

LIST OF ABBREVIATIONS AND SYMBOLS

AICS	: Alternating Current Impedance Spectroscopy
AC	: Alternating Current
CNT	: Carbon Nanotube
CSNPs	: Core-Shell Nanoparticles
CTAB	: Cetyl Trimethyl Ammonium Bromide
CMS	: Core–multi–shell
DOX	: Doxorubicin
EB	: Exchange Bias
EPR/ESR	: Electron Paramagnetic Resonance/Electron Spin Resonance
EM	: Electromagnetic
EDS	: Energy Dispersive X-ray Spectroscopy
emu	: Electromagnetic Unit
eV	: Electron Volt
E_g	: Band Gap Energy
g	: Gram
h	: Plank’s Constant
HRTEM	: High Resolution Transmission Electron Microscope
I	: Current
JCPDS	: Joint Committee Powder Diffraction System
LBL	: Layer-by-Layer
MRI	: Magnetic Resonance Imaging
M	: Mole
min	: Minutes
NCs	: Nanocrystals
NPs	: Nanoparticles
PNCs	: Polymer Nanocomposites
PEG	: Polyethylene Glycol

PPy	: Polypyrrole
PS-b-PAA	: Polystyrene-b-Poly (Acrylic Acid)
QDs	: Quantum Dots
RT	: Room Temperature
rpm	: Rotations Per Minute
SAED	: Selected Area Electron Diffraction
SEM	: Scanning Electron Microscopy
TEM	: Transmission Electron Microscopy
T_c	: Curie Temperature
UV	: Ultra Violet
VSM	: Vibrating Sample Magnetometer
XRD	: X-ray Diffraction
λ	: Wavelength of Light
2θ	: Bragg's Angle
T_1	: Spin-Lattice Relaxation
T_2	: Spin-Spin Relaxation
ϵ	: Dielectric Constant
N_S	: Number of Unpaired Spins
ΔH_{pp}	: Peak-to-Peak Linewidth
γ	: Gyromagnetic Ratio
μ_B	: Bohr Magnetron