

Electronic Supplementary Information

Low-voltage pentacene transistor inverters using micro-contact printed nano-layer

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We have evidences to show a good control level of the monolayer property as indicated in the inverter VTC curves of Fig. SI1 where the three inverters show a similar amount of shift (the inverter I1 is the device for Fig. 4(a)). This means that a fast micro-contacting nicely controls the VTC properties of inverters without much deviation. Being confident on these inverter results, we fabricated a ring oscillator composed of 3 serial sets of similar property inverters (I1, I2 and I3) as shown in Fig. SI2(a). The 3 load-TFTs are μ CP-treated. One set of load- and driver-TFTs is an inverter. If our μ CP-treatment is not secured or unstable, the VTC curves that show similar inverter properties must not be achieved.

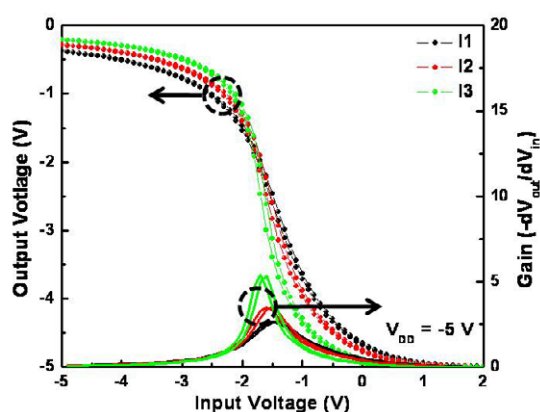


Fig. SI1. The VTC and voltage gain of similar property inverters in a ring oscillator (3 serial sets).

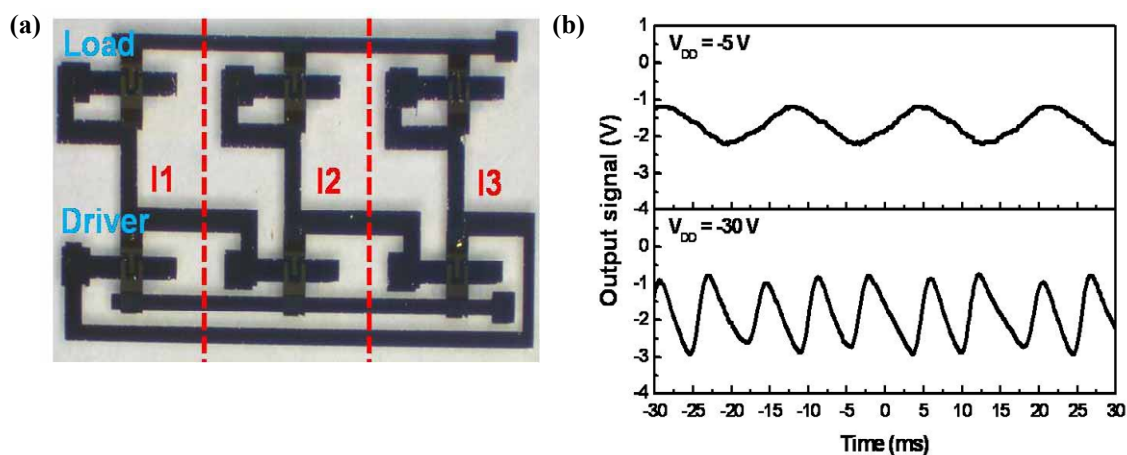


Fig. SI2. (a) The photograph and (b) oscillating actions of 3 stage ring oscillator.