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List of Symbols

Symbol	*Description*
Al	Aluminum
A	Actual Contact Area
Ar^+	Argon Ion
b_a	Anodic Tafel Constant
b_c	Cathodic Tafel Constant
Cu	Copper
E	Energy
E_{corr}	Corrosion Potential
e	Electrons
F	Faraday Constant
G_{sc}	Solar Constant
H	Hardness
h	Plank's Constant
h_{max}	Maximum Displacement
I_{corr}	Corrosion Current
i_{corr}	Corrosion Current Density
K	Extinction Coefficient
k	Boltzmann's Constant
m	Mass of the Electron
Ni	Nickel
n	Electron Density
n	Refractive Index
P_i	Protective Efficiency
P	Porosity
P_{max}	Maximum Load
R	Gas Constant
R	Reflectance
R_p	Polarization Resistance
R_a	Average Surface Roughness
R_q	Root Mean Square Surface Roughness
r_0	Sun Earth Distance
r_s	Mean radius of Sun
S	Stiffness
T	Temperature
v	Poisson's Ratio
Y	Young's Modulus
α	Alpha
β	Beta
ε	Epsilon
π	Pi
λ	Wavelength
σ	Stefan-Boltzmann Constant
ε_0	Free Space Permittivity
η	Eta
δ	Sigma
%	Percentage
ω_p	Plasmon Frequency

List of Abbreviations

Abbreviation	*Full form*
AA	Air Annealed
ARTSSCs	Absorber Reflector Tandem Solar Selective Coatings
AD	As Deposited
ASTM	American Society for Testing and Materials
AC	After Corrosion
ACV	After Cyclic Voltammetry
ATA	After Tafel Analysis
ARC	Anti-Reflecting Coatings
AM	Air Mass
AFM	Atomic Force Microscopy
BC	Black Chrome
CVD	Chemical Vapor Deposition
CSP	Concentrated Solar Power
CCD	Charged Coupled Devices
CV	Cyclic Voltammetry
DNI	Direct Normal Radiance
DRA	Diffuse Reflectance Accessories
DC	Direct Current
DSC	Differential Scanning Calorimetry
DTA	Differential Thermal Analysis
DoF	Depth of Focus
EDX	Energy Dispersive X-ray
eV	Electron Volts
FeCo(C) NPs	Graphite Encapsulated Iron Cobalt Nano Particles
FWHM	Full Width Half Maxima
FTO	Fluorine Doped Tine Oxide
FTIR	Fourier Transform Infrared
FE-SEM	Field Emission Electron Microscopy
HER	Hydrogen Evolution Reaction
hr	Hours
kW	Kilowatt
LSV	Linear Sweep Voltammetry
mm/y	Millimeter Per Year
mVS^{-1}	Millivolts Per Second
min	Minute
nm	Nano meter
NIR	Near Infrared
NRs	Nano Rods
ND	Neutral Density
PLD	Pulsed Laser Deposition
PVD	Physical Vapor Deposition
PECVD	Plasma Enhanced Chemical Vapor Deposition
PMT	Photomultiplier
PID	Proportional Integral Derivative
PEC	Photo Electrochemical
PTFE	Polytetrafluoroethylene
PDF	Powder Diffraction File
PL	Photo Luminescence

RF	Radio Frequency
RVS	Raman Vibrational Spectroscopy
RMS	Root Mean Square
RT	Room Temperature
SS	Stainless Steel
SEM	Scanning Electron Microscopy
SPM	Scanning Probe Microscopy
STA	Simultaneous Thermal Analyzer
SCCM	Standard Cubic Centimeter Per Minute
STP	Standard Temperature and Pressure
SSCs	Solar Selective Coatings
TW	Terawatt
TG	Thermogravimetry
UV	Ultraviolet
VA	Vacuum Annealed
WHO	Word Health Organization
XRD	X-ray Diffraction
YM	Young's Modulus
μm	Micro Meter