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

Bipolar Host Containing Carbazole/Dibenzothiophene for Efficient Solution-Processed Blue and White Phosphorescent OLEDs

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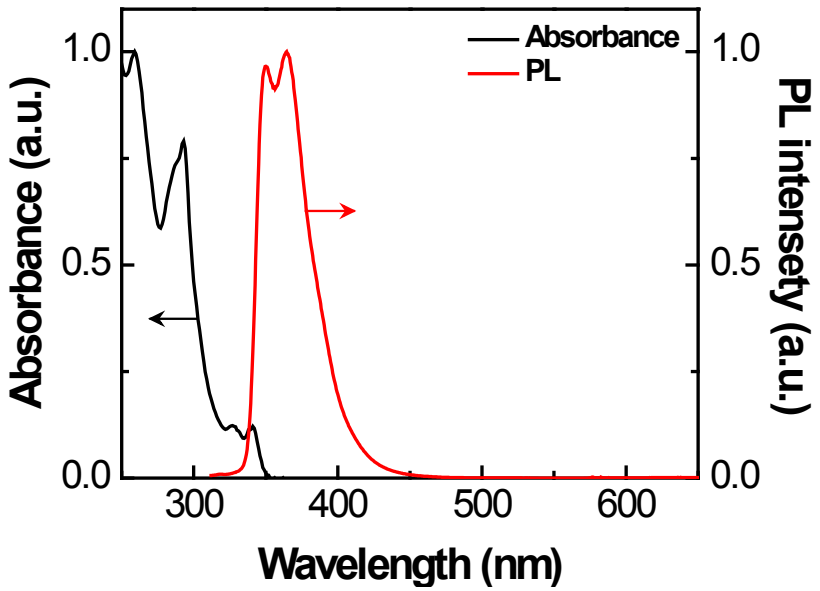
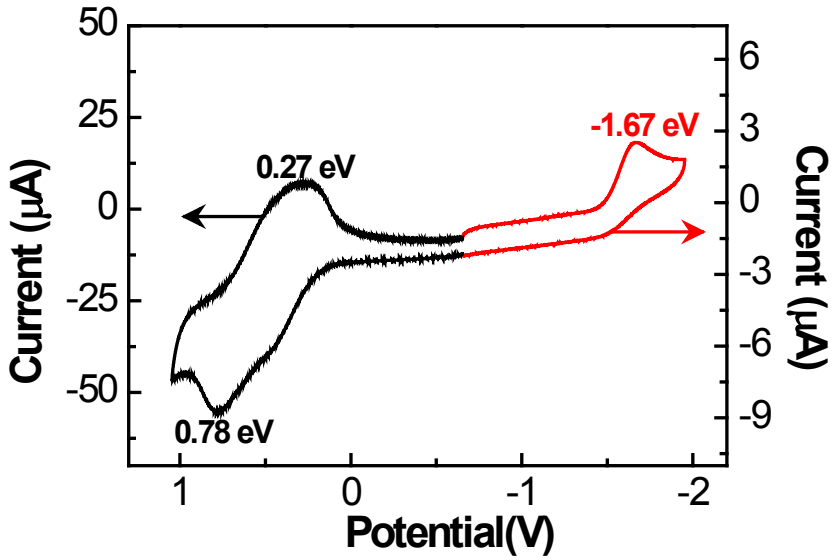
Supporting Information

1. Absorption and photoluminescence spectra of CzDBS



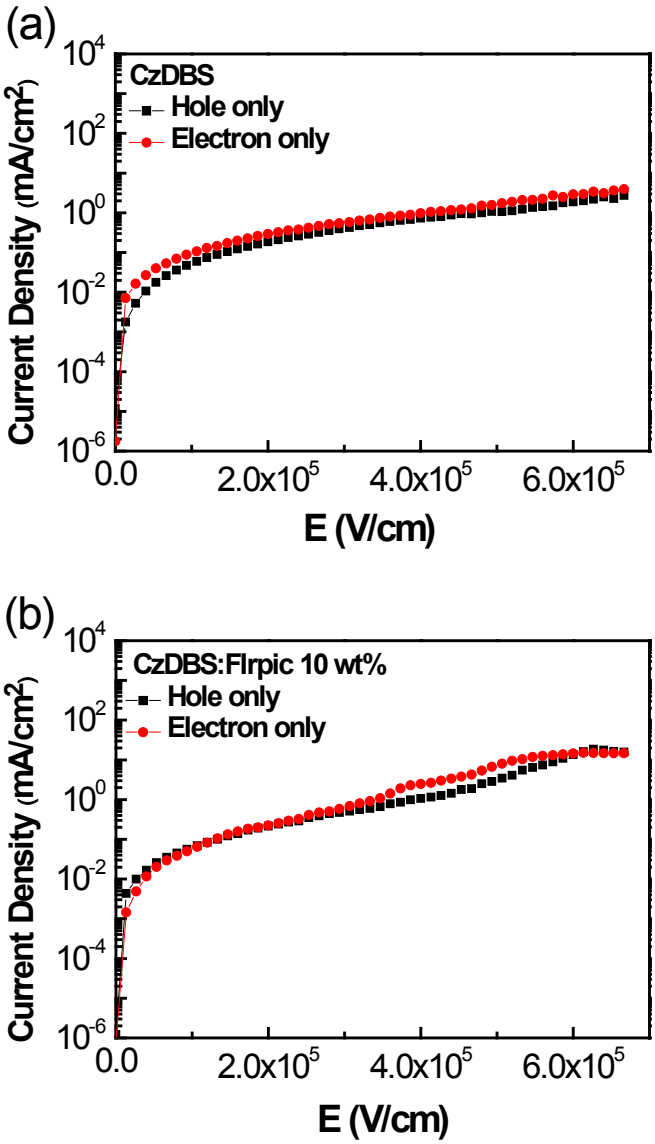
Supplementary Fig. S1: Absorption and photoluminescence (PL) spectra of CzDBS. Absorption spectra (5×10^{-5} M in CH_2Cl_2) were recorded on a Meter Tech SP8001 spectrometer. Emission spectra (1×10^{-5} M in CH_2Cl_2) were recorded on a JASCOFP-6500 spectrometer upon excitation at the absorption maxima in the same solvent after saturating with nitrogen.

2. Cyclic voltammetry properties of CzDBS



Supplementary Fig. S2: Cyclic voltammetry (CV) properties of CzDBS. CV experiment was performed in 1.0 mm of substrate on a CH Instrument (CHI610D). The measurement was carried out in anhydrous CH_2Cl_2 containing 0.1 M tetrabutylammonium chloride (n-Bu_4NCl) as a supporting electrolyte, purging with nitrogen prior to conduct the experiment.

3. Single carrier device measurements



Supplementary Fig. S3: Current density to electric field characteristics of of (a) CzDBS and (b) CzDBS:FIrpic 10 wt.% hole/electron-only devices. The device configuration: (hole-only device) ITO/ MoO_3 (1 nm)/ Organic layer (~ 75 nm)/ MoO_3 (10 nm)/ Al (120 nm); (electron-only device) ITO/ Mg (5 nm)/ Organic layer (~ 75 nm)/ Ca (5 nm)/ Al (120 nm).