Electronic Supplementary Material (ESI) for Journal of Materials Chemistry C.

Supporting Information

A Universal Strategy to Improve the Mechanical Stability of Flexible Organic Thin Film Transistor

Xiumei Wang [a], Huihuang Yang [a], Shuguang Cao [a,b], Jianfeng Zhong [a], Yuan Fang [a],Yaqian Liu [a], Zhixian Lin [a], Huipeng Chen [a,]*and Tailiang Guo [a]

[a] *Institute of Optoelectronic Display, National & Local United Engineering Lab of Flat Panel Display Technology, Fuzhou University, Fuzhou 350002, China*

[b] *School of Mechanical Engineering & Automation, Fuzhou University, Fuzhou, 35018, China*

* Corresponding authors.

Email: **hpchen@fzu.edu.cn(Huipeng Chen)**

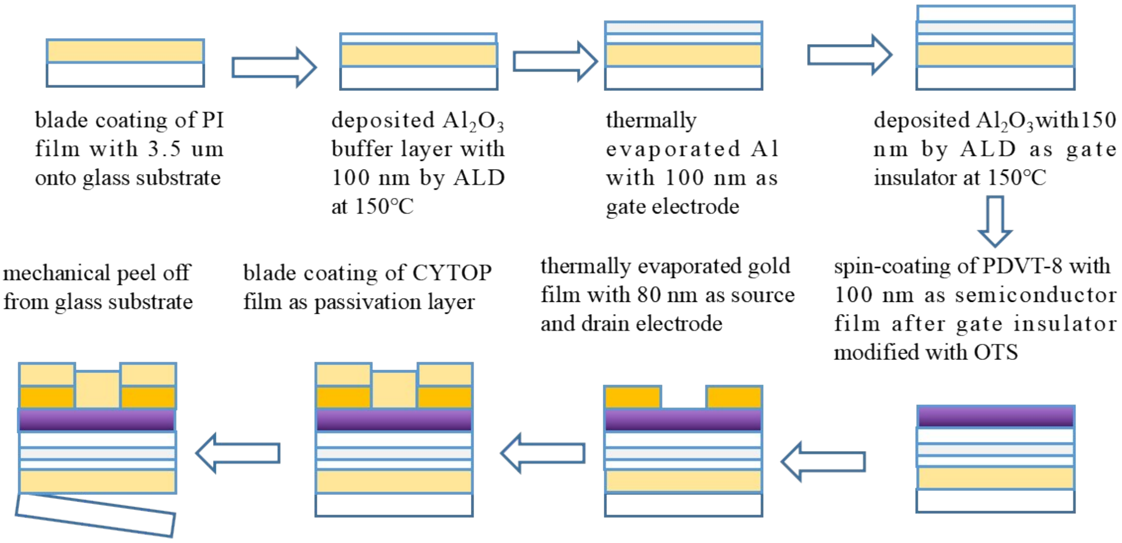

Fig. S1 The fabrication process flow diagram of flexible OTFT.

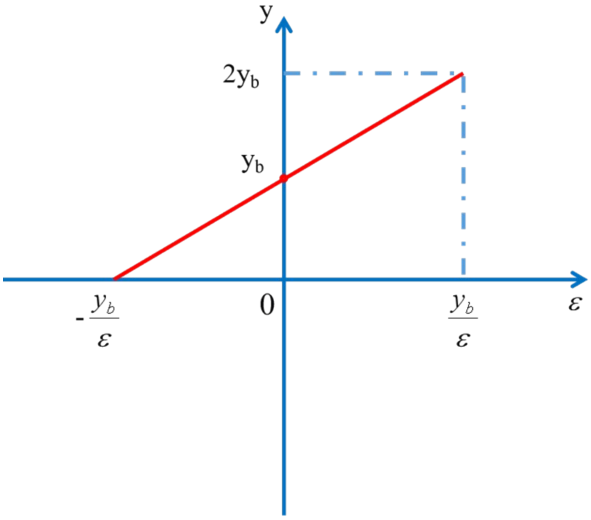

Fig. S2 The relationship between bending strain and the position of bending axis.

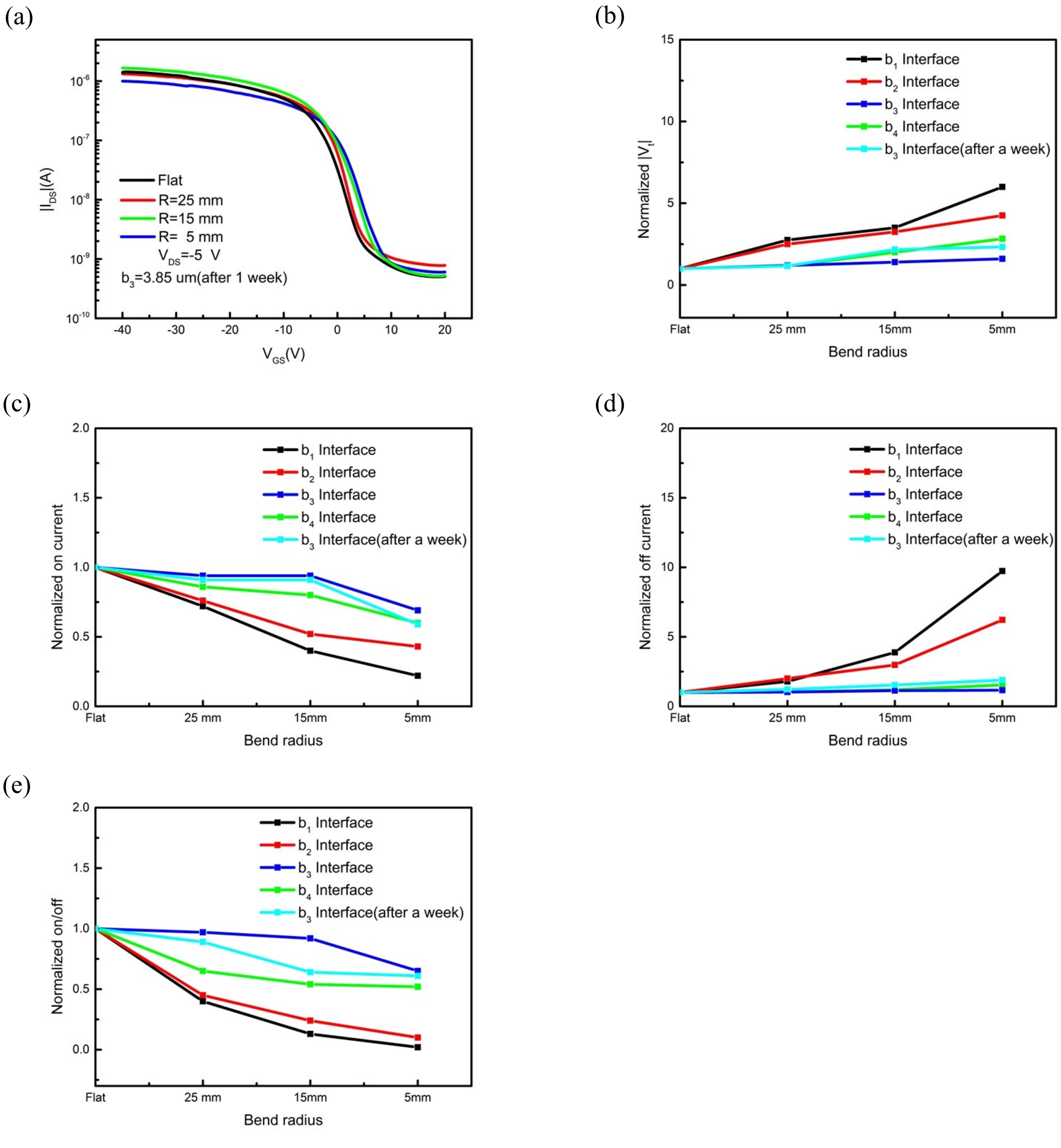

Fig. S3 Transfer characteristic curves of flexible OTFTs with (a) bending axis located at b_3 interface for a week under different bending radius, and the curves of (b) normalized threshold voltage, (c) normalized on current, (d) normalized off current, and (e) normalized on/off current ratio of bending axis located at different interfaces as a function of bending radius.

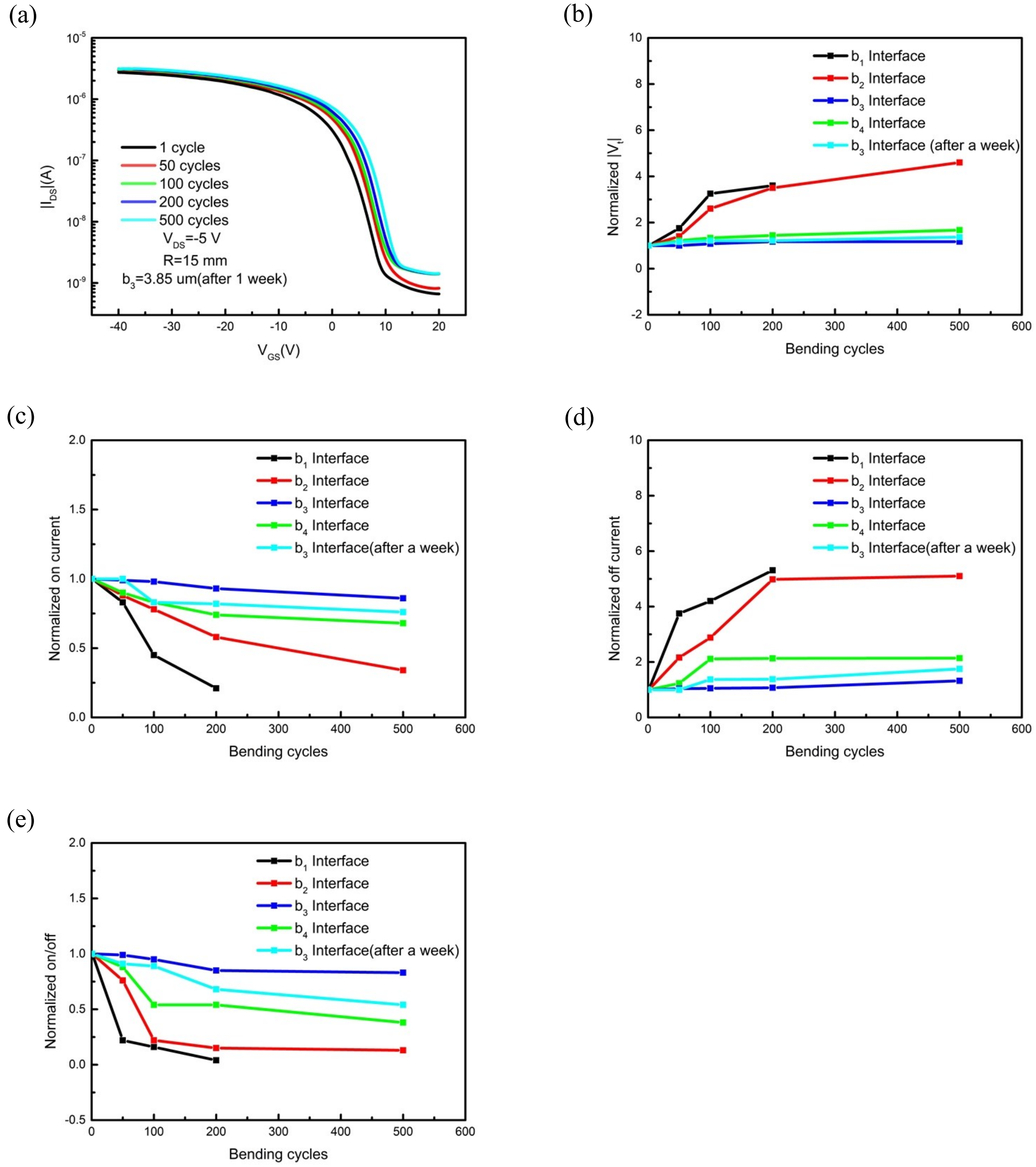

Fig. S4 Transfer characteristic curves of flexible OTFTs with (a) bending axis located at b_3 interface for a week under different bending cycles, and the curves of (b) normalized threshold voltage, (c) normalized on current, (d) normalized off current, and (e) normalized current on/off ratio of bending axis located at different interfaces as a function of bending cycles.

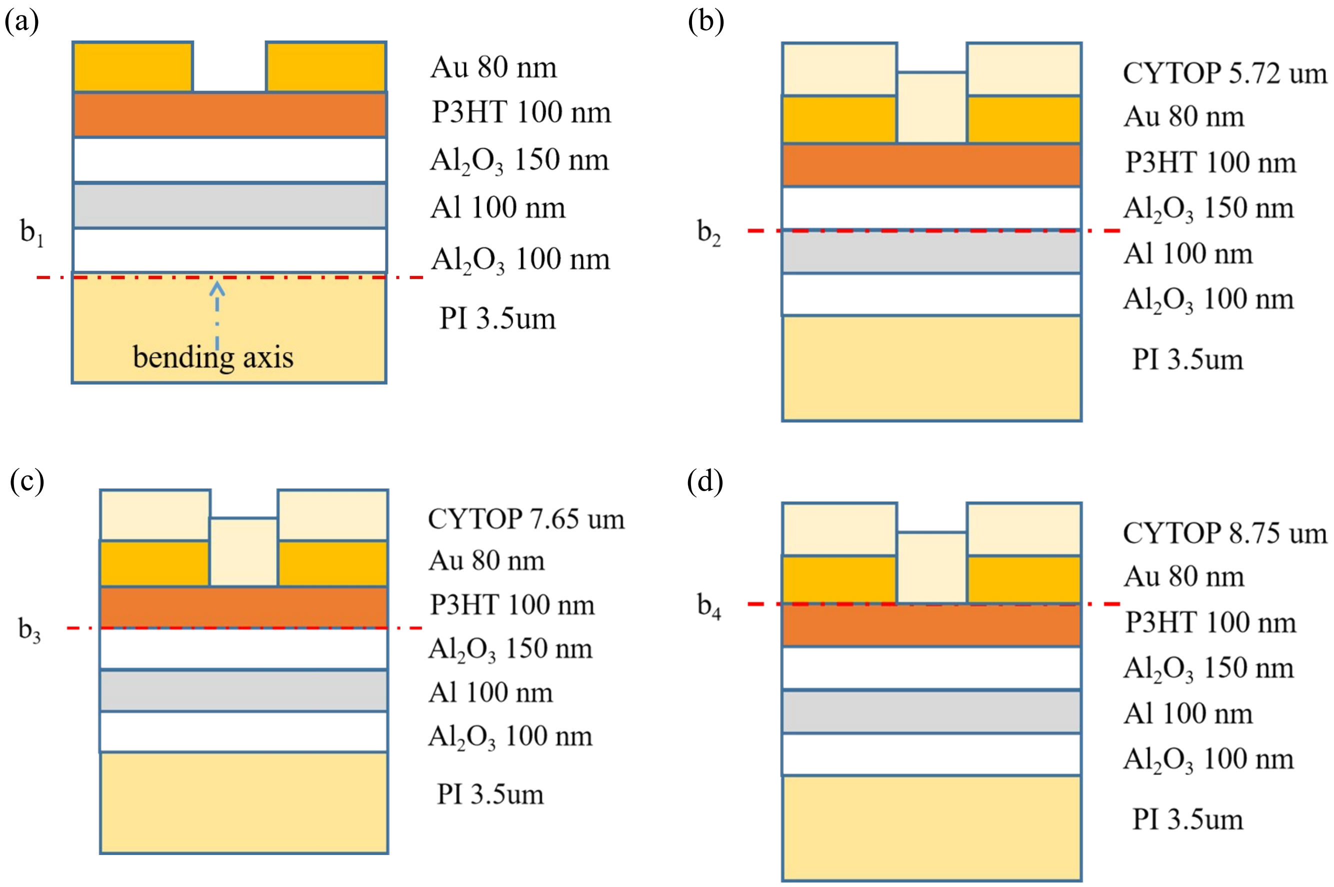

Fig. S5 Position of the bending axis for different flexible OTFTs based on P3HT.

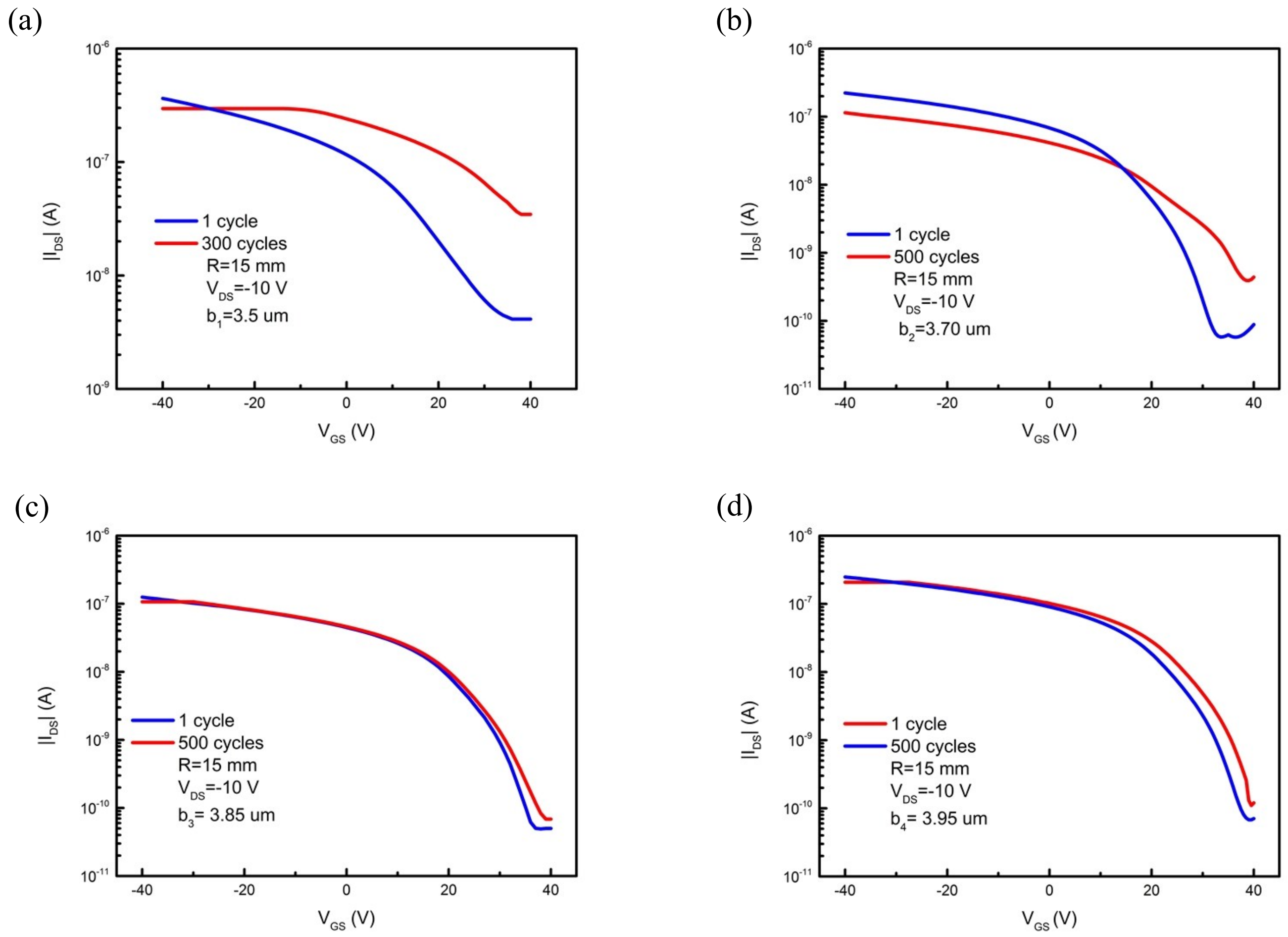

Fig. S6 Transfer characteristic curves of flexible OTFTs based on P3HT with bending axis located at (a) b_1 interface, (b) b_2 interface, (c) b_3 interface, and (d) at b_4 interface under different bending cycles.