

Supporting information

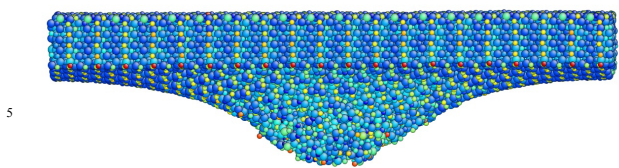


Fig.11 Snapshot of indentation process of five layers of β - Si_3N_4 films

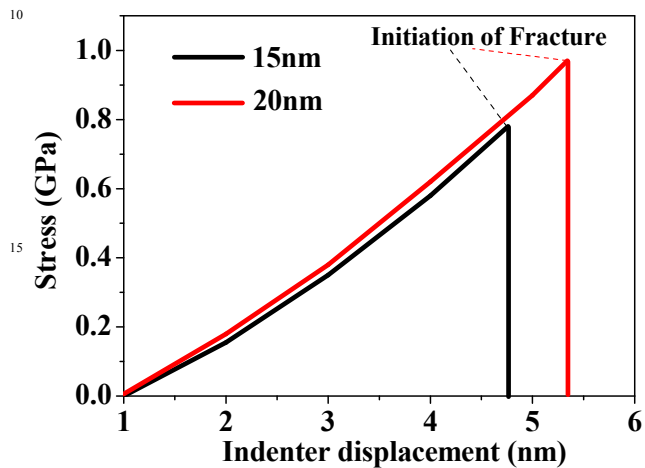


Fig.12 The stress evolution of indenter displacement for the five layer films at 300K and a loading velocity of 0.07 nm/ps with different indenter radii

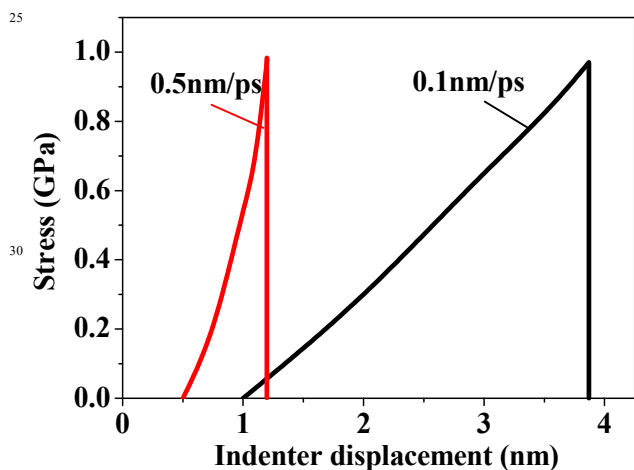
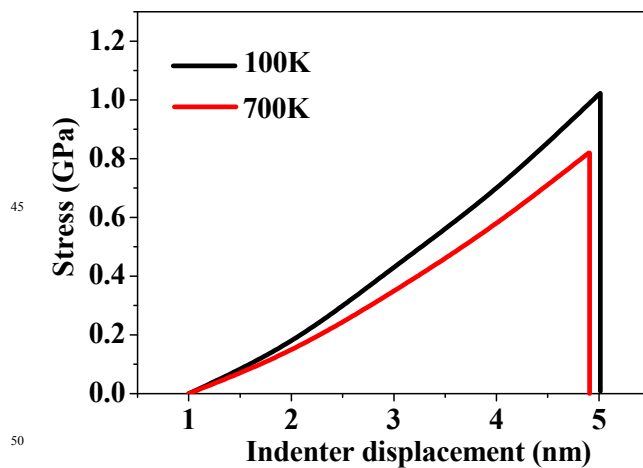


Fig.13 The stress evolution of indenter displacement for the five layer films with an indenter radius of 20nm at 300K and at various indentation velocities

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Fig.14 The stress evolution of indenter displacement for the five layer films with an indenter radius of 17nm and an indentation velocity of 0.07nm/ps at various indentation temperatures

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