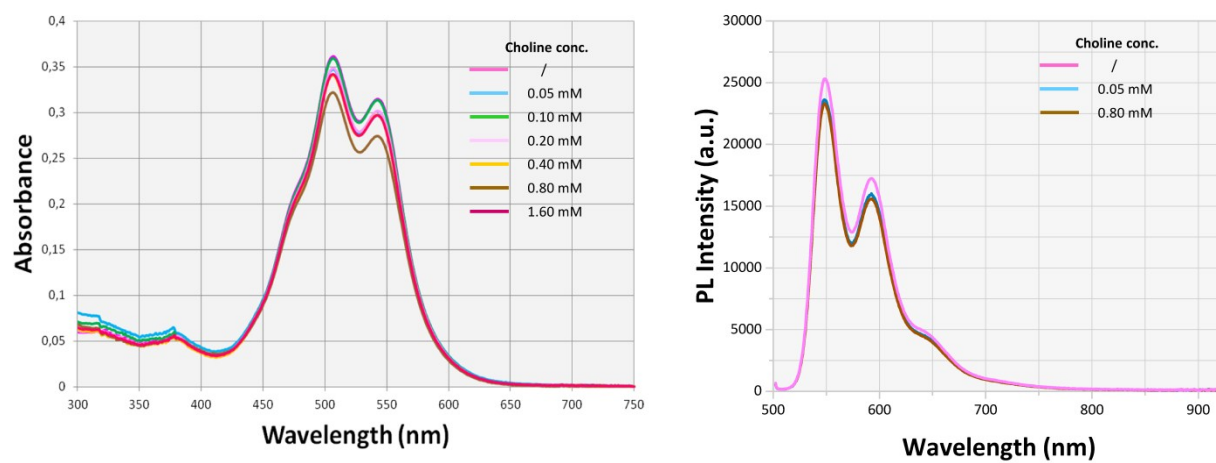


Figure S5. Concentration-dependent absorption (left) and emission (right) spectra of 0.1 mM PDI-Thr solutions (PB pH 8) in the presence of different choline amounts (0-1.60 mM).

Both plots evidence the absence of any surfactochromic effect due to choline.