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LIST OF SYMBOLS AND ABBREVIATIONS

Symbols

Å	-	Angstrom
β	-	Beta
°C	-	Degree Celsius
δ	-	Delta
C ₆₀	-	Fullerenes
λ	-	Lambda (Wavelength)
μ	-	Mu
ω	-	Omega
%	-	Percentage
π	-	Pi
φ	-	Si (Potential function)
σ	-	Sigma
θ	-	Theta

Abbreviations

AlPOs	-	Aluminophosphates
ASTM	-	American Society for Testing and Materials
a.u.	-	Arbitrary Units
AFM	-	Atomic Force Microscopy
BJH	-	Barrett-Joyner-Halenda
BET	-	Brunauer-Emmet-Teller
CNFs	-	Carbon Nanofibers
CNTs	-	Carbon Nanotubes

CCVD	-	Catalytic Chemical Vapour Deposition
cm	-	Centimeter
CTAB	-	Cetyltrimethylammonium Bromide
CVD	-	Chemical Vapour Deposition
CPP	-	Critical Packing Parameters
CMC	-	Critical Micelle Concentration
cc/g	-	Cubic centimeter per gram
cm ³ /g	-	Cubic centimeter per gram
DRS-UV	-	Diffuse Reflectance Ultra Violet-Visible Spectroscopy
D-band	-	Disorder band
DTG	-	Derivative Thermogravimetry
DWCNTs	-	Double-Walled Carbon Nanotubes
eV	-	Electron Volt
C ₂ H ₅ OH	-	Ethanol
FT-IR	-	Fourier Transform Infrared
f-MWCNTs	-	Functionalised Multi-Walled Carbon Nanotubes
g	-	Gram
G-band	-	Graphitic band
HMS	-	Hexagonal Mesoporous Silica
h	-	Hour
HCl	-	Hydrochloric acid
HF	-	Hydrofluoric acid
IUPAC	-	International Union of Pure and Applied Chemistry
K	-	Kelvin
kV	-	Kilo Volt
KIT	-	Korean Institute of Technology
LCT	-	Liquid Crystal Template
MgO	-	Magnesium oxide

MPa	-	Megapascal
μm	-	Micrometer
mg	-	Milligram
mL/min	-	Millilitre per minute
mm	-	Millimeter
min	-	Minute
MCM	-	Mobil Composition Matter
M	-	Molar
MWCNTs	-	Multi-Walled Carbon Nanotubes
nm	-	Nanometer
NT	-	Nanotube
n-BuOH	-	n-Butyl alcohol
NMR	-	Nuclear Magnetic Resonance
HNO_3	-	Nitric acid
N	-	Normality
CMK	-	Ordered Mesoporous Carbon
cm^{-1}	-	Per centimeter
P123	-	Poly (ethylene glycol)-block-poly (propylene glycol)- block-poly (ethylene glycol)
PSD	-	Pore Size Distribution
KBr	-	Potassium bromide
PID	-	Process Integral Derivative
RBM	-	Radial Breathing Mode
SBA	-	Santa Barbara Amorphous
SEM	-	Scanning Electron Microscope
STM	-	Scanning Tunnelling Microscope
s	-	Second
Si/M	-	Silicon to Metal ratio
SWCNTs	-	Single-Walled Carbon Nanotubes

SWNHs	-	Single-Walled Nanohorns
m ² /g	-	Square metre per gram
STP	-	Standard Temperature Pressure
H ₂ SO ₄	-	Sulphuric acid
TEOS	-	Tetraethylorthosilicate
TGA	-	Thermogravimetric Analysis
TEM	-	Transmission Electron Microscope
UTM	-	Universal Testing Machine
wt. %	-	Weight percentage
XRD	-	X-ray Diffraction
ZSM	-	Zeolite Socony Mobil