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Supplementary information for

Low-cost flexible poly(3,4-ethylenedioxythiophene) based counter electrodes for efficient energy conversion in dye-sensitized solar cells

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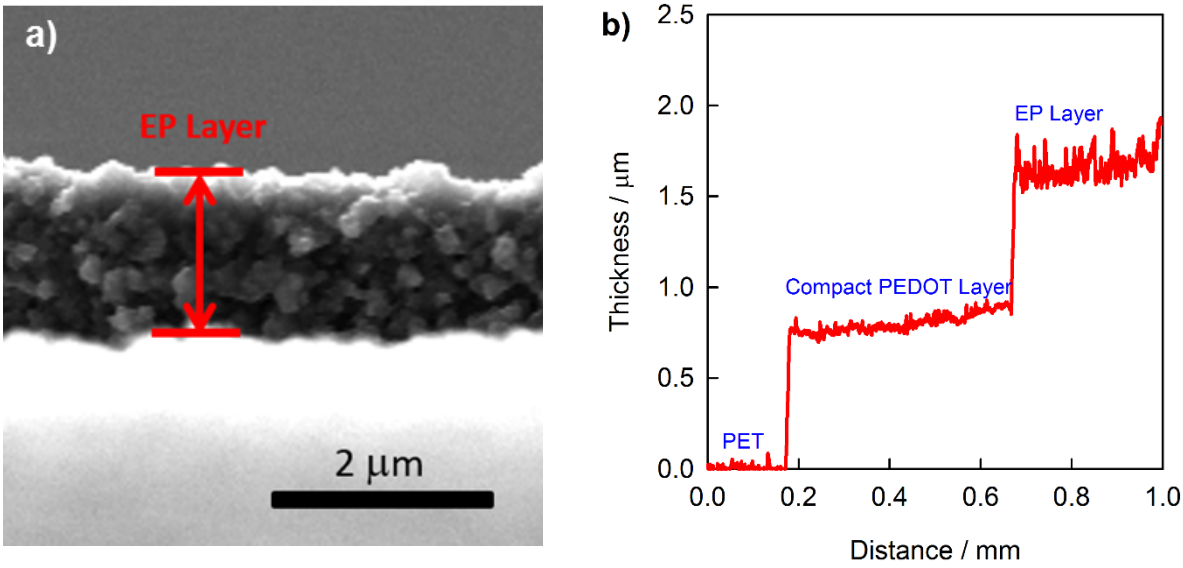

Figure S1. (a) SEM image showing cross sectional view of EP/PEDOT electrode; (b) Thickness profile of composite PEDOT electrode obtained by scanning from PET substrate to compact PEDOT layer to porous EP layer.

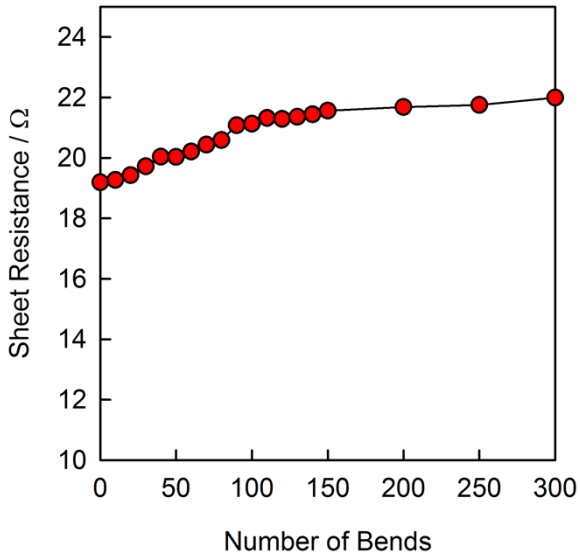

Figure S2. Plot of sheet resistance versus number of bends. The measurement was performed by repeatedly bending the EP/PEDOT/PET electrode to 90 degrees while measuring the sheet resistance.

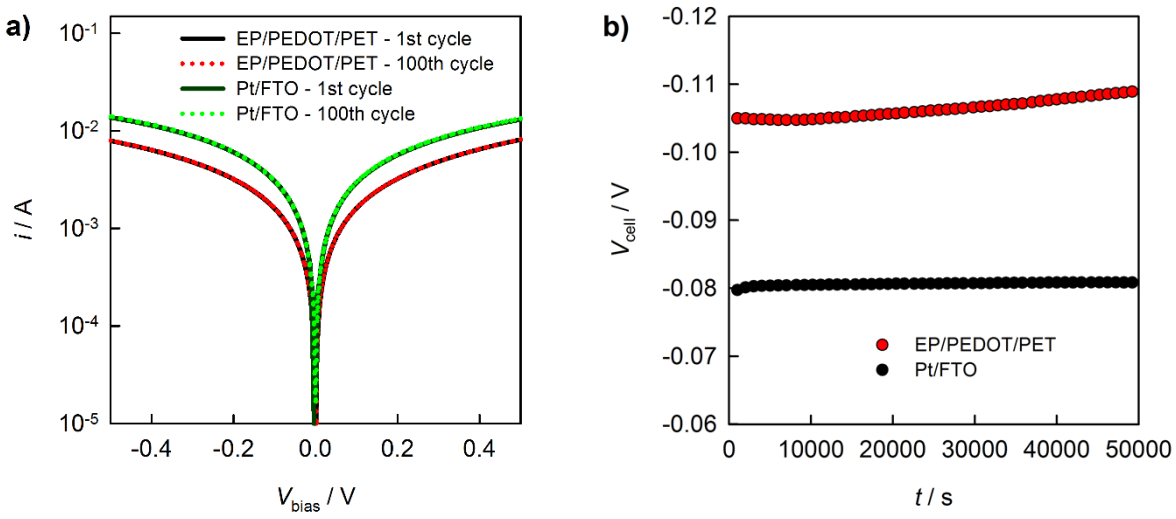

Figure S3. Electrochemical test of thin layer cells consisting of either one Pt/FTO electrode and one EP/PEDOT/PET electrode or two identical Pt/FTO electrodes, with iodide/triiodide based electrolyte. (a) Cyclic voltammetry measurement showing the comparison of 1st and 100th cycles for different electrodes; (b) Chronopotentiometry measurement performed at constant current (i = -1.68 mA) which is comparable to the short-circuit current obtained at 1 Sun illumination for devices using different counter electrodes. Note that the voltage for the EP/PEDOT/PET electrode is higher than that for the Pt/FTO electrode, due to the higher sheet resistance for the EP/PEDOT/PET electrode, as shown in the main text. In these experiments, the EP/PEDOT/PET electrode was the working electrode, so negative V_{bias} (and current) corresponds to reduction of triiodide.