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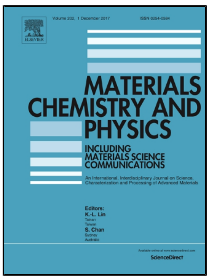

Microstructures and mechanical properties of TiB_2-based composites with self-grown carbon nanotubes synthesized using Co catalysts

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CNTs toughened TiB_2-based ultra-high temperature ceramics were synthesized in situ.

The flexural strength and fracture toughness were enhanced to 987±42 MPa and 12.4±0.5 $MPa \cdot m^{1/2}$.

The reinforcing mechanisms were crack deflection, crack bridging, CNTs debonding and pull-out.