

Abbreviations

MO	Metal oxides
BG/TC	Bottom gate/Top contact
SBA	Sodium beta-alumina
κ	Dielectric constant
AOS	Amorphous oxide semiconductor
TFT	Thin film transistor
FET	Field effect transistor
GFET	Graphene field effect transistor
SLG	Single layer graphene
LET	Light-emitting transistor
MIM	Metal insulator metal
ICMO	Ion conducting metal oxide
XRD	X-ray diffraction
GIXRD	Grazing incidence X-ray diffraction
AFM	Atomic force microscope
MIM	Metal insulator metal
RMS	Root-mean-square
SEM	Scanning electron microscope
QD	Quantum Dot
TGA	Thermogravimetric analysis
DTA	Differential thermal analysis
UV	Ultraviolet
I-V	Current voltage

SEM	Scanning electron microscope
TEM	Transmission electron microscope
CVD	Chemical vapour deposition
MFC	Mass flow controller
C-f	Capacitance frequency
AMLCD	Active-matrix liquid crystal displays
AMOLED	Active-matrix organic light-emitting diode
SnO ₂	Tin oxide
PbS	Lead Sulfide
Si ⁺⁺	Heavily doped p-type silicon
EDT	1,2-ethanedithiol
CMOS	Complementary metal-oxide-semiconductor
C	Capacitance
d	Thickness of dielectric
I _D	Drain current
I _G	Gate current
V _D	Drain voltage
W/L	Channel width to length ratio
V _G	Gate voltage
V _{Th}	Threshold voltage
V _D	Dirac voltage
R _S	Sheet resistance
R _C	Contact resistance
R _{tot}	Total resistance
<i>g_m</i>	Transconductance

g_N	Normalized Transconductance
SS	Subthreshold swing
μ	Mobility
E_g	Band gap
h	Planck's constant
N_{ss}	Interfaces states