Electronic Supplementary Information for

1D Nanowires of Non-Centrosymmetric Molecular Semiconductors Grown by Physical Vapor Deposition

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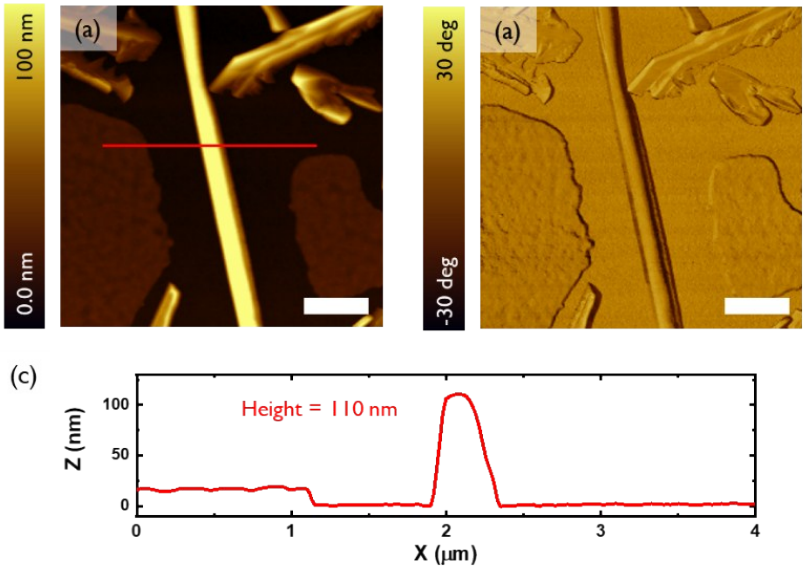

Figure S1. (a) AFM height image of **AcDCF** film deposited under deposition rate of 0.3 Å/s at T_{sub} = 25 °C, (b) corresponding AFM phase image, and (c) the line profile (red line in Figure. S1a)

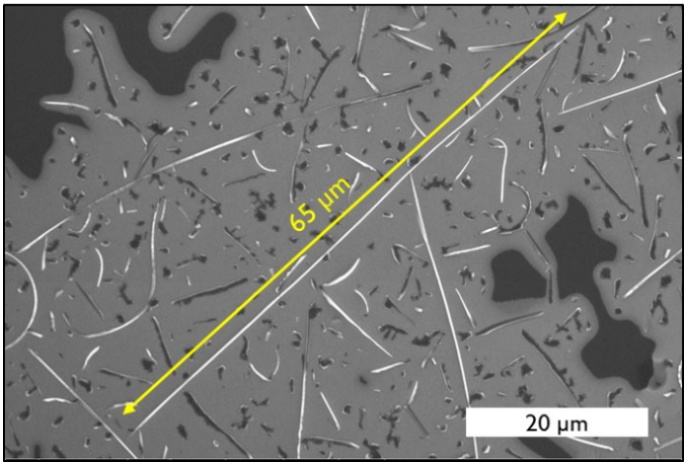

Figure S2. SEM image of **AcDCF** film deposited under deposition rate of 0.3 Å/s at T_{sub} = -15 °C.

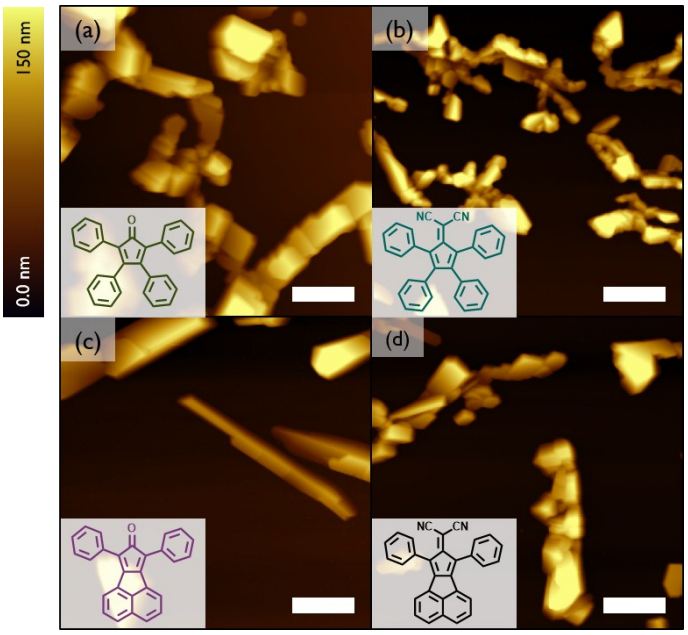

Figure S3. AFM topography images of (a) **TpCPD**, (b) **TpDCF**, (c) **AcCPD**, and (d) **AcDCF** films after thermal annealing at 80 °C (**TpCPD** and **TpDCF**) and 120 °C (**AcCPD** and **AcDCF**) for 6 h, originally grown under deposition rate of 0.3 Å/s at $\boldsymbol{T}_{sub}$ = 25 °C. Scale bar is 1 µm.

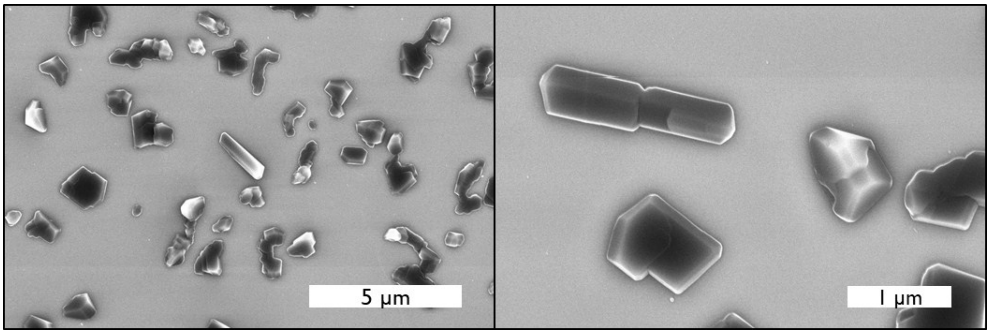

Figure S4. (left) Lower and (right) higher magnification SEM images of post-annealed (120 °C for 6 h) **AcDCF** film grown under deposition rate of 0.3 Å/s at $\boldsymbol{T}_{sub}$ = 25 °C.

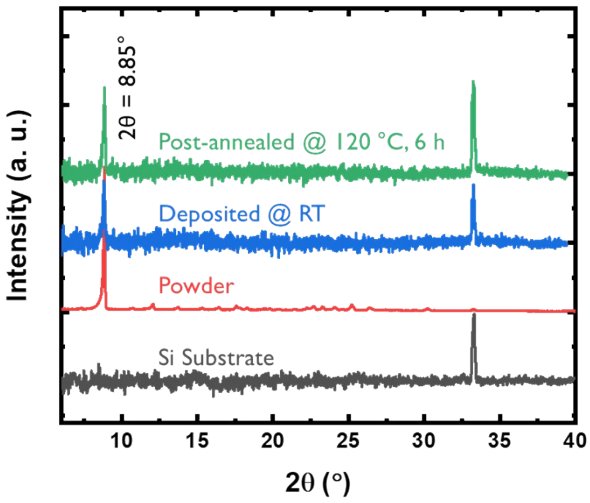

Figure S5. XRD pattern of Si substrate (grey), **AcDCF** power (red), **AcDCF** film grown at T_{sub} = 25 °C (blue), post-deposition annealed **AcDCF** film at 120 °C for 6 h (green).

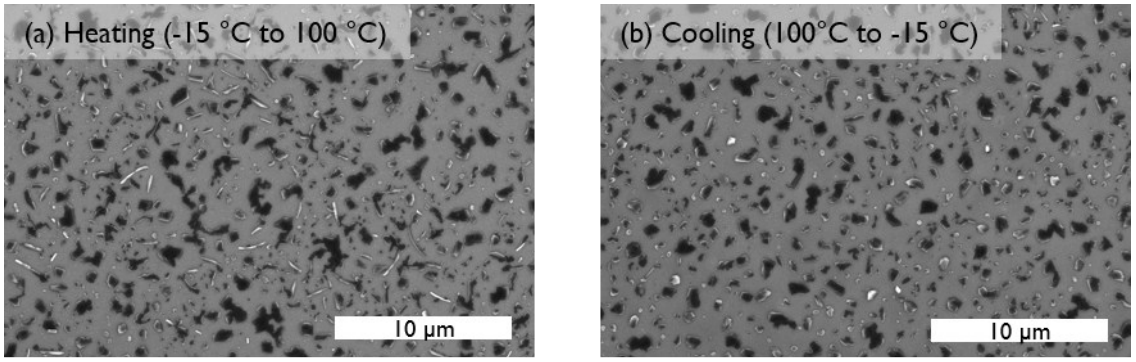

Figure S6. SEM images of **AcDCF** films under a deposition rate of 0.1 Å/s (a) while gradually increasing the T_{sub} from -15 °C to 100 °C, and (b) decreasing the T_{sub} from 100 °C to -15 °C.

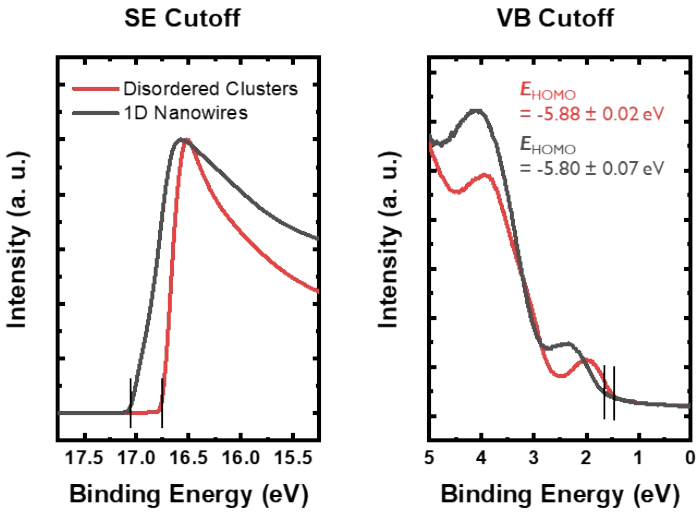

Figure S7. Representative secondary electron cutoff photoemission spectra (left) and the corresponding valence band spectrum (right) of amorphous (red) and crystalline (grey) **AcDCF** films on ITO substrates.

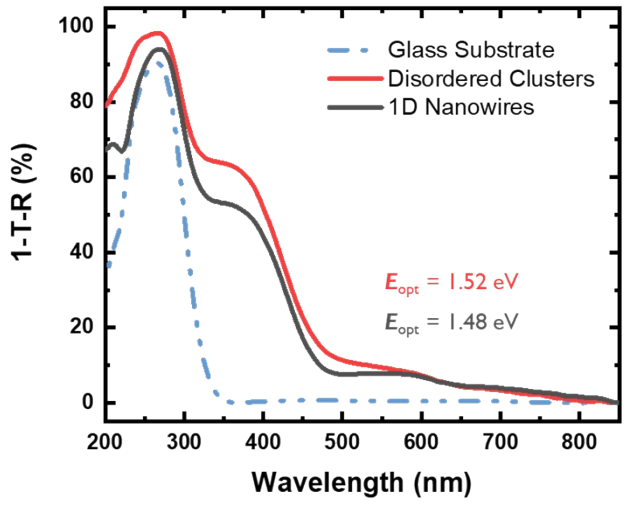

Figure S8. UV-Vis spectra of glass substrate (dotted line), amorphous (red), and crystalline (grey) **AcDCF** films grown on glass substrate. Optical bandgap energies are indicated.