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Electronic Supplementary Information (ESI)

Synthesis and optical properties of a new triphenylamine-*p*-phenylenevinylene-small molecule with applications in high open-circuit voltage organic solar cells

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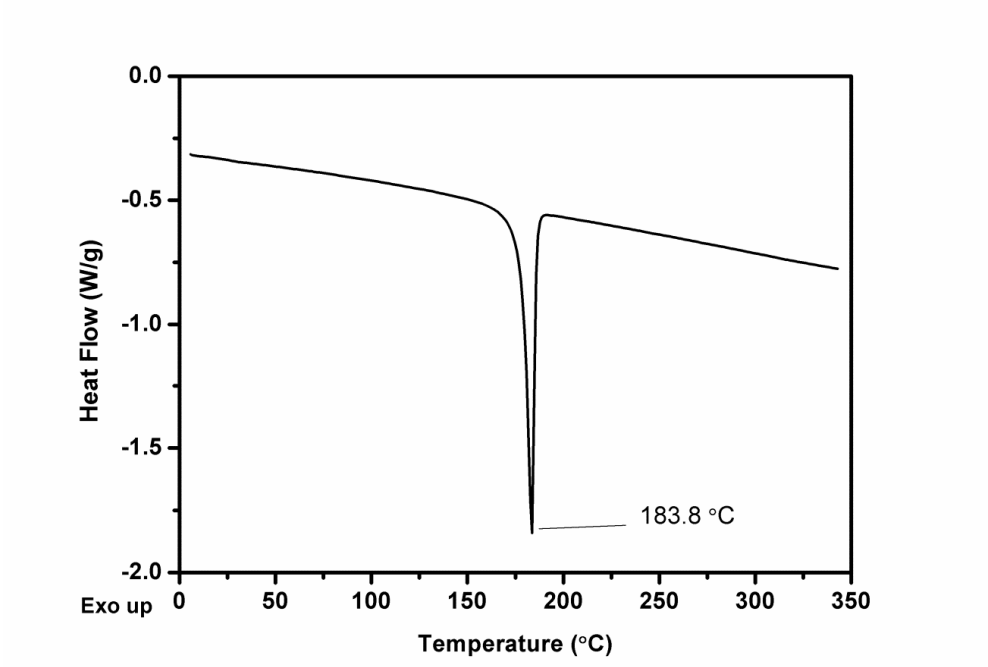

Figure S1. DSC thermogram of TPAPV measured at a heating rate of 10 °C/min under a nitrogen stream (2nd heating).

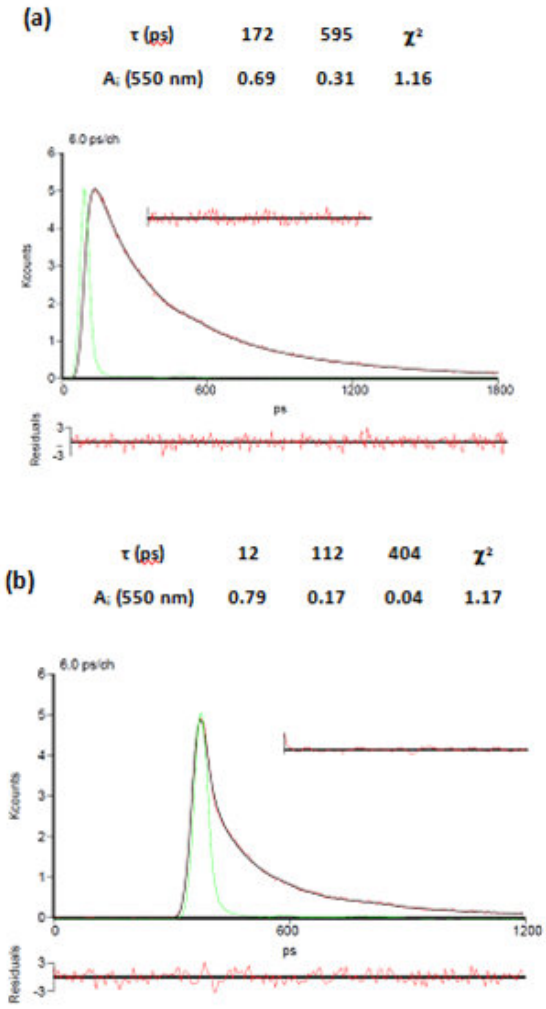

Figure S2. Fluorescence decays of TPAPV (**a**) in neat films and TPAPV:$PC_{61}BM$ blend films (**b**). The decays were measured at 550 nm, upon excitation at 410 nm, with 6.1 ps/ch. The fits, weighted residuals (W.R.) and autocorrelation functions (A.C.) are also represented. The experimental excitation pulse is the narrowest one shown in green.

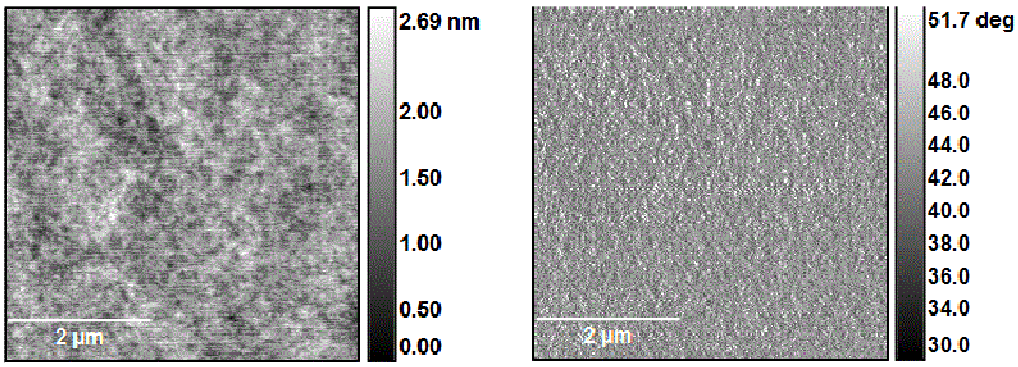

Figure S3. AFM topographic (left) and phase (right) images (5 × 5 µm) of TPAPV thermally evaporated on glass/ITO substrates. The Rrms is 0.31 nm.

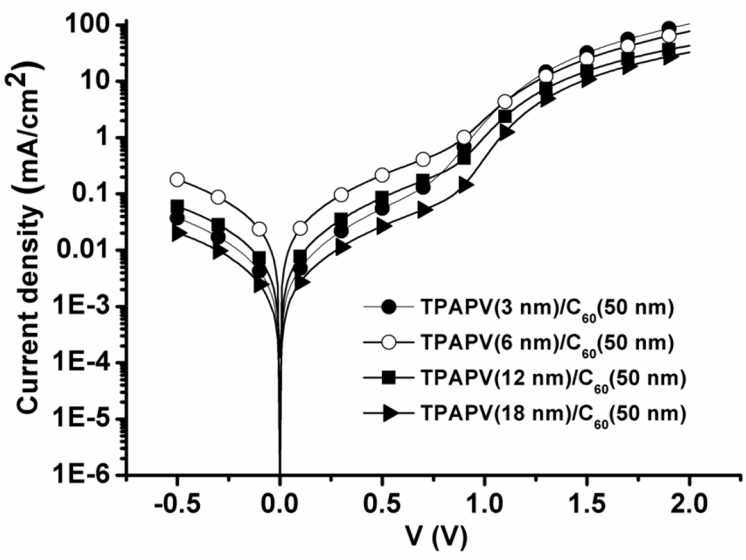

Figure S4. *J-V* curves in a semilogarithmic representation for planar heterojunction PV cells fabricated with TPAPV/C_{60}(50 nm) in the dark.