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Lists of abbreviations

DNA	Deoxyribonucleic acid
nm	Nanometer
m	Meter
AD	Anno Domini
STM	Scanning tunnelling microscope
TEM	Transmission electron microscopy
SFM	Scanning force microscope
AFM	Atomic tunnelling microscope
0-D	Zero-dimensional
1-D	One-dimensional
2-D	Two-dimensional
3-D	Three-dimensional
NPs	Nanoparticles
PVA	Polyvinylalcohol
UV	Ultraviolet
IR	Infrared
Pd NPs	Palladium nanoparticles
CuO NPs	Copperoxide nanoparticles
mmol	Milimole
XRD	X-ray diffraction technique
PXRD	Powder X-ray diffraction
EDS or EDAX	Energy dispersive X-ray spectroscopy

HRTEM	High resolution transmission electron microscopy
SPM	Scanning probe microscopy
FT-IR	Fourier-transform infrared spectroscopy.
C-C	Carbon-carbon
C-Heteroatom	Carbon-heteroatom
C-N	Carbon-nitrogen
Pd-NHC	Palladium-*N*-heterocyclic carbene
NHC	*N*-heterocyclic carbene
DAPCy	Trans-bis(dicyclohexylamine)palladiumacetate.
DABCO	1,4-Diazabicyclo[2.2.2]octane.
TPPTS	Tris(3-sulfophenyl)phosphine trisodium salt.
TMEDA	Tetramethylethylenediamine
TEMPO	2,2,6,6-tetramethylpiperidinyl-1-oxyl
CuFAP	Copper fluoroapatite
br	Broad
d	Doublet
BET	Branauer-Emmett-Teller
^{1}H	Proton
J	Coupling constant
m	Multiplet
NMR	Nuclear magnetic resonance

PEG	Polyethylene glycol
t	Triplet
TLC	Thin Layer Chromatography
TMS	Tetramethylsilane
SPR	Surface Plasmon Resonance
rt	Room temperature
wt%	Weight percentage
h	Hour
M	Molarity
ml	Mililiter
MHz	Megahertz
^{13}C	Carbon
kV	Killovolt
rpm	Revolutions per minute
IP	Isopropanol
SAED	Selected area (electron) diffraction
ppm	Parts per million
δ	Chemical Shift
-Me	Methyl
-OMe	Methoxy
-CHO	Formyl
$-COCH_3$	Acetyl
MeOH	Methanol

TGA	Thermogravimetric analysis
XPS	X-ray photoelectron spectroscopy
DE	Diatomaceous earth
DMF	Dimethylformamide
THF	Tetrahydrofuran
BJH	Barrett–Joyner–Halenda
Å	Angstrom
JCPDS	Joint Committee on Powder Diffraction Standards
%	Percentage
g	Gram