Correlation of growth temperature with stress, defect states and electronic structure in epitaxial GaN film grown on c-sapphire *via* Plasma MBE

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Supplement Information

A-1: a) Cross sectional FESEM image of sample S2 and b) SIMS spectra showing the depth profile of sample S2.



A-2: a) RHEED images of GaN samples S1, S2, S3 and S4 along (1120) zone axes.



A-3: HRXRD ω -scan of a) symmetric b) asymmetric plane diffraction of GaN film grown at different temperature.



A-4: De-convoluted defect band spectra of sample S1, S2, S3 and S4 showing various defect emissions.