

**Electronic Supplementary Information (ESI) for New Journal of
Chemistry**

**The enhanced crystallization in virtue of complete confinement during the pattern process
of poly(3-hexylthiophene) ultrathin film**

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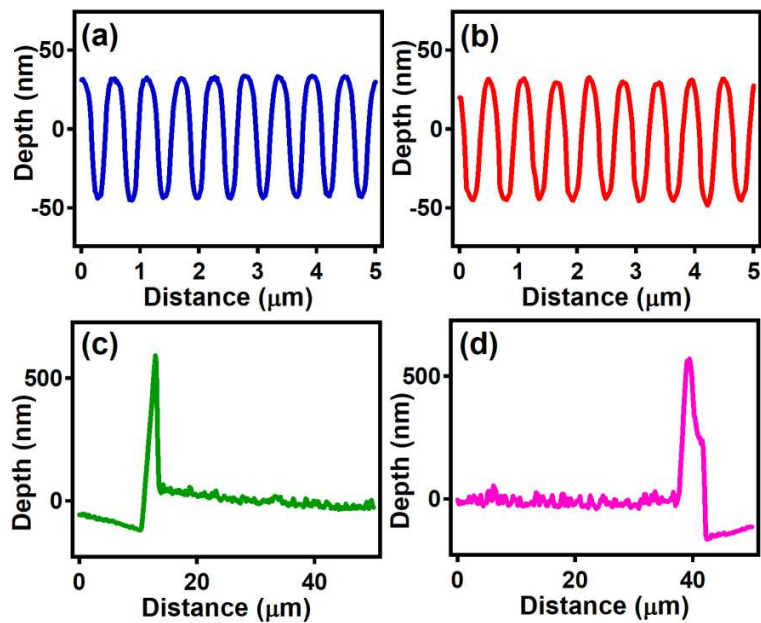


Fig. S1 The cross-sectional profiles of AFM height images for PDMS template (a), the patterned structure of polymer nanograting film (b), single unpatterned PVPh layer film on substrate (c) and the unpatterned two layers with PVPh and P3HT film on substrate (d).

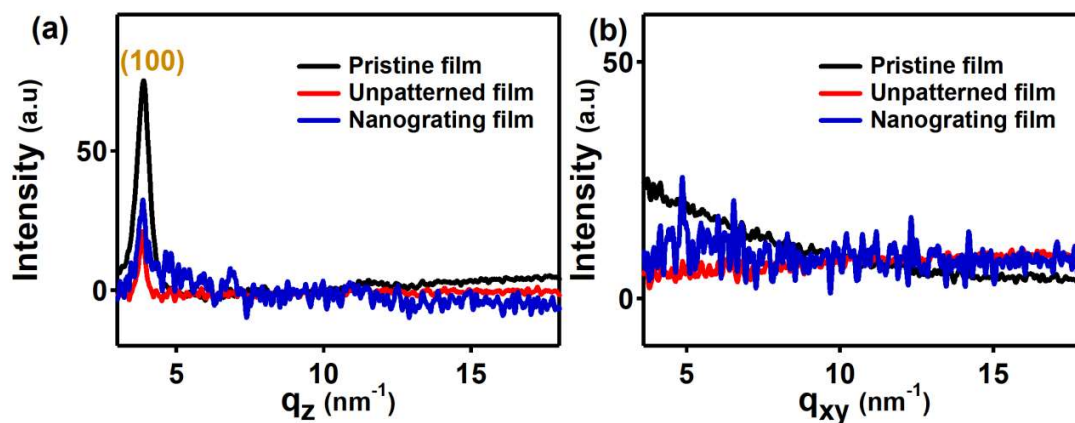


Fig. S2 The one dimensional (1D) GIWAXD intensity images of pristine film, unpatterned film and nanograting film integrated along the q_z direction (a) and the q_{xy} direction (b). The corresponding data are integrated from the 2D images shown in Fig. 4.

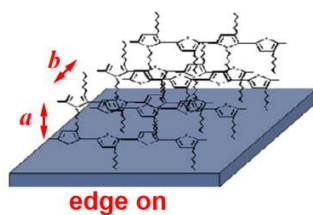


Fig. S3 The schematic illustration of edge-on molecular orientation.

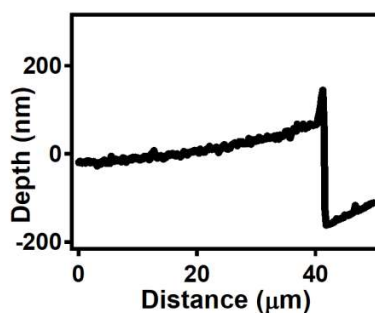


Fig. S4 The cross-sectional profile of AFM height image for the two layer film with PVPh and P3HT film on substrate.

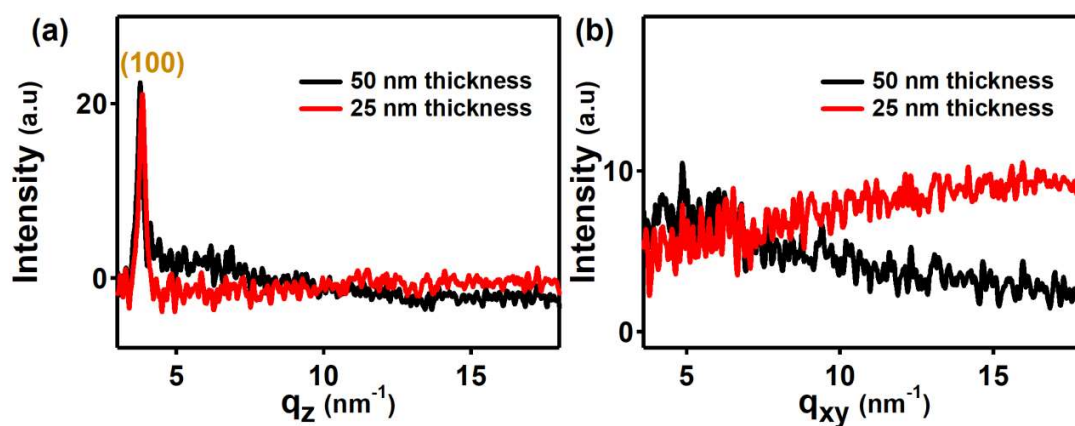


Fig. S5 1D GIWAXD intensity images of unpatterned film with different thickness integrated along the q_z direction (a) and the q_{xy} direction (b). The corresponding data are integrated from the 2D images shown in Fig. 4 and 5.

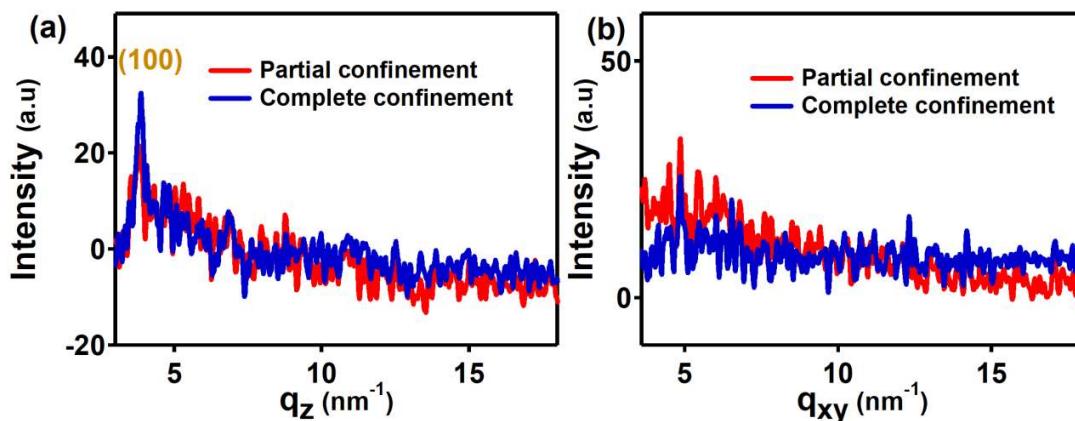


Fig. S6 1D GIWAXD intensity images of nanograting film with various confinements integrated along the q_z direction (a) and the q_{xy} direction (b). The corresponding data are integrated from the 2D images shown in Fig. 4 and 6.

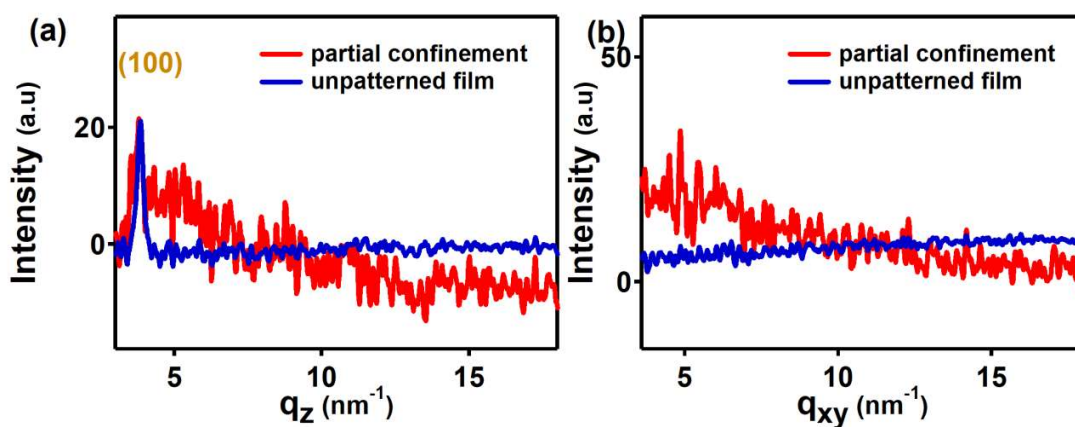


Fig. S7 1D GIWAXD intensity images of partial confinement and unpatterned films along the q_z direction (a) and the q_{xy} direction (b). The corresponding data of unpatterned film are integrated from the 2D image shown in Fig. 4. The 1D data of partial confinement film are integrated from the 2D image shown in Fig. 6.