

## LIST OF SYMBOLS/ABBREVIATIONS

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### Symbols

$\mu$	:	Coefficient of friction
$\mu_a$	:	Adhesive coefficient of friction
$\mu_d$	:	Coefficient of friction due to deformation
$\tau$	:	Shear strength of junction
$A_a$	:	Apparent area of contact
$A_r$	:	Real area of contact
$F_a$	:	Adhesive component of friction force
$F_d$	:	Deformation component of force
$H$	:	Initial hardness of the softer material
$K$	:	Kurtosis
$R_a$	:	Arithmetic average
$R_p$	:	Maximum peak height
$R_{pm}$	:	Average peak-to-mean height
$R_q$	:	Root mean square
$R_t$	:	maximum peak-to-valley height
$R_v$	:	Maximum valley depth
$R_z$	:	Average peak-to-valley height
$S_k$	:	Skewness

### Abbreviations

2D	:	Two dimensional
AFM	:	Atomic force microscope
APCVD	:	Atmospheric pressure chemical vapour deposition

BU	:	Bottom-up
CNTs	:	Carbon nanotubes
COF	:	Coefficient of friction
CVD	:	Chemical vapour deposition
DI	:	Deionised
EDS	:	Energy-dispersive X-ray spectroscopy
FIB	:	Focused ion beam
GNPs	:	Graphene nanoplatelets
GO	:	Graphene oxide
HL	:	Hysteresis loop
HRTEM	:	High-resolution transmission electron microscope
LPCVD	:	Low-pressure chemical vapor deposition
MACs	:	Multialkylated cyclopentanes
MCD	:	Micro-crystalline diamond
MGO	:	Modified graphene oxide
RPM	:	Revolution per minute
SCCM	:	Standard cubic centimeters per minute
SEM	:	Scanning electron microscope
SS	:	Stainless steel
TD	:	Top-down
TEM	:	Transmission electron microscopy
UHVCVD	:	Ultra-high vacuum chemical vapour deposition
XPS	:	X-ray photoelectron spectroscopy