

Supporting information for

The fabrication of color-tunable organic light-emitting diode displays via solution processing

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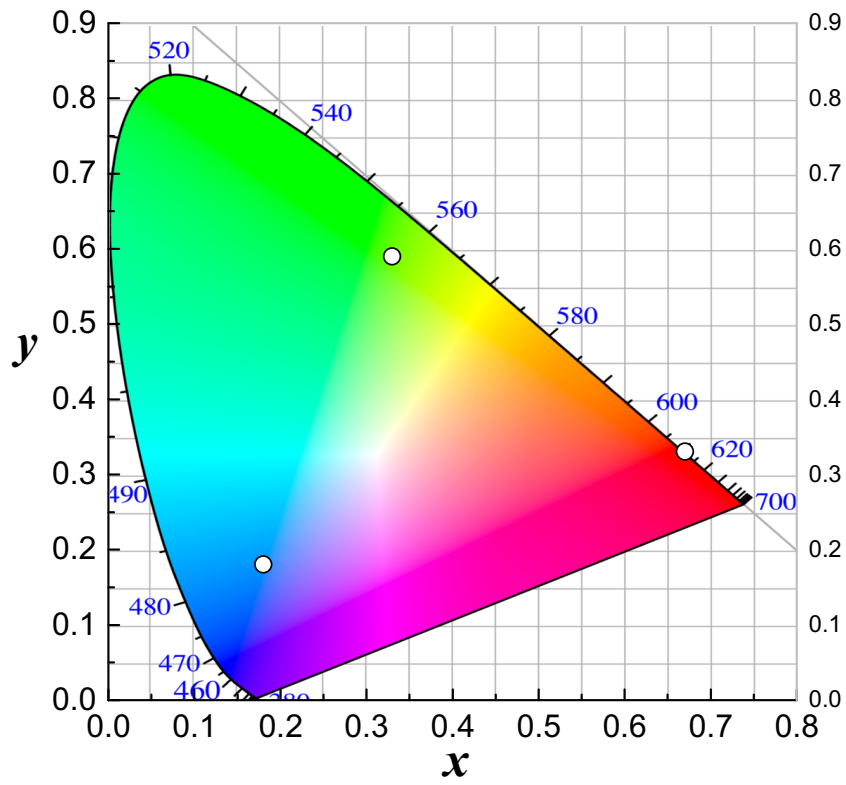
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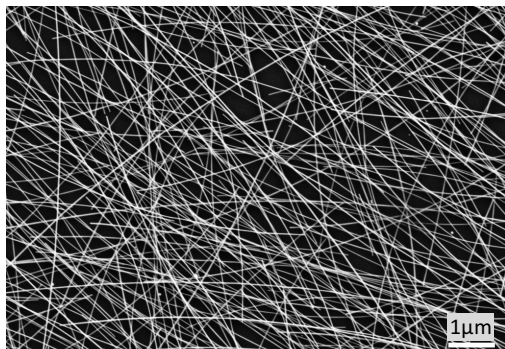
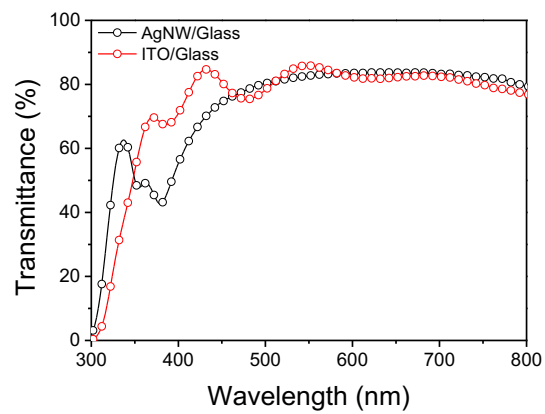
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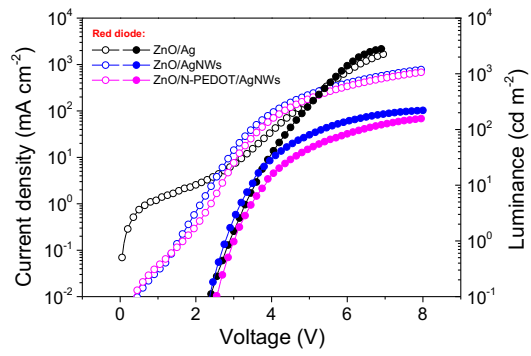
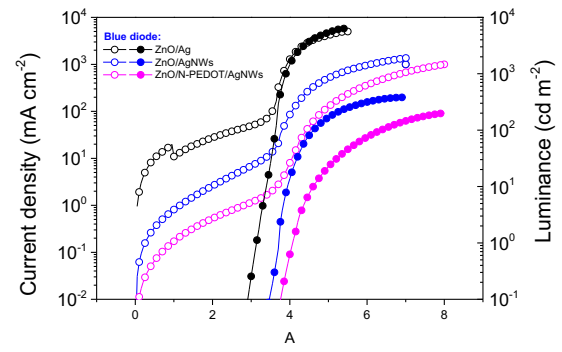
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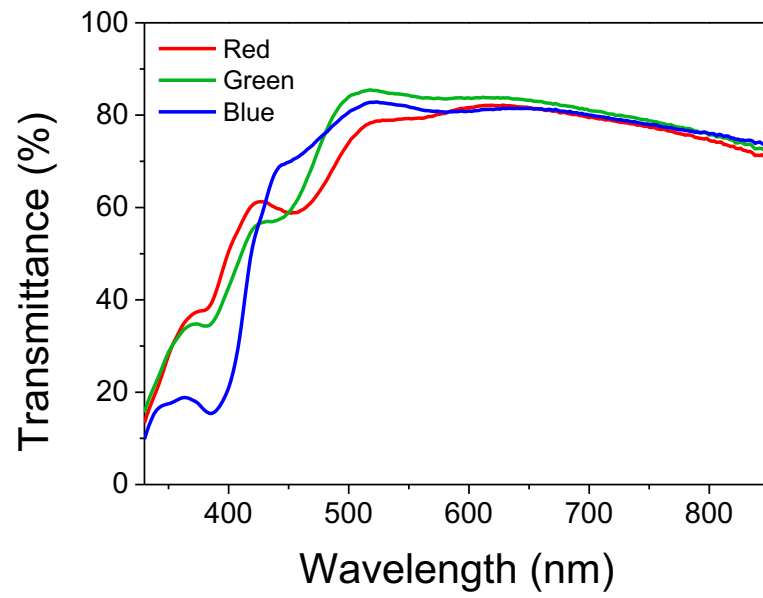
Supplementary Figure 1 | CIE 1931 color space chromaticity coordinate of the three reference OLED cells.

a**b**

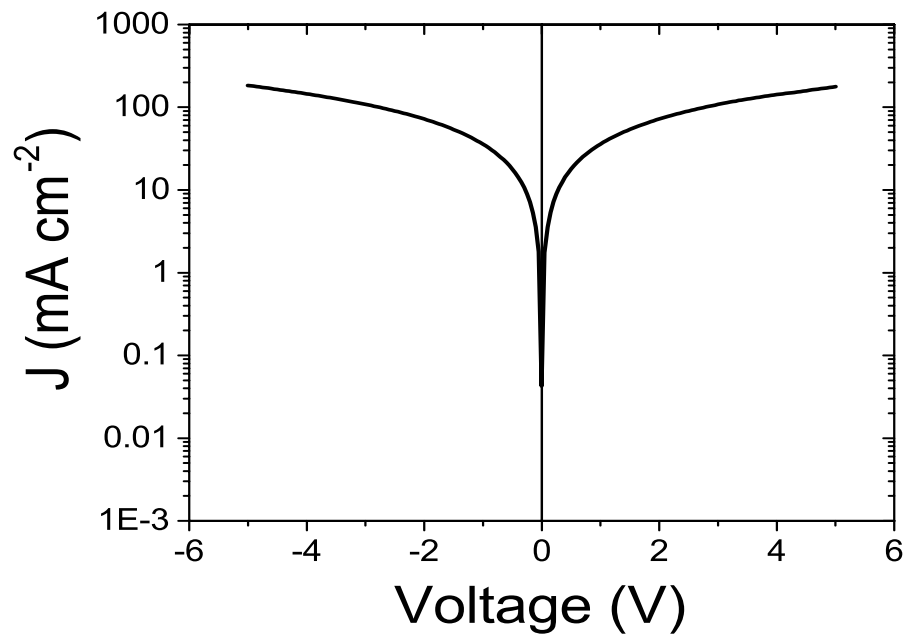
Supplementary Figure 2 | a, SEM image of the AgNW film deposited from isopropanol based solution. **b**, Transmittance spectra of the AgNW film deposited on glass substrate. As a comparison, the commonly used ITO/Glass electrode is plotted.

a**b**

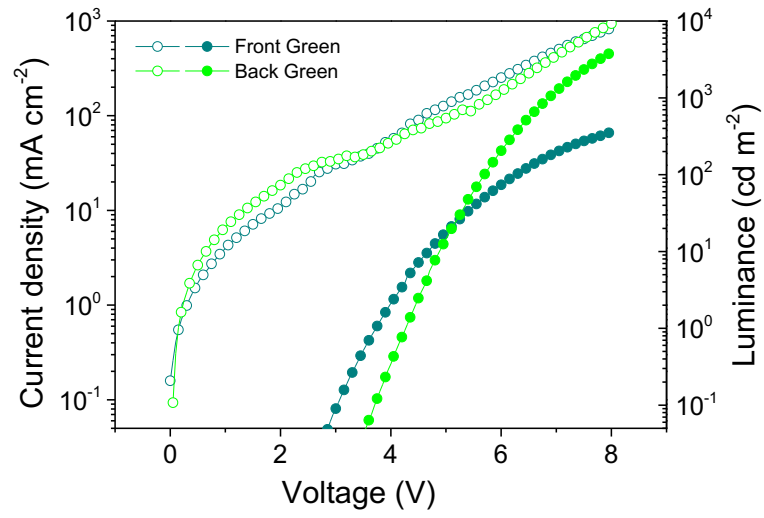
Supplementary Figure 3 | J-V-L characteristics of the red (a) and blue (b) emitting OLED devices with different top electrodes.



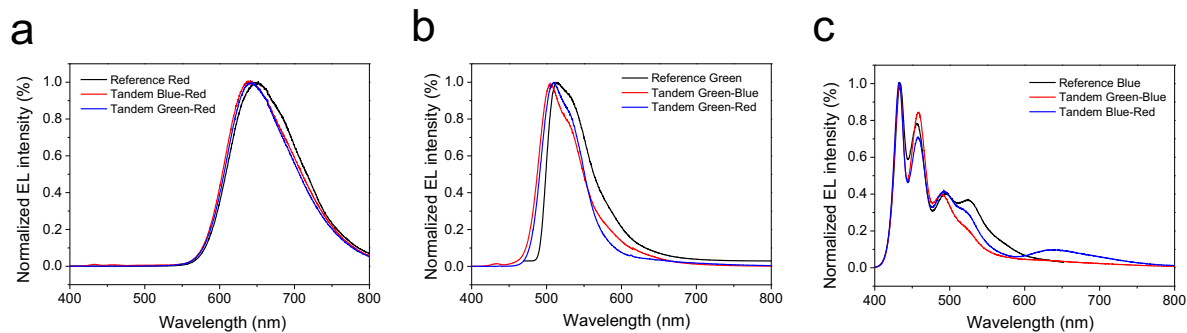
Supplementary Figure 4 | UV-vis transmission spectra of the prepared semitransparent red, green and blue emitting OLED devices in their bleached state.



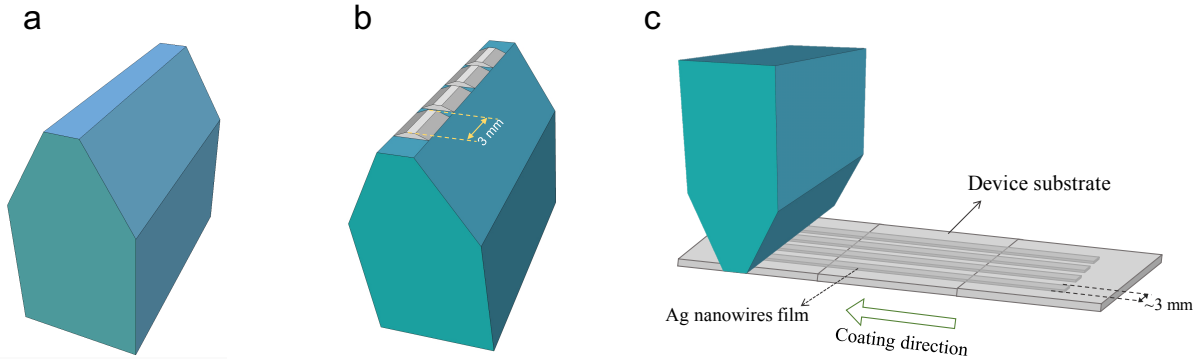
Supplementary Figure 5 | J-V characteristic of the interlayer stack of “ITO/ZnO/N-PEDOT/AgNW”.



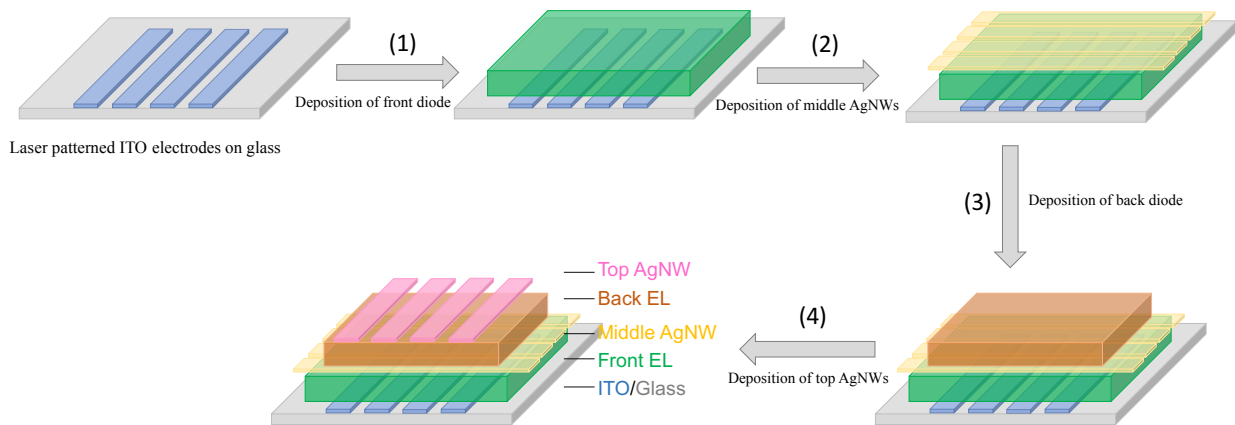
Supplementary Figure 6 | J-V-L characteristics of the tandem OLED device where the green emitter is used as both the bottom and top subdiodes.



Supplementary Figure 7 | Normalized EL spectrum of the Red (a), Green (b) and Blue (c) subdiodes measured in their tandem devices and compared to the respective single-junction reference devices.



Supplementary Figure 8 | Schematic illustration of the modified doctor-blade for solution-deposition of the four stripes AgNW electrodes. (a) bottom view of a normal doctor blading coater. (b) bottom view of a modified doctor blading, where 4 tapes (3 mm in width) are attached to the blade with an interval of 1 mm. (c) Side view of blading the AgNW films. It should be noted that the modified doctor blade enables coating AgNW stripes in a specific width (~ 3 mm), rather than fully covering the substrate ($25 \text{ mm} \times 25 \text{ mm}$).



Supplementary Figure 9 | Schematic diagram of the display fabrication. (1) On laser patterned ITO substrate, the first four layers with sequence of “PEDOT:PSS/emitting layer/ZnO/N-PEDOT” was successively deposited using the normal blade coating. (2) Deposition of the middle four AgNW electrodes in stripe-shape using the modified doctor blade shown in **Supplementary Figure 8**. (3) Deposition of back diode with layer sequence of “PEDOT:PSS/emitting layer/ZnO” using the normal blade coating. (4) Deposition of the top four AgNW electrodes in stripe-shape using the modified doctor blade.