Supporting Information

The Green Poly-Lysine Enantiomers as Electron Extraction for High Performance Organic Photovoltaics

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Table S1 UPS analysis of the ITO, ITO/Poly-L-Lysine, and ITO/Poly-L-Lysine + Poly-D-Lysine.

	E_{cutoff} (eV)	E_F (eV)	WF [a)] (eV)
ITO	12.20	3.90	5.12
ITO/0.1PLL	12.20	4.00	5.02
ITO/0.5PLL	12.13	4.00	5.09
ITO/1PLL	12.80	4.20	4.22
ITO/PLL+PDL	12.08	3.70	5.45

[a)] WF (eV) = $h\nu$-E_{cutoff} -E_F, which HeI source of $h\nu$=21.22 eV and bias of 5 V. (E_{cutoff}: secondary electron offset. E_F: Fermi level)

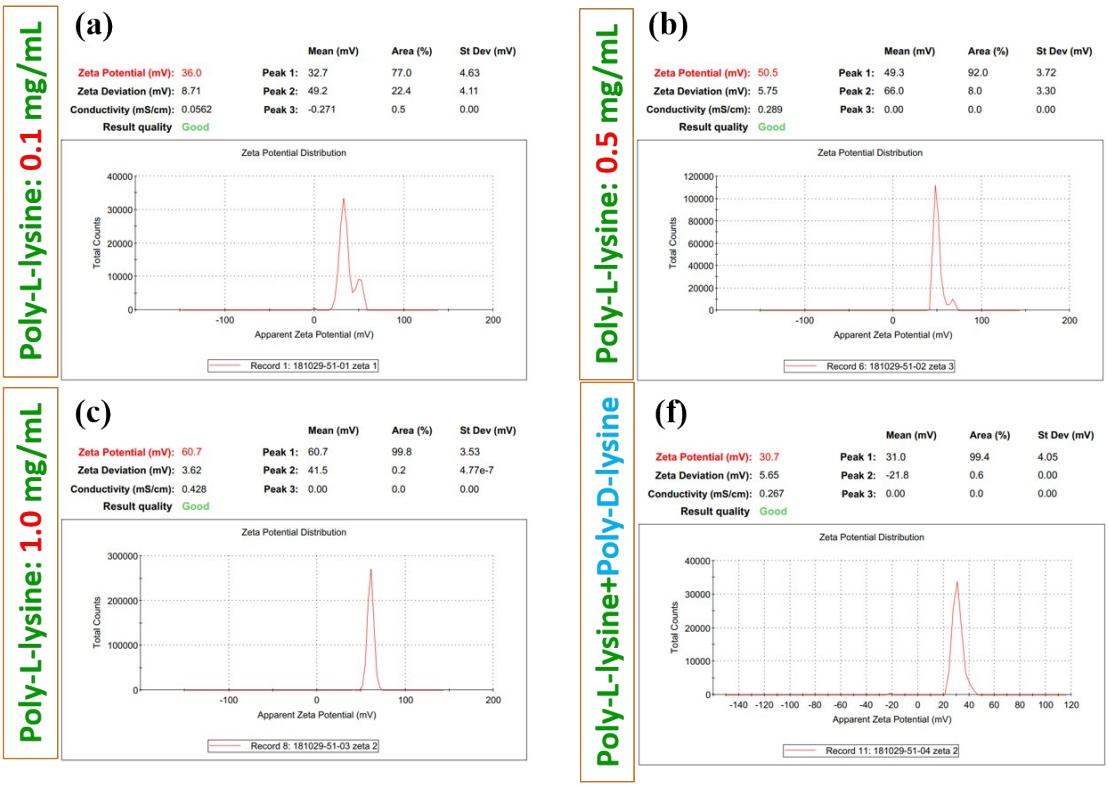

Figure S1 Zeta potential analyzer of Poly-L-lysine and Poly-L-lysine blend Poly-D-lysine prepared in different concentration

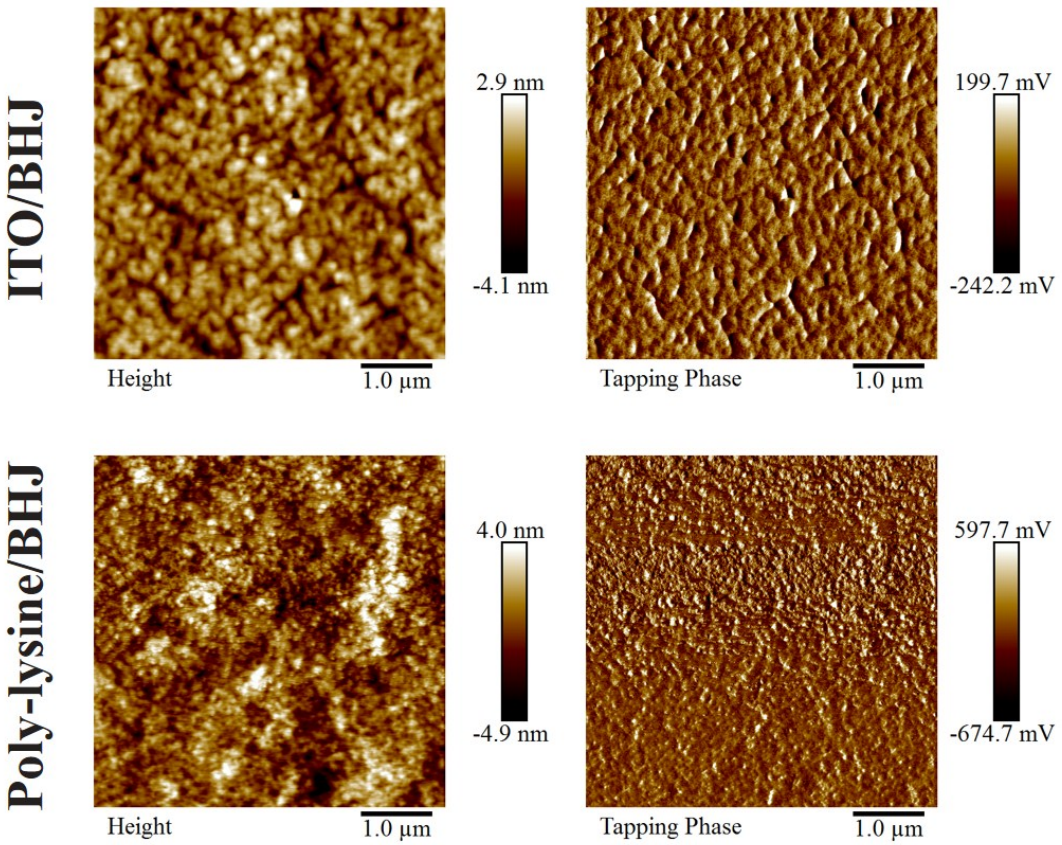

Figure S2 AFM topographic (left: 1 µm × 1 µm), phase (right: 1 µm × 1 µm), of studied poly-lysine-derived BHJ films.

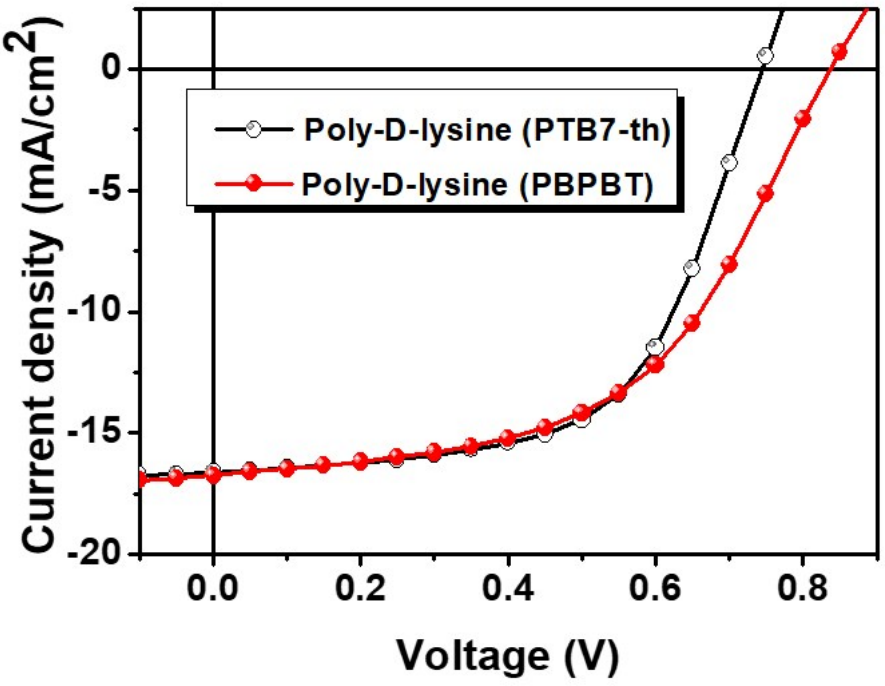

Figure S3. *J-V* curve of the OPVs using Poly-D-lysine as the EEL.