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ABBREVIATIONS AND SYMBOLS

Å	Angstrom
AA	Ascorbic acid
AFM	Atomic force microscopy
ATR	Attenuated Total Internal Reflection
A-IgG	Anti-human Immunoglobulin G (Feb specific)
BLM	Bilayer lipid membrane
°C	Celsius degree
CA	Catecholamine
CP	Conjugated polymer
CPE	Carbon paste electrode
CV	Cyclic voltammetry
CTAB	Cation surfactant cetyltrimethyl ammonium bromide
DA	Dopamine
EC-SPR	Electrochemical-surface plasmon resonance
EC-QCM	Electrochemical quartz crystal microbalance
E_g	Energy gap
EA-HCl	Ethanolamine hydrochloride
EDC	1-ethyl-3-(3-dimethylaminopropyl)-carbodiimide Hydrochloride

e.g.	Exempli gratia (for example)
FETs	Field effect transistors
FTIR/ATR	Fourier transforms infrared spectroscopy attenuated total reflectance
*f*mol	A billion of a millionth (10^{-15}) of a mole
HOMO	Highest occupied molecular orbital
hr.	Hour
ICP	Intrinsically conductive polymer
IgG	Immunoglobulin G
ITO	Indium-Tin Oxide
k_f	First order rate constant
LbL	Layer by layer
LUMO	Lowest occupied molecular orbital
µm	Micrometer
mL	Milliliter
mV/ sec	Millivolt/second
min	Minute
M	Molarity
nM	Nanomolar
NHS	*N*-hydroxysuccinimide
OLEDs	Light-emitting diodes

PANI	Polyaniline
P3HT	Poly(3-hexylthiophene-2,5diyl)
PBS	Phosphate buffer saline
P2ABA	Poly(2-aminobenzylamine)
P2ABA/SWNTs	Poly(2-aminobenzylamine)/single wall carbon nanotube
P2ABA/ZnO nanoparticles	Poly(2-aminobenzylamine)/ZnO nanoparticles
PEDOT	Poly(3,4-ethylenedioxythiophene)
pM	Picomolar
PPy	Polypyrrole
PPy/PPa	Poly(pyrrole-co-pyrrolepropylic acid)
PT	Polythiophene
QCM-D	Quartz crystal microbalance with dissipation
ROMP	Ring-opening metathesis polymerization
sec	Second
SAMs	Self-assembled monolayers
SPR	Surface plasmon resonance
UA	Uric acid
UV-vis	Ultraviolet-visible
V	Volts
XPS	X-ray photoelectron spectroscopy
λ	Wavelength