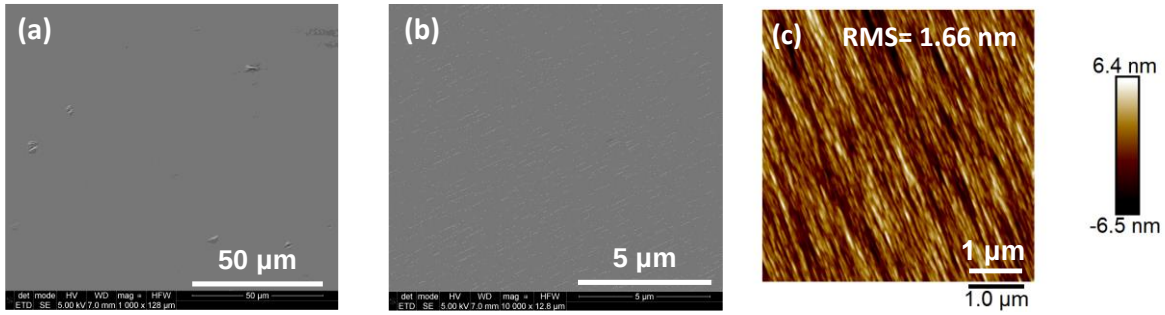

Figure 1. Top view FESEM images of MOCVD grown (010) β-Ga_2O_3 thin film with growth rate of 3 µm/hr and room temperature mobility of 190 cm^2/Vs: (a) large field of view; and (b) high magnification. (c) The corresponding AFM image of the same β-Ga_2O_3 sample (RMS: 1.66 nm).

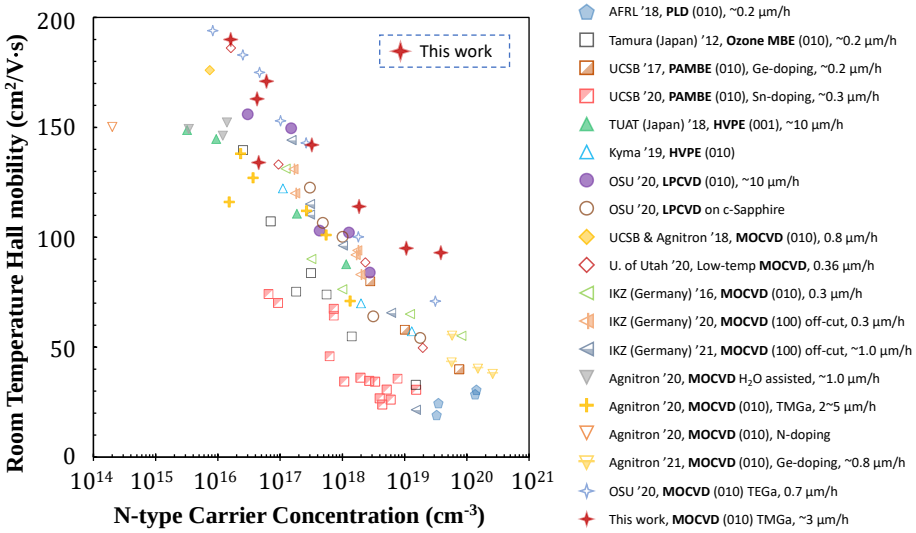

Figure 2. Room temperature electron mobility data of (010) β-Ga_2O_3 homoepitaxial thin films from this work (GR: 3µm/h) as compared to representative data from literature: room temperature electron mobility vs. electron concentration of β-Ga_2O_3 films grown by different growth techniques. The corresponding growth rates are listed.

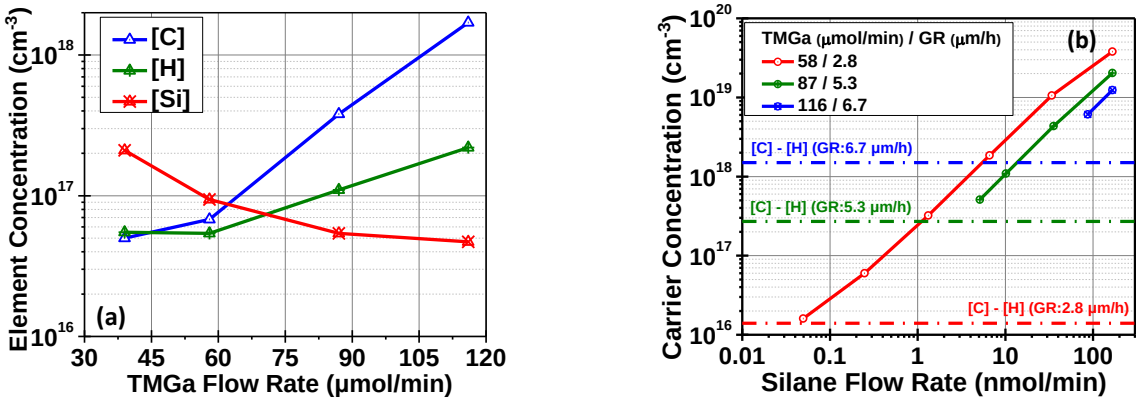

Figure 3. (a) The extracted C, H and Si incorporation concentrations as a function of the TMGa molar flow rate from quantitative SIMS measurements. (b) Measured free electron carrier concentration as a function of the silane molar flow rate for three different sets of samples varying the TMGa molar flow rate/growth rate. The dash-dotted lines indicate the net compensation levels ([C]-[H]) for the three sets of samples grown at different growth rate of MOCVD Ga_2O_3.