

FIG. 1. (a) HAADF-STEM image of Ga_2O_3 film grown on c-plane sapphire (b) High-resolution STEM image of top 700nm layer κ - Ga_2O_3 film. (c) High-resolution STEM image of the transition layer containing β - and γ - Ga_2O_3 and a 3-4 monolayer thick, pseudomorphic α - Ga_2O_3 (d)-(i) STEM images and associated ball-and-stick models of two rotational domains of κ - Ga_2O_3 , β - Ga_2O_3 , α - Ga_2O_3 , Al_2O_3 and γ - Ga_2O_3 , respectively, overlaid on their respective projections.

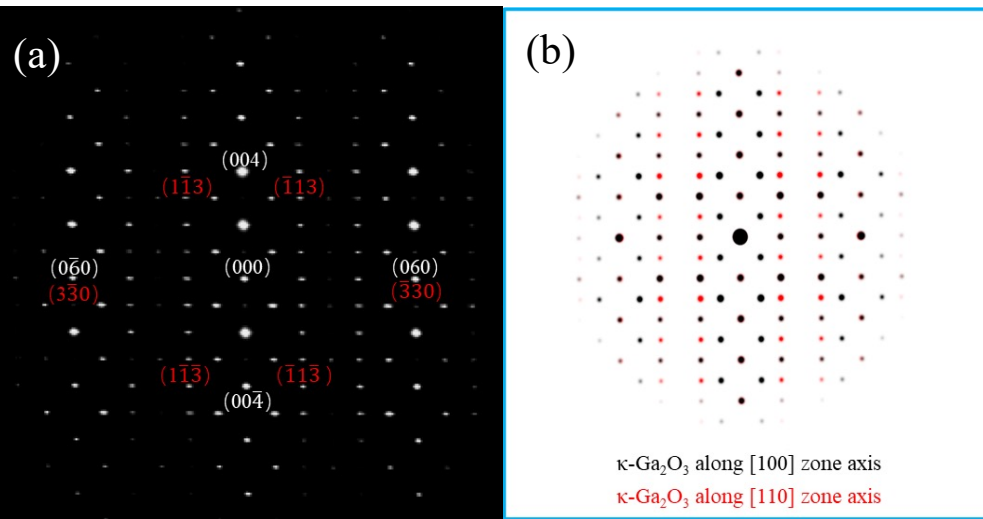


FIG. 2. (a) SAED pattern from the top 700nm layer of κ - Ga_2O_3 thin film. (b) Overlay of two simulated diffraction patterns that reveal the presence of two rotational domains along the [100] and [110] zone axes.

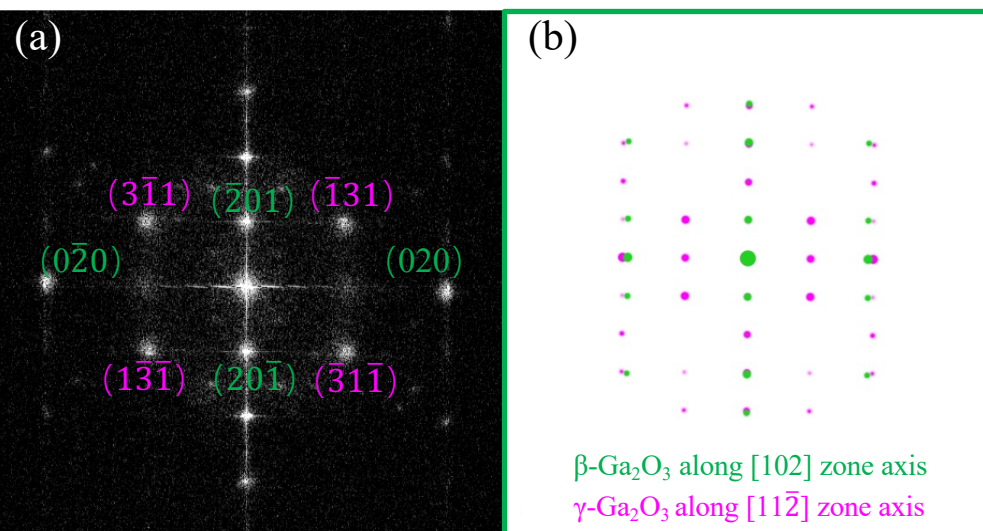


FIG. 3. (a) FFT image obtained from the transition layer containing β - and γ - Ga_2O_3 . (b) Overlay of two simulated electron diffraction patterns for β - Ga_2O_3 and γ - Ga_2O_3 along [102] and [112] zone axes, respectively.