LIST OF SYMBOLS AND ABBREVIATIONS

nm	Nanometer (10^{-9} m)
e^-	Electron
n	Number of electron
E	Potential; V = volt
d^{-1}	Per decade
ΔV	Overall cell voltage
E_{cell}	Cell voltage
$E°_{cell}$	Standard cell voltage
ΔG	Gibbs free energy
$\Delta G°$	Standard Gibbs free energy
$\Delta G°^{\neq}$	Standard free energy of activation
μ	Chemical potential
$\mu°$	Standard chemical potential
16d	16 octahedral positions
8a	8 tetrahedral positions
R	Gas constant = 8.314 $Jmol^{-1}K^{-1}$
R_f	Roughness factor
T	Temperature
a	Activity/lattice parameter
P	Partial pressure/reaction order
ΔH	Standard enthalpy
$\Delta S°$	Standard entropy
η	Overpotential
$E°$	Standard electrode potential
b	Tafel slopes; mV
F	Faraday`s constant = 96485 $Cmol^{-1}$
E_p	Peak potential; mV
E_{Pa}	Anodic peak potential; mV
E_{Pc}	Cathodic peak potential; mV

E^o	Formal peak potential;mV
ΔE_p	Peak separation potential; mV
SCE	Saturated calomel electrode
E_{OCP}	Open circuit potential
j	Observed current density; $mAcm^{-2}$
j_a	Apparent current density.
j_0	Exchange current density
v	Rate of reaction
m	Molal concentration
M	Molarity; $g\ l^{-1}$
k	Boltzmann`s constant/rate constant
k°	Specific rate constant
h	Plank`s constant
iR	Ohmic drop
wt %	Weight percentage
S	Crystallite size
λ	Wave length of the radiation source; Å
B	Full width at half maximum of the intense peak in radians
β	Symmetry factor
α	Transfer coefficient
θ	Angle in degree
θ_T	Total surface coverage
θ_{OH}	Surface coverage by OH species
$\Delta H_{el}^{o\neq}$	Standard electrochemical enthalpy of activation
$\Delta S^{o\neq}$	Standard entropy of activation
$\Delta H^{o\neq}$	Standard enthalpy of activation
η_{O_2}	Oxygen overpotential
h	Hour
Å	Angstrom
C_{OH^-}	Concentration of OH^- ions
p	Reaction order

OER	Oxygen evolution reaction
rds	Rate determining step
CA-SG	Citric acid sol-gel method
EW-SG	Egg white sol-gel method
MA-SG-A	Malic acid sol-gel method at pH = 4.00
MA-SG-B	Malic acid sol-gel method at pH = 3.75
COP	Co-precipitation method