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Enhancing the efficiency of PTB7-Th:CO₈DFIC-based ternary solar cells with versatile third components

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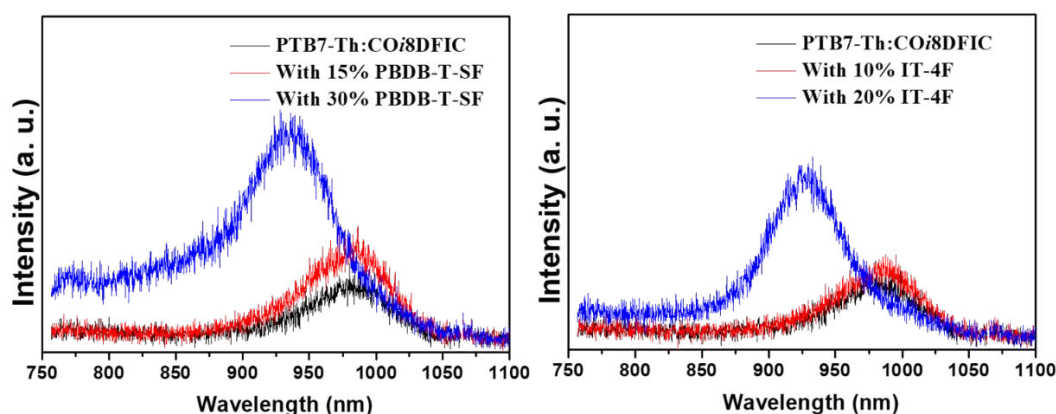


FIG. S1. PL spectra of PTB7-Th:CO₈DFIC films with the addition of different amounts of PBDB-T-SF and IT-4F.

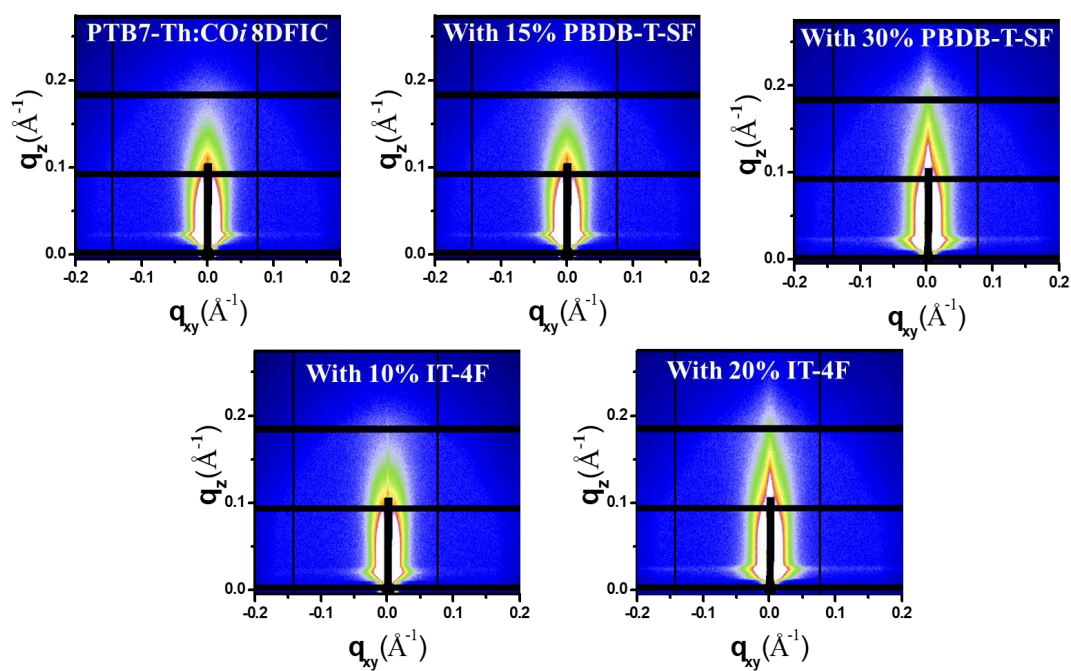


FIG. S2. 2D GISAXS patterns of PTB7-Th:COi8DFIC films with the addition of different amounts of PBDB-T-SF and IT-4F.

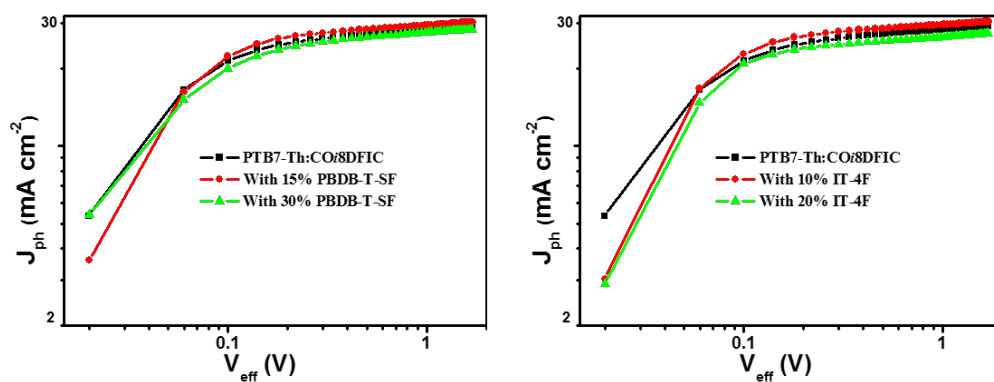


FIG. S3. Photocurrent density versus effective voltage curves of PTB7-Th:COi8DFIC based ternary solar cells.

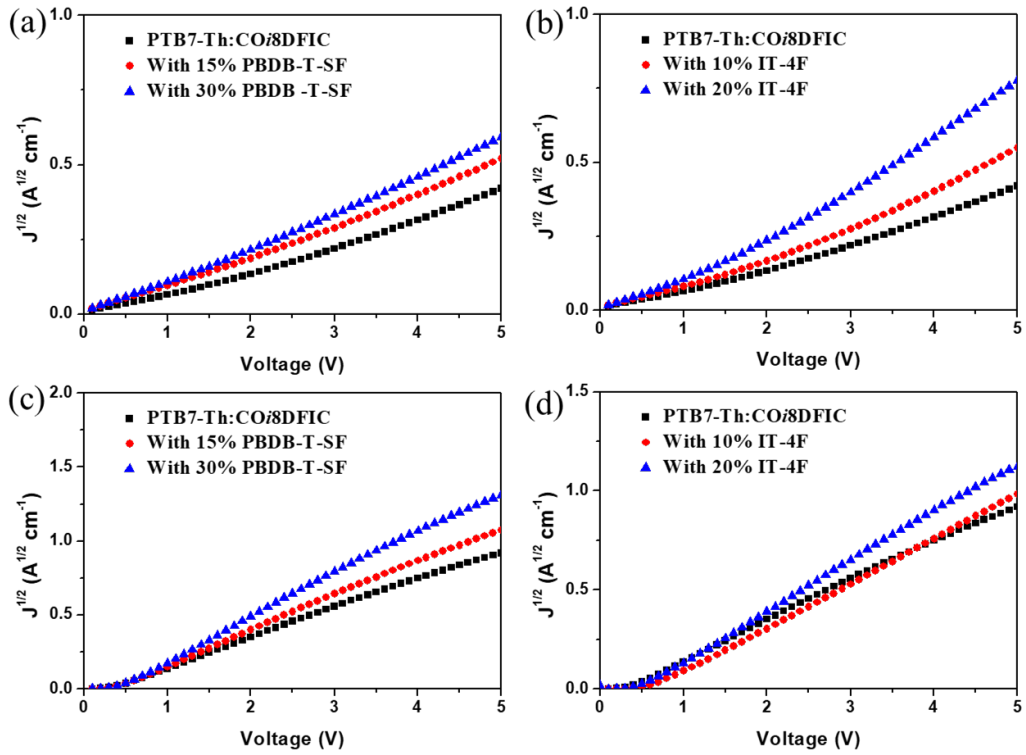


FIG. S4. (a, b) Root square plots of electron current densities versus bias voltage of the ITO/TiO₂/Active layer/Ca/Ag electron-only devices. (c, d) Root square plots of hole current densities versus bias voltage of the ITO/PEDOT:PSS/Active layer/MoO₃/Ag hole-only devices.