Electronic Supplementary Material (ESI) for Physical Chemistry Chemical Physics.

Supplementary Information

Current Mapping of Lead Phthalocyanine Thin Films in the Presence of Gaseous Dopants

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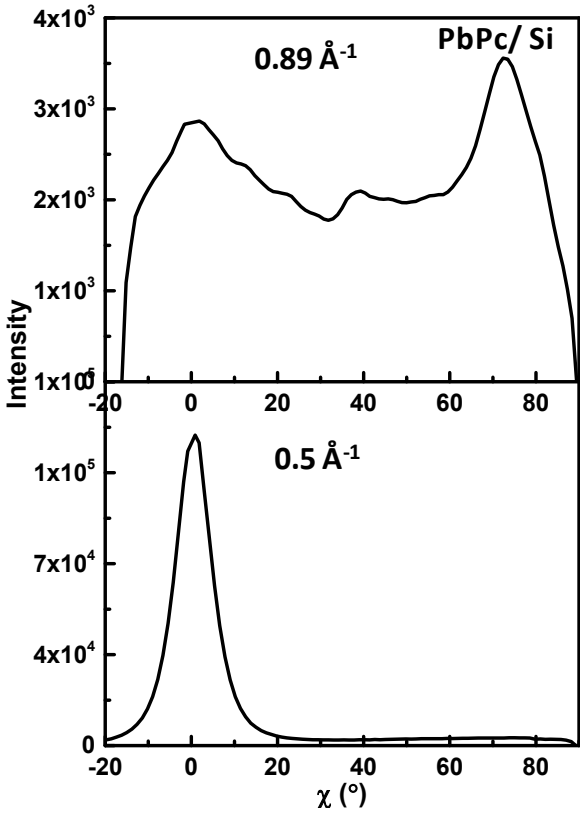

Figure S1: Plot of intensity versus azimuthal angles for pristine PbPc film on Si substrate.

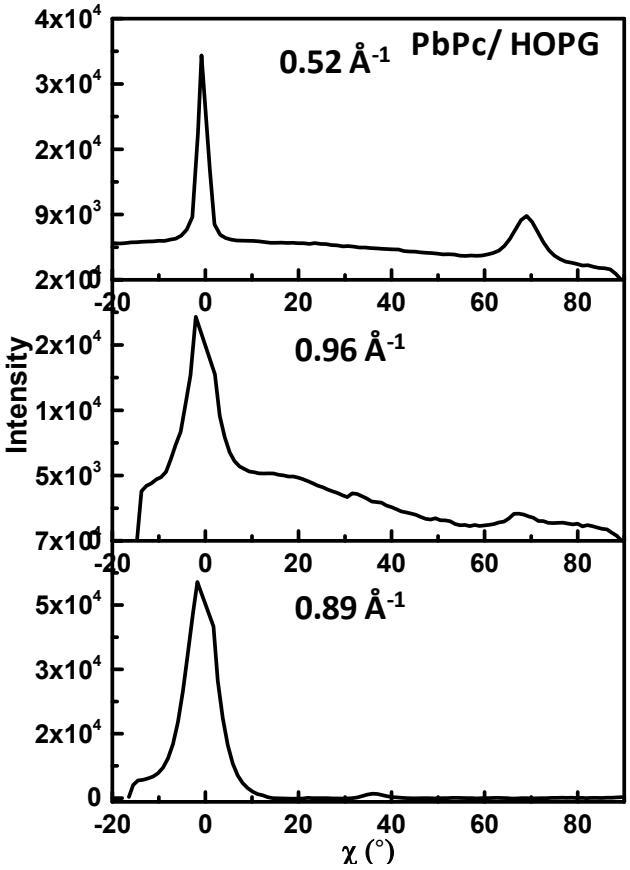

Figure S2: Plot of intensity vs. azimuthal angles for pristine PbPc film on HOPG substrate.

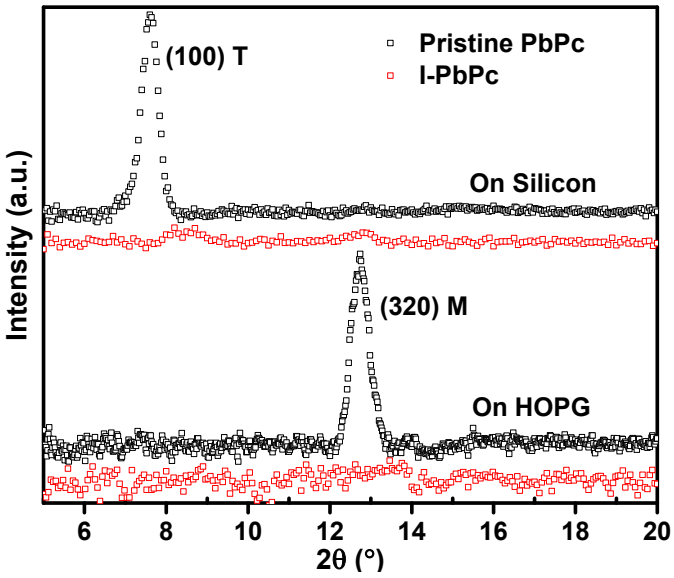

Figure S3: XRD patterns of 50 nm pristine PbPc and I-PbPc films deposited on Si and HOPG substrates.

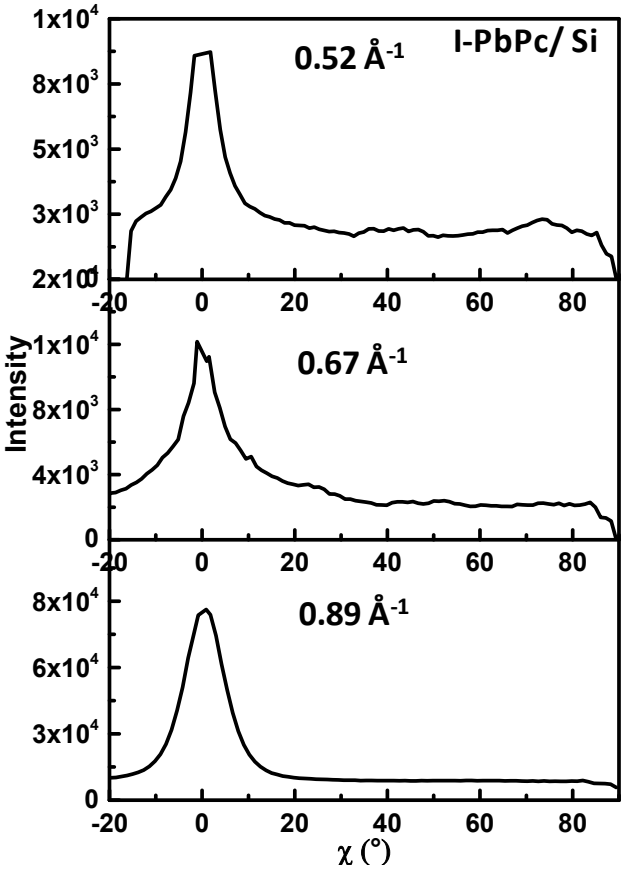

Figure S4: Plot of intensity vs. azimuthal angles for pristine I-PbPc film on Si substrate.

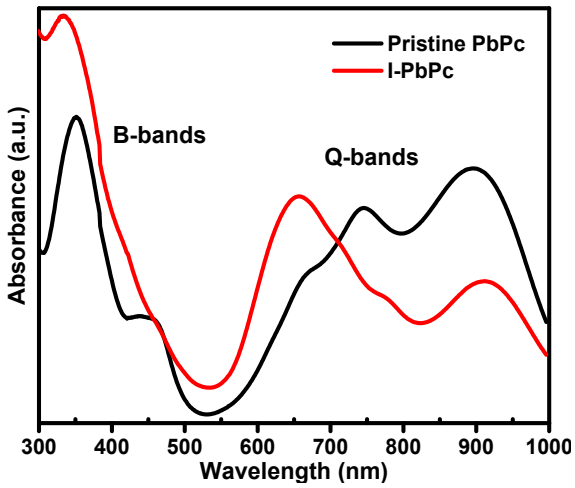

Figure S5: UV-Vis absorption spectra of 50 nm pristine PbPc and I-PbPc films obtained on quartz substrates.

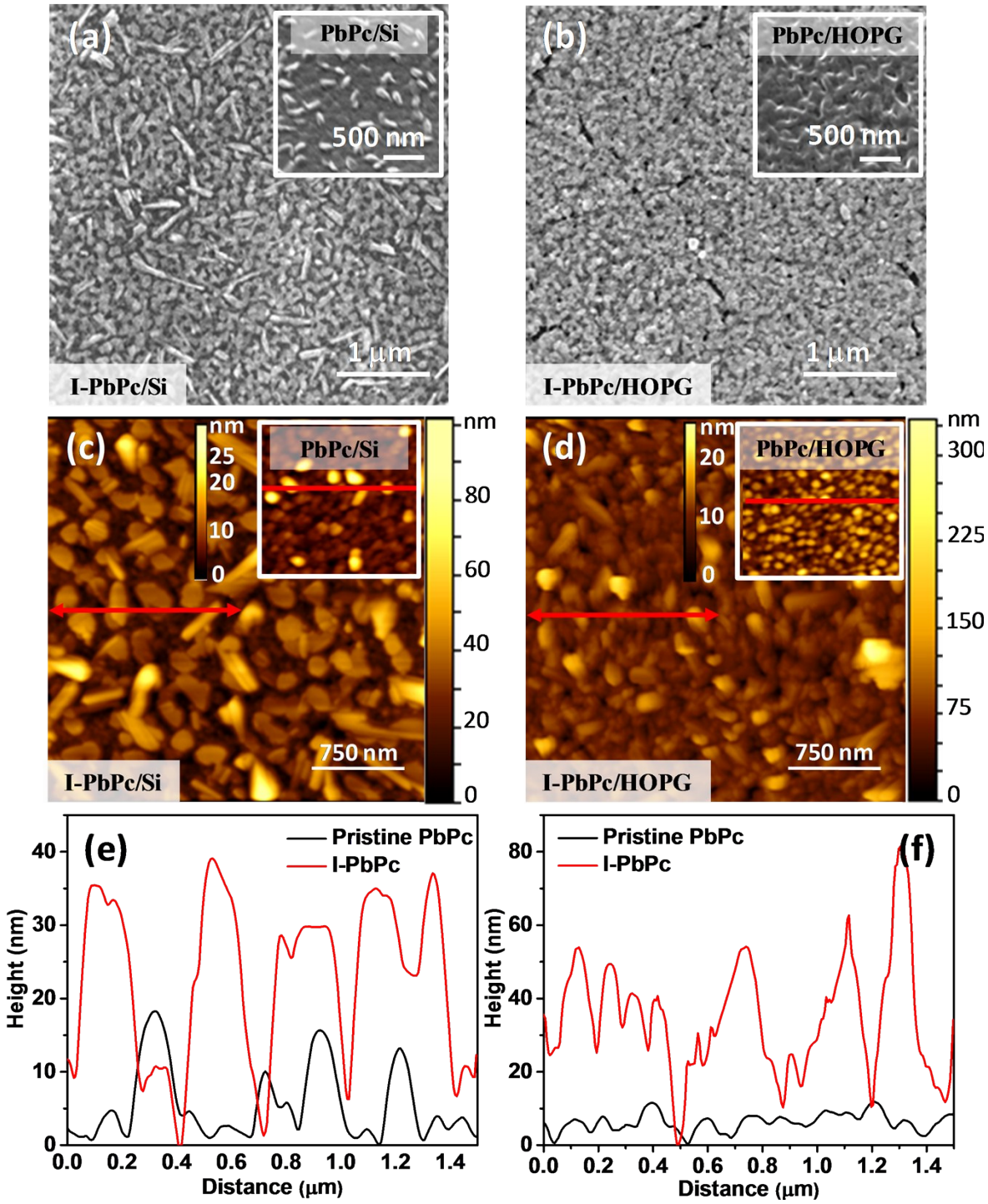

Figure S6: (a), (b) FESEM and (c), (d) 3 µm × 3 µm AFM images of I-PbPc films on Si and HOPG substrates. Insets in (a), (b) are FESEM and (c), (d) are 1.5 µm × 1.5 µm AFM images of pristine PbPc films on Si and HOPG substrates; (e) and (f) are the profile sections taken across the marked lines in (c) and (d).

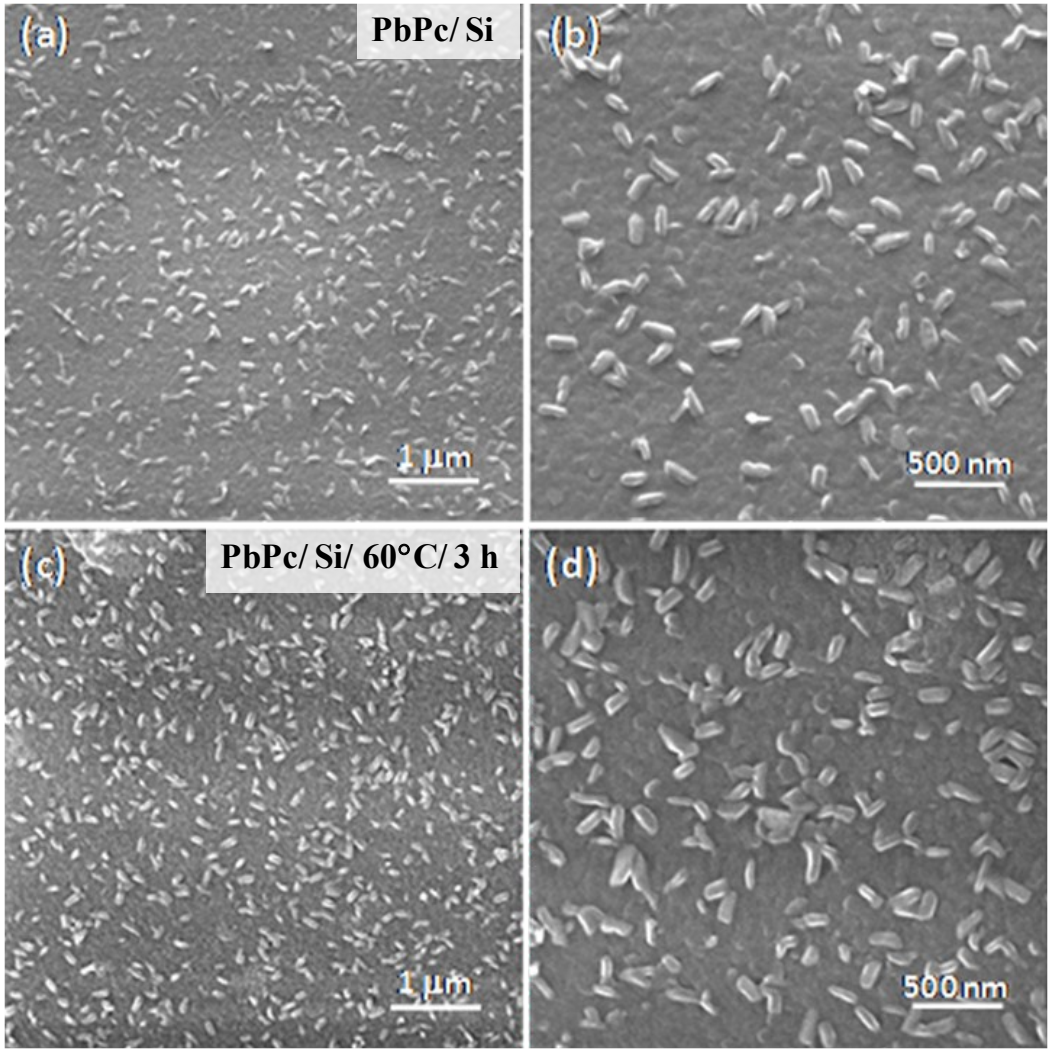

Figure S7. (a), (b) FESEM images of as deposited pristine PbPc film on Si substrate and (c), (d) FESEM images of pristine PbPc film on Si substrate after annealing at 60 °C for 3 hours.

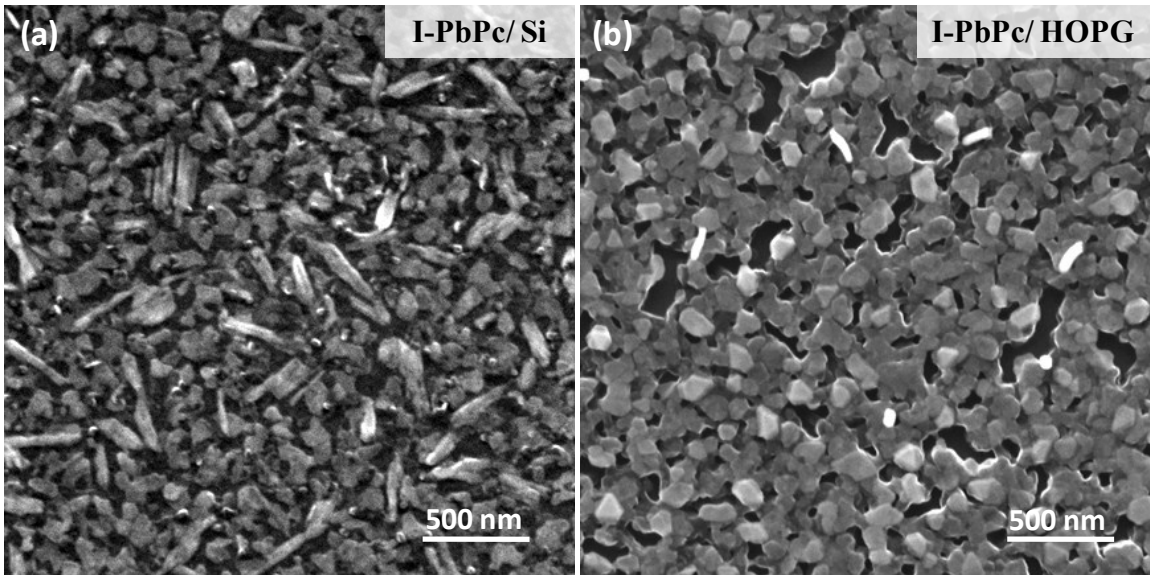

Figure S8: FESEM images for I-PbPc films annealed at 100 °C for 1 h in an argon atmosphere on (a) Si and (b) HOPG substrates.

Table S1: EDS analysis of I-PbPc films on Si and HOPG substrates before and after annealing at 100 °C for 1 h.

Elements (at. %)	I-PbPc on Si	I-PbPc on HOPG	I-PbPc on Si (after annealing)	I-PbPc on HOPG (after annealing)
Carbon	68.32	95.40	68.95	95.78
Nitrogen	21.64	3.92	21.29	3.73
Lead	3.21	0.14	3.94	0.13
Iodine	6.83	0.53	5.82	0.37

Table S1 shows EDS analysis of iodine doped thin films before and after annealing. The EDS analysis indicates that there is very little escape of iodine from the PbPc films even after annealing at 100 °C for 1 h. The relative atomic % values obtained for N, Pb and I are lower on HOPG and do not correlate with the values obtained for PbPc on Si substrate because of higher carbon contribution from the graphite substrate.

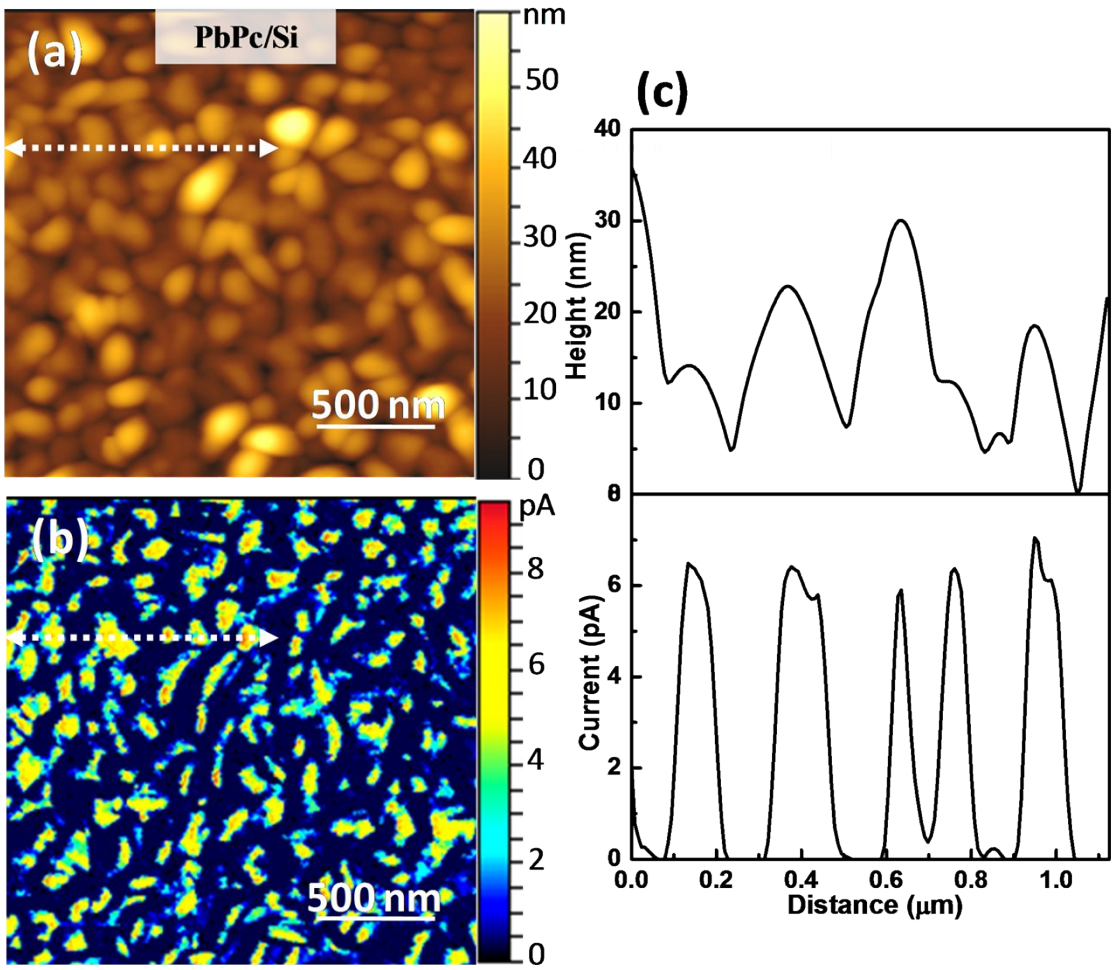

Figure S9: (a) 2 μm × 2 μm topography and (b) corresponding current map of pristine PbPc film on Si substrate obtained at 1 V (c) profile sections of (a) and (b) showing the height and current variations across pristine PbPc film on Si substrate.

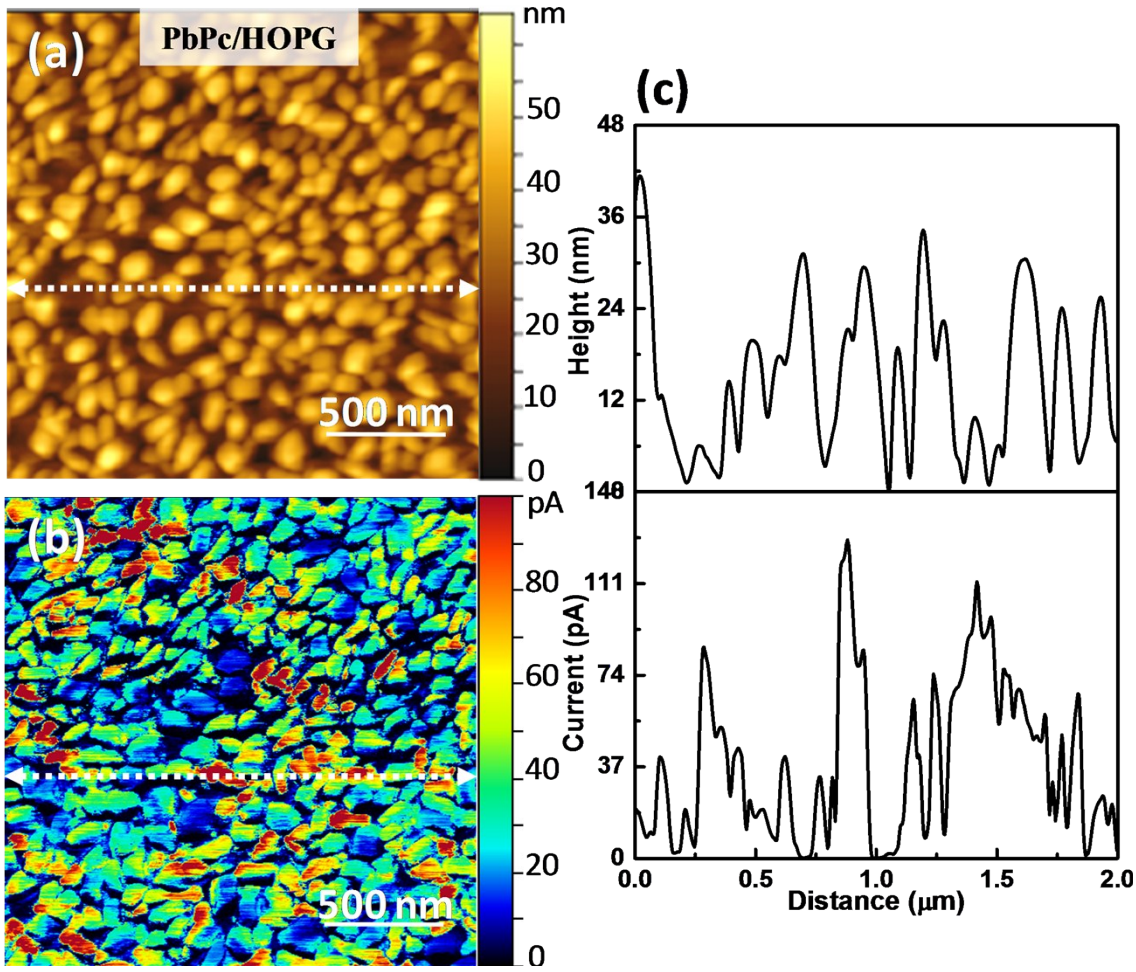

Figure S10: (a) 2 μm × 2 μm topography (b) corresponding current map obtained at 1 V for pristine PbPc film on HOPG substrate; (c) profile sections of (a) and (b) showing the height and current variations across pristine PbPc film on HOPG substrate.