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## LIST OF SYMBOLS AND ABBREVIATIONS

### Symbols

$\beta$ -TCP	-	$\beta$ -Tricalcium Phosphate
Å	-	Angstrom
a.u	-	Arbitrary Unit
A	-	Area
°	-	Degree
$\epsilon_r$	-	Dielectric Constant
$\epsilon_0$	-	Dielectric Constant for free Space
$\mu$ L	-	Microliter
$\mu$ m	-	Micrometer
%	-	Percentage
$\lambda$	-	Wavelength

### Abbreviations

ACD	-	Acid Citrate Dextrose
ASTM	-	American Society for Testing and Materials
ACP	-	Amorphous Calcium Phosphate
AMX	-	Amoxicillin
AFM	-	Atomic Force Microscope
BET	-	Brunauer-Emmett-Teller
CaP	-	Calcium Phosphate
C <sub>p</sub>	-	Capacitance
C	-	Celsius

cm	-	Centimeter
H <sub>c</sub>	-	Coercivity
CFU	-	Colony Forming Unit
CD	-	Cytosine Deaminase
DC	-	Defluoridation Capacity
DMSO	-	Dimethyl Sulfoxide
DMEM	-	Dulbecco's Modified Eagle's Medium
DLS	-	Dynamic Light Scattering
emu	-	Electro Magnetic Units
EDS	-	Energy Dispersive X-ray Spectrum
<i>E. coli</i>	-	<i>Escherichia coli</i>
EDTA	-	Ethylene Diamine Tetra Acetic acid
FB	-	Fetal Bovine serum
FE-SEM	-	Field Emission Scanning Electron Microscope
FTIR	-	Fourier Transform Infra-Red
FWHM	-	Full Width at Half Maximum
GPa	-	Giga Pascal
GIXRD	-	Glancing Incident X-ray Diffraction
g	-	Gram
H <sub>z</sub>	-	Hertz
h	-	Hour
HAp	-	Hydroxyapatite
ICP-OES	-	Inductively Coupled Plasma Optical Emission Spectrometer
JCPDS	-	Joint Commission on Powder Diffraction Standards
K	-	Kelvin
keV	-	Kilo Electron Volt
MTT	-	3-(4,5-diMethylThiazol-2-yl)-2,5-diphenylTetrazolium bromide



MRI	-	Magnetic Resonance Imaging
$M_s$	-	Magnetization
MAUD	-	Material Analysis Using Diffraction
MeV	-	Mega Electron Volt
MPa	-	Mega Pascal
mg	-	Milligram
mL	-	Milliliter
mm	-	Millimeter
min	-	Minute
M	-	Molar
MHA	-	Mueller Hinton Agar
nm	-	Nanometre
NCCS	-	National Centre for Cell Science
OD	-	Optical Density
PSD	-	Particle Size Distribution
ppm	-	Parts Per Million
PBS	-	Phosphate Buffer Saline
PDI	-	Poly Dispersity Index
PLGA	-	Poly Lactic-co-Glycolic Acid
PLA	-	PolyLactic Acid
PMMA	-	PolyMethyl MethAcrylate
KBr	-	Potassium Bromide
psi	-	Pounds Per Square Inch
$M_r$	-	Retentivity
RMS	-	Root Mean Square
rpm	-	Rotation Per Minute
SEM	-	Scanning Electron Microscope
S	-	Second
Si	-	Silicon

SBF	-	Simulated Body Fluid
<i>S. aureus</i>	-	<i>Staphylococcus aureus</i>
<i>S. epidermidis</i>	-	<i>Staphylococcus epidermidis</i>
SRIM	-	Stopping and Ranging of Ions in Matter
SHI	-	Swift Heavy Ion
TEM	-	Transmission Electron Microscope
TRIM	-	Transport of Ions in Matter
UV	-	Ultra Violet
UHMWPE	-	UltraHigh Molecular Weight Polyethylene
VSM	-	Vibrating Sample Magnetometer
H <sub>v</sub>	-	Vickers Hardness
W	-	Watt
wt	-	Weight
WHO	-	World Health Organization
XRD	-	X-Ray Diffraction
XRDA	-	X-ray Diffraction Analysis