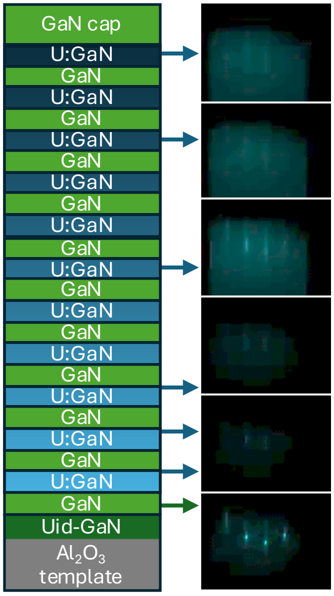

Figure 1. (Left) Schematic of a multilayer calibration sample where GaN layers doped with increasing amounts of U (U:GaN) are separated by undoped GaN layers with equal thickness. (Right) Reflection high energy electron diffraction (RHEED) patterns throughout the growth reveal that a smooth surface is maintained throughout, and do not show the presence of any phase segregation or other orientations.

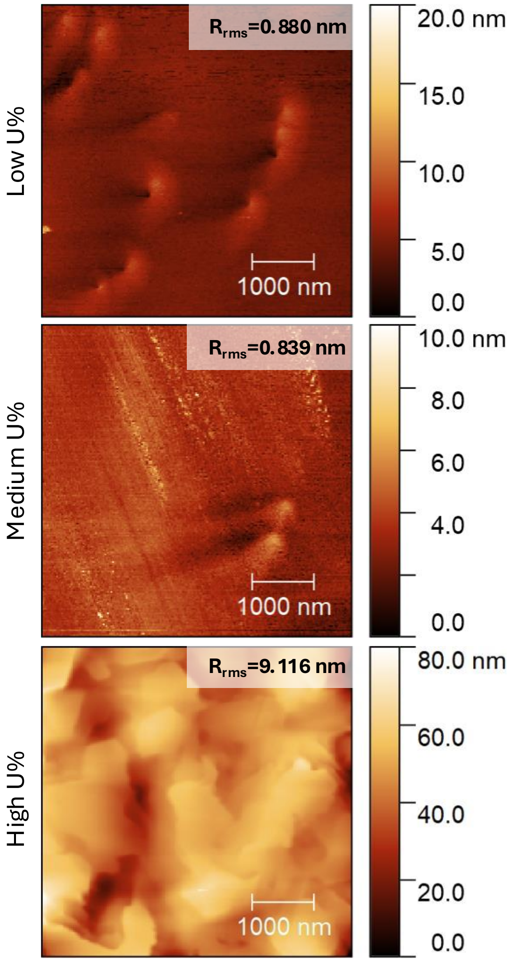

Figure 2. Atomic force microscopy images of GaN surfaces with different amounts of U-doping

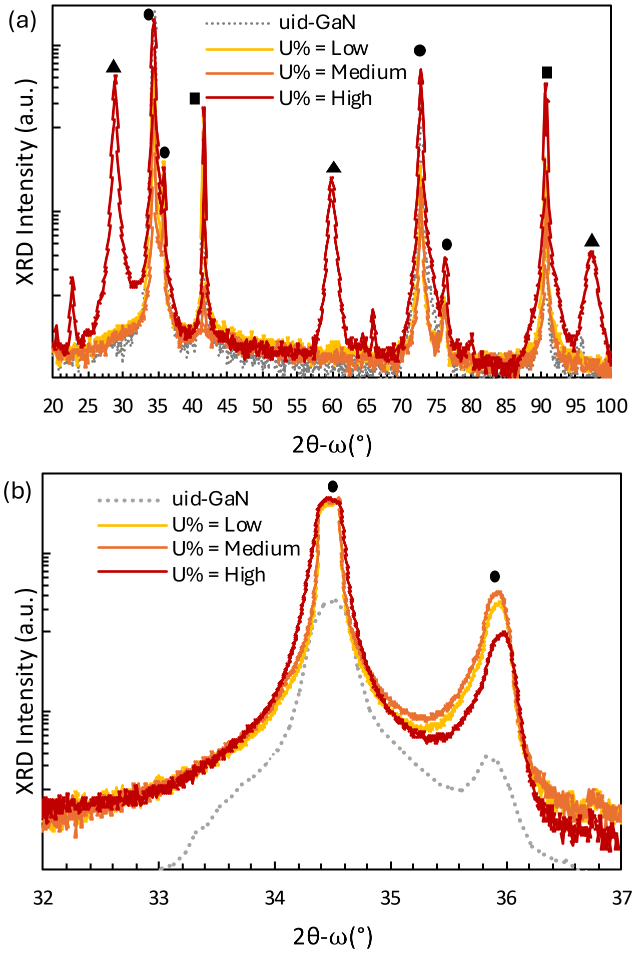

Figure 3. 2θ-ω X-ray diffraction diffraction patterns of uid-GaN (grey, offset) and different levels of U-doping over a (a) wide angle and (b) the first order substrate peaks. Circles and squares indicate diffraction from the substrate. The precipitation of oriented material (stars) is observed with doping levels exceeding a certain amount.

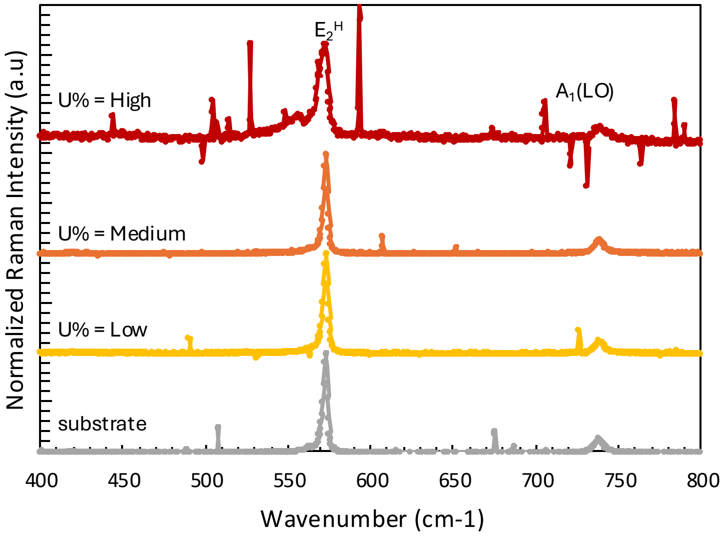

Figure 4. Raman spectroscopy of GaN with different amounts of U-doping