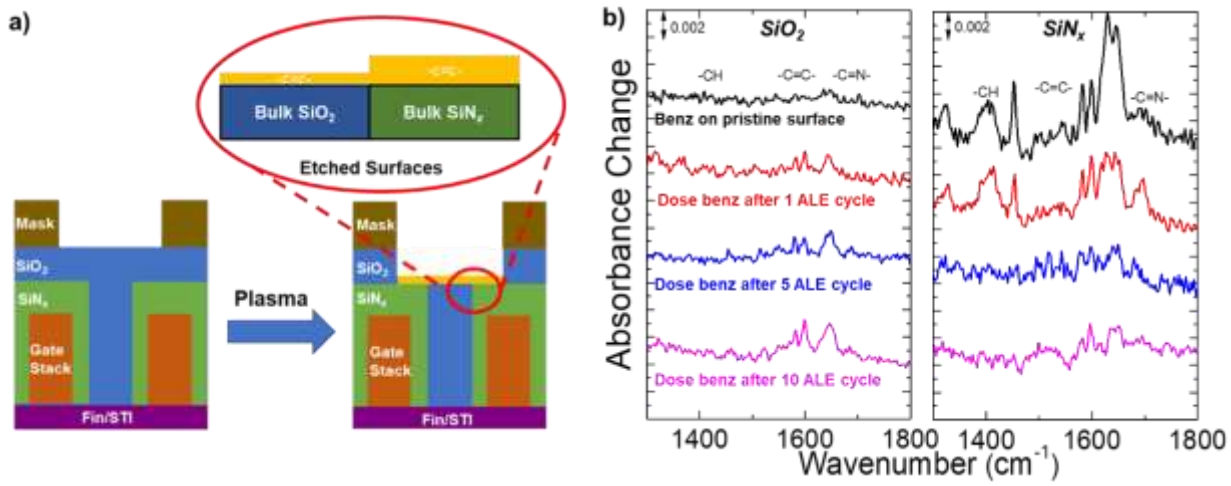

Figure 1: (a) Schematic of the partially etched SiO_2 and SiN_x surfaces in a self-aligned contact etch process. **(b)** Infrared absorbance change for benzaldehyde attachment on various SiO_2 and SiN_x surfaces at a substrate temperature of 70 °C. The reference spectrum was collected immediately prior to benzaldehyde exposure.

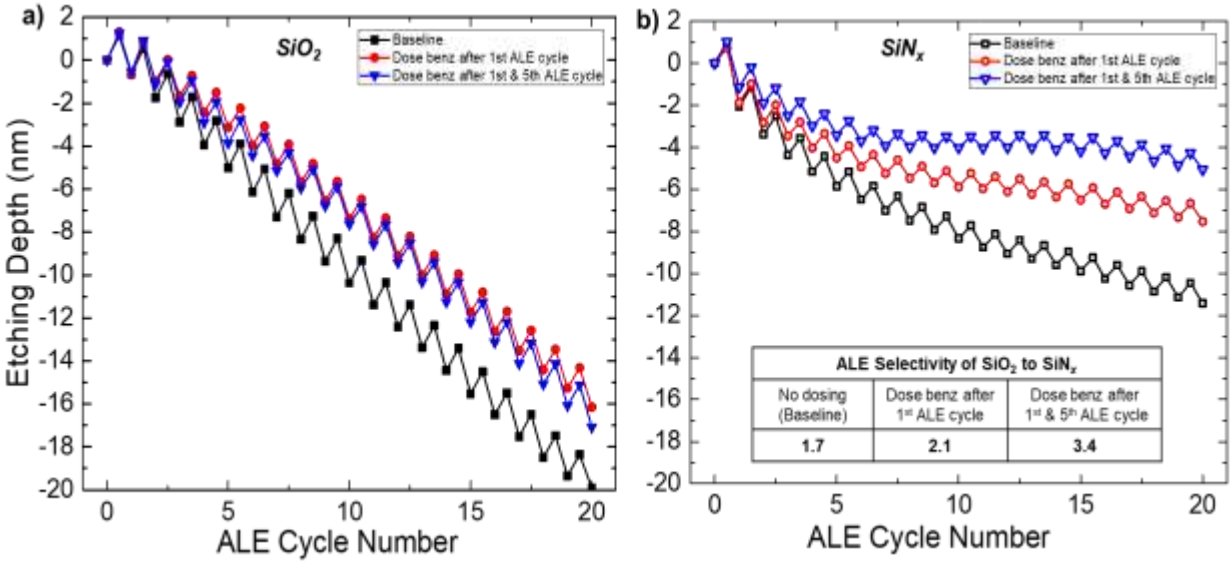

Figure 2: Etching depth as a function of the number of ALE cycles for **(a)** SiO_2 and **(b)** SiN_x with different benzaldehyde pre-functionalization steps. The inset in (b) shows the ALE selectivity for SiO_2 over SiN_x for 20 ALE cycles.