

LIST OF SYMBOLS

A	Surface area
B	True peak broadening
D	Diameter of the particle
F	Tangential force
G	Shear modulus
H	Hardness
K	Strength coefficient
L	Sliding distance
S	Shear strength
W	Applied load
A_r	Real contact area
B_{observed}	Observed peak broadening
B_{instrument}	Instrumental broadening
a	Lattice constant
b	Burger's vector
d	Crystallite size
d_g	Average grain size
k	Wear coefficient
m	Mass of composite in air
m₁	Mass of composite in distilled water
n	Strain hardening exponent
k_y	Hall-Petch Coefficient
k_w	Constant
V_f	Volume fraction of the particles
V_m	Volume fraction of matrix
V_r	Volume fraction of reinforcement
ρ	Dislocation density
ρ_c	Density of composite
ρ_w	Density of distilled water
ρ_{th}	Theoretical density

ρ_{exp}	Experimental density
ρ_{m}	Density of matrix
ρ_{r}	Density of reinforcement
V_{r}	Volume fraction of reinforcement
ρ_{w}	Density of distilled water
ε	Lattice strain
λ	Wavelength
λ_{e}	Edge to edge particle spacing
θ_{B}	Bragg angle
x_{f}	Fractional concentration of foreign atoms
$\Delta\sigma_{\text{Orowan}}$	Contribution of Orowan strengthening mechanism
$\Delta\sigma_{\text{dislocation}}$	Contribution of dislocation strengthening mechanism
$\Delta\sigma_{\text{grain-refined}}$	Contribution of grain refinement strengthening mechanism
$\Delta\sigma_{\text{solid-solution}}$	Contribution of solid-solution strengthening mechanism
μ	Coefficient of friction
μ_{a}	Adhesion component of friction
μ_{plow}	Ploughing component of friction
μ_{d}	Deformation component of friction
μ_{part}	Particle contribution to friction
σ	True stress
ε_{p}	True plastic strain