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LIST OF ABBREVIATIONS AND SYMBOLS

CNT	Carbon Nanotube
MWCNT	Multi walled CNT
SWCNT	Single walled CNT
FET	Field Effect Transistor
g-FET	graphene FET
ENFET	Enzyme Field Effect Transistor
ISFET	Ion Sensitive Field Effect Transistor
CNTFET	Carbon Nanotube FET
JLCNTFET	Junctionless CNTFET
DGJLCNTFET	Double Gated JLCNTFET
BioFET	Biologically modified FET
MOSFET	Metal oxide semiconductor FET
IUPAC	International Unit for Pure and Applied Chemistry
N_2	Nitrogen gas
IC	Integrated Circuit
ITO	Indium Tin Oxide
DMM	Digital Multimeter
PBS	Phosphate Buffer Saline
ECD	Electrochemical Deposition
RE	Reference Electrode
WR	Working Electrode
CE	Counter Electrode
LoD	Limit of Detection

PANI	Polyaniline
PEI	Polyethylene imine
PPy	Polypyrrole
ChOx	Cholesterol Oxidase
AChE	Acetylcholine Esterase
K	Potassium
PDMS	Polydimethylsilaxane
Ag/AgCl	Silver/Silver chloride
NaCl	Sodium Chloride
V_{REF}	Reference Voltage
V_{GS}	Gate Voltage
PGSTAT	Potentiostat/Galvanostat
V_{DS}	Drain Voltage
I_{DS}	Drain Current
ZnO	Zinc Oxide
ZrO_2	Zirconium Dioxide
HfO_2	Hafnium Dioxide
CH	Chitosan
NiO	Nickel Oxide
AChE	Acetylcholine Esterase
GOx	Glucose oxidase
H_2O_2	Hydrogen peroxide
KOH	Potassium hydroxide
NH_4OH	Ammonium hydroxide
$ZrCl_4$	Zirconium tetrachloride

$(Zn(CH_3COO)_2)$	Zinc acetate
Al	Aluminum
Pt	Platinum
κ	Dielectric constant
S	Source
D	Drain
CVD	Chemical vapor deposition
mV	Mili Volt
V	Volt
mM	Mili Mole
µM	Micro Mole
mg	Mili Gram
dL	Deciliter
K_m	Michaelis-Menten constant
A_V	Intrinsic voltage gain
µS	Micro Siemen
µl	Micro Littre
H^+	Proton
$\Delta\Psi_0$	Interfacial potential difference
Ta_2O_5	Titanium Pentoxide
Si_3N_4	Silicon Nitrite
dec	Decade
$C_{27}H_{46}O$	Cholesterol
$CH_3COO(CH_2)_2N^+(CH_3)_3$	Acetylcholine

ANS	Autonomic nervous system
PNS	Peripheral nervous system
CNS	Central nervous system
PLs	Phospholipids
TGs	Triglycerides
CEs	Cholesterol Esters
HDL	High density lipoprotein
LDL	Low density lipoprotein
VLDL	Very low-density lipoprotein
CM	Chylomicron
CA	Control amplifier
CF	Current follower
CR	Control resistance
DA	Differential amplifier
GC	Glassy carbon
DNA	Deoxyribonucleic acid
n^+/p^+	High *n*–dope/*p*–dope
μ_e/μ_p	Electron/hole carrier mobility
C_{ox}	Oxide capacitance
V_{TH}	Threshold voltage
χ^{sol}	Dipole potential of solvent
ϕ_{Si}	Work function of silicon
Q_{ox}	Oxide charge of FET
Q_{ss}	Fixed surface charge of FET
Q_B	Bulk charge of FET

ϕ_f	Fermi potential of silicon
$2\phi_f$	Surface inversion potential of silicon
Φ_{CNT}	Work function of CNT
nm	Nano meter
SiO_2	Silicon dioxide
IEP	Isoelectric point
A	Area of sensing film
ρ	Density of deposited material
δ	Thickness of deposited film
M	Mass of deposited substance
R	Gas constant
v	Reaction velocity
σ	Standard deviation
S	Slope of curve
$[S]$	Concentration of analytes
mm^2	Millimeter square
cm^2	Centimeter squire
q	Electronic charge ~1.6×10^{-19} C
k	Boltzmann constant~ 1.38×10^{-23} J/K
t	Time
$\wedge$	Impingement rate
N_{av}	Avogadro's number
η	Concentration of aluminum gas
ζ	Pressure of gas
ζ_o	Initial pressure of gas

ω	Pumping speed,
O	Rate of outgoing gas
χ	Regression coefficients
Y	Interference
R_S	Shunt resistance
X	Volume of chamber
$\overset{\circ}{\pi}$	Molarity of substance