

List of Abbreviations

Al	Aluminium
Al ₂ O ₃	Aluminium Oxide or alumina
AMZ	Alumina Magnesia Zirconia
BET	Brunauer-Emmet-Teller
C ₂ H ₄	Ethylene
C ₂ H ₄ O or CH ₃ CHO	Acetaldehyde
C ₂ H ₅ OH	Ethanol
Ce	Cerium
CeO ₂	Ceria
CH ₃ COCH ₃	Acetone
CH ₃ COOH	Acetic Acid
CH ₄	Methane
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
DM Water	Demineralized water
DSC-TG	Differential Scanning Calorimetry-Thermal Gravimetric
EDR	Ethanol Dry Reforming
ESR	Ethanol Steam Reforming
EtOH	Ethanol
FTIR	Fourier Transform Infrared Spectroscopy
GHSV	Gas Hourly Space Velocity
H ₂	Hydrogen
HRTEM	High Resolution Transmission Emission Spectroscopy
ICP-OES	Inductively Coupled Plasma Optical Emission spectroscopy
La	Lanthanum
La ₂ O ₃	Lanthana
MBOH	2-methyl-3-butyn-2-ol
MBYNE	3-methyl-3-buten-1-yne
Mg	Magnesium
MgAl ₂ O ₄	Magnesium Aluminate

MgO	Magnesium Oxide or magnesia
MiPK	3-Methyl-2-butanone or Methyl isopropyl ketone
m-ZrO ₂	Monoclinic Zirconium oxide
N ₂	Nitrogen
NH ₃ -TPD	Ammonia Temperature programmed Desorption
Ni	Nickel
Ni(0)	Nickel metal
NiAl ₂ O ₄	Nickel Aluminate
NiO	Nickel Oxide
O ₂	Oxygen
OSC	Oxygen Storage Capacity
P-XRD	Powder X Ray Diffraction
SMR	steam methane reforming
TOF	Turn over frequency
TPR	Temperature Programmed Reduction
t-ZrO ₂	Tetragonal Zirconium oxide
WGS	Water Gas Shift Reaction
WHSV	Wet Hour Space Velocity
XCO ₂	Conversion of Carbon Dioxide
XEtOH	Conversion of Ethanol
XRD	X ray Diffraction
Zr	Zirconium
ZrO ₂	Zirconium Oxide
°C	Degree Celsius
K	Degree Kelvin