

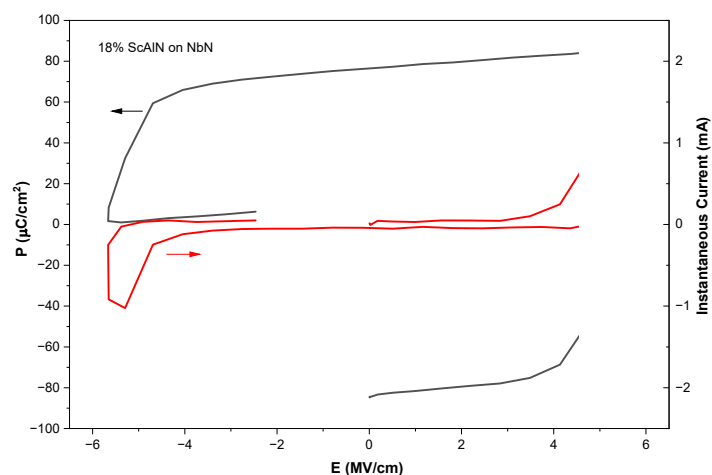


Figure 1: Ferroelectric behavior of 18% ScAlN/NbN

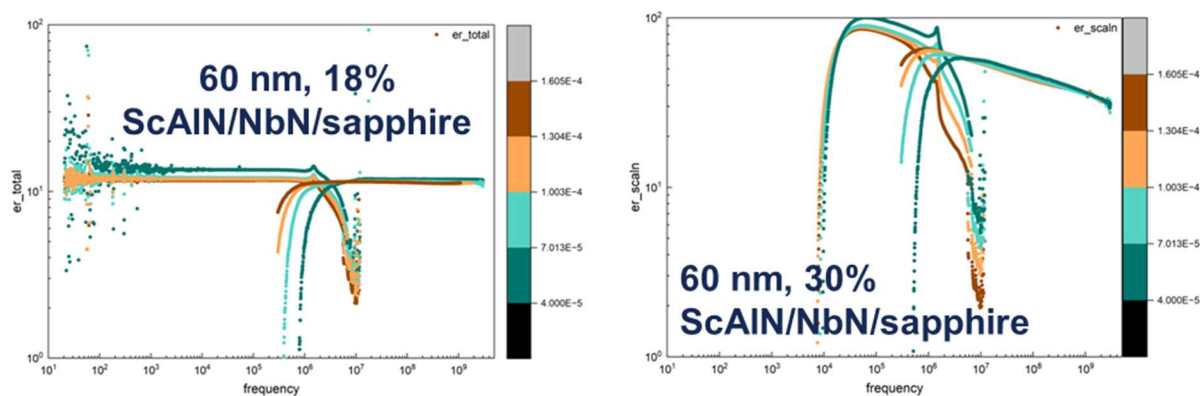


Figure 2: Dielectric permittivity of PEALD ScAlN/NbN/sapphire films as a function of frequency for (a) 18% Sc and (b) 30% Sc. 30% Sc films exhibit higher values but large dispersion with frequency.

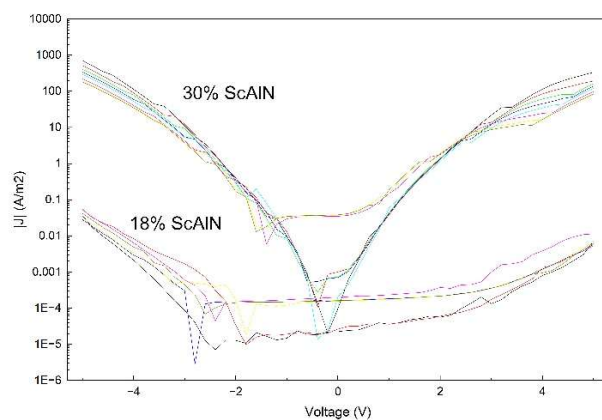


Figure 3: Leakage current as a function of %Sc in PEALD films showing increased leakage with increasing Sc content.