

Electronic Supplementary Material

Threshold voltage tuning and printed complementary transistors and inverters based on thin films of carbon nanotubes and indium zinc oxide

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1 Histograms of normalized on-current ($I_{\text{on}} \times L/W$), current on/off ratio ($I_{\text{on}}/I_{\text{off}}$), and field-effect mobility of carbon nanotube thin film transistors (CNT TFTs) with Ti/Au and Ti/Pd source and drain (S/D) metal contacts

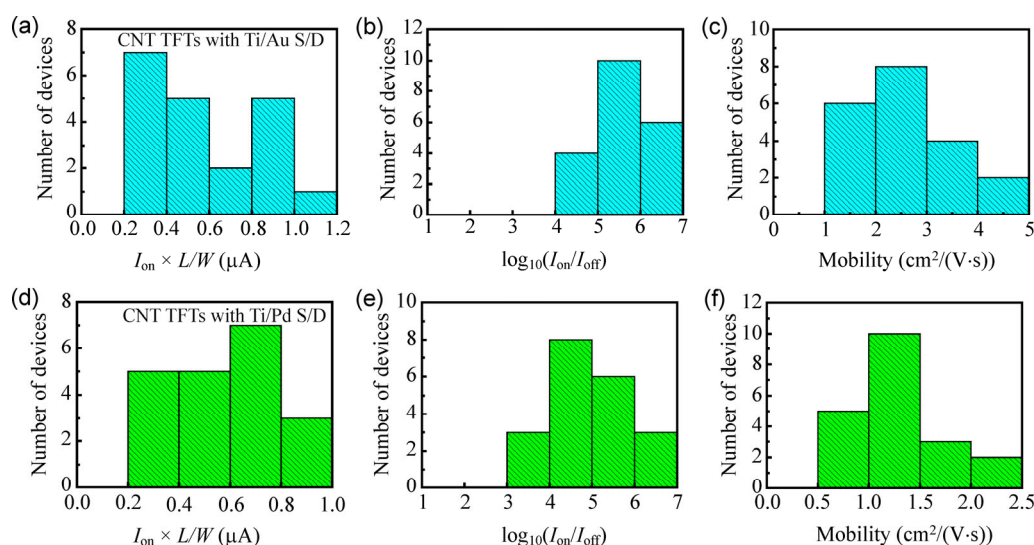


Figure S1 Histograms of normalized on-current, current on/off ratio, and field-effect mobility of 20 CNT TFTs with Ti/Au S/D metal contacts and 20 CNT TFTs with Ti/Pd metal contacts. (a) Histogram of normalized on-current measured from 20 CNT devices with Ti/Au S/D metal contacts. (b) Histogram of current on/off ratio of the same 20 CNT devices, with 16 of the devices showing on/off ratios between 1×10^5 and 1×10^7 . (c) Histogram of field-effect mobility of the 20 CNT devices showing the average mobility of $2.35 \text{ cm}^2/(\text{V}\cdot\text{s})$, with 8 of the devices showing mobility between 2 and $3 \text{ cm}^2/(\text{V}\cdot\text{s})$. (d) Histogram of normalized on-current of 20 CNT devices with Ti/Pd S/D metal contacts. (e) Histogram of current on/off ratio of the same 20 CNT TFTs, with nine of the devices showing on/off ratios between 1×10^5 and 1×10^7 . (f) Histogram of field-effect mobility measured from the same 20 CNT TFTs showing the average mobility of $1.17 \text{ cm}^2/(\text{V}\cdot\text{s})$, with 10 of the devices showing mobility between 1.0 and $1.5 \text{ cm}^2/(\text{V}\cdot\text{s})$.

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2 Histograms of normalized on-current, current on/off ratio, and field-effect mobility of 20 indium zinc oxide (IZO) TFTs

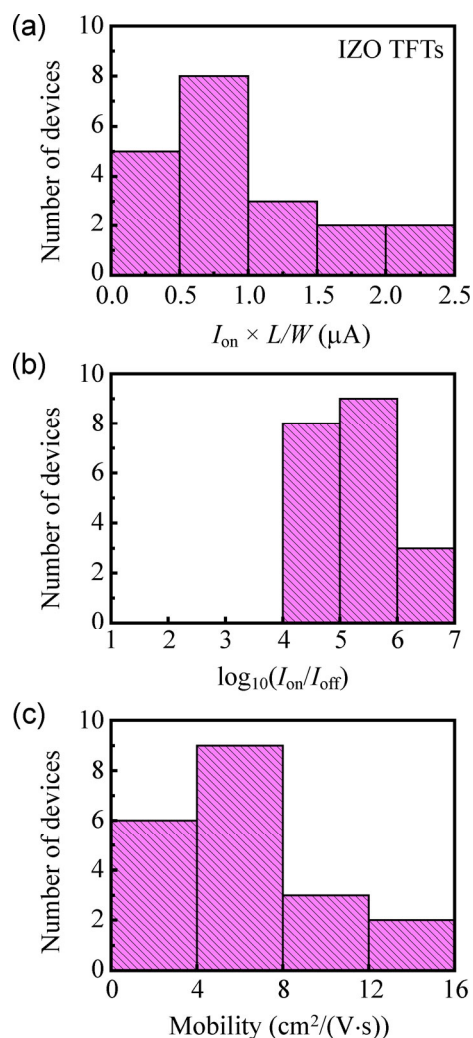


Figure S2 Histograms of normalized on-current, current on/off ratio, and field-effect mobility of 20 IZO TFTs. (a) Histogram of normalized on-current of 20 IZO TFTs. (b) Histogram of current on/off ratio measured for the same 20 IZO devices, with 12 of the devices showing on/off ratios between 1×10^5 and 1×10^7 . (c) Histogram of field-effect mobility of the 20 IZO devices showing the average mobility of $5.86 \text{ cm}^2/(V \cdot s)$, with nine of the 20 devices showing mobility between 4 and $8 \text{ cm}^2/(V \cdot s)$.