

Supplementary Material to

Photoinduced hole transfer in semiconducting polymer / low-
bandgap cyanine dye blends: evidence for unit charge separation
quantum yield

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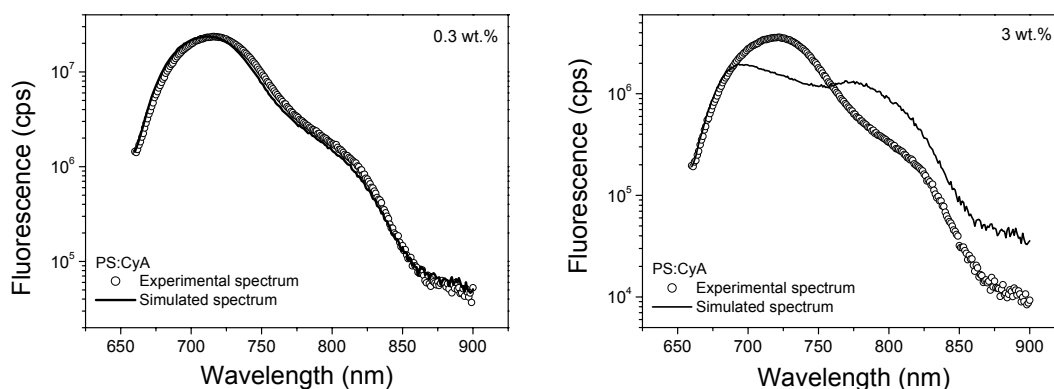


Fig. S1 Simulation of fluorescence spectra from CyA dye in polystyrene, taking only re-absorption in account. We used the following equation: $F'(\lambda) = F(\lambda)[10^{-\varepsilon(\lambda)cl}]$, where $F'(\lambda)$ is the fluorescence spectrum distorted by reabsorption, $F(\lambda)$ is the undistorted spectrum (we used the one from PS:CyA blend with 0.1 wt% of dye) and the term $\varepsilon(\lambda)cl$ accounts for re-absorption. This equation does not reproduce the experimental spectra for blends with dye concentrations higher than 3 wt%.

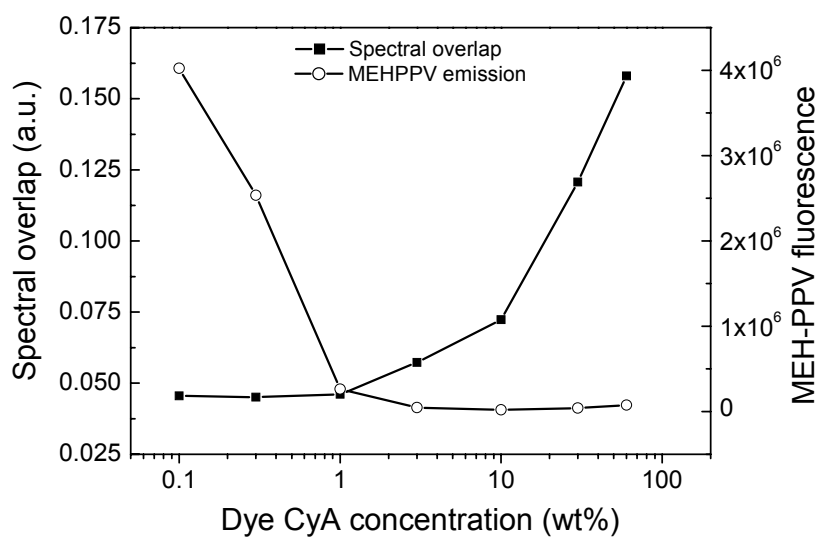


Fig. S2 Spectral overlap between MEH-PPV emission normalized by the area and dye absorption (left) and intensity of the peak of MEH-PPV emission (right) as a function of dye CyA concentration in the blend.^a

[a] A. Gilbert and J. Baggot, *Essentials of Molecular Photochemistry*, first edition, Blackwell, 1991.

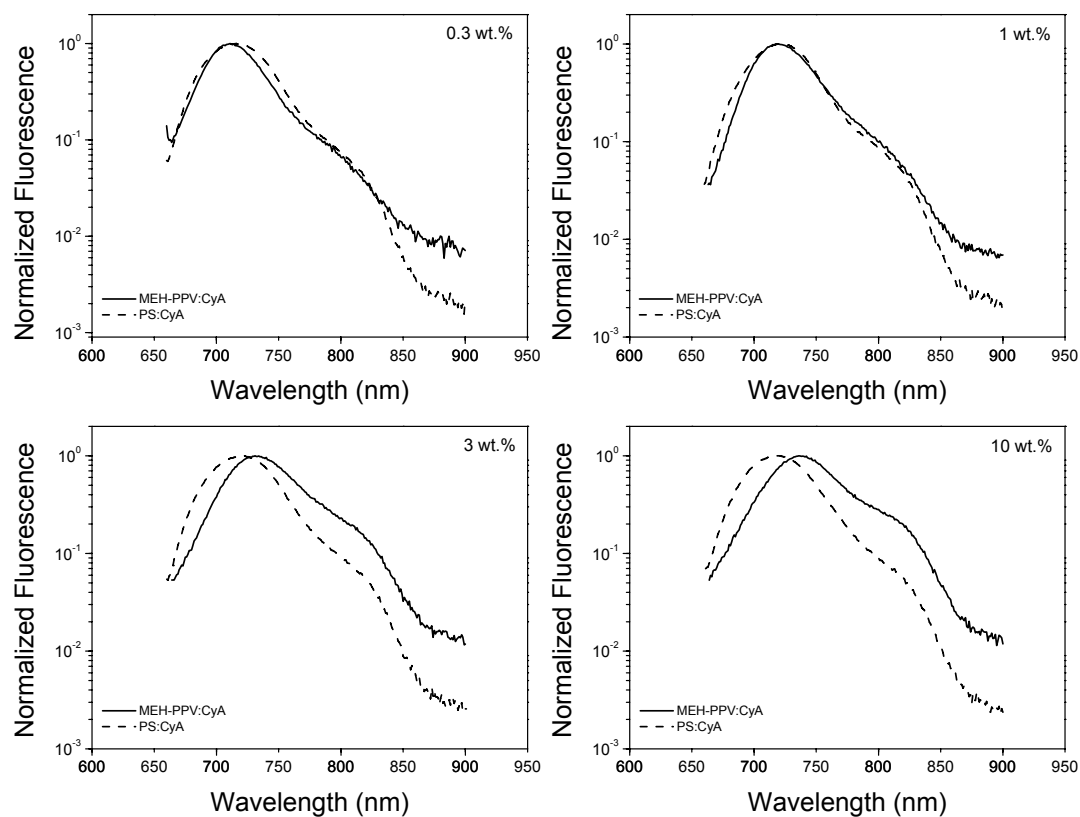


Fig. S3 Comparison between normalized fluorescence spectra of MEH-PPV : CyA and polystyrene (PS) : CyA blends for four different dye concentrations. Below 3 wt%, spectra are essentially the same. At higher concentrations, however, electronic-vibration coupling is higher when the dye is in the MEH-PPV matrix.