

Multi-scale investigation of superior mechanical properties in nitride ceramics with negative stacking fault energy

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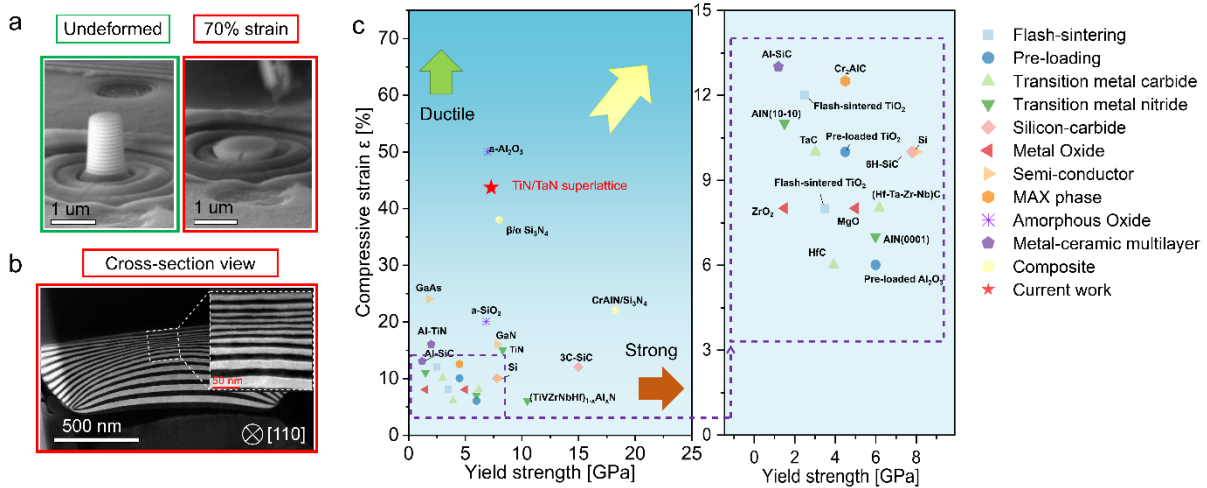


Fig.1 (a) Scanning electron microscopy images of an undeformed pillar and its post-compression state with $\epsilon_c \approx 70\%$. (b) Cross-section view high-angle annular dark field scanning TEM image of the compressed pillar with $\epsilon_c \approx 70\%$ (c) Recently reported maximum strain without cracking and yield strength of ceramics and semiconductor materials measured by micropillar compression at room temperature.

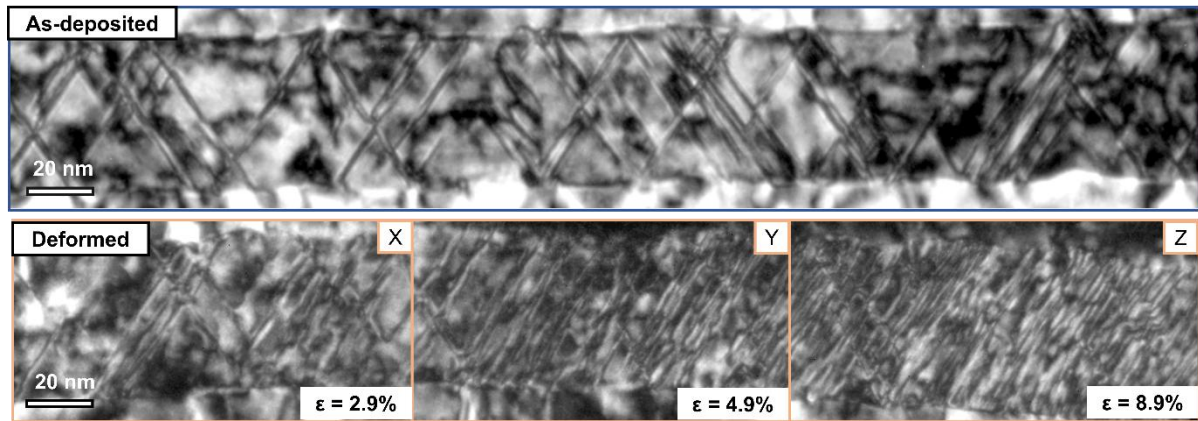


Fig. 2. Bright field TEM images of as-deposited TaN and deformed TaN along [110] zone axis.