Supporting Information

Functional Tuning of A-D-A Oligthiophenes: The Effect of Solvent Vapor Annealing on Blend Morphology and Solar Cell Performance

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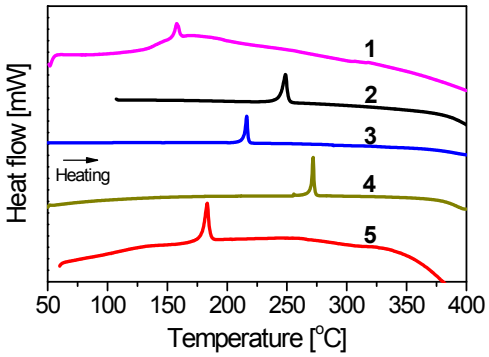

Figure S1. DSC trace of oligomers **1-5** measured under Ar flow at a heating rate of 10 °C/min.

It is known in the literature[1-3] that the $E_{1/2}$ or E^0 value can be estimated from a reversible stationary electrode polarogram from the fact that it occurs at a point 85.17% of the wave in the direction of positive potential within the order of experimental error. Using the simplified equation ($E^0_{irrev} = E(0.852I_p)$) one can also roughly estimate the E^0 values for the quasi- or irreversible redox waves. The E_P and E^0 values for the reduction waves are given in Table S1.

Table S1. Electrochemical data for the oligomer series **1-5**.

Oligomer	E^0_{red} [V][a]	$E_{p\ red}$ [V][b]
1	-1.62	-1.73
2	-1.43	-1.46
3	-1.45	-1.49
4	-1.47	-1.52
5	-1.47	-1.53

[c]Cyclic voltammetry in dichloromethane/$TBAPF_6$ (0.1 M), scan rate = 100 mV/s, referenced against Fc/Fc^+. For the irreversible waves, the redox potentials $E°$ were determined at $I_0 = 0.852I_p$.[1-3] [b]For comparison the maximum potential (E_p) values of the reduction waves are also given.

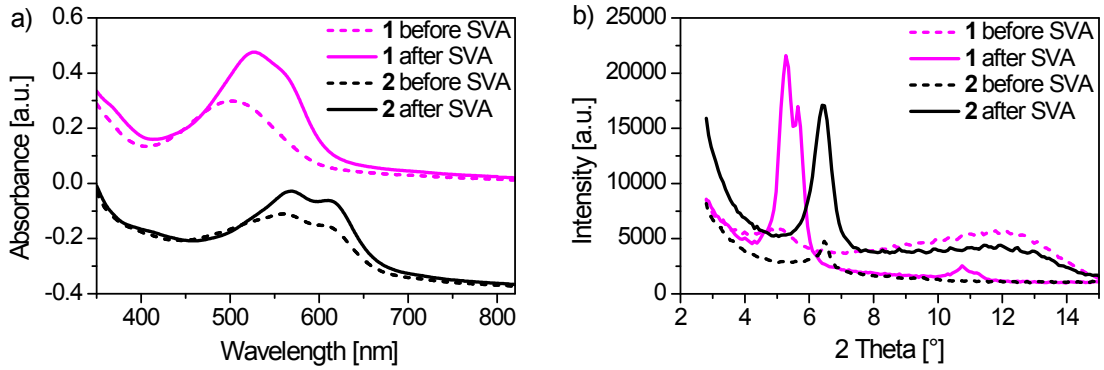

Figure S2. (a) Normalized absorption spectra of **1**:$PC_{61}BM$ and **2**:$PC_{61}BM$ blends made with before and after SVA. (b) GIXRD plot of the BHJ made using the same conditions. All films were spin-coated on PEDOT:PSS to accurately reproduce the active layer.

References

1. R. N. Adams, *Electrochemistry at Solid Electrodes*, Marcel Dekker: New York, 1969.
2. R. S. Nicholson, *Anal. Chem.*, 1966, **38**, 1406-1406.
3. R. S. Nicholson and I. Shain, *Anal. Chem.*, 1964, **36**, 706-723.