Supporting Information

Simple O_2 plasma processed V_2O_5 as an anode buffer layer for high-performance polymer solar cells

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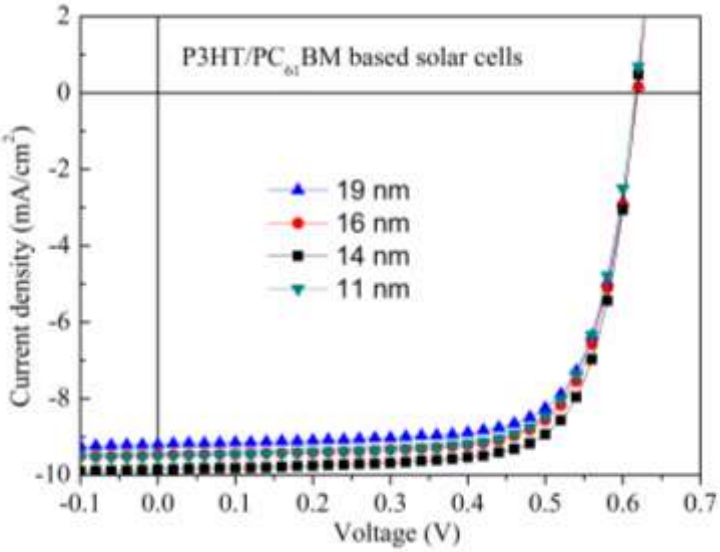

Figure S1. *J*-*V* curves of P3HT:PC_{61}BM solar cells with different thicknesses of V_2O_5 controlled by spin speed.

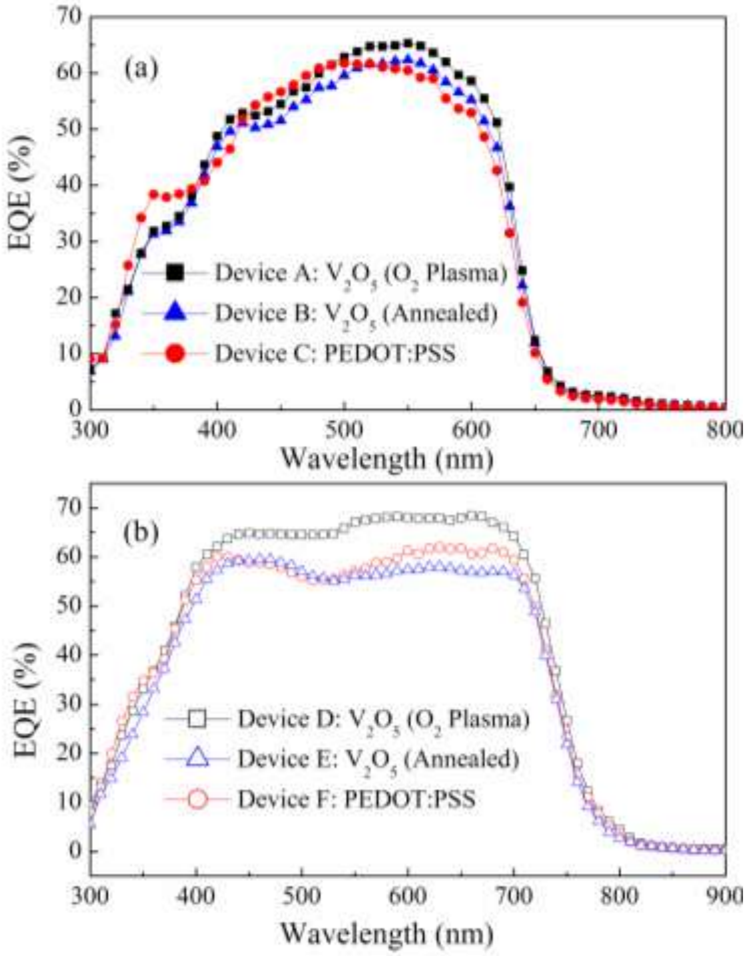

Figure S2. EQE curves of the PSCs with different anode buffer layers, (a) P3HT:PC_{61}BM, (b) PBDTTT-C:PC_{71}BM.

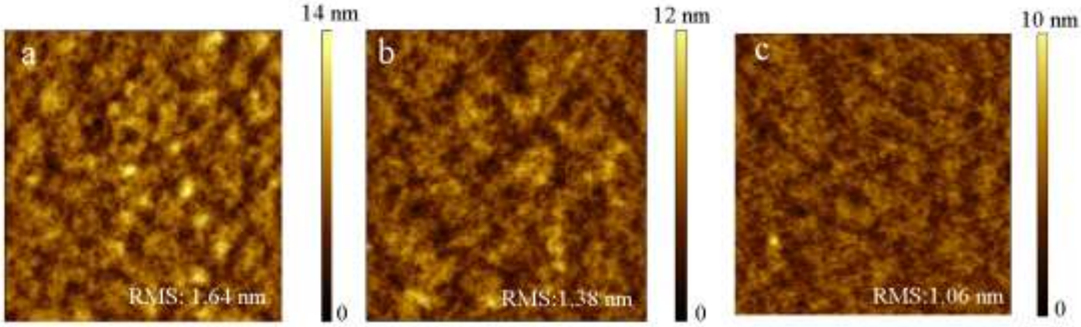

Figure S3. AFM images of P3HT:$PC_{61}BM$ active layer on different anode buffer layers, a) V_2O_5 (O_2 plasma), b) V_2O_5 (annealed), c) PEDOT:PSS.

Table S1. Device performance of P3HT:$PC_{61}BM$ solar cells with different thickness of V_2O_5 (O_2 plasma)

Device	Thickness [a] (nm)	J_{SC} (mA/cm^2)	V_{OC} (V)	FF (%)	PCE (%)
A	19	9.19	0.62	72.49	4.13
B	16	9.48	0.62	72.95	4.28
C	14	9.85	0.62	73.55	4.47
D	11	9.50	0.62	72.32	4.23

[a] Thickness of V_2O_5 (O_2 plasma) anode buffer layer.