

## List of abbreviation

<b>Abbreviation</b>	<b>Full form</b>
$2\theta$	Diffraction Angle
4-ABN	4-Aminobenzonitrile
4-AP	4-Aminophenol
4-NP	4-Nitrophenol
$\delta$	Chemical Shift
a.u.	Atomic Unit
Å	Ångström
$A_0$	Initial Absorbance
$A_t$	Absorbance at time “t”
°C	degree Celsius
cm	centimeter
$\text{cm}^{-1}$	Wavenumber
g	Gram
k	Rate Constant
K	Kelvin
m	Meter
mg	Milligram
min	Minute
ml	Milliliter
m/z	atomic mass units per charge
<i>m</i> -NA	<i>meta</i> -Nitroarene
<i>o</i> -NA	<i>ortho</i> -Nitroaniline
<i>p</i> -MNA	<i>para</i> -Methoxy nitroarene
<i>p</i> -NA	<i>para</i> -Nitroaniline
<i>p</i> -PD	<i>para</i> -Phenylenediammine
ppm	Parts Per Million
$P/P_0$	Relative pressure
s	Second

AAS	Atomic Absorption Spectroscopy
aq	Aqueous
BET	Brunauer-Emmet-Teller
BzCl	1,3,5-Benzenetricarbonyl trichloride
CAE	Constant Analyzer Energy
CIF	Covalent Imidazole Framework
CMP	Conjugated Microporous Polymer
COF	Covalent Organic Framework
COP	Covalent Organic Polymer
CPM	Carbon Porous Material
CP-MAS NMR	Cross-Polarization Magic Angle Spinning Nuclear Magnetic Resonance
Cu(OAc) <sub>2</sub>	Copper(II) acetate
DCM	Dichloromethane
DFT	Density Functional Theory
DMSO	Dimethyl Sulfoxide
EDS	Energy Dispersive Spectroscopy
EDX	Energy Dispersive X-ray
ESI	Electrospray Ionization
FE-SEM	Field Emission Scanning Electron Microscope
FT-IR	Fourier Transformation Infra-red
GC-MS	Gas Chromatography-Mass Spectroscopy
HPLC	High-Performance Liquid Chromatography
HR-TEM	High Resolution Transmission Electron Microscope
ICP	Inductively coupled plasma
Int	Intermediate
MAS-NMR	Magic Angle Spinning Nuclear Magnetic Resonance

MOF	Metal Organic Framework
NCI	Non-covalent Interaction
NMR	Nuclear Magnetic Resonance
O <sup>t</sup> Bu	tert-Butyl oxy
PAF	Porous Aromatic Framework
PCM	Porous Carbon Material
PICP	Porous Ionic Copolymer
PIM	Polymer of Intrinsic Microporosity
POP	Porous Organic Polymer
PPF	Porous Polymer Framework
Prod	Product
PXRD	Powder X-ray Diffraction
QTAIM	Quantum Theory of Atoms In Molecules
RH	Relative Humidity
SAPT	Symmetry Adapted Perturbation Theory
SEM	Scanning Electron Microscope
SEM-EDS	Scanning Electron Microscope Energy Dispersive Spectroscopy
ssNMR	Solid State Nuclear Magnetic Resonance
TAPPy	2,4,6-Tris(4-aminophenyl)pyridine
TAPT	2,4,6-Tris(4-aminophenyl)-1,3,5-triazine
TBHP	tert-Butyl hydroperoxide
TEA	Triethylamine
TEM	Transmission Electron Microscope
TEMPO	2,2,6,6-Tetramethyl-1-piperidinyloxy
TGA	Thermogravimetric Analysis
THF	Tetrahydrofuran
TLC	Thin Layer Chromatography
TNPP	2,4,6-Tris(4-nitro)pyridine
Triflic acid	Trifluoromethane sulfonic acid
TS	Transition State