FABRICATION AND TRIBOLOGICAL CHARACTERIZATION OF Ni ALLOY-BASED SELF-LUBRICATING HYBRID COMPOSITES

Thesis submitted in partial fulfillment for the Award of Degree

Doctor of Philosophy

By

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2D	:	Two dimensional
CMCs	:	Ceramic Matrix Composites
CoF	:	Coefficient of friction
EDS	:	Energy Dispersive X-ray Spectroscopy
FESEM	:	Field Emission Scanning Electron Microscopy
FTIR	:	Fourier-Transform Infrared Spectrometer
g	:	Gram
h-BN	:	Hexagonal Boron Nitride
hr	:	Hour
HV	:	Vickers Hardness
kHz	:	Frequency
min	:	Minute
mm^3/Nm	:	Wear Rate
MMCs	:	Metal Matrix Composites
mL/min	:	Flow Rate
mL	:	Millilitres
MPa	:	Mega Pascal
m/s	:	Sliding Speed
mg/mL	:	Milligram per millilitre
N	:	Normal Load
Ni-*h*-BN	:	Ni-Doped Hexagonal Boron Nitride
Ni-rGO	:	Ni-Doped Reduced Graphene Oxide
P/M	:	Powder Metallurgy
PMCs	:	Polymer Matrix Composites
rpm	:	Revolution Per minute
rGO	:	Reduced Graphene oxide
RT	:	Room Temperature
S	:	Sliding Distance
SAED	:	Selected Area Electron Diffraction
SEM	:	Scanning Electron Microscopy
SPS	:	Spark Plasma Sintering

TEM	:	Transmission Electron Microscope
wt.%	:	Weight Percentage
XPS	:	X- Ray Photoelectron Spectroscopy
XRD	:	X- Ray Diffraction
°C	:	Degree Celsius
°C/min	:	Heating Rate
%	:	Percentage
μm	:	Micrometre
λ	:	Wavelength of the X-Ray
θ	:	Incident Angle
γ	:	Gamma