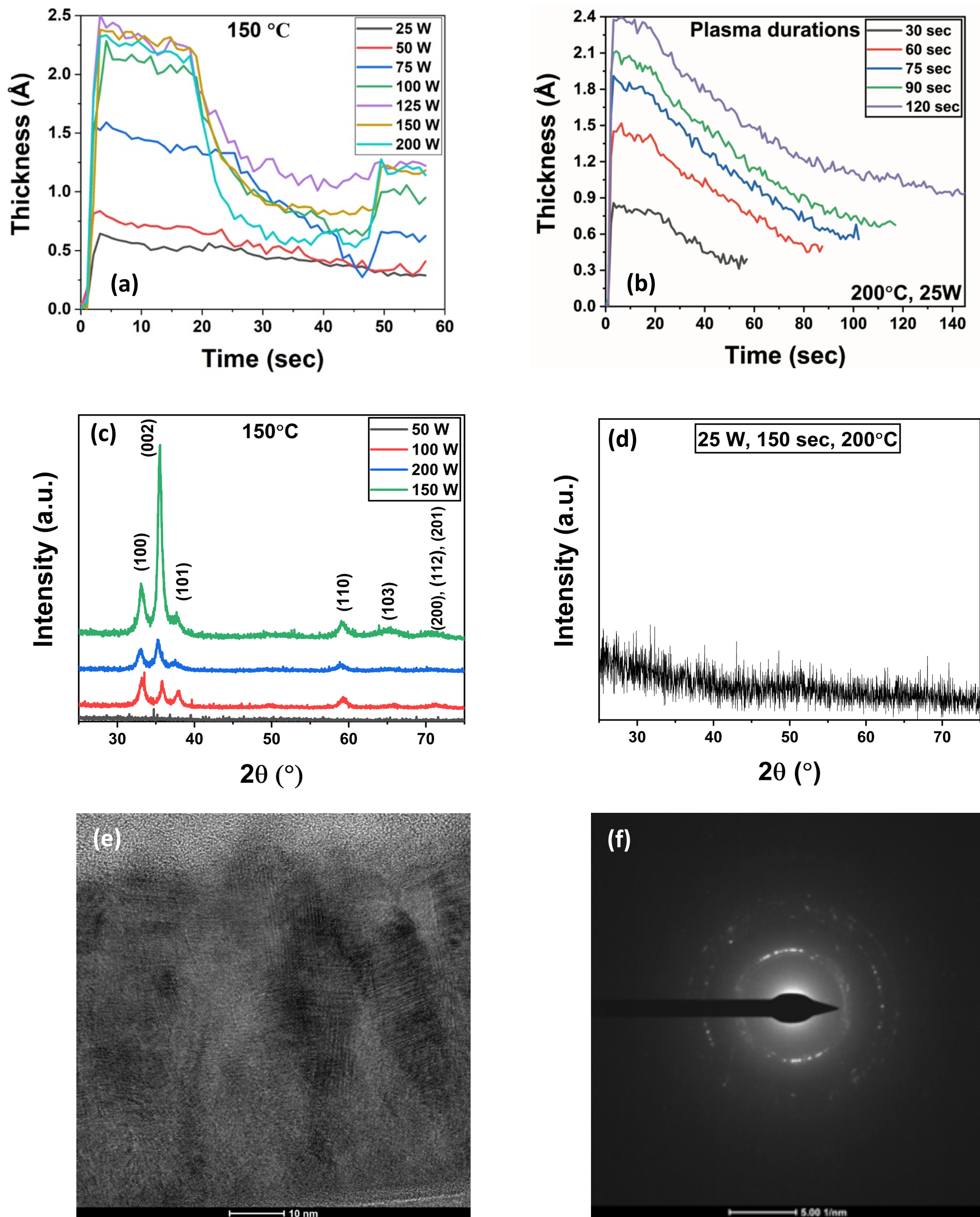

Figure 1. (a) Averaged *in situ* single-cycle ellipsometer measurements as a function of plasma powers at 150 °C. (b) Averaged *in situ* single-cycle ellipsometer measurements for varying plasma durations at 200 °C. (c) GIXRD measurement spectra for 500-cycle AlN film grown at various plasma powers with 30 s plasma exposure at 150 °C. (d) GIXRD spectra of AlN film grown with 25 W, 150 s plasma duration at 200 °C. (e) High-resolution TEM image of 500-cycle AlN film grown at 100 W and 250 °C. (f) Selected-area electron diffraction (SAED) micrograph of the film showing the diffraction rings indicative of the polycrystallinity nature.