Electronic Supplementary Material (ESI) for Journal of Materials Chemistry C.

Supporting Information

Energy transfer processes in hyperfluorescent organic light-emitting diodes

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Content

Experimental details

All chemicals were purchased from commercial sources and used with further purification. All thin-film samples were thermally evaporated under high vacuum pressure on quartz substrate. UV-visible absorption spectra of the thin films were performed with a Perkin-Elmer Lambda 950-PKA spectrometer in the range of 290-800 nm. The photoluminescence spectra of the thin films were measured with a FluoroMax-4 Horiba Jobin Yvon spectrofluorometer.

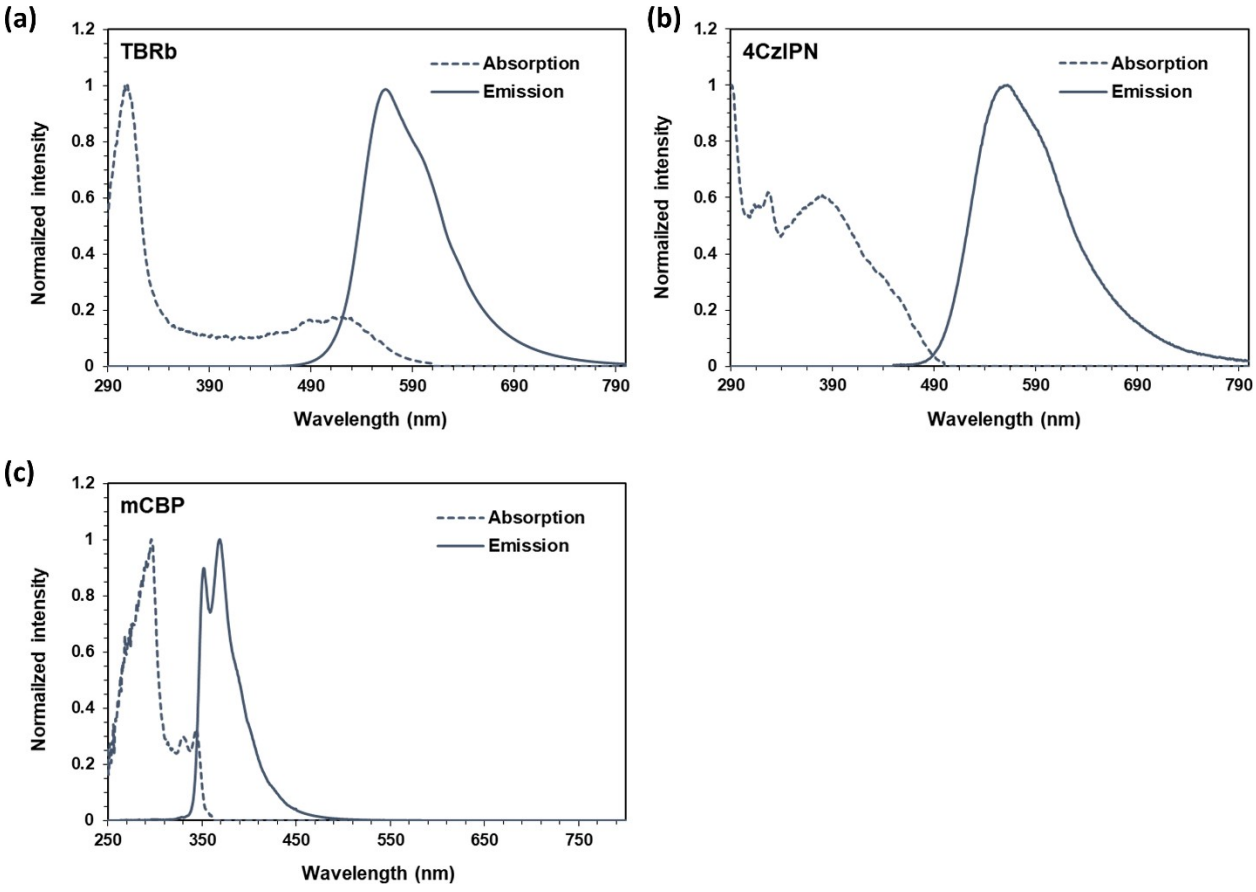

Figure S1. Experimental absorption (dashed line) and emission (solid line) spectra of (a) TBRb, (b) 4CzIPN, and (c) mCBP thin films.

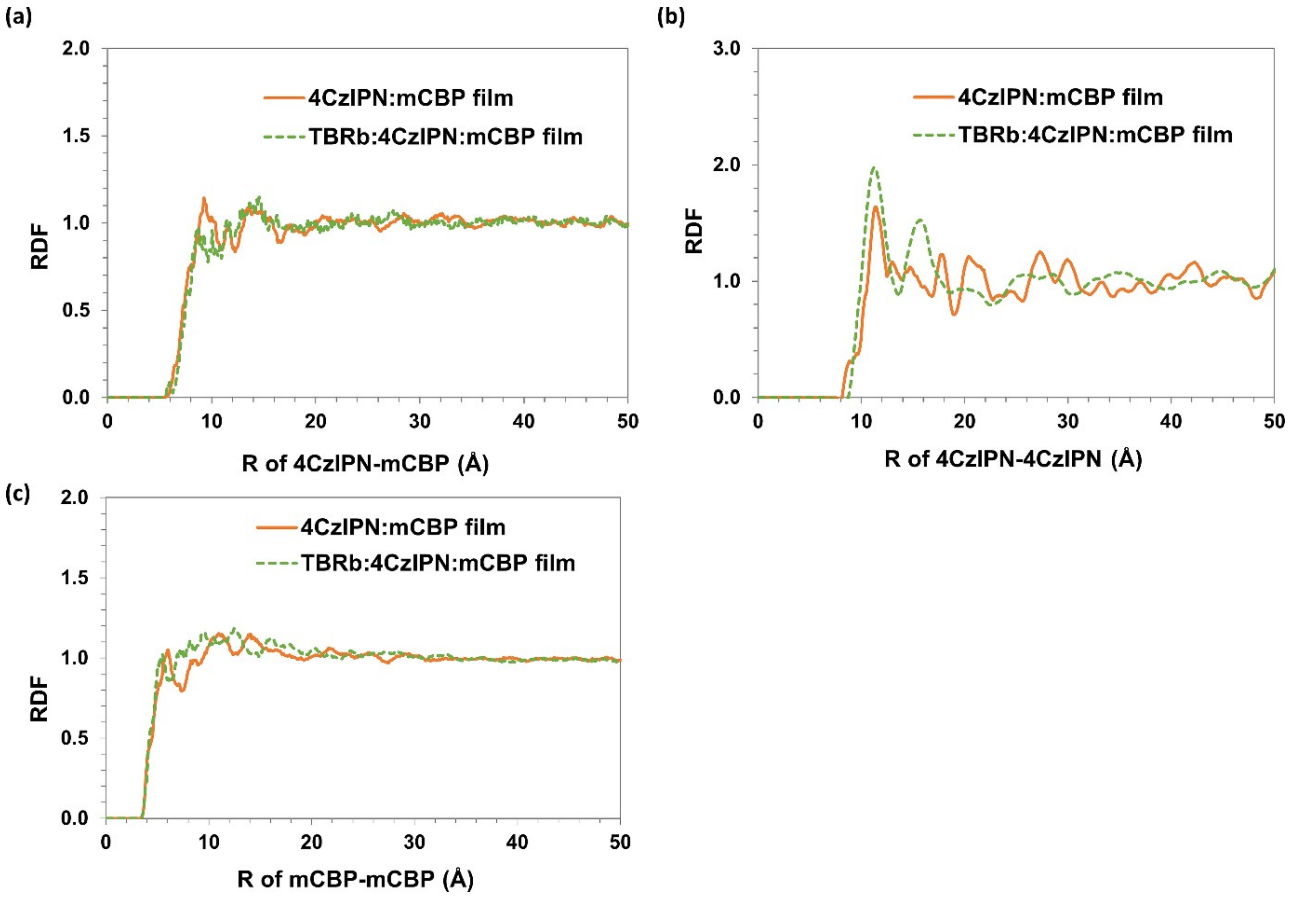

Figure S2. Radial distribution functions (RDFs) of (a) 4CzIPN-mCBP pairs, (b) 4CzIPN-4CzIPN pairs, and (c) mCBP-mCBP pairs in binary 4CzIPN:mCBP and ternary TBRb:4CzIPN:mCBP films as a function of intermolecular center-of-mass distance (R).

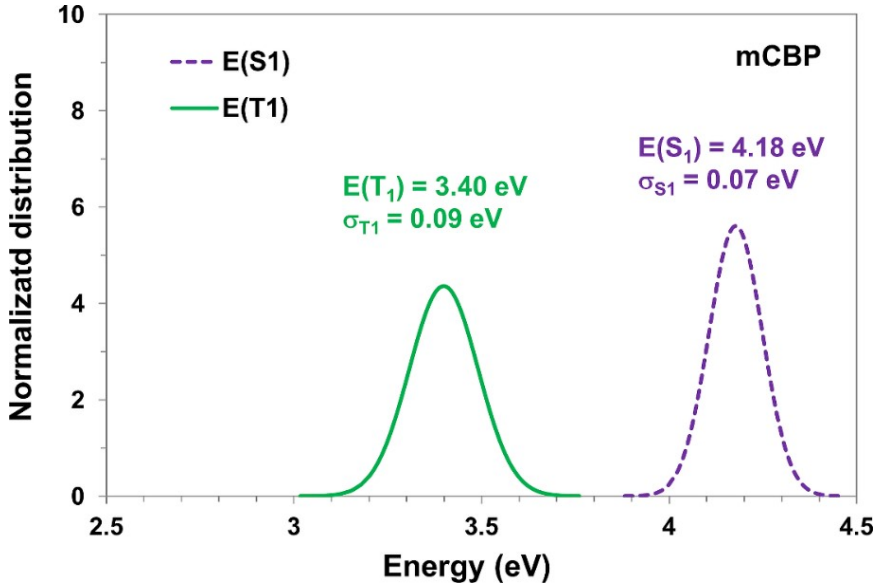

Figure S3. Normalized distributions of singlet (S, dashed line) and triplet (T, solid line) excited-state energies in mCBP, evaluated for molecules extracted from MD trajectories in the TBRb:4CzIPN:mCBP blend.

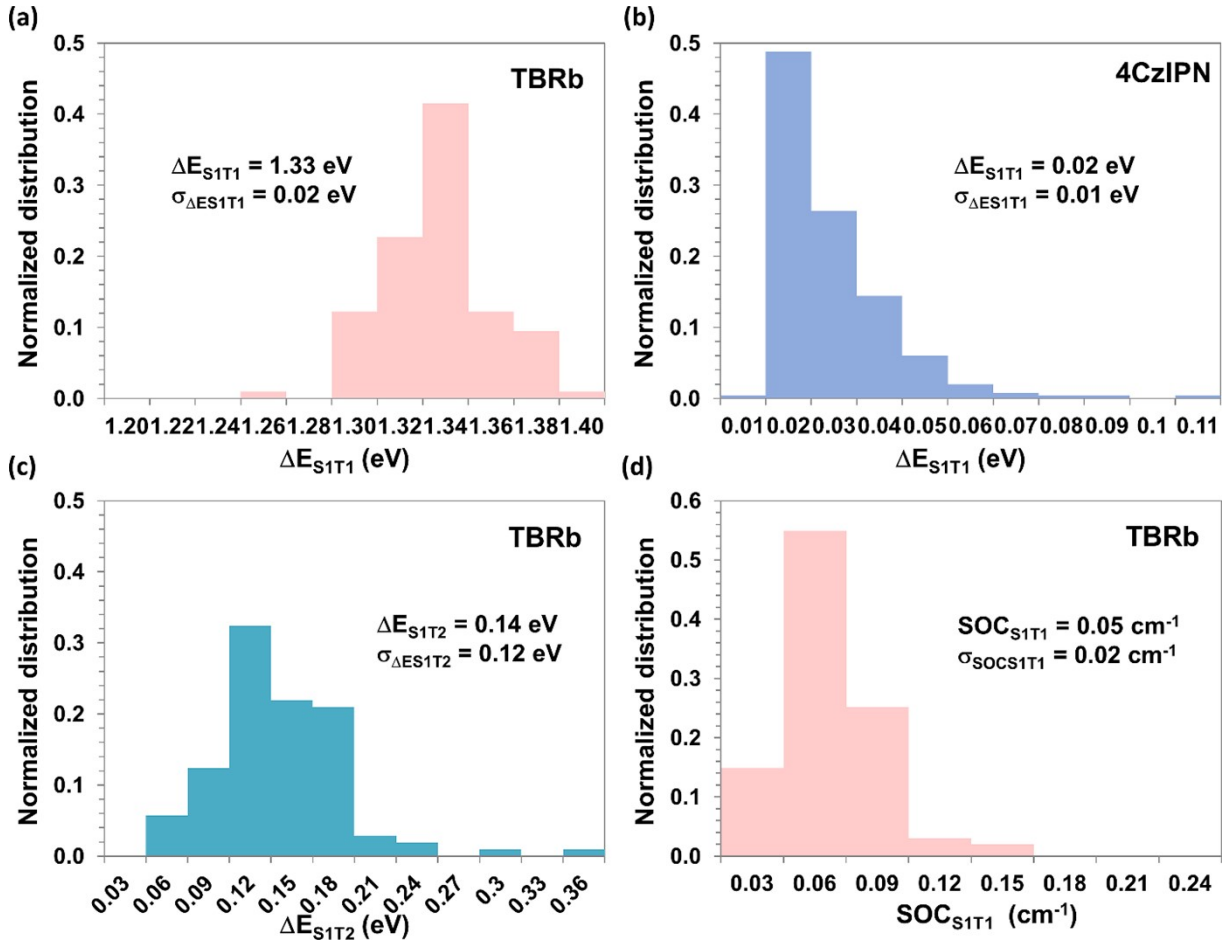

Figure S4. Normalized distributions of the energy differences ΔE_{S1T1} in TBRb (a) and 4CzIPN (b); the energy differences ΔE_{S1T2} in TBRb (c); and the SOC values between the S_1 and T_1 states in TBRb (d), evaluated for molecules extracted from MD trajectories in the TBRb:4CzIPN:mCBP blend.