

List of Abbreviations

<i>Abbreviation</i>	<i>Full form</i>
2DEG	2-Dimensional Electron Gas
A*STAR	Agency for Science, Technology, and Research
AAS	Atomic Absorption Spectroscopy
AC	Alternating Current
AFM	Atomic Force Microscopy
Ag	Silver
AgCl	Silver Chloride
AgNp	Silver Nanoparticle
Al	Aluminum
AlGaAs	Aluminum Gallium Arsenide
AlGaN	Aluminum Gallium Nitride
AlN	Aluminum Nitride
Ar	Argon
Au	Gold
AuNp	Gold Nanoparticle
Bi	Bismuth
BIS	Bureau of Indian Standards
Cd	Cadmium
CDC	Centre for Disease Control
CFL	Compact Fluorescent Light
CNS	Central Nervous System
Cr	Chromium
Cu	Copper
CV	Coefficient of Variation
CVD	Chemical Vapor Deposition
DC	Direct Current
DMTD	2,5-dimercapto-1,3,4, thiadiazol
DNA	Deoxyribonucleic acid
EDC	1-ethyl-3-(3-dimethylaminopropyl)-carbodiimide-hydrochloride
EPA	Environmental Protection Agency
FESEM	Field Emission Scanning Electron Microscopy
FET	Field Effect Transistor
Ga	Gallium
GaAs	Gallium Arsenide
GaN	Gallium Nitride
GC	Gouy-Chapman Layer
GCS	Gouy-Chapman-Stern Layer
GSH	Glutathione
GUI	Graphical User Interface
HCP	Hexagonal Closely Packed
HEMT	High Electron Mobility Transistor
HF	Hydrofluoric Acid
HFET	Heterojunction Field Effect Transistor
Hg	Mercury
HNO ₃	Nitric Acid
HRXRD	High-Resolution X-Ray Diffraction
IARC	International Agency for Research on Cancer
ICP-MS	Inductively Coupled Plasma Mass Spectroscopy

ICP-OES	Inductively Coupled Plasma-Optical Emission Spectrometry
IHP	Inner Helmholtz Plane
III-N	III-Nitride
IIT	Indian Institute of Technology
IMRE	Institute of Materials Research and Engineering
InN	Indium Nitride
IoT	Internet of Things
IPA	Iso Propyl Alcohol
ISE	Ion-Selective Electrodes
ISFET	Ion Selective Field Effect Transistors
IUPAC	International Union of Pure and Applied Chemistry
I-V	Current -Voltage
JCPDS	Joint Committee Powder Diffraction Standards
LED	Light Emitting Diode
LoD	Limit of Detection
MBE	Molecular Beam Epitaxy
MES	2-(N-morpholino)-ethane-sulfonic-acid
MFC	Mass Flow Controller
MNIT	Malviya National Institute of Technology
MOCVD	Metal-Organic Chemical Vapor Deposition
MoS ₂	Molybdenum Disulfide
MPA	3-Mercaptopropionic Acid
MRC	Materials Research Centre
N ₂	Nitrogen
NaOH	Sodium Hydroxide
NH ₃	Ammonia
NHS	N-hydroxy-succinimide
Ni	Nickel
OHP	Outer Helmholtz Plane
Pb	Lead
PCB	Printed Circuit Board
PEB	Post Exposure Bake
PNS	Peripheral Nervous System
ppb	parts per billion
ppm	parts per million
ppq	parts per quadrillion
ppt	parts per trillion
PVC	Polyvinyl Chloride
RF	Radio Frequency
rGO	Reduced Graphene Oxide
RMS	Root Mean Square
RoHS	Restriction of the Use of Certain Hazardous Substances
S	Sulfur
SCCM	Standard Cubic Centimeter per Minute
SCS	Semiconductor Characterization System
SDE	Sentaurus Device Editor
SDevice	Sentaurus Device
SEM	Scanning Electron Microscopy
SERS	Surface-Enhanced Raman Spectroscopy
Si	Silicon
SiC	Silicon Carbide
SPE	Screen Printed Electrode
SPR	Surface Plasmon Resonance

SWB	Sentaurus Work Bench
TCAD	Technology Computer-Aided Design
TEM	Transmission Electron Microscopy
TGA	Thioglycolic Acid
TLM	Transmission Line Measurement
UID	Unintentionally Doped
UV	Ultra Violet
WHO	World Health Organization
WiTricity	Wireless Electricity
XRD	X-Ray Diffraction

