

Supporting Information

Role of solvent on microstructure and charge transport of semiconducting polymer films prepared at air-liquid interface

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Note 1: We normalized the spectra given in Figure 2 (d) by dividing each pair of absorbance of \parallel and \perp spectra by the absorbance at λ_{\max} of its respective \parallel spectra. In this manner, DR of each pair of \parallel and \perp spectra remains unchanged. However, this enables the graphical comparison of DR easier because \parallel spectra of the different films are normalized to 1.

Note 2: To obtain Figure 2(e), first, polarized spectra were measured by rotating the light polarization direction at regular interval of 10°. Here 0° is the basically the assumed polymer direction, as described in Figure 2(a). However, the angle at which the maximum absorbance for each film was obtained changes, since the orientation direction of the polymer changes with respect to the assumed polymer direction. Therefore, to make the comparison easier, we normalized the intensity variation with respect to the maximum intensity found in each case.

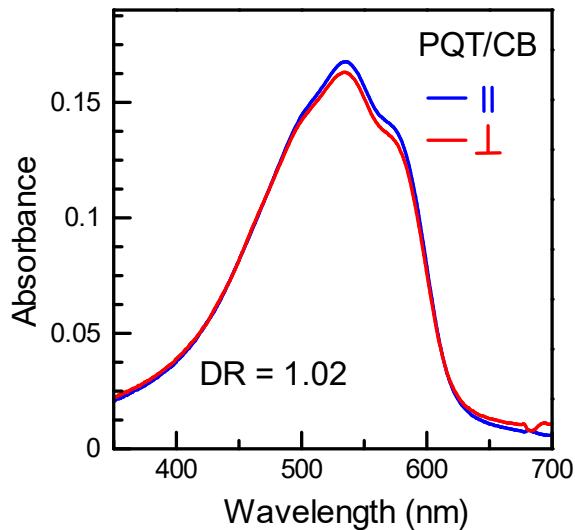


Figure S1: Polarized absorbance of the PQT films processed with CB using interfacial spreading. Since no macroscopic orientation was observed, \parallel and \perp spectra refer to arbitrary direction orthogonal to each other.

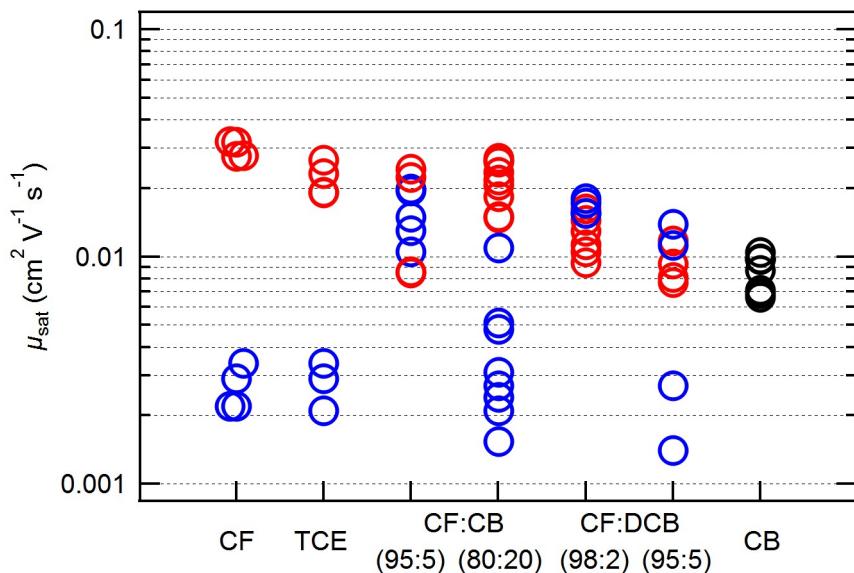


Figure S2: Saturation mobility of each PQT-based FET processed with different solvents.

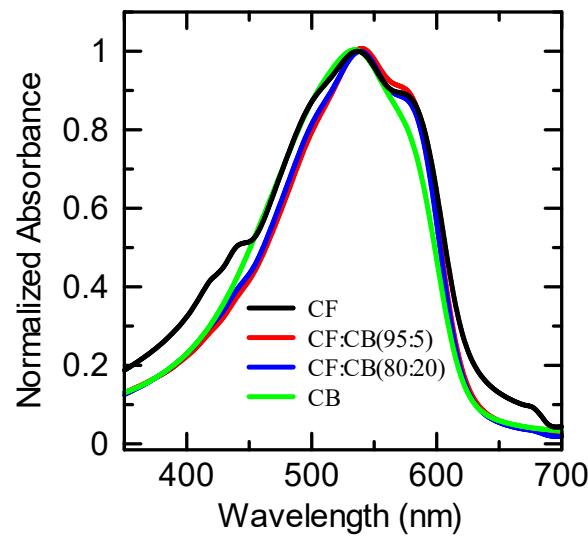


Figure S3: Normalized absorbance of PQT films processed with different solvents.

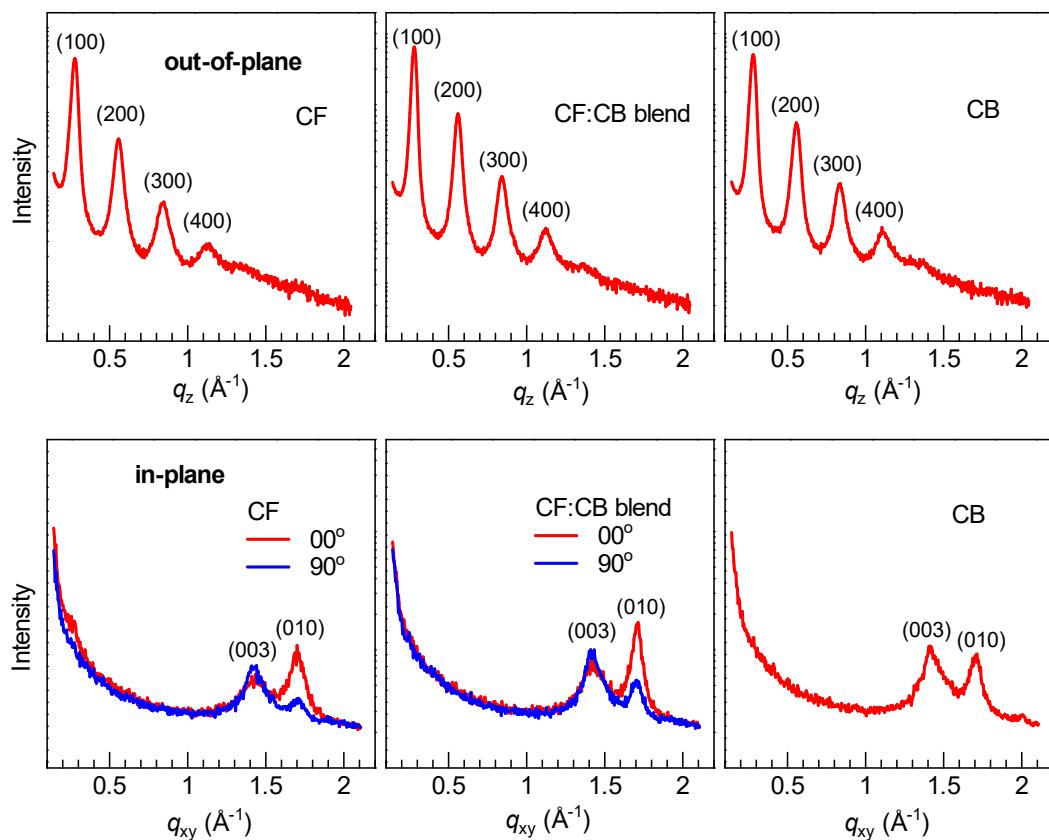


Figure S4: Out-of-plane (top) and in-plane (bottom) GIXD pattern of PBTTT films prepared with different solvents. Here, CF:CB blend refers to (CF/CB = 90:10).

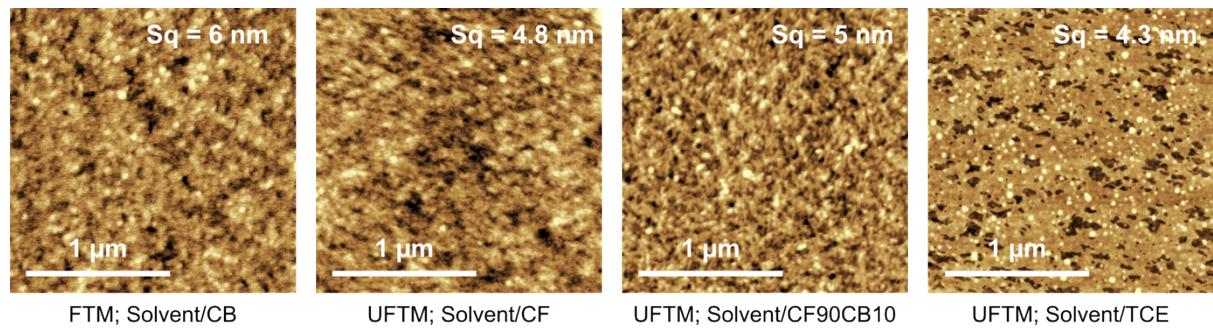


Figure S5: AFM image of PBT TT films processed with different solvents. Here, FTM refers to interfacial spreading while other films are prepared with UFTM.

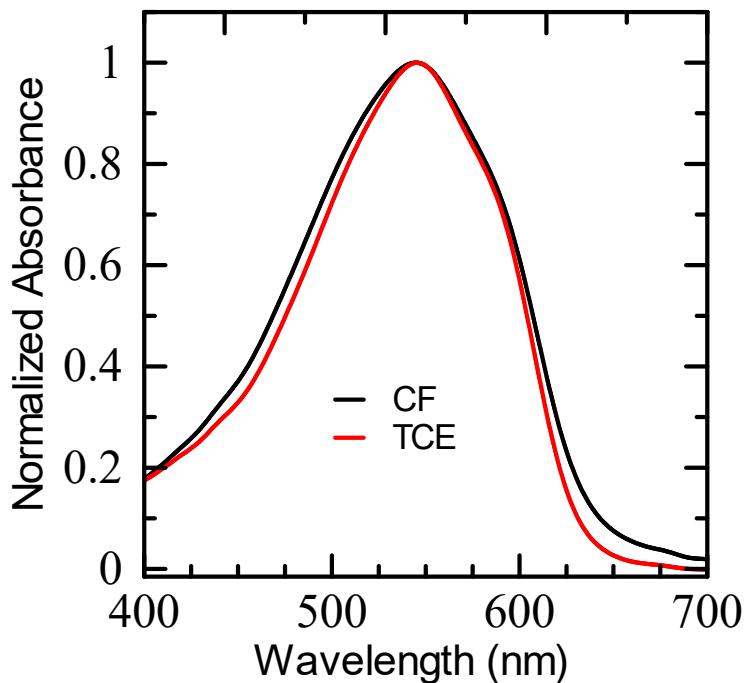


Figure S6: Normalized absorbance of PBT TT films processed with CF and TCE.

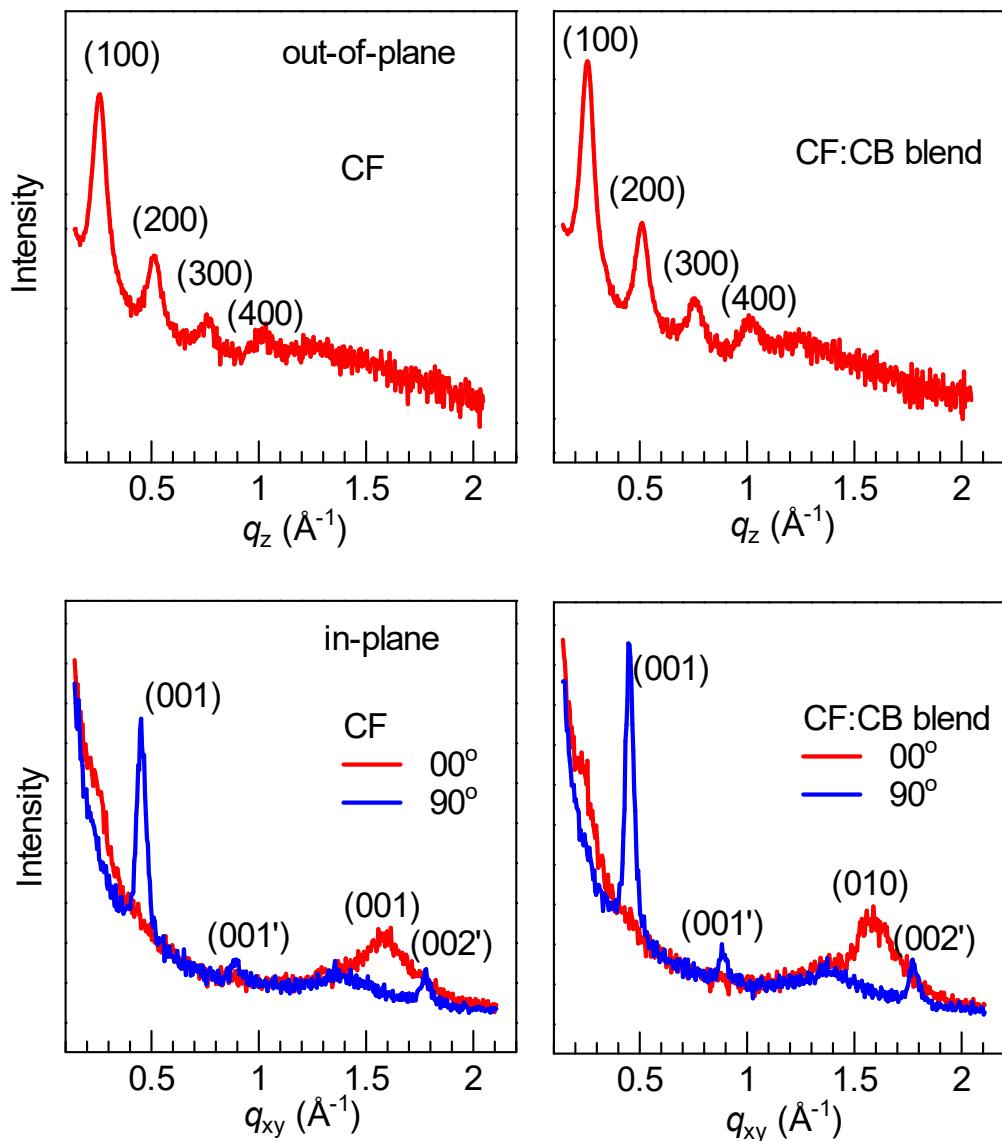


Figure S7: Out-of-plane (top) and in-plane (bottom) GIXD pattern of P(NDI2OD-T2) films prepared with different solvents. Here, CF:CB blend refers to (CF/CB = 95:5).