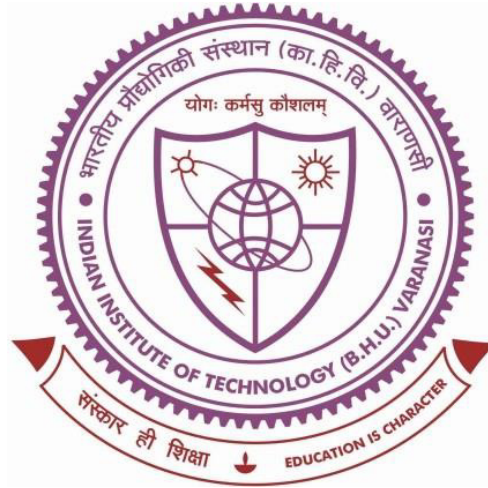


# Synthesis and Characterization of Hydroxyapatite From Waste Natural Resources



Thesis submitted in partial fulfillment for the  
Award of Degree  
Doctor of Philosophy

By

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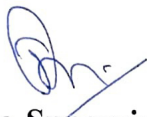
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# LIST OF ABBREVIATIONS/SYMBOLS

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Symbol	:	Meaning
$\mu$	:	Coefficient of friction
$^{\circ}\text{C}$	:	Degree Celsius
$\rho$	:	Density
$\text{\AA}$	:	Angstrom
SEM	:	Scanning electron microscopy
BTSEM	:	Bench Top Scanning electron microscopy
XRD	:	X-ray diffraction
FTIR	:	Fourier Transform Infrared Spectroscopy
EDS	:	Energy-dispersive X-ray spectroscopy
ICPMS	:	Inductively coupled plasma mass spectrometry
AFM	:	Atomic force microscopy
HRN	:	Vickers Hardness Number
MCS	:	Maximum Compressive Strength
CA	:	Contact Angle
SFE	:	Surface free energy
HAp	:	Hydroxyapatite
PMMA	:	Poly (Methyl Methacrylate)
Ag	:	Silver
HAPAg	:	Silver-doped Hydroxyapatite
AgNO <sub>3</sub>	:	Silver Nitrate
NaOH	:	Sodium Hydroxide
g	:	Gram
h	:	Hour
$\theta$	:	Incident angle
$2\theta$	:	Two- theta
n	:	Integer representing order of the diffraction

d	:	Interplanar spacing
K	:	Kelvin
MPa	:	Mega Pascal
GPa	:	Giga Pascal
$\mu\text{m}$	:	Micrometer
min	:	Minute
N	:	Normal load
%	:	Percentage
rpm	:	Revolution per minute
mL	:	Millilitre
m	:	Sliding distance
s	:	Sec
T	:	Temperature
V	:	Volume loss
$\lambda$	:	Wavelength of the X-ray
K	:	Wear coefficient
W	:	Wear volume loss
wt.%	:	Weight percentage
Sq	:	Root mean square roughness (3D)
Sa	:	Average surface roughness (3D)
Rq	:	Root mean square roughness (2D)
Ra	:	Average surface roughness (2D)
APS	:	Average particle size

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