Electronic Supplementary Information for Dalton Transactions

Supplementary Information

Charge separation and fullerene triplet formation in blend films of polyfluorene polymers with [6,6]-phenyl C61 butyric acid methyl ester

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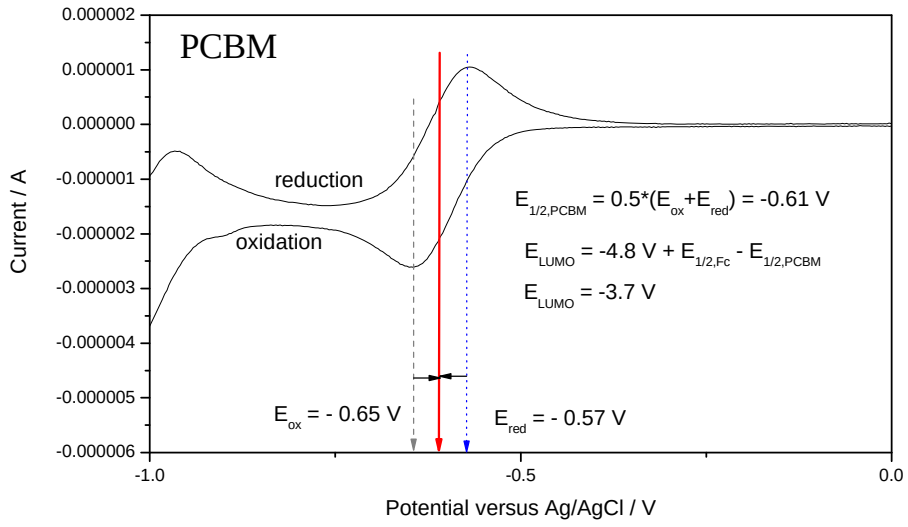
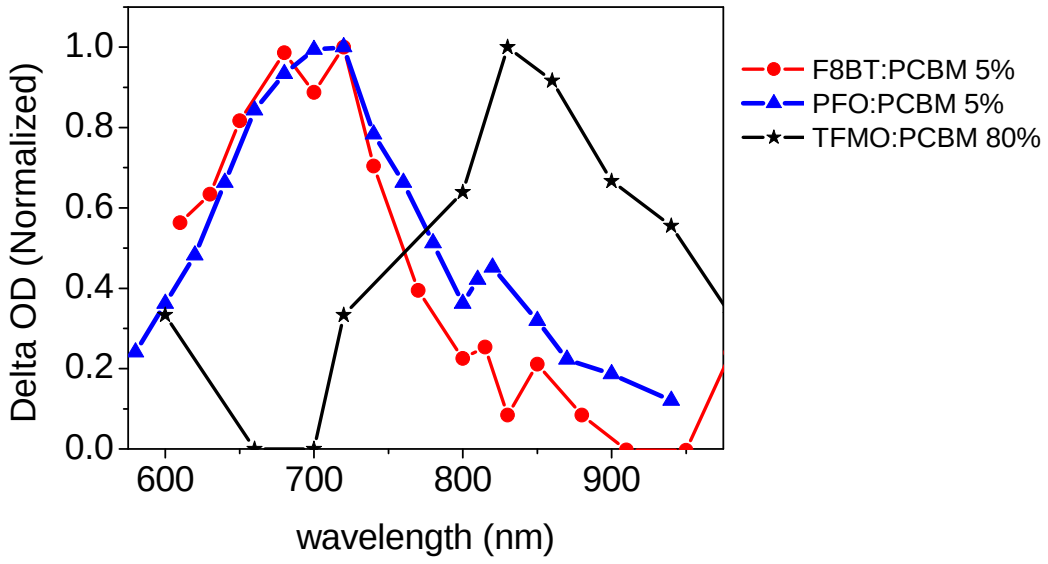
1. Determination of the LUMO energy of PCBM.



Cyclic voltammorams were Measured in ODCB:Acetonitrile (4:1) solution, with 0.1M Bu4NPF6 (tetrabutyl ammonium hexafluorophosphate) vs. ferrocene Fc/Fc+. The working and counter electrodes were titanium and the reference electrode was Ag/AgCl. The scan rate was10mV/s.
The LUMO energy was calculated from the $E_{1/2}$ position of the first reduction peak in comparison with the reduction peak of ferrocene under the same conditions.

2. Transient optical spectrum of 50 wt% PCBM:TFMO:device.



Transient absorption spectrum measured in transmission at 1 μs after photoexcitation at 440 nm of a device structure consisting of structure glass/indium tin oxide/ poly(3,4-ethylenedioxylenethiophene)-polystylene sulfonic acid (PEDOT:PSS) /TFMO:PCBM/Al (15 nm). The TAS spectra of blend films of 5 wt% PCBM:PFO and 5 wt.% PCBM:F8BT are shown for comparison. All spectra are normalised for ease of comparison.