

Figure 1. TEM images of the thermal AlN. An overview image a) with a small objective lens aperture (high diffraction contrast) shows a partly crystalline structure, while the HRTEM image b) at the Si-AlN interface shows lattice planes corresponding to small crystallites. The electron diffraction in (a) shows polycrystalline hexagonal AlN structure. The surface of the film has a thin oxide layer.

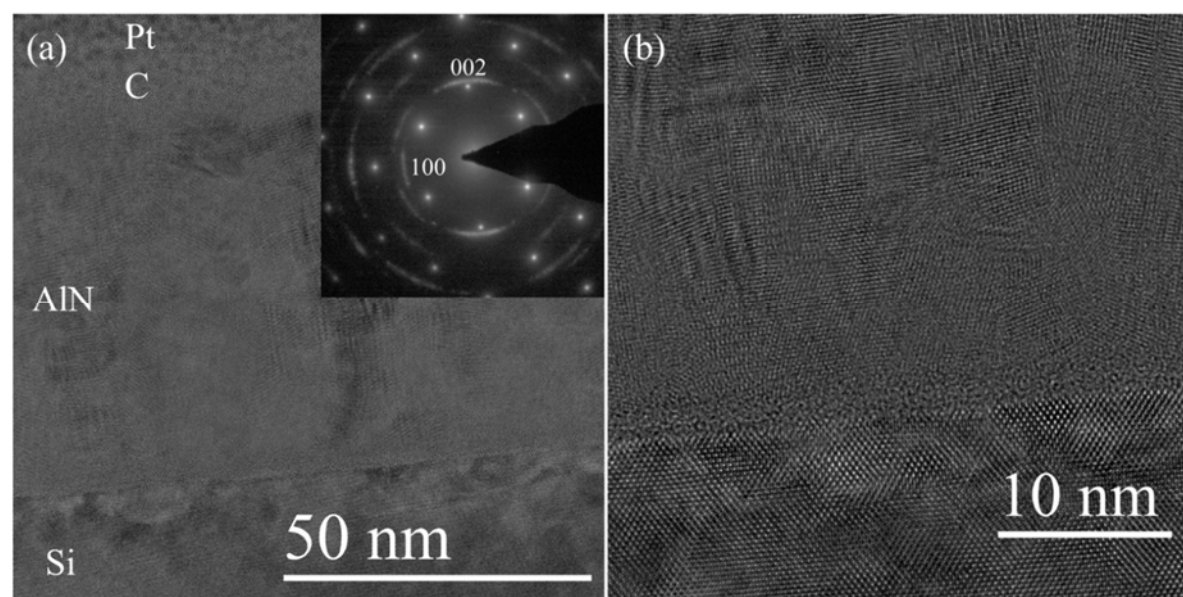


Figure 2. TEM images of the PEALD AlN taken with a C_s -corrected microscope. An overview image a) with a small objective lens aperture (high diffraction contrast) shows polycrystalline AlN. The HRTEM image b) at the Si-AlN interface shows distinct lattice planes and an amorphous layer between Si and the crystalline AlN. The electron diffraction in (a) shows polycrystalline hexagonal AlN structure with a preferred orientation (c-axis normal to the Si (100) surface). No oxide layer was observed on the film.