

Supplementary Information

Solution-Processable Polymer based Photovoltaic Devices with Concentration Graded Bilayers made via Composition Control of a *Poly(3-hexylthiophene)/[6,6]-phenyl C₆₁-butyric acidmethyl ester*

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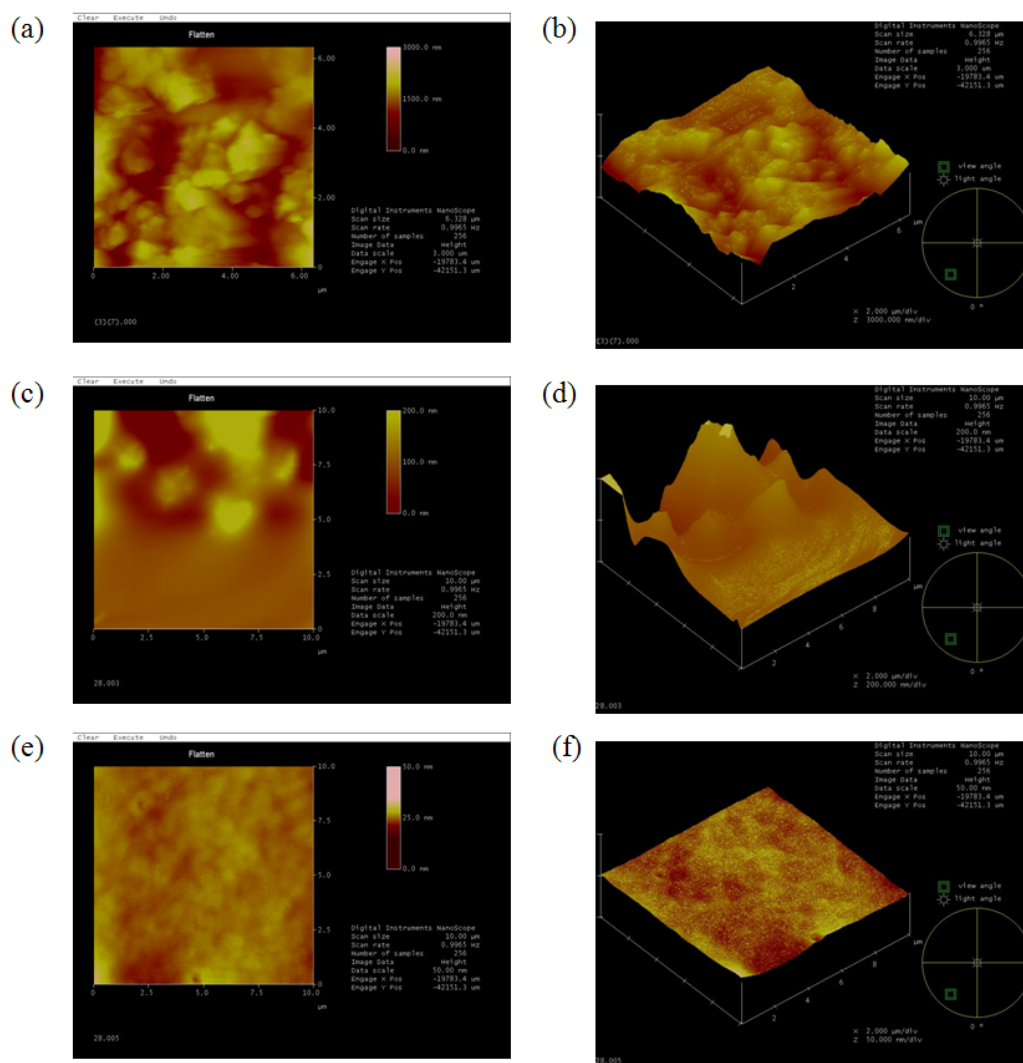


Figure S1. AFM 2D and 3D images of (a), (b) The PCBM-rich top layer with P3HT/PCBM composition of 3 : 7 from DCM solvent (c), (d) The PCBM-rich top layer with P3HT/PCBM composition of 2 : 8 from DCM solvent (e), (f) The PCBM-rich top layer with P3HT/PCBM composition of 1 : 9 from DCM solvent.

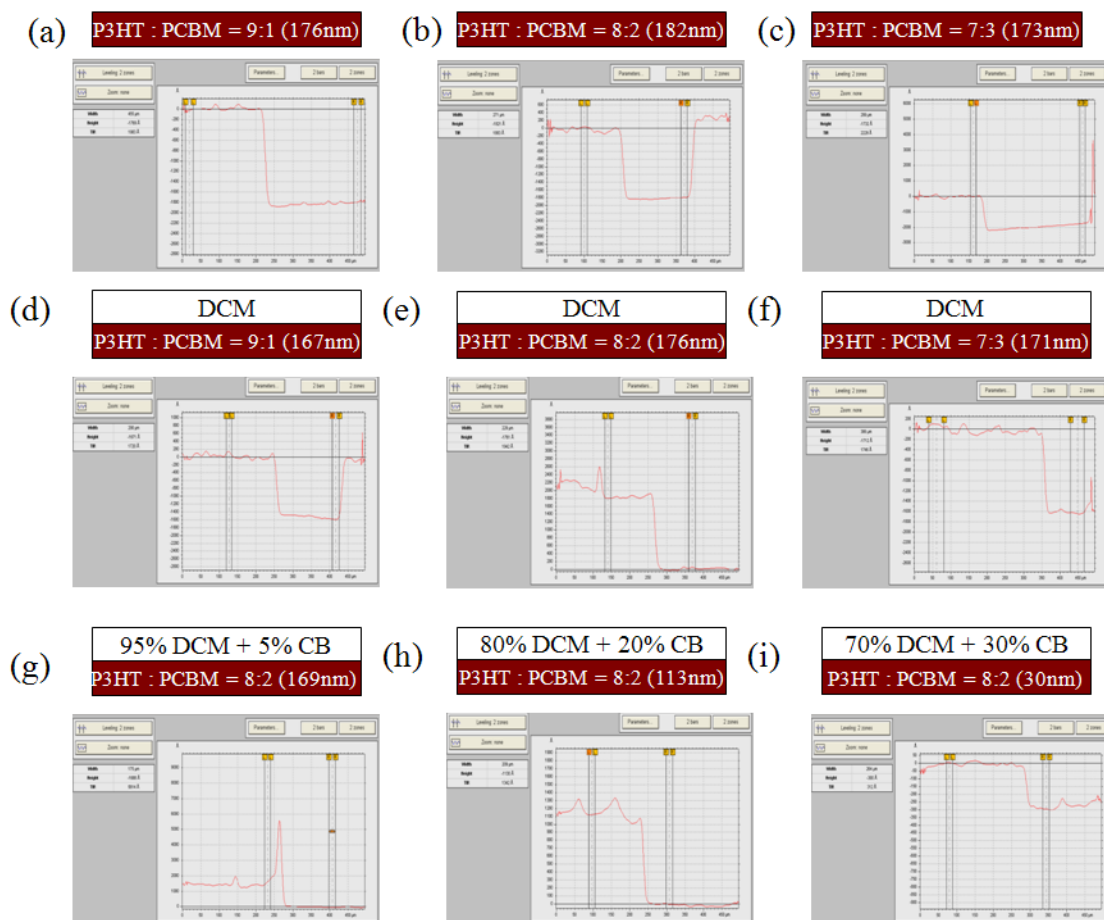


Figure S2. Surface profile data of spin-coated active layer with P3HT/PCBM composition of (a) 9 : 1, (b) 8 : 2, (c) 7 : 3 from CB solvent, and spin-coated DCM solvent on the active layer of P3HT/PCBM composition with (d) 9 : 1, (e) 8 : 2 and (f) 7 : 3 from CB solvent, and spin-coated DCM solvent with adding (g) 5%, (h) 20%, (i) 30% CB solvent on the 8:2 composition of P3HT/PCBM active layer from CB solvent

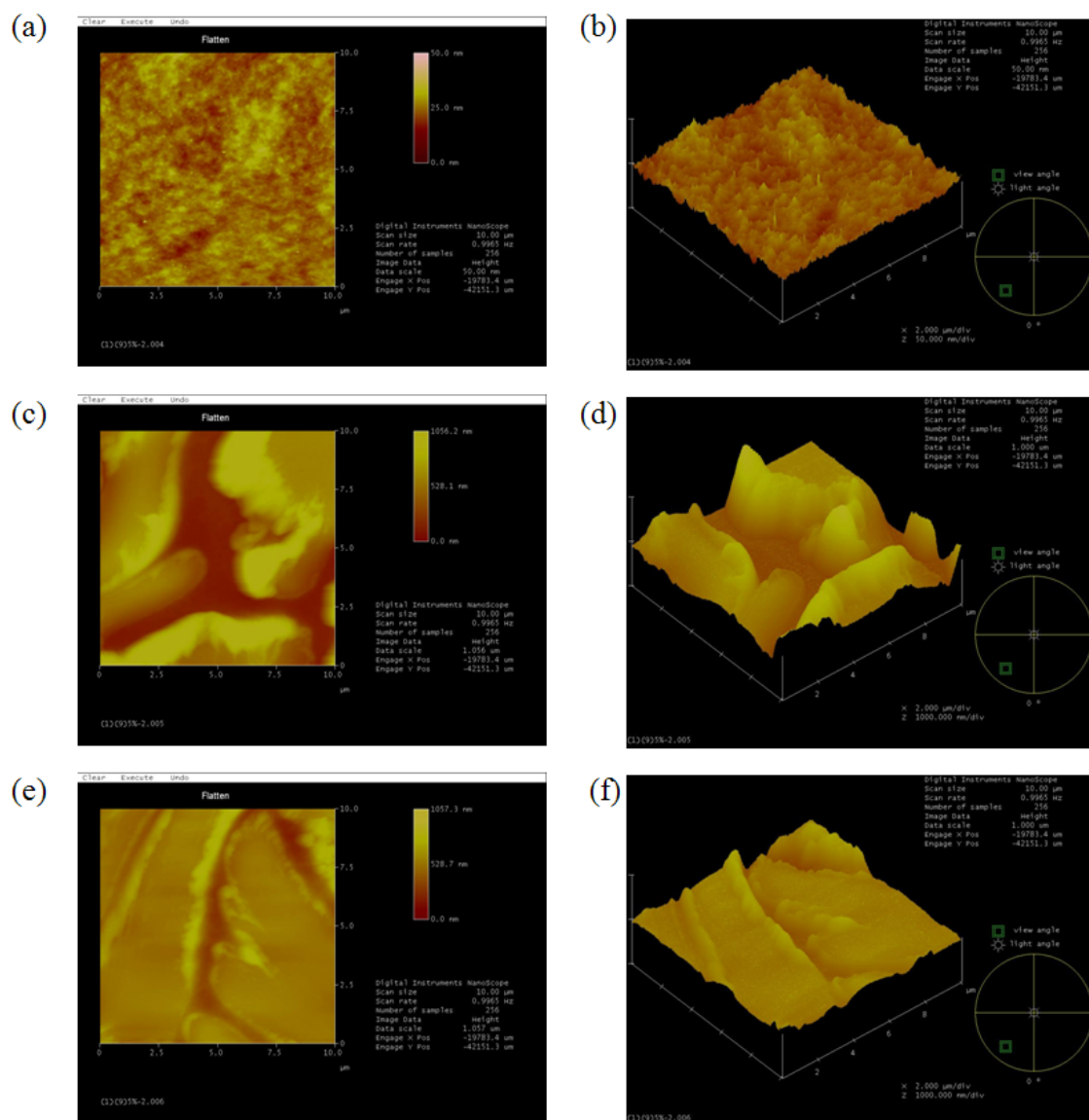


Figure S3. AFM 2D and 3D images of (a), (b) The 5% CB in DCM solvent was spin-coated on the P3HT/PCBM composition of 1 : 9 film (c), (d) The 20% CB in DCM solvent was spin-coated on the P3HT/PCBM composition of 1 : 9 film (e), (f) The 30% CB in DCM solvent was spin-coated on the P3HT/PCBM composition of 1 : 9 film.

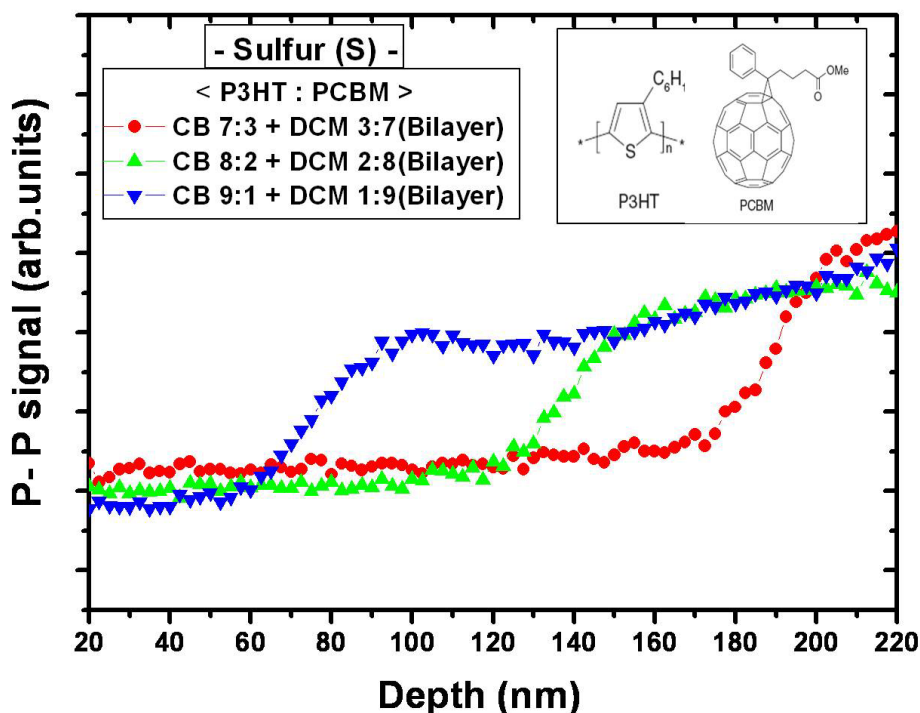


Figure S4. Depth profile of composition controlled bilayers (Auger electron spectroscopy) (-●- The PCBM-rich region (P3HT/PCBM composition of 3 : 7) of the top layer from DCM solvent spin-coated on the P3HT-rich region (P3HT/PCBM composition of 7 : 3) of the bottom layer from CB solvent, -▲- The PCBM-rich region (P3HT/PCBM composition of 2 : 8) of the top layer from DCM solvent spin-coated on the P3HT-rich region (P3HT/PCBM composition of 8 : 2) of the bottom layer from CB solvent, -▼- The PCBM-rich region (P3HT/PCBM composition of 1 : 9) of the top layer from DCM solvent spin-coated on the P3HT-rich region (P3HT/PCBM composition of 9 : 1) of the bottom layer from CB solvent).