

<Supplementary Information>

Efficient and Stable Solution-Processed Organic Light Emitting Transistors using a High-k Dielectric

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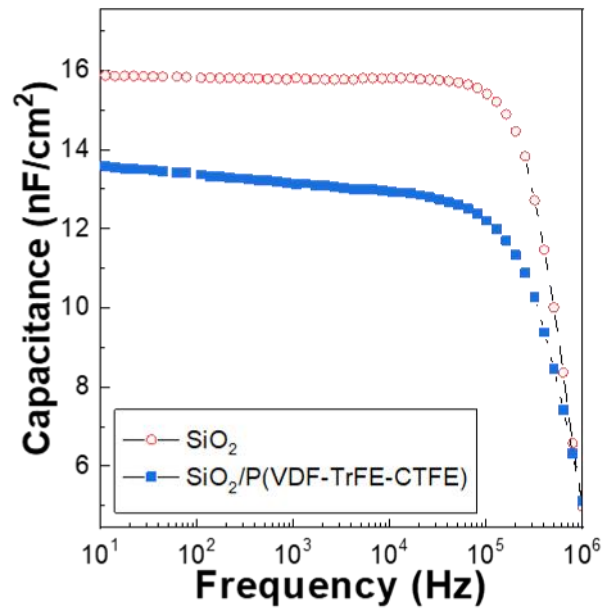


Figure S1. Capacitance-frequency (C-f) spectra for SiO₂ (200 nm) and SiO₂/P(VDF-TrFE-CTFE) (300 nm) polymer dielectric layers measured using a doped Si/dielectric/Al capacitor structure.

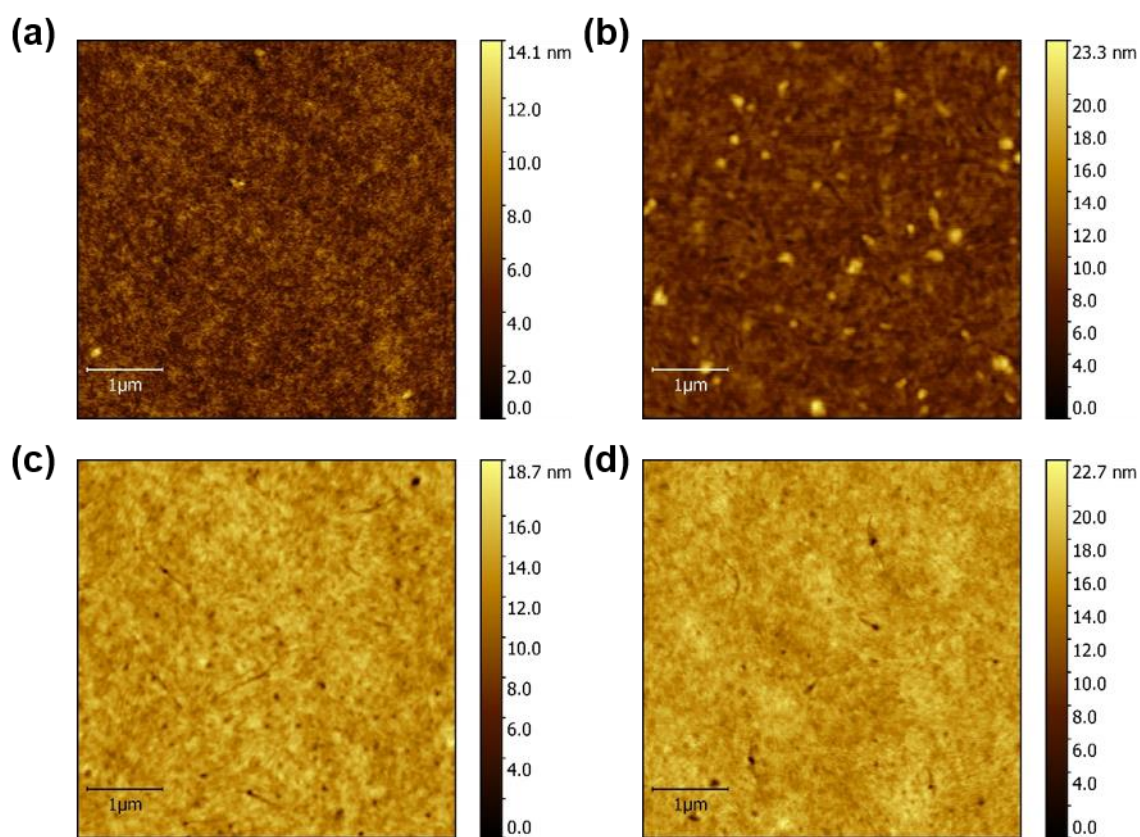


Figure S2. Height-mode atomic force microscope (AFM) images: (a) spectrosil/P(VDF-TrFE-CTFE) (root mean square roughness, $R_{\text{rms}} = 0.92$ nm), (b) spectrosil/PCDTPT ($R_{\text{rms}} = 1.74$ nm), (c) spectrosil /P(VDF-TrFE-CTFE)/PCDTPT ($R_{\text{rms}} = 1.24$ nm), (d) ITO-glass/P(VDF-TrFE-CTFE)/PCDTPT ($R_{\text{rms}} = 1.24$ nm).

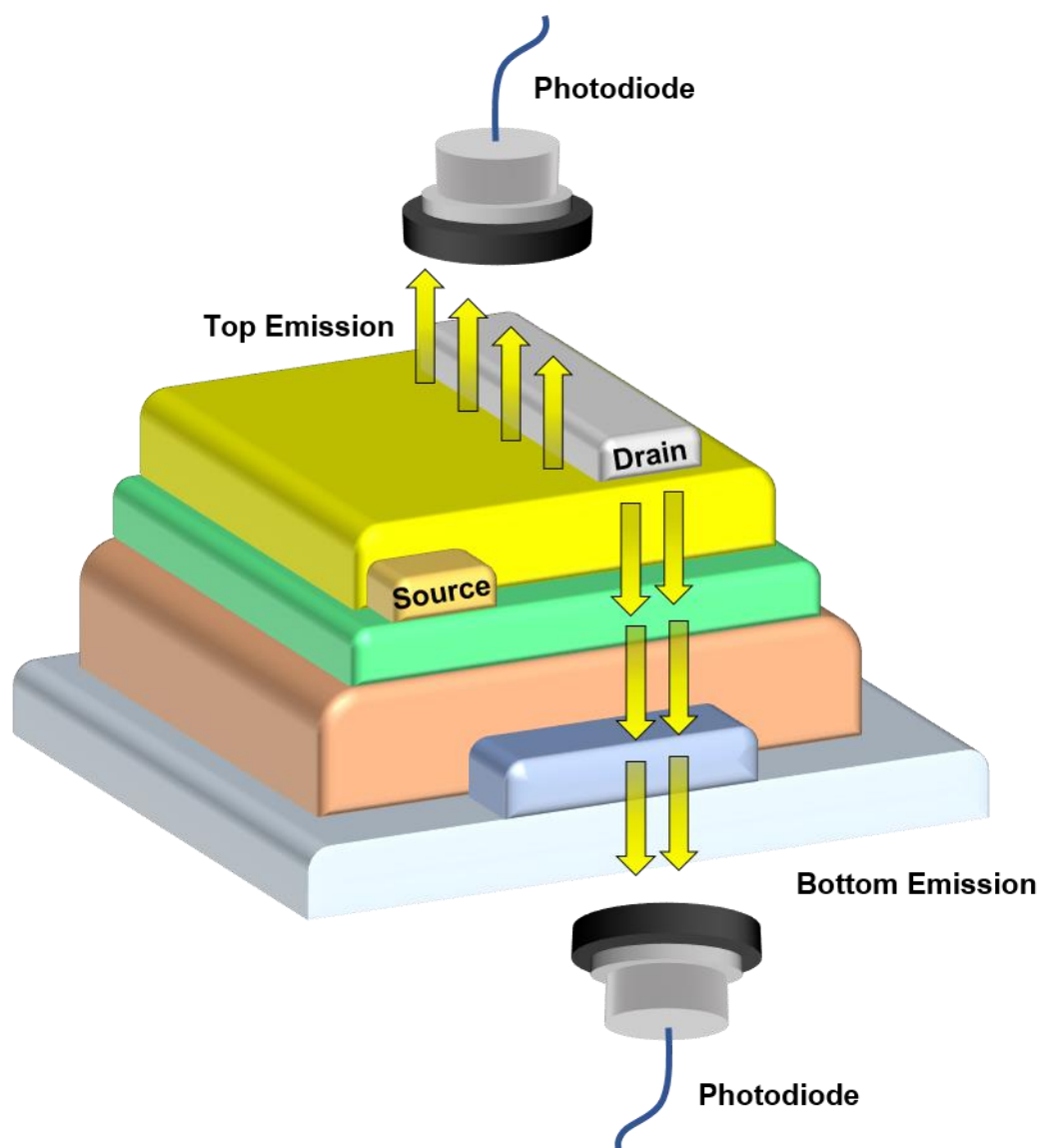


Figure S3. Schematic measurement geometry for OLET top and bottom emission.

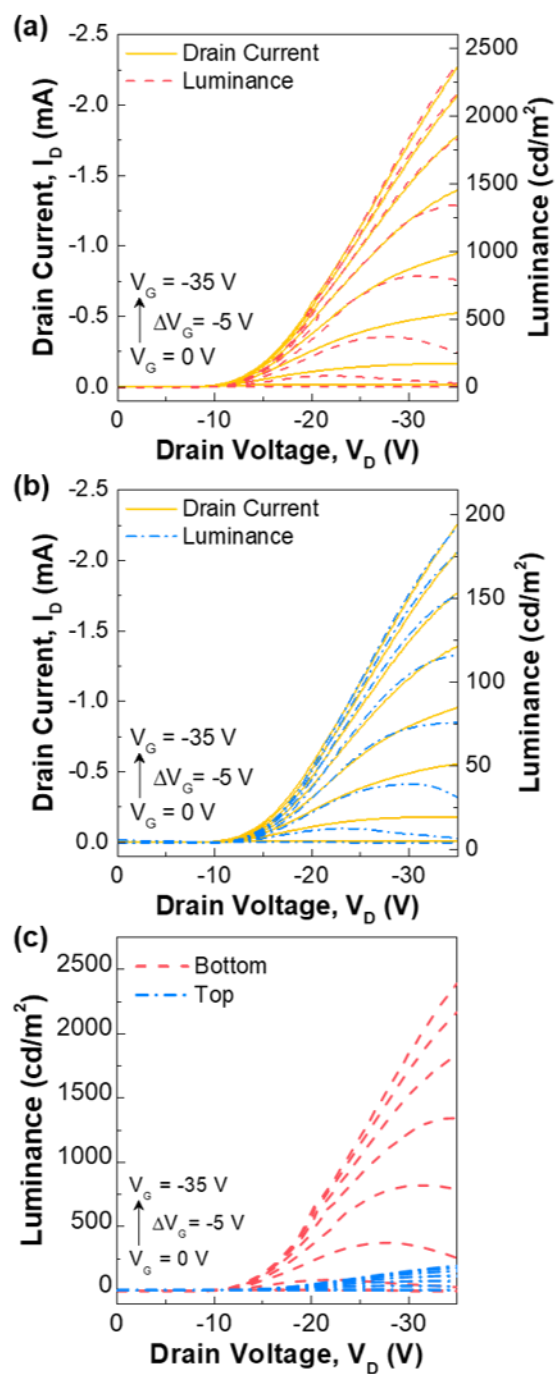


Figure S4. Electrical (I_D) and optical (luminance) output characteristics for OLET (a) top and (b) bottom emission. (c) Top and bottom emission characteristics plotted on the same luminance scale.

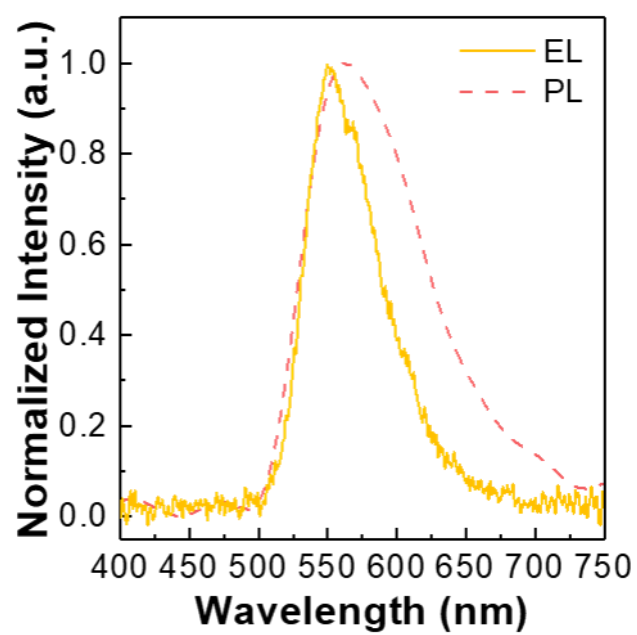


Figure S5. Super Yellow emission layer OLET electroluminescence (EL, top emission) and photoluminescence (PL) spectra.

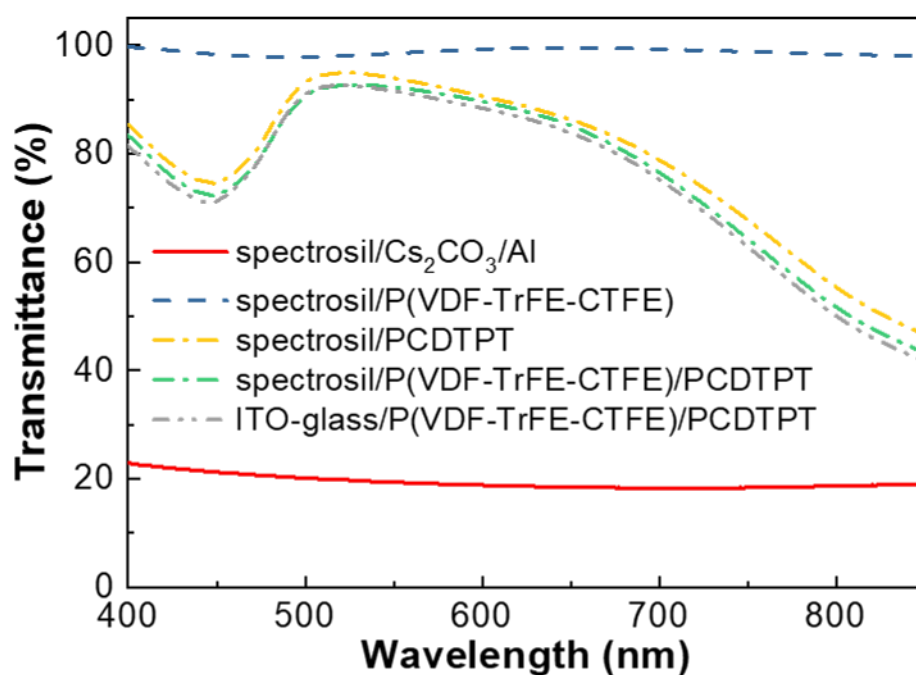


Figure S6. Transmittance spectra of partial device stacks. Spectra are shown for spectrosil/ Cs_2CO_3 /Al electron-injection stack, spectrosil/P(VDF-TrFE-CTFE) dielectric layer, spectrosil/PCDTPT hole injection and transport layer, the combined spectrosil/P(VDF-TrFE-CTFE)/PCDTPT stack, and the ITO-glass/P(VDF-TrFE-CTFE)/PCDTPT hole injection stack.