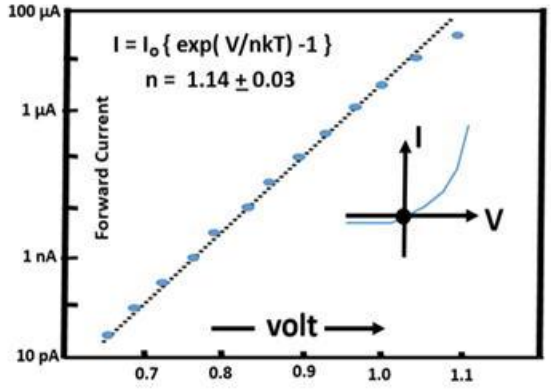

In Fig. 10, forward current characteristics are displayed at room temperature. The slope gives **q/nkT**, where **n** is the diode non-ideality factor, seen to be 1.14 ± 0.03, which is consistent with 1.08 ± 0.04 obtained by the capacitance-voltage method. The extrapolated current density at zero applied bias voltage is given by

$$J_o = A^* T^2 \exp\left(-\frac{q V_d}{nkT}\right) \quad (4)$$

where A * is the Richardson constant corresponding to the effective mass of the material taken as 0.2 $\mathbf{m_e}$. Using this equation the barrier height was found to be 1.69 ± 0.04 eV.

Fig. 10: IV measurement of Ga_2O_3-Au Schottky Barrier

Slide 31

Figure 10 shows

the typical IV measurement of

Ga2O3-Gold Metal Schottky Barrier.

The forward current characteristics

are displayed at room temperature.

The slope gives q/nkT,

where n is the diode non-ideality factor,

was found to be 1.14

which is close to the value of 1.08

obtained by the capacitance-voltage method.