

# Versatile Near-Infrared Polarization-Sensitive Ionic Liquid-Gated Organic Electrochemical Phototransistor

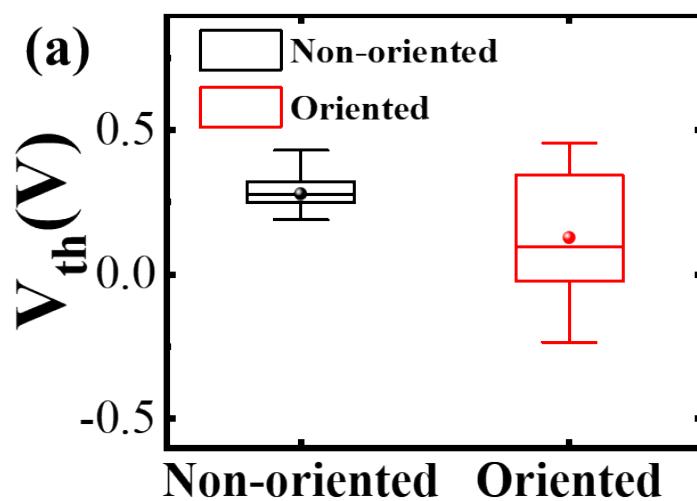
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**Keywords:** Organic electrochemical phototransistor (OECPT), Ionic liquid, Polarization response, Non-volatile



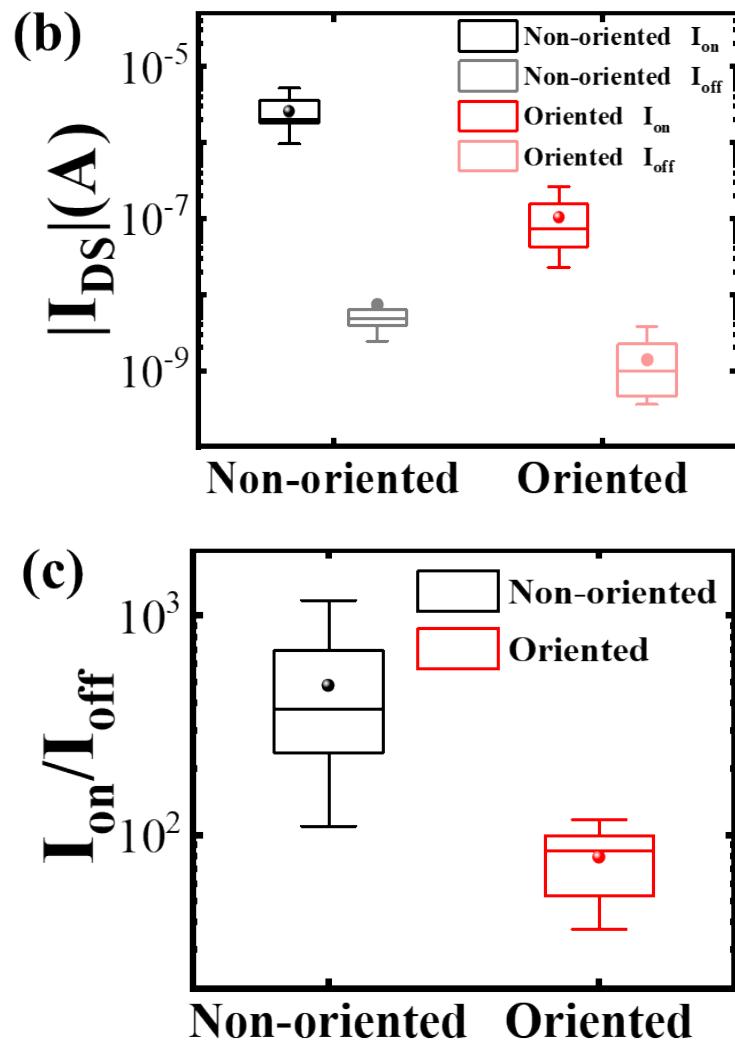


Figure S1. Statistical analysis of (a) threshold voltage, (b) on/off state current, and (c) switching ratio for multiple devices

Table S1. Statistical summary of the basic electrical parameters.

	Oriented device	Non-oriented device
$V_{th}$	$0.13 \pm 0.22$ V	$0.28 \pm 0.08$ V
$I_{on}$	$1.02 \times 10^{-7} \pm 1.02 \times 10^{-7}$ A	$2.52 \times 10^{-6} \pm 1.27 \times 10^{-6}$ A
$I_{off}$	$1.36 \times 10^{-9} \pm 1.08 \times 10^{-9}$ A	$7.25 \times 10^{-9} \pm 5.86 \times 10^{-9}$ A
$I_{on}/I_{off}$	$7.91 \times 10^1 \pm 2.63 \times 10^1$	$4.80 \times 10^2 \pm 3.18 \times 10^2$

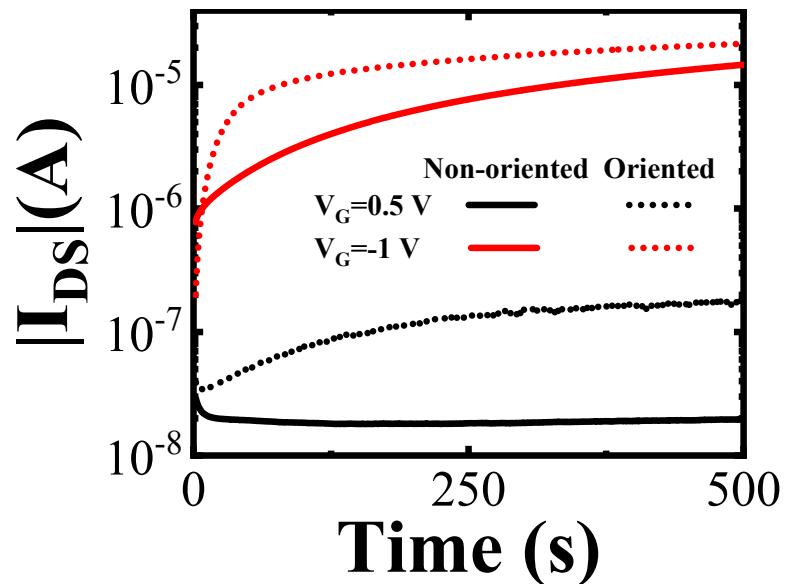


Figure S2. Comparison of steady state currents for oriented/non-oriented devices