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ABBREVIATIONS AND SYMBOLS

FC	Fuel cell
PEFC	polymer electrolyte fuel cell
PEMFC	Proton exchange membrane fuel cell
PEFC	Polymer electrolyte fuel cell
DMFC	Direct methanol fuel cell
DEFC	Direct ethanol fuel cell
DFAFC	Direct formic acid fuel cell
PAFC	Phosphoric acid fuel cells
MCFC	Molten carbonate fuel cell
SOFC	Solid oxide fuel cell
PEM	Proton exchange membrane
CCM	Catalyst-coated membrane
PFSI	Perfluorosulfonate ionomer
PTFE	Polytetra-fluorethylene
Pt	Platinum
Pd	Palladium
Au	Gold
OCV	Open Circuit Voltage
FTIR	Fourier Transform Infrared Spectroscopy
TEM	Transmission Electron Microscopy
SAED	Selected Area Electron Diffraction

XRD	X-Ray Diffraction
EDX	Energy Dispersive X-ray Spectroscopy
CV	Cyclic Voltammetry
CA	Chronoamperometry
°C	Degree Celcius
M	Molar
E	Potential
V	Voltage
W	Watt
F	Faraday constant
kg L ⁻¹	Kilogram per Liter
i	Current intensity
A/g	Ampere per gram
mV s ⁻¹	millivolt per second
cm ⁻¹	Reciprocal centimeter
nm	Nanometer
NMNs	Noble Metal Nanomaterials
NPs	Nanoparticles
θ	Theta
CO _{ads}	Carbon monoxide adsorption
CO ₂	Carbon dioxide
THPC	tatrakis(hydroxymethyl)phosphonium chloride