

Exciton Dynamics in Heterojunction Thin-film Devices Based on Exciplex-Sensitized Triplet- Triplet Annihilation

Supporting information

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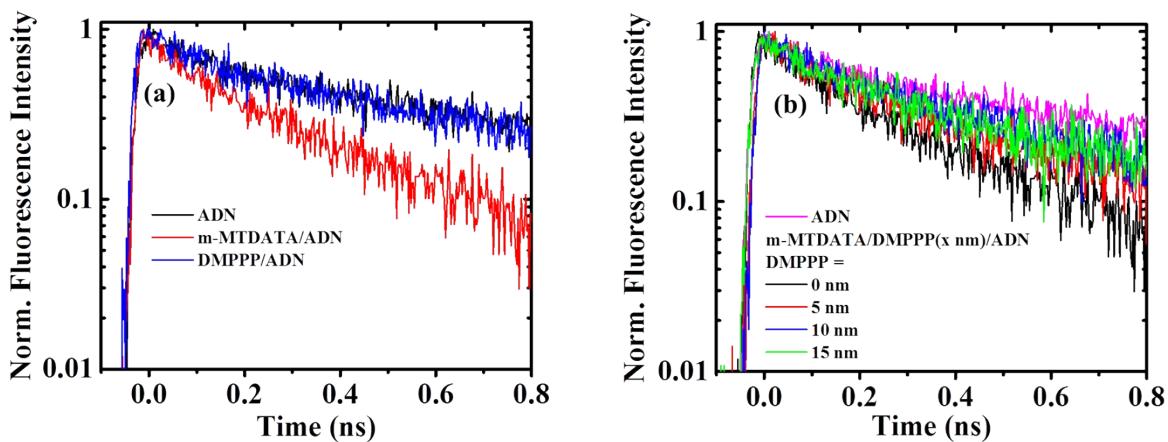


Figure S1. (a) Early time (0.0-0.8 ns) TrPL decays of monolayer ADN, and bilayers m-MTDATA/ADN, and DMPPP/ADN. (b) trilayer m-MTDATA/DMPPP/ADN with different DMPPP thickness (0, 5, 10, 15 nm), and single layer ADN thin films. TrPL decays were taken at a single wavelength (440 nm) that reflects the ADN. The same trends are seen as in Figure 4 of the manuscript.

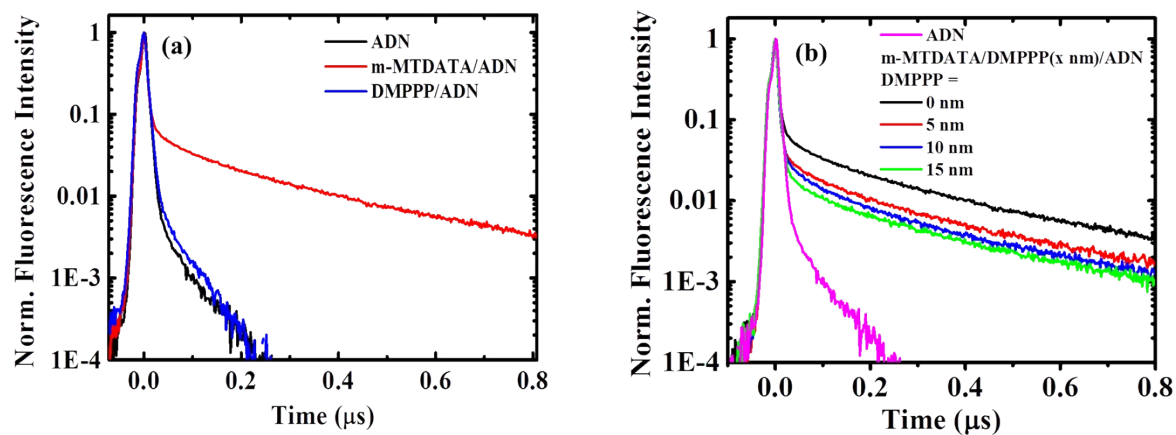


Figure S2. (a) **Late time (0.0-0.8 μs)** TrPL decays of monolayer ADN, and bilayers m-MTDATA/ADN, and DMPPP/ADN. (b) trilayer m-MTDATA/DMPPP/ADN with different DMPPP thickness (0, 5, 10, 15 nm), and single layer ADN thin films. TrPL decays were integrated from 400-600 nm.

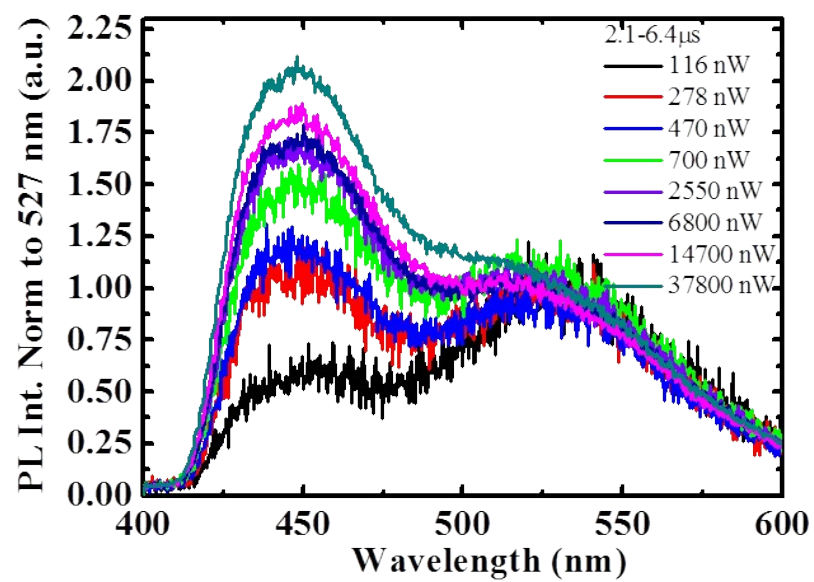


Figure S3. Intensity dependence of long time PL spectra, showing enhanced ADN PL at high intensities due to TTA

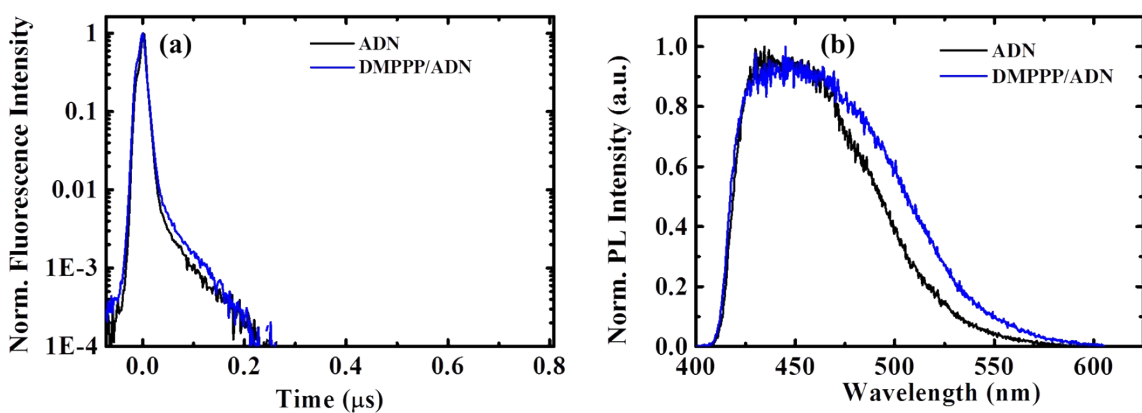


Figure S4. (a) Late time (0 – 0.8 μ s) TrPL decays of monolayer ADN, and bilayer DMPPP/ADN. (b) Corresponding PL spectra integrated from 0 – 0.8 μ s.

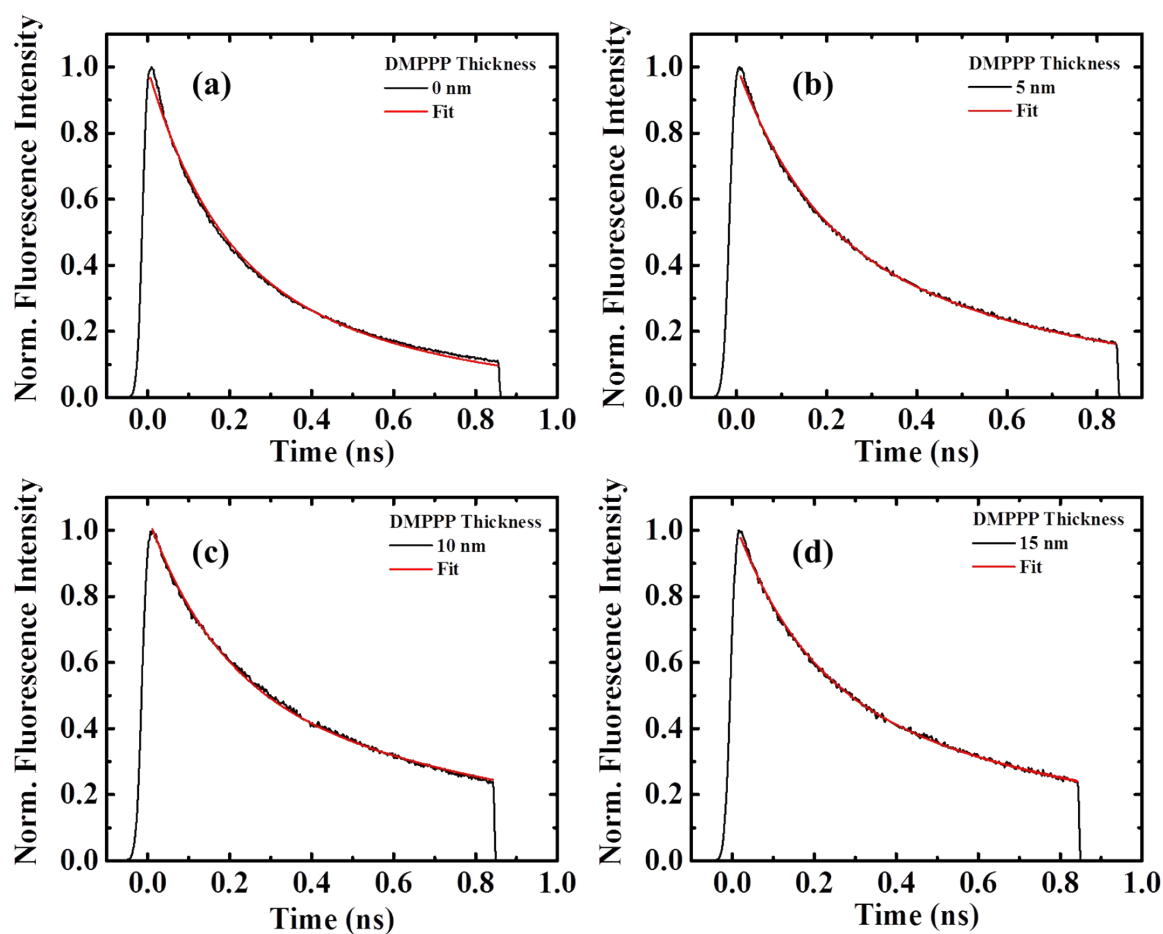


Figure S5. TrPL of ADN prompt fluorescence decays of m-MTDATA/ADN bilayer (a) and m-MTDATA/ADN/DMPPP trilayer of various DMPPP thickness (b-d) fit to equation 2.

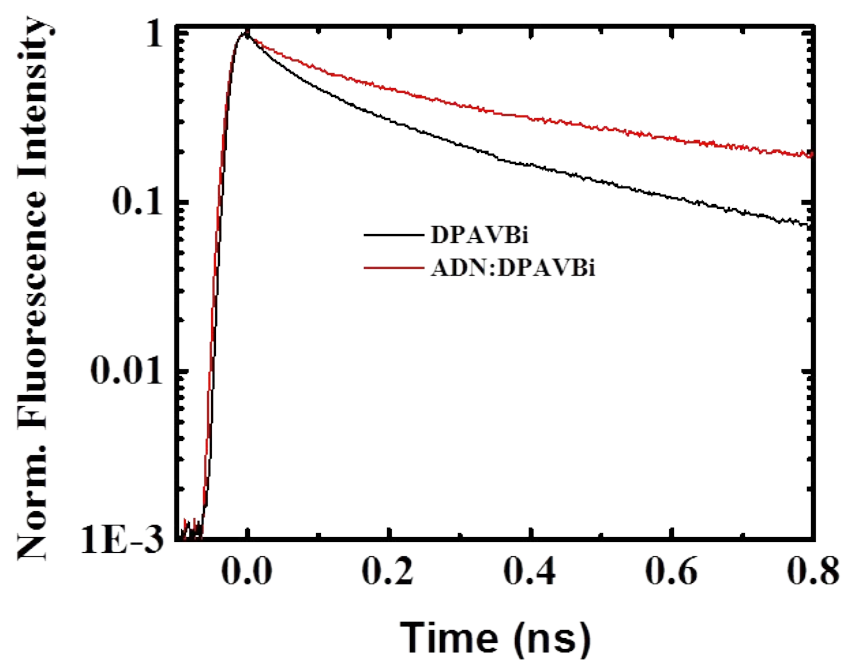


Figure S6. TrPL decays in the 0-0.8 ns window of monolayer DPAVBi and DPAVBi doped into ADN with 10% in volume ratio.