

## LIST OF SYMBOL AND ABBREVIATION

Symbol or Abbreviation	Meaning
$A$	Surface area of deposition ( $\text{m}^2$ )
$e^-$	Electron
$E_0$	Reduction potential
$F$	Faraday's constant (Coulombs)
$F_L$	Lorentz Force
$i$	Current
$j$	Current density ( $\text{A m}^{-2}$ )
$\lambda$	Wavelength ( $\text{\AA}$ )
$m$	Mass electrodeposition
$W_{act}$	Actual weight
$W_{theo}$	Theoretical weight
$M$	Average molar mass ( $\text{g mol}^{-1}$ )
$MW$	Molecular weight
$r.t$	Room temperature
$n$	Number of electron
$\lambda$	Grain size (nm)
$t$	Electrodeposition time
$\theta$	Angle satisfying Bragg's law
$\emptyset$	Electrodeposition efficiency
BSE	Back scattered electrons
CE	Counter electrode
Cu	Copper
CV	Cyclic voltammetry
DC	Direct Current

EDX/ EDS	Energy dispersive X-ray microanalysis
FCC	Face centred tube
FWHM	Full-width half maximum
HER	Hydrogen evolution reaction
MSA	Methane Sulfonic Acid
RE	Reference electrode
Pb	Lead
SCE	Saturated calomel electrode
SEM	Scanning electron microscope
SEI	Secondary electron imaging
SHE	Standard hydrogen electrode
WDS	Wavelength dispersive X-ray spectroscopy
WE	Working electrode
XRD	X-ray diffraction