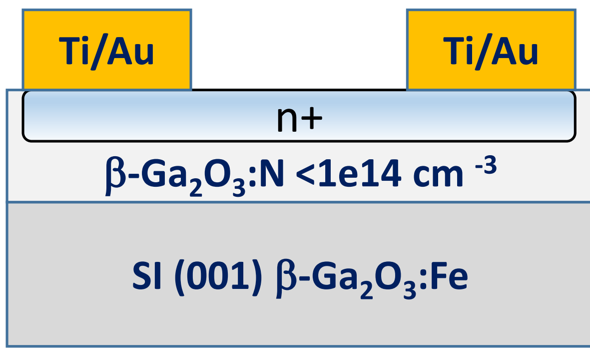


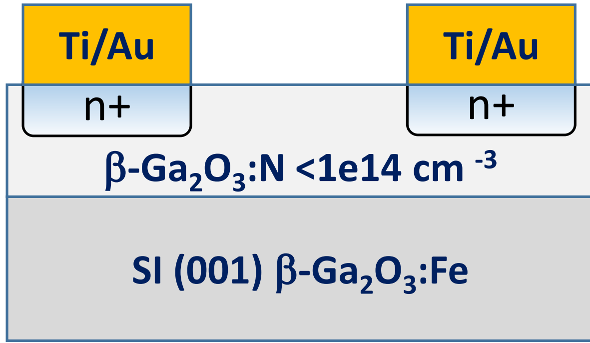


Figure 1) Cross-sectional area of **a)** fully implanted van der Pauw structure and **b)** non-implanted active region of a van der Pauw structure.

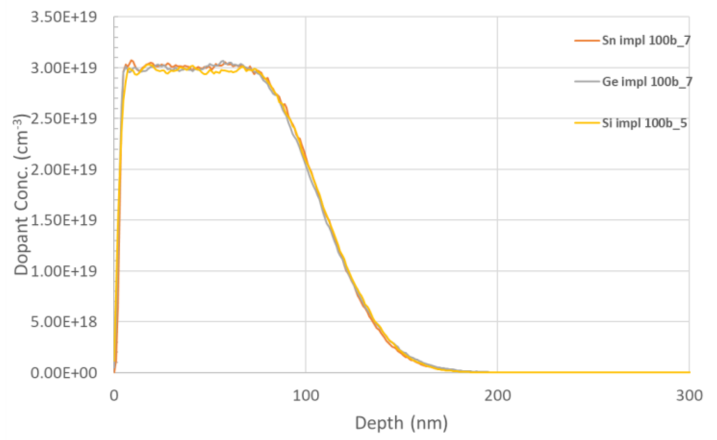
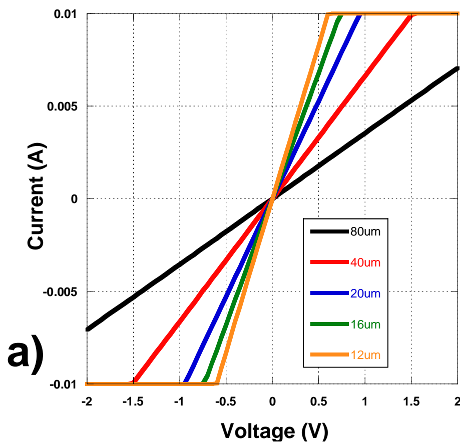
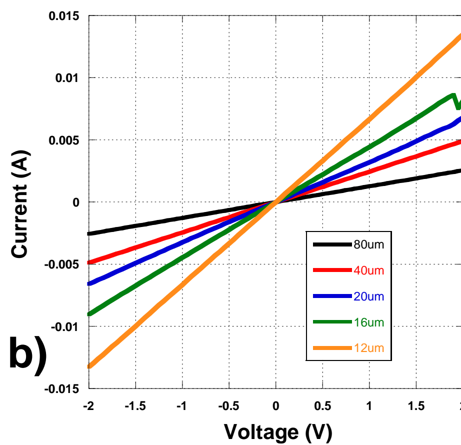


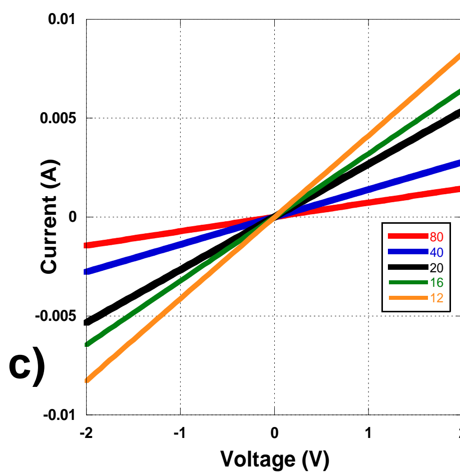
Figure 2) Implanted dopant profile as calculated by SRIM approximating a 100 nm box profile.

Implant	Si	Ge	Sn
R_{sh} (Ω/sq)	323	941	1760
μ (cm^2/(Vs))	85	71	59
N_{sh} (cm^{-2})	2.25×10^{14}	9.32×10^{13}	6.01×10^{13}
Activation %	66	28	18

Table 1) Room temperature (300 K) Hall effect measurement results. The donor activation % was calculated using the in sheet carrier concentration and the implant dose $3.33e^{14}$ cm^{-2}.







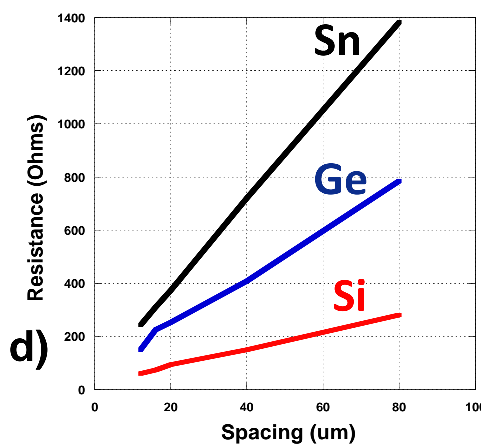


Figure 3) Linear transmission line measurements showing ohmic contacts for **a)** Si implant, **b)** Ge implant, and **c)** Sn implant. **d)** Plot of resistance vs. LTLM gap length of both Si (red), Ge (blue), and Sn (black) implanted GO.

Abstract References:

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