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ABBREVIATIONS AND SYMBOLS

Å	Angstrom
Au	Gold
Al_2O_3	Alumina
at%	atomic %
C	Amount of carbon
cm	Centimeter
cm^3/min	Cubic centimeter per minute
CRT	Cathode-Ray Tube
CVD	Chemical Vapor Deposition
°C	Degrees Celsius
d_{hkl}	Interplanar distance between (hkl) planes
d	the lattice planar spacing or thickness
d_{EM}	different primary particle sizes
CB	Conduction Band
CB	Chlorobenzene
d_{BET}	BET-particle diameter
e^-	Electron
eV	Electron Volt
E	binding energy
E_0	Energy of ground state
E_b	Binding energy
E_F	Fermi level
E_g	Optical band gap of the semiconductor
E_{CB}	Conduction band energy
E_{VB}	Valence band energy

E_{vac}	Energy of vacuum level
FF	Fill factor
EPMA	Electron probe micro-analysis by X-ray
g/L	grams/liter
h	Hour
H	Plank's constant (6.63×10^{-34} Js), hour
HMDSO	Hexamethyldisiloxane
HOMO	Highest occupied molecular orbital
hν	Photon energy
h^+	Hole
I_0	Intensity of the incident beam
I	Intensity of the transmittance
J_{SC}	Short circuit current
ITO	Indium-tin oxide
IUPAC	International Union of Pure and Applied Chemistry
JCPDS	Joint Committee Powder Diffraction Standards
K	Kelvin
keV	Kilo electron volt
kV	Kilo-volt
LUMO	Lowest unoccupied molecular orbital
L/min	Liter per minute
M	Mol per liter
mg	Milligram
min	Minute
mL	Milliliter
m^2	Square meter
mS	Millisiemen
n	Order of diffraction

N_a	Avogadro's number (6.02×10^{23})
O_2	Oxygen gas
$^{\bullet}O_2^-$	Superoxide radical
$^{\bullet}OH$	Hydroxyl radical
rpm	Revolution per minute
R_0	Resistance in air
Rg	Resistance when the gas is present
T	Transmittance
T_{rec}	Recovery time
T_{res}	Response time
VB	Valence band
V_{OC}	Open circuit voltage
V_mI_m	The maximum deliverable power
V_m	The volume of gas adsorbed at STP per unit mass of adsorbent, when the surface is covered by a unimolecule layer of adsorbate
Z	Atomic number
λ	Wavelength
μg	Microgram (10^{-6} g)
μg C	Microgram of carbon
μm	Micron (10^{-6} meter)
μ_s	Electron mobility at the surface
μS/cm	MicroSiemens /square centimeter
ε	Absorptivity
ε_0	The permittivity of the vacuum
θ	The Bragg angle for the reflection
ν	Frequency
η	Power conversion efficiency