
Supplementary Material

**EFFECTS OF FUSED SILICA ADDITION ON THERMAL EXPANSION,
DENSITY AND HARDNESS OF ALUMIX-231 BASED METAL MATRIX
COMPOSITES**

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XRPD of pellets MMC-5 vol.% of fused silica, sintered at 565 and 575 °C.

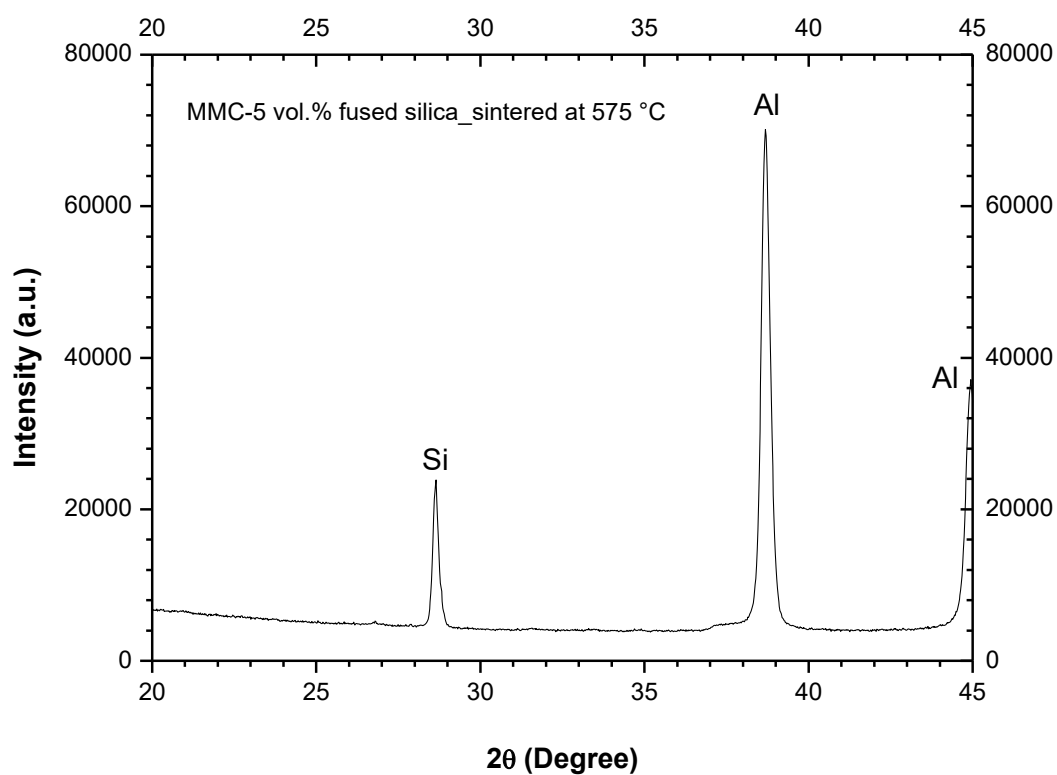
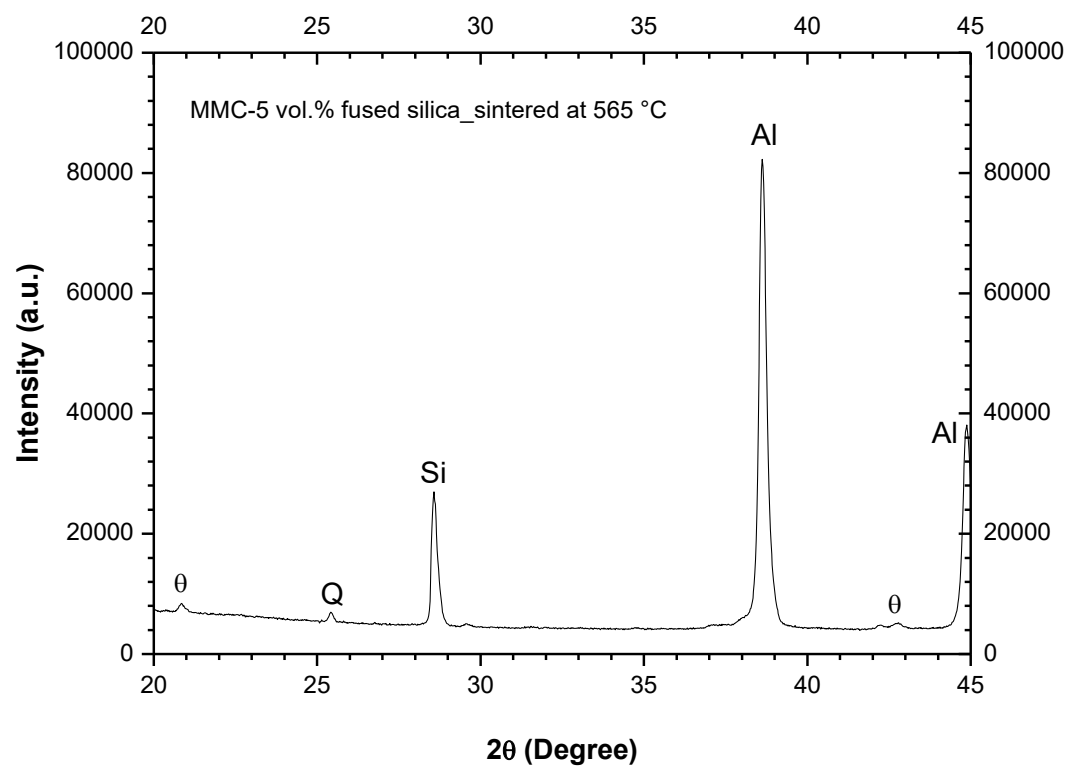


Figure S1: XRPD patterns of MMC-5 vol.%, sintered at 565 and 575 °C.

Thermomechanical properties.

Table S1: Thermomechanical properties of Alumix-231 and fused silica.

Material	Young modulus (GPa)	Shear modulus (GPa)	Bulk modulus (GPa)	Poisson coefficient	Coefficient of thermal expansion ($\times 10^{-6} \text{ } ^\circ\text{C}^{-1}$)	Density (g/cm^3)
Alumix-231	83 [12]	31.13 ^a	83.00 ^b	0.33	18.50 [13]	2.668 [20] / 2.634 [12]
Fused silica	72 [24]	31.00 ^a	41.00 ^b	0.17	0.54 [22]	2.250 [23]

a,b—calculated using the relationships between elastic constants.