

## LIST OF ABBREVIATION AND SYMBOLS

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%	percentage
% T	transmittance percentage
°	degree
°C	degree centigrade
ASTM	American Society for Testing and Materials
BD	1,4-butandiol
bis-MPA	2,2-Bis(hydroxymethyl)propionic acid
BPA	bisphenol A
CD	carbon dot (s)
cm	centimeter(s)
CNT	carbon nanotubes
COD	chemical oxygen demand
d	interlayer distance
DB	degree of branching
DP	degree of polymerization
DMAc	<i>N,N</i> -dimethylacetamide
DMF	<i>N,N</i> -dimethylformamide
DMSO	dimethyl sulfoxide
DSC	differential scanning calorimetry
EMI	electromagnetic interference shielding
EtOH	ethanol
eV	electronvolt
F	Faraday
f-GO	functionalized graphene oxide
FTIR	fourier transform infrared
g	gram(s)
GO	graphene oxide
GPa	giga pascal
GPC	gel permeation chromatography
h	hour(s)
HBGE	glycerol based hyperbranched epoxy

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HBGP	glycerol based hyperbranched polyol
HPE	hyperbranched polyester(s)
HRTEM	high resolution transmission electron microscope
Hz	hertz
IR	infrared
J	Joule
k	rate constant
$k_1$	pseudo first order rate constant
$k_2$	pseudo second order rate constant
$k_F$	Freundlich constants
kg	kilogram(s)
kJ	kilojoule
$k_L$	Equilibrium Langmuir constant
kPa	kilopascal
kV	kilovolt
m	meter(s)
MB	methylene blue
min	minute(s)
mL	milli litre(s)
mm	milli meter(s)
mmol	milimole
MO	Methyl orange
mol	mole(s)
MPa	megapascal
MW	microwave
MWCNT	multiwalled carbon nanotube
n	order of diffraction
N	Newton
nm	nanometer
NMR	nuclear magnetic resonance
OD	optical density
OMMT	organically modified montmorillonite
PAA	poly(amidoamine)

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Pas	pascal second
PEG	poly(ethyleneglycol)
PET	poly(ethyleneterephthalate)
PL	photoluminescence
$q_e$	adsorption capacity
QY	quantum yield
R	correlation coefficient
RBC	red blood cells
RGO	reduced graphene oxide
RhB	rodamine blue
s	second(s)
SAED	selected area electron diffraction
SEM	scanning electron microscope
TDI	2,6-toluene diisocyanate
TEM	transmission electron microscope
$T_g$	glass transition temperature
TG	thermogravimetric
TGA	thermogravimetric analysis
THF	tetrahydrofuran
TLC	thin layer chromatography
$T_m$	melting temperature
TMS	tetramethylsilane
UTM	universal testing machine
UV	ultraviolet
V	volume of the solution
VOC	volatile organic compounds
W	watt (s)
WHPE	water dispersible hyperbranched polyester
WHBP	water soluble hyperbranched polyester
wt	weight
XRD	X-ray diffraction
$\delta$	chemical shift
$\theta$	diffraction angle

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$\lambda$	wavelength
$\mu\text{g}$	micro gram(s)
$\mu\text{L}$	micro liter(s)
$\mu\text{m}$	micro meter(s)

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