## **Supporting information**

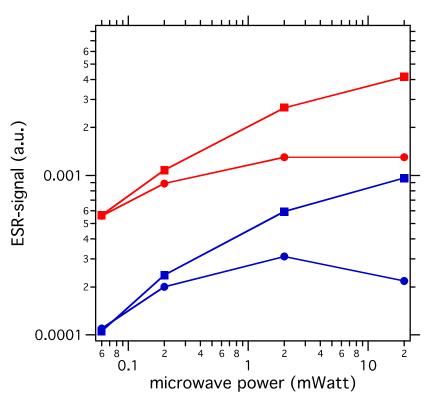


Figure A. Microwave power dependence on signal size of polarons (circles) measured at g=2.0035 and PCBM anions (squares) measured at g=1.9995 for pATBT:PCBM<sub>NA</sub> (blue), and pATBT:PCBM<sub>AN</sub> (red). Signals were recorded at 80 K, normalized for the lowest microwave power and vertically shifted in the graph for better comparison.

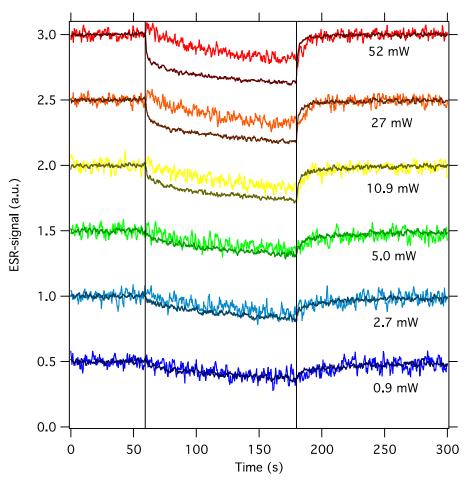


Figure B. Normalised transient responses of pATBT:PCBM<sub>AN</sub> at 10 K at a g-factor of 1.9995 (dark coloured lines) and at g-factor 2.0035 (bright coloured lines) corresponding with the PCBM anion and the polaron, respectively. The laser excitation at 488 nm was blocked after 60 seconds and switched on after 180 s as indicated with the vertical lines. The laser intensity was varied from 1.0 mWatt (blue transients) to 52 mWatt (red transients). The signal of the polaron has been multiplied to overlap with the signal of the PCBM anion for the period of the first 60 s. For clarity for each set measured at the same intensity is given a different vertical shift.