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SUPPLEMENTARY MATERIAL

Excitonic Processes in a Conjugated Polyelectrolyte Complex

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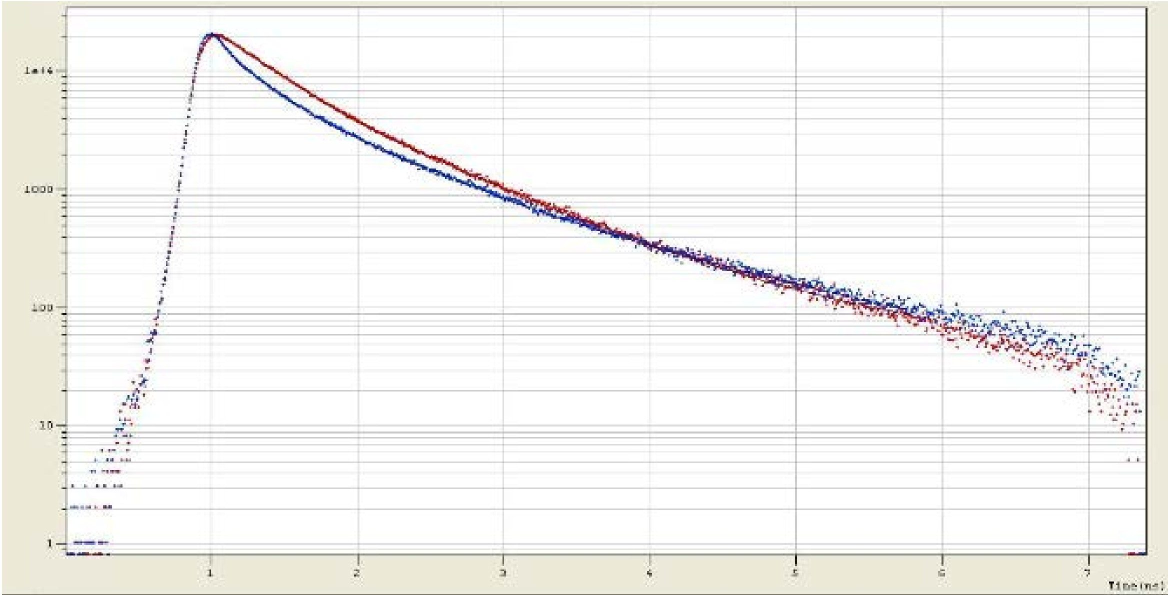

Figure S1. Fluorescence decay data and fits for DPS-PPV (4 x 10^{-7} M) in aqueous solution without (blue) and with (red) 10 mol equivalent PVA.

Decay curves were not single-exponential. While no particular kinetic model is assigned since there is likely multiple emitting environments and energy transfer dynamics operative, the profiles could be fitted using a sum of exponentials, viz. $y = B_1 e^{-\frac{t}{\tau_1}} + B_2 e^{\frac{t}{-\tau_2}}$, where τ_1 and τ_2 are the excited state lifetimes. The fractional contribution (f_1) of component with lifetime τ_1 to the overall fluorescence decay is given by:

$$f_1 = \frac{B_1 e^{-\frac{t}{\tau_1}}}{B_1 e^{-\frac{t}{\tau_1}} + B_2 e^{\frac{t}{-\tau_2}}}$$

The average fluorescence decay time was then calculated from the following equation:

$$\tau_{average}=f_1\tau_1 + f_2\tau_2$$

Fitting parameters for fluorescence decay of DPS-PPV in water

Decay component	B_i	Fractional Contribution (%)	Excited state lifetime (ns)
1	0.0522	40.352	0.188
2	0.0168	59.648	0.866
$\tau_{average}$	-	-	0.59

Fitting parameters for fluorescence decay curve of DPS-PPV:PVA in water

Decay component	B_i	Fractional Contribution (%)	Excited state lifetime (ns)
1	0.0832	69.076	0.413
2	0.0143	30.924	1.076
$\tau_{average}$	-	-	0.62

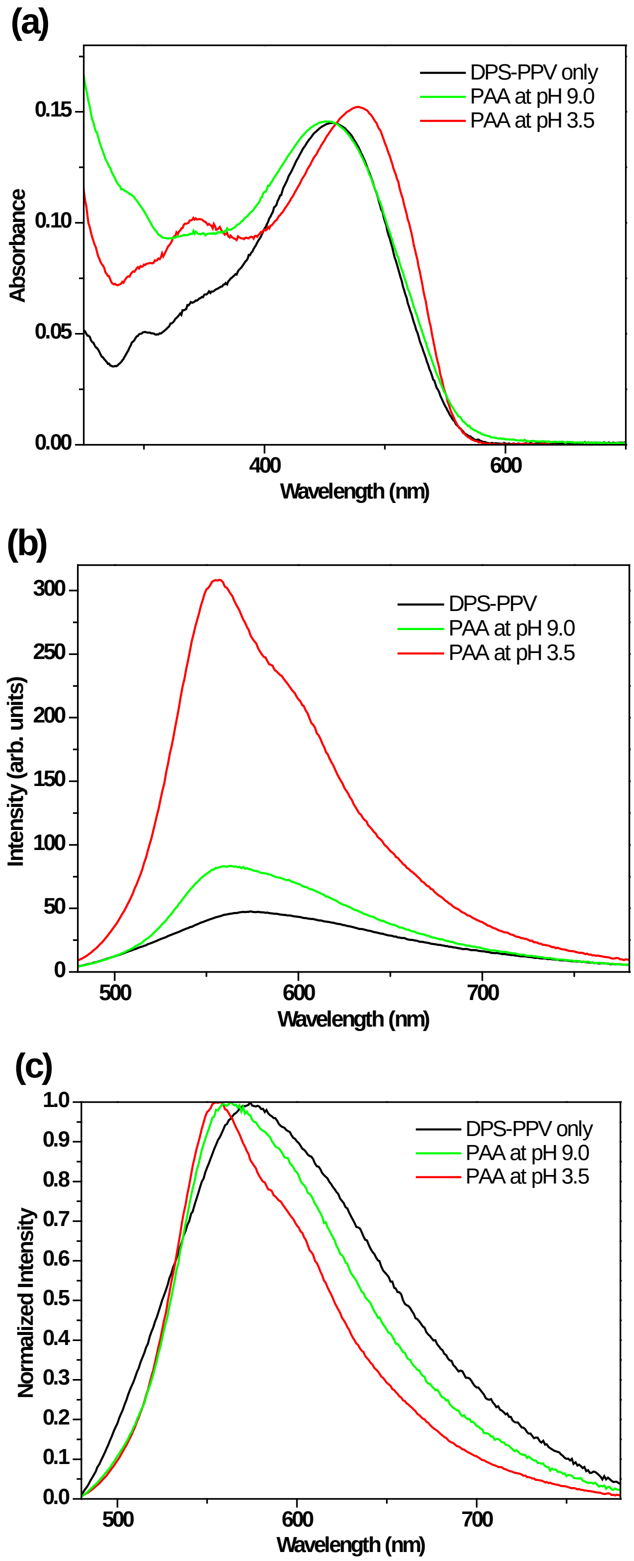

Figure S2. Absorbance (a) and absolute (b) and normalised (c) fluorescence spectra for DPS-PPV (4.0×10^{-7} M) in water, and in water with 1 mg/ml poly(acrylic acid) (PAA) at pH 9.0 and 3.5 (ex. 455 nm).