

**Electronic Supplementary Information**

**Self-assembly of large-scale P3HT patterns by confined evaporation in the capillary tube**

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## Experimental Section

### General Procedure:

The glass capillary tubes (inner diameter  $\sim 0.15$  cm) KIMBLE Co. were cleaned with a piranha solution (7 : 3 mixture of 98%  $\text{H}_2\text{SO}_4$  and 30%  $\text{H}_2\text{O}_2$ ) at 80 °C for 2 h (*Caution! Piranha solution reacts violently with organic materials.*), then washed with deionized water three times and dried by nitrogen flow.

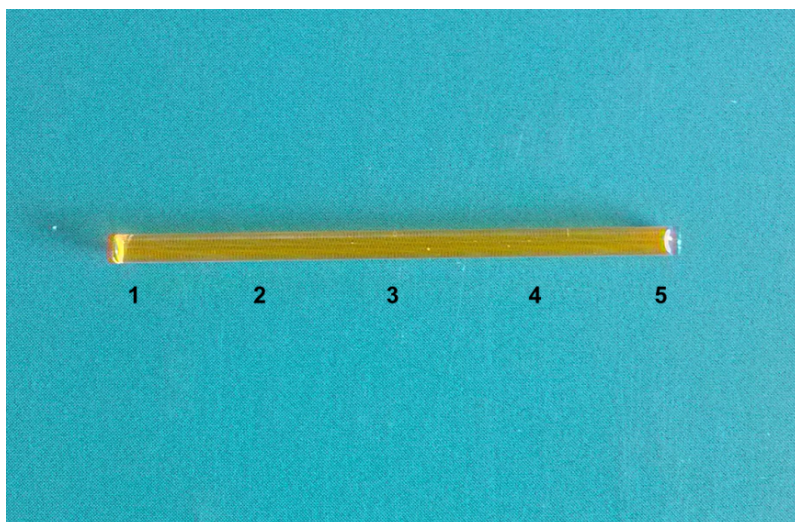
PDDA modified glass tube: Cleaned glass tube (negatively charged) was immersed in 1 mg/mL PDDA in water (positively charged) solution for 30 min to fully absorb on the tube, then washed thoroughly with ultrapure water ( $>18.2$  M $\Omega$  cm) and dried with nitrogen gas.

APTES modified glass tube<sup>1</sup>: The cleaned glass tubes (borosilicate) were immersed in 1% (v/v) of 3-aminopropyltriethoxysilane (APTES) in ethanol for 20 minutes and washed thoroughly with ethanol to remove excess physical absorbed APTES. After drying with nitrogen, APTES coating was crosslinked at 160 °C in a vacuum oven for 1 hour. The tubes were dried and flushed with nitrogen gas for complete drying.

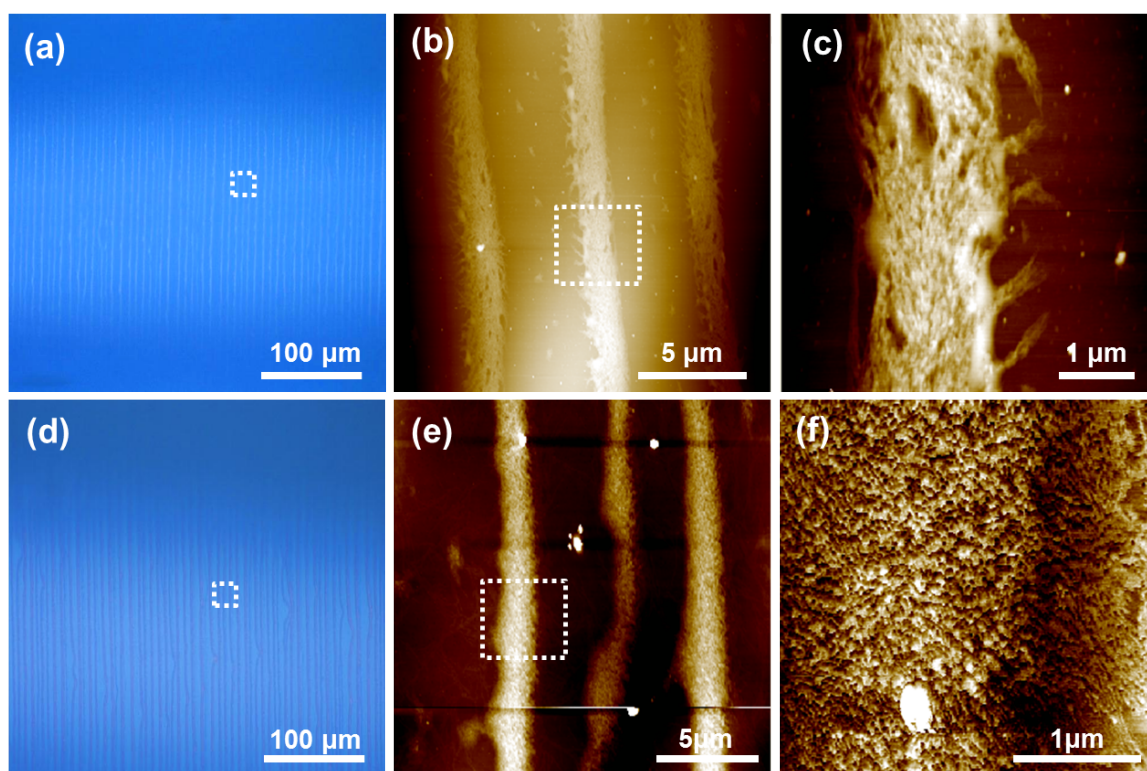
### Characterization:

Optical microscopy measurements were obtained on a Carl Zeiss A1m microscope. Atom Force Microscopy was carried out by an Agilent 5500 AFM in an ambient atmosphere by tapping mode.<sup>2</sup>

## Supplementary Results



**Fig.S1** Photograph of a 0.1 mg/mL CF solution of P3HT injected into a glass tube lied on the horizontal bench and the full tube was divided into 5 different positions.



**Fig. S2** Optical microscopy images and AFM images of stripes in position 2 (**Figure 1a**) from 0.1 mg/mL P3HT solution in different solvents: (a), (b) and (c), MB; (d), (e) and (f), CF/MB (1/1) mixed solvents. Images (b), (e) are enlarged views of the white dashed square in (a), (d). Images (c), (f) are enlarged views of the white dashed square in (b), (e), respectively.

## Reference

1. P. Sitasuwan, L. A. Lee, P. Bo, E. N. Davis, Y. Lin and Q. Wang, *Integr. Biol.*, 2012, **4**, 651-660.
2. G. Xiao, Y. Guo, Y. Lin, X. Ma, Z. Su and Q. Wang, *Phys. Chem. Chem. Phys.*, 2012, **14**, 16286-16293.