

Fig.1 GIXRD patterns (left) and XRR curves (right) of GaN thin films deposited on multilayer graphene (MLG) templates at 200°C.

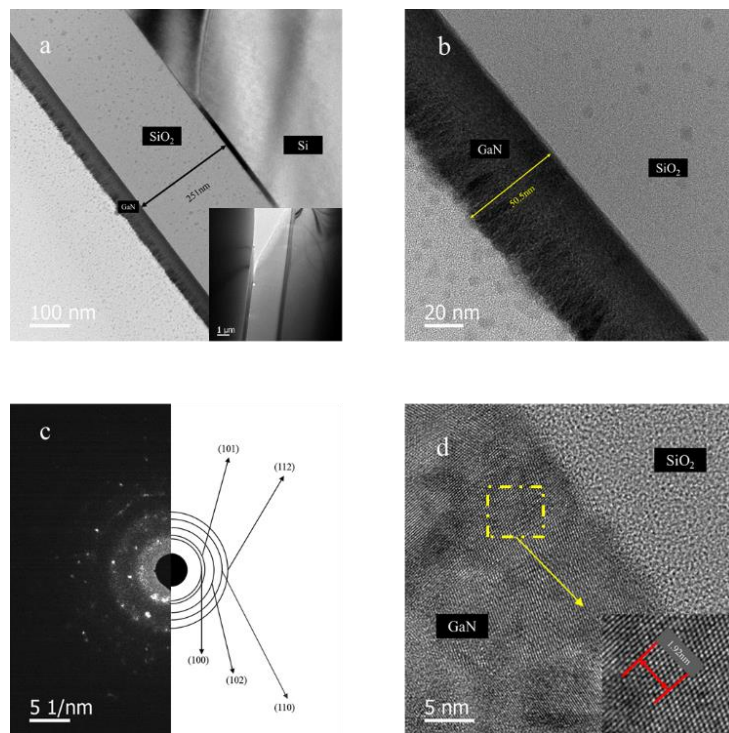


Fig.2 Cross-sectional TEM images of the 51 nm thick GaN thin films deposited on MLG templates. **a** Cross-sectional TEM image and (inset) lower magnification cross-sectional TEM image. **b** Cross-sectional TEM image of the same sample. **c** SAED pattern of the same sample. **d** Cross-sectional HR-TEM. The inset image is magnification of the selected square area.

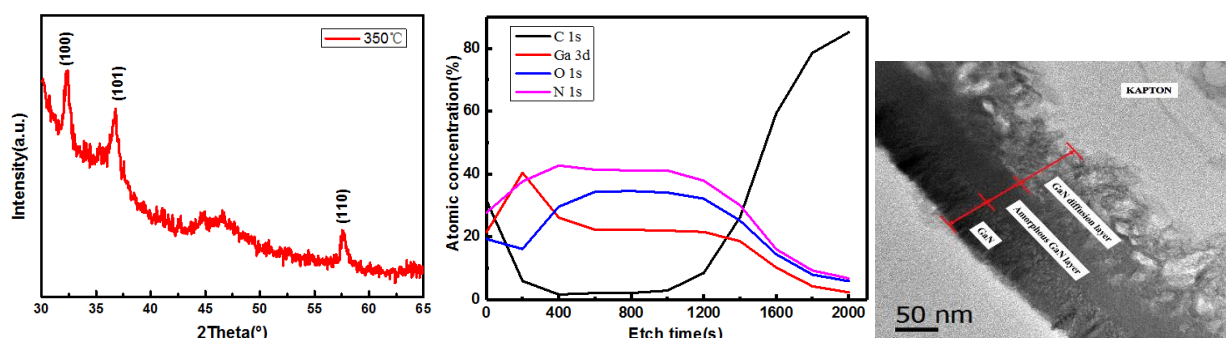


Fig. 3 The GIXRD patterns (left), in-depth variation of atomic concentration (middle) and cross-sectional TEM images (right) of as-deposited GaN films on KAPTON at 350°C.