Silver Nanowire Percolation Network Soldered with Graphene Oxide at Room Temperature and Its Application for Fully Stretchable Polymer Light-Emitting Diodes

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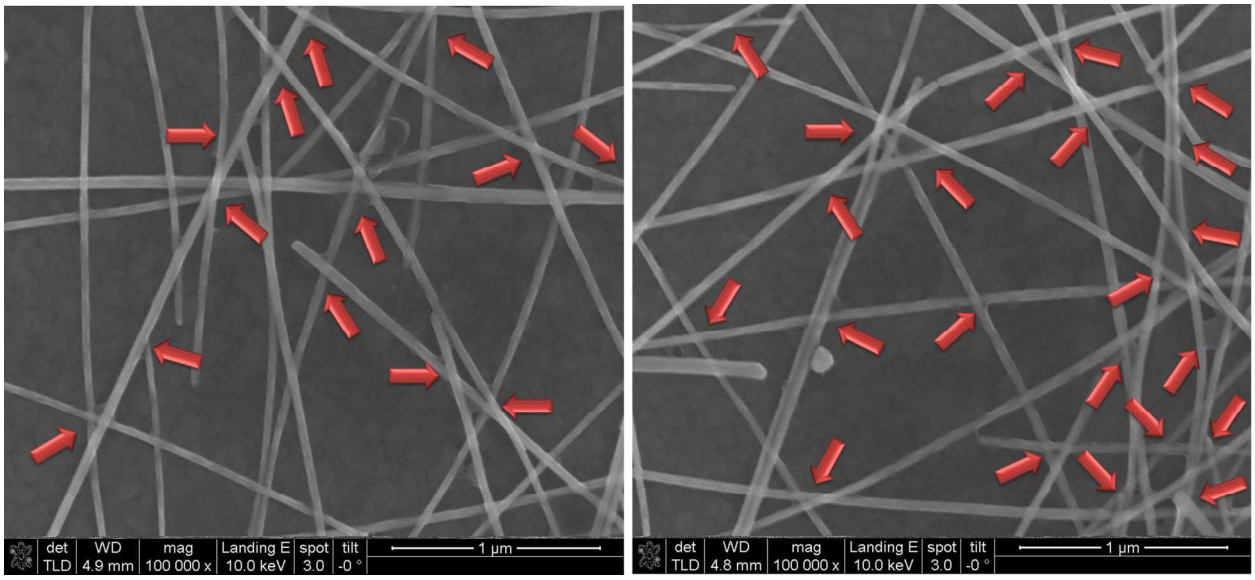

Figure S1. SEM images of AgNW junctions soldered by GO. Red arrows indicate GO soldered junctions.

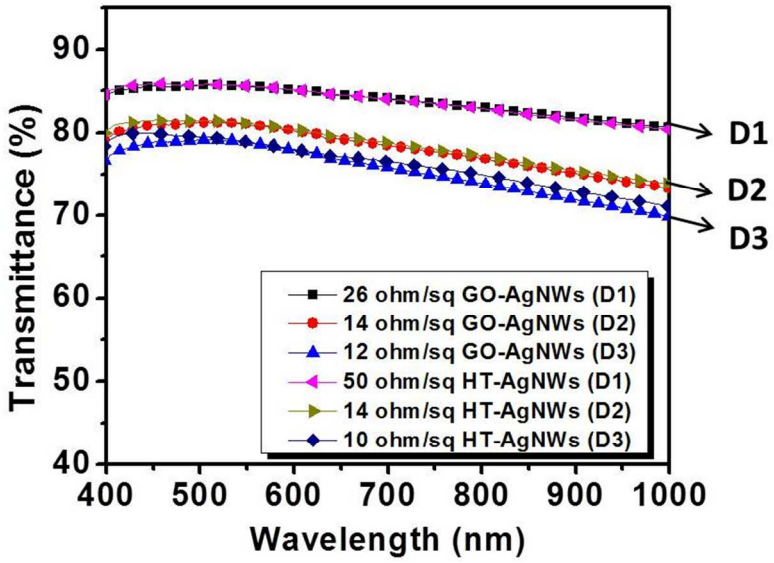

Figure S2. Transmittance spectra of GO-soldered AgNW networks and HT-annealed AgNW networks with three different AgNW densities (D1, D1 and D3). All transmittance data are inclusive of glass substrate.

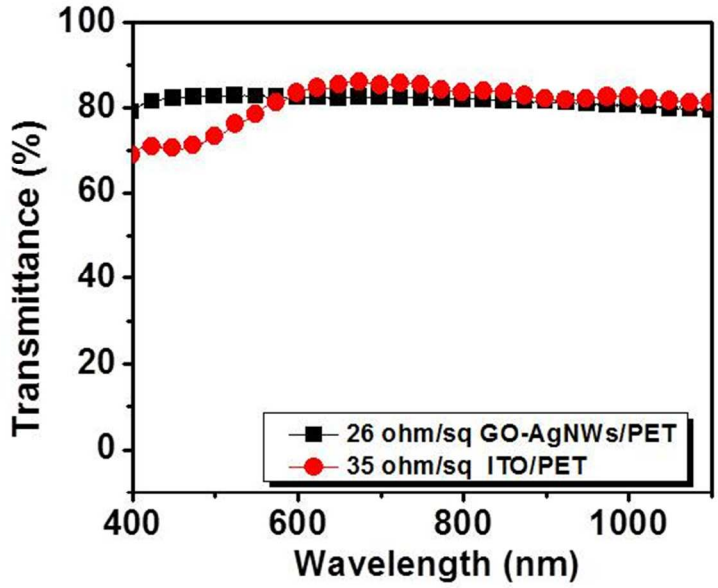

Figure S3. Transmittance spectra of the 26 ohm/sq GO-AgNW/PET as compared to a commercial ITO/PET film (35 ohm/sq) (transmittance data are inclusive of PET substrate).

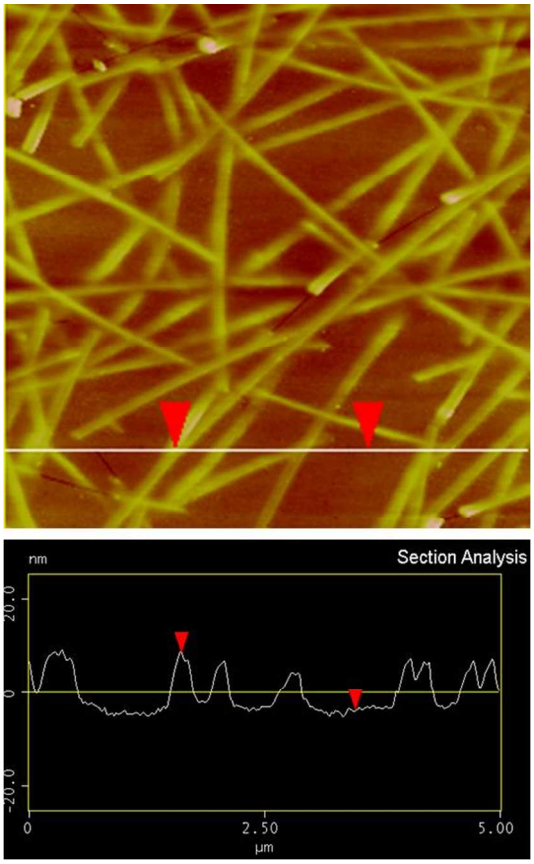

Figure S4. AFM images for 14 ohm/sq GO-AgNW-PUA composite electrode. The peak to valley value between the two red arrows is around 10 nm.

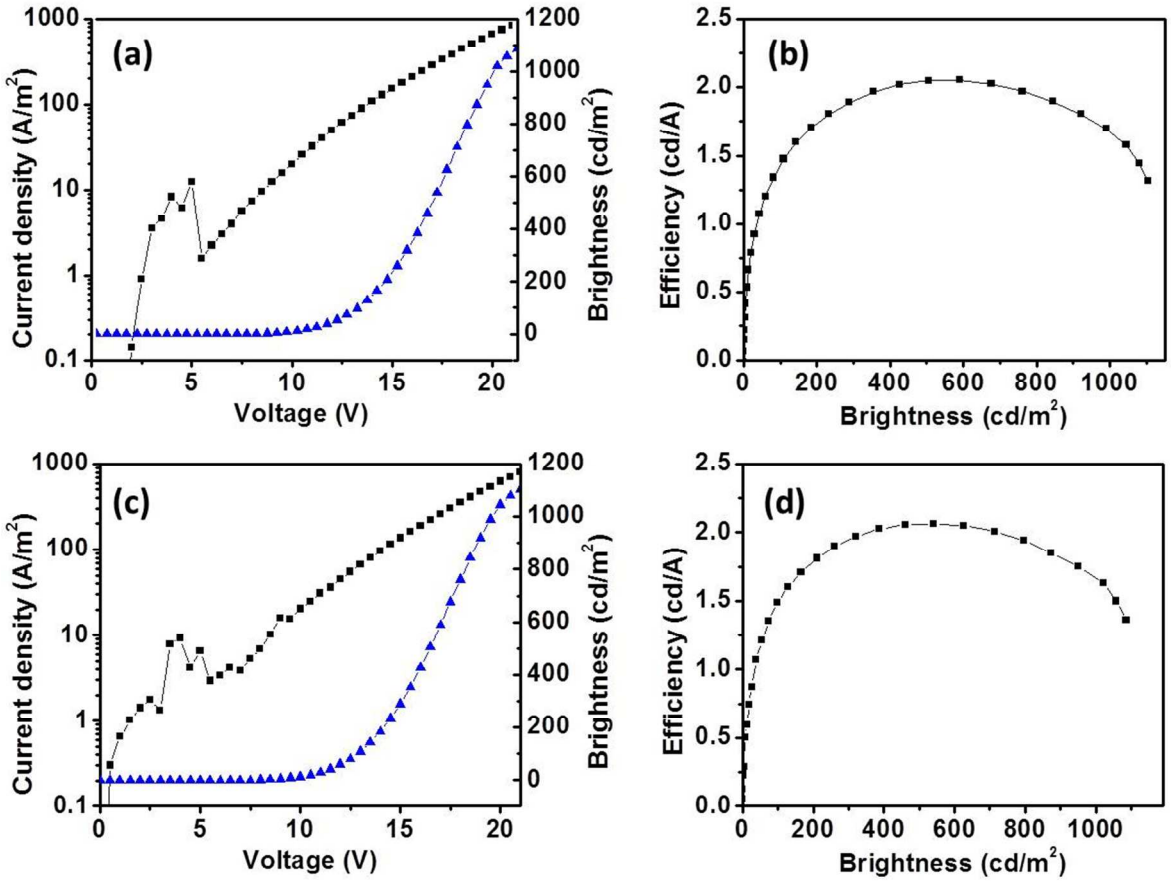

Figure S5. (a) Current density-luminance-driving voltage characteristics and (b) current efficiency-brightness characteristics of the stretchable PLED device measured from composite electrode anode side. (c) Current density-luminance-driving voltage characteristics and (d) current efficiency-brightness characteristics of the PLED device measured from composite electrode cathode side.

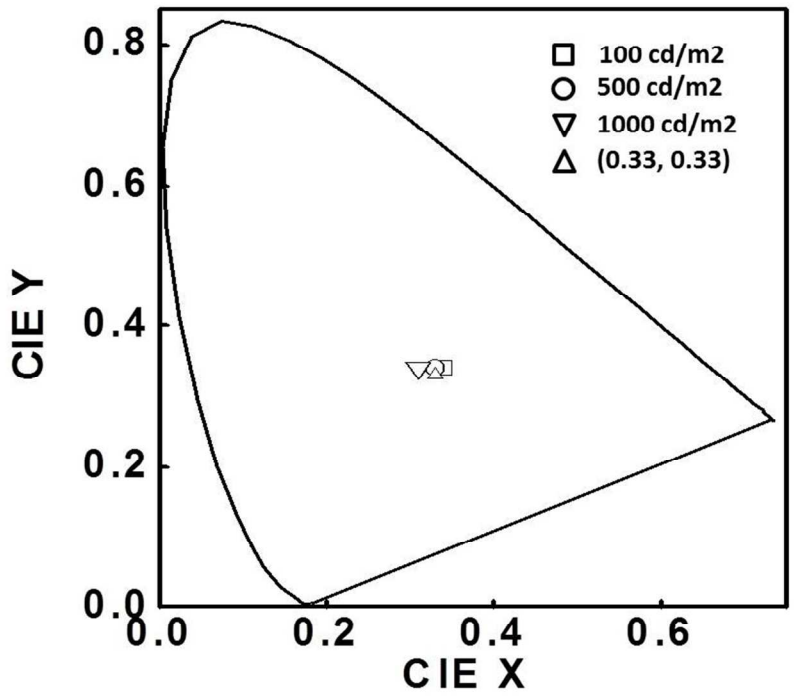

Figure S6. A typical CIE coordinate diagram used to compare the emission color of white-light stretchable PLED under different brightness.

Supporting movie S1: A stretchable white PLED with fairly uniform and bright light emission under stretching-releasing cycles with different strains at room temperature. The driving voltage is 14 V.