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ABBREVIATIONS

| | |
|----------------|---|
| QC | Quasicrystal |
| HEA | High Entropy Alloy |
| MMC | Metal Matrix Composite |
| AMC | Aluminium Matrix Composite |
| IQC | Icosahedral Quasicrystal |
| NC | Nanocomposite |
| HP | Hot Pressing |
| VHP | Vacuum Hot Pressing |
| CP | Cold Pressing |
| CIP | Cold Isostatic Pressing |
| BCC | Body Centered Cubic |
| OM | Optical Microscopy |
| DSC | Differential Scanning Calorimeter |
| EDS/EDX | Energy Dispersive X- ray Spectroscopy |
| FCC | Face Centered Cubic |
| FSP | Friction Stir Processing |
| SFSP | Submerged Friction Stir Processing |
| HADDF | High Angle Annular Dark Field |
| HIP | Hot Isostatic Pressing |
| HE | Hot Extrusion |
| HRTEM | High Resolution Transmission Electron Microscopy |
| MA | Mechanical Alloying |
| MM | Mechanical Milling |
| HEM | High Energy Ball Milling |
| HT | Heat Treatment |
| PCA | Process Control Agent |
| SEM | Scanning Electron Microscopy |
| SLM | Selective Laser Melting |
| SPS | Spark Plasma Sintering |

| | |
|-------------|--|
| STEM | Scanning Transmission Electron Microscopy |
| TEM | Transmission Electron Microscopy |
| VEC | Valence Electron Concentration |
| VIM | Vacuum Induction Melting |
| VAM | Vacuum Arc Melting |
| XRD | X-Ray Diffraction |

SYMBOLS

| | |
|--------------------------------------|----------------------------|
| A | Lattice Parameter |
| β | Beta |
| $^{\circ}\text{C}$ | Degree Centigrade |
| K | Kelvin |
| N | Newton |
| Pa | Pascal |
| MPa | Megapascal |
| GPa | Gigapascal |
| θ | Theta |
| Ψ | Chi |
| δ | Delta |
| Ω | Omega |
| m | Meter |
| μm | Micrometer (micron) |
| nm | Nanometer |
| at% | Atomic Percent |
| wt% | Weight Percent |
| mm | Millimeter |
| g | Gram |
| l | Litre |
| ml | Millitre |
| J | Joule |
| cm | Centimeter |
| h | Hour |
| min | Minute |
| s | Second |
| R | Ideal Gas Constant |
| < | Less than |
| > | Greater than |

σ

Å

λ

HV

Sigma

Angstrom

Wavelength

Vickers Hardness