CONTENT OF THE THESIS

Chapter 5

HPU/sulfur nanoparticles decorated RGO nanocomposite as an antimicrobial smart material

LIST OF ABBREVIATIONS AND SYMBOLS

%	percentage
°	degree
°C	degree centigrade
ASTM	American Society for Testing and Materials
ATCC	American type culture collection
BD	1,4-butandiol
cm	centimeter(s)
CNT	carbon nanotubes
DMAc	*N*,*N*-dimethylacetamide
DMF	*N*,*N*-dimethylformamide
DMSO	dimethyl sulfoxide
DSC	differential scanning calorimetry
eV	electronvolt
F	Faraday
f-RGO	Functionalized reduced graphene oxide
FTIR	Fourier transform infrared
g	gram(s)
GO	graphene oxide
h	hour(s)
HPU	hyperbranched polyurethane(s)
HRTEM	high resolution transmission electron microscope
Hz	hertz
IO	iron oxide nanoparticles
IR	infrared
J	Joule
kg	kilogram(s)
kV	kilovolt
LSD	least significant difference
m	meter(s)
MB	methylene blue
MIC	minimum inhibitory concentration

min	minute(s)
mL	milli litre(s)
mm	milli meter(s)
mol	mole(s)
MPa	megapascal
MW	microwave
MWCNT	multiwalled carbon nanotube
N	Newton
nm	nanometer
NMR	nuclear magnetic resonance
OMMT	organically modified montmorillonite
Pas	pascal second
PCL	poly(ε-caprolactone)diol
PU	polyurethane
RGO	reduced graphene oxide
s	second(s)
S	Siemens
SAED	selected area electron diffraction
SCP	self-cleaning polymer (s)
SEM	scanning electron microscope
SERS	surface-enhanced Raman spectroscopy
SHP	self-healing polymer (s)
SME	shape memory effect
SMP	shape memory polymer (s)
SP	semiconductor photocatalyst
SRGO	sulfur nanoparticles decorated reduced graphene oxide
SWCNT	single walled carbon nanotube
T_c	crystalline temperature
TDI	2,4/2,6-toluene diisocyanate
TEM	transmission electron microscope
T_g	glass transition temperature
TGA	thermogravimetric analysis
THF	tetrahydrofuran

T_m	melting temperature
TMS	Tetramythylsilane
UTM	universal testing machine
UV	ultraviolet
W	watt (s)
wt	weight
XRD	X-ray diffraction
δ ppm	chemical shift
μg	micro gram(s)
μL	micro liter(s)
μm	micro meter(s)