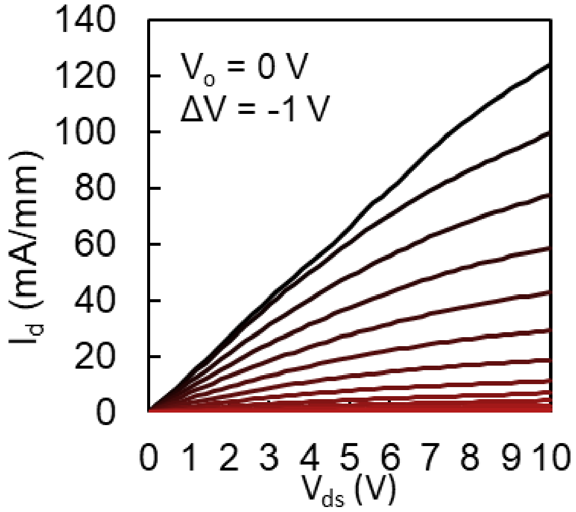
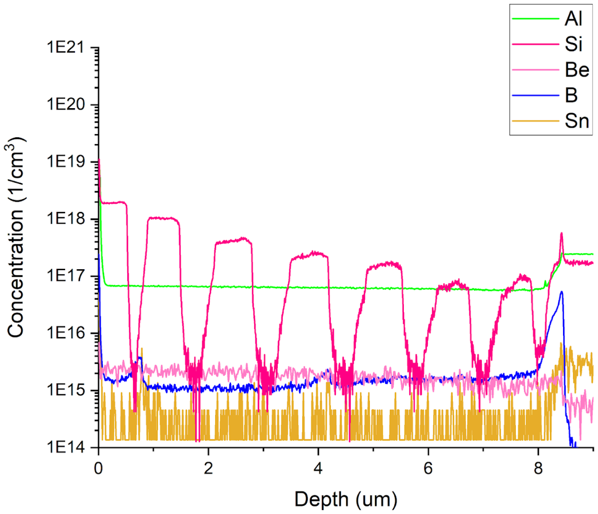
Supplementary: Figures



I-V plane of an annealed-ohmic MESFET fabricated on a 65 nm thick Si-doped β-Ga_2O_3 layer grown by *S*-MBE. The device shows linear ohmic contacts, good conduction, and pinches off at V_{gs} = -14V. Device behavior is in-class for similarly fabricated devices on material grown by other methods, including conventional MBE.



SIMS of an ~8.5 µm thick Si-doped β-Ga_2O_3 film grown at 1.1 µm/hr by *S*-MBE on an Fe-doped Ga_2O_3 (010) substrate. The temperature of the dopant source is increased in steps as the film is grown. The structure of the film is alternating undoped and Si-doped β-Ga_2O_3 to demonstrate controlled doping with Si in the 10^{18} to 10^{17} cm^{-3} regime.