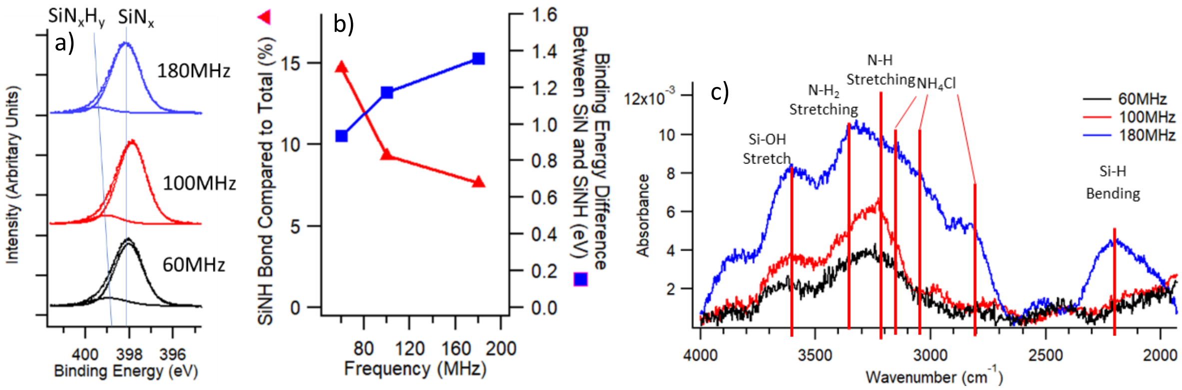

Figure 1: a) XPS of the N *1s* peak in silicon nitride after 50 cycles, with 5 Torr-sec of DCS coverage in the silicon reduction step, and 300 mTorr, 150 sccm of NH_3 to 600 sccm of Ar, 400 W, and 5 sec of exposure. This graphically shows that the SiN_zH_y peak shifts relative to the SiN_x peak. b) A plot of the results in Figure 1a) showing the relative shift and relative intensity between SiN_x and SiN_zH_y. c) FTIR results of the same films showing N-H and N-H_2 modes as well as Si-H modes.