

Electronic Supplementary Information (ESI) for

**Enhanced solvent resistance and electrical performance of
electrohydrodynamic jet printed PEDOT:PSS composite patterns:
Effects of hardeners on the performance of organic thin-film
transistors**

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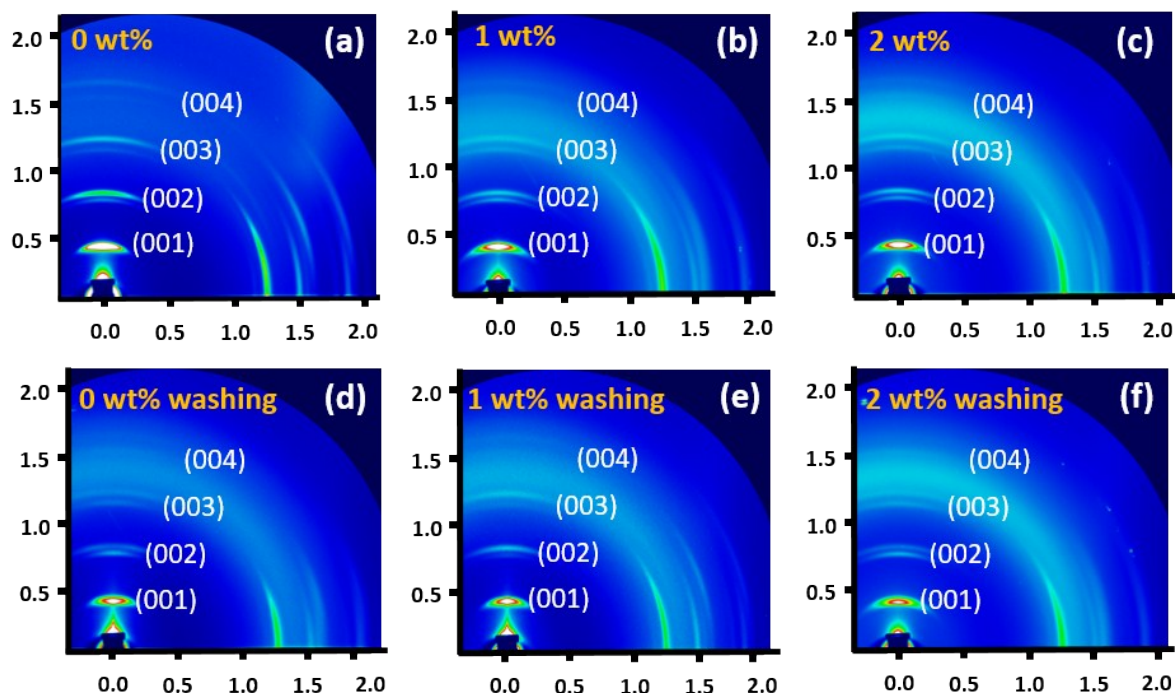


Figure S1. 2D-GIXD patterns of pentacene deposited on EHD jet printed PEDOT:PSS/additives/hardener electrodes with hardener amount of (a, d) 0 wt%, (b, e) 1 wt%, and (c, f) 2 wt% before (a, b, c) and after (d, e, f) washing. The intensities of the 2D-GIXD patterns were normalized according to the measured volume and X-ray exposure time.

All the 2D-GIXD patterns of pentacene films showed arc-shaped spots including (00l) and (00l)* reflections along the out-of-plane and the in-plane directions, which corresponded to randomly-oriented crystals. In other words, pentacene semiconductor molecules formed polymorphic structures composed of thin-film and bulk phase crystals, regardless of the conditions of PEDOT:PSS/additives/hardener electrodes.

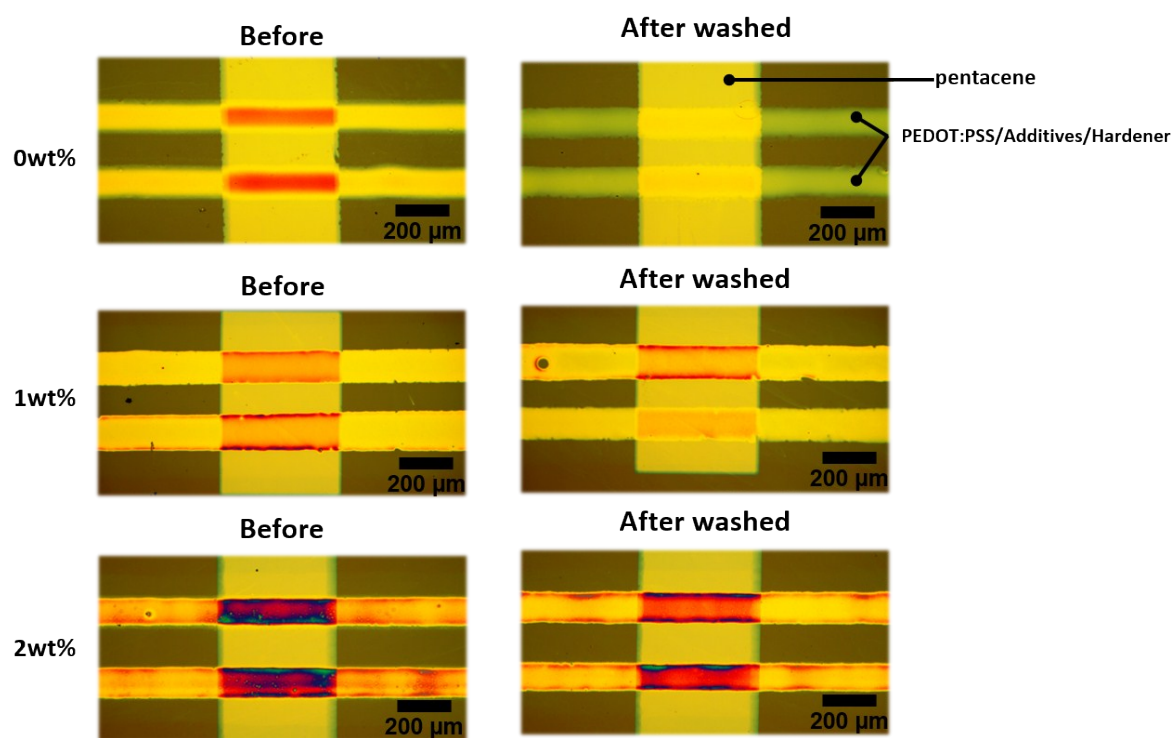


Figure S2. OM images of pentacene on EHD jet printed PEDOT:PSS/additives/hardener (hardener amount = 0 wt%, 1 wt%, and 2 wt%) electrodes before and after washing.