

LIST OF ABBREVIATIONS

AC	Activated carbon
AKI	Antiknocking Index
ASAP	Accelerated Surface Area and Porosimetry System
ASTM	American Society for Testing and Materials
A _T	Total Acidity
BT	Benzothiophene
B/D	Barrel Per Day
MB/D	Million Barrel Per Day
BET	Brunauer-Emmett-Teller
Btu	British thermal unit
BS	Bharat Stage
C	Cubic
CAAA	Clean Air Act Amendment
CVD	Chemical vapor deposition
D _B	Bulk Density
DHA	Details Hydrocarbon Analyzer
D _P	Pore Diameter
EIA	Energy Information Administration
EPA	Environmental protection agency
EN	European Norm

EPEFE Technologies	European Program on Emission, Fuel and Engine
EPMA	Electron Probe Microscopic Analysis
ETBE	Ethyl Tertiary Butyl Ether
FBR	Fixed Bed Reactor
FCC	Fluid Catalytic Cracking
FID	Flame Ionization Detector
FTIR	Fourier Transform Infrared Spectroscopy
FWHM	Full Width Half-Maximum
GC	Gas Chromatography
GT	Hydro treated
HBEA	Hydrogen Beta Catalyst
HGL	Hydrothermal Gad Liquids
HMOR	Hydrogen Mordenite Catalyst
HPAs	Heteropoly Acids
HPW	Phosphotungstic Acid
IEO	International Energy Outlook
ICE	Internal Combustion Engine
IS	Indian Standard
M	Monoclinic
Max.	Maximum
Min.	Minimum
MMT	Million Metric Tones

MP	Melting Point
MOT	Moter Octane Number
MPA	Phosphomolybdic Acid
MSZ	Metal Promoted Sulphated Zirconia
MT	Methylthiophene
MT.	Million Ton
MTBE	Methyltertiarybutylether
MW	Molecular Weight
NA	Naphthalene
NAA	Neutron Activation Analysis
NLDFT	Non-Local Density Functional Theory
NO _x	Oxide of Nitrogen
OECD	Organization for Economic Co-operation and Development
PPM	Part Per Million
PPAC	Petroleum Planning Analysis Cell
PSD	Pore Size Distribution
RON	Research Octane Number
S	Sulphur
S _A	Surface Area
SCW	Supercritical Water
SEM	Scanning Electron Microscopy
SIMA	Society of Indian Automobile Manufacturers
SO _x	Oxide of Sulphur

Sp	Particle Size
SRGO	Straight Run Gas Oil
ST	Sulphated Titania
SZ	Sulphated Zirconia
SZG	Sulphated Zirconia Sol-gel Synthesis
SZM	Sulphated Zirconia Microwave Synthesis
SZP	Sulphated Zirconia Precipitation Method
SZT	Sulphated Zirconia Hydrothermal Synthesis
T	Tetragonal
TSA	Tungstosilicic Acid
TOF	Turn Over Frequency
TH	Thiophene
TEL	Tetraethyl lead
TEM	Transmission Electron Microscopy
TPD	Temperature Programmed Desorption
TPA	Tungstophosphoric acid
TPR	Temperature Programmed Reduction
TGA	Thermo -Gravimetric Analysis
ULP	Unleaded Petrol
US	United States
V _P	Pore Volume
WHSV	Weight Hourly Space Velocity
WZ	Tungsted Zirconia

XRD	X-Ray Diffraction
Z	Zirconia
ZG	Zirconia Sol-gel Synthesis
ZM	Zirconia Microwave Synthesis
ZP	Zirconia Precipitation Method
ZT	Zirconia Hydrothermal Synthesis