

Supplementary data

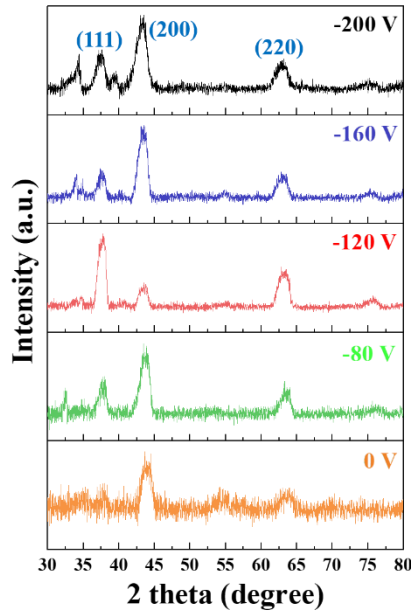


Fig. 1. XRD diffractograms of (AlCrNbSiTi)N thin films deposited at varied substrate bias values.

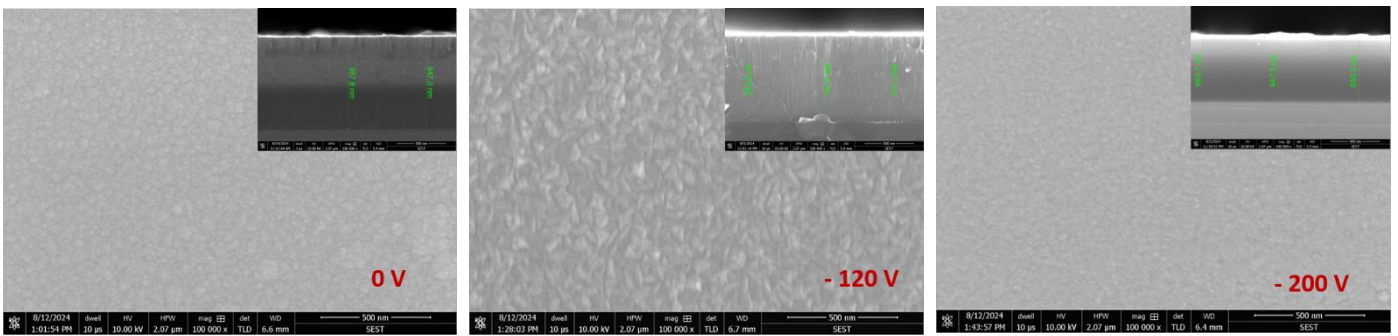


Fig. 2. Surface and cross-sectional images of thin films deposited at 0 V, -120 V, and -200 V.

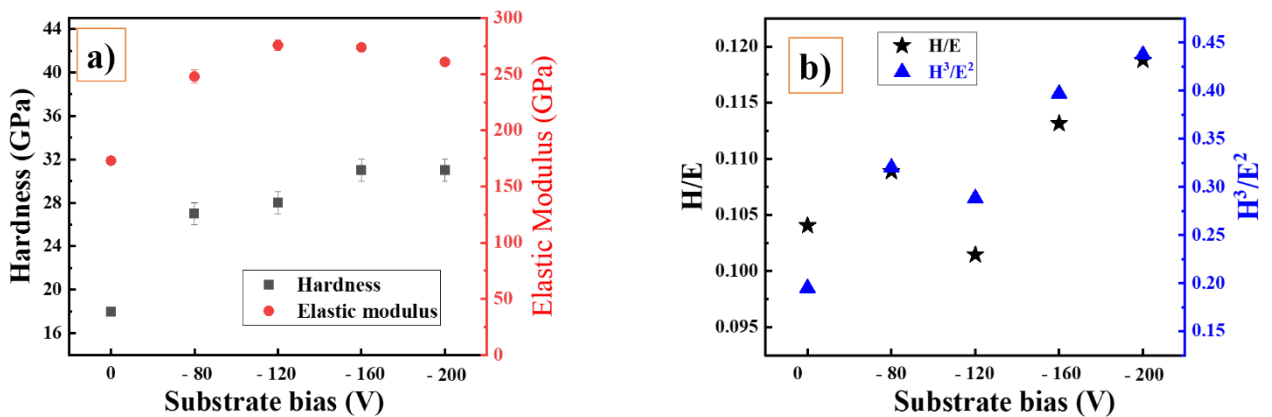


Fig. 3. a) Hardness and elastic modulus values, and b) H/E and H^3/E^2 values of the (AlCrNbSiTi)N thin films deposited at varied substrate bias values