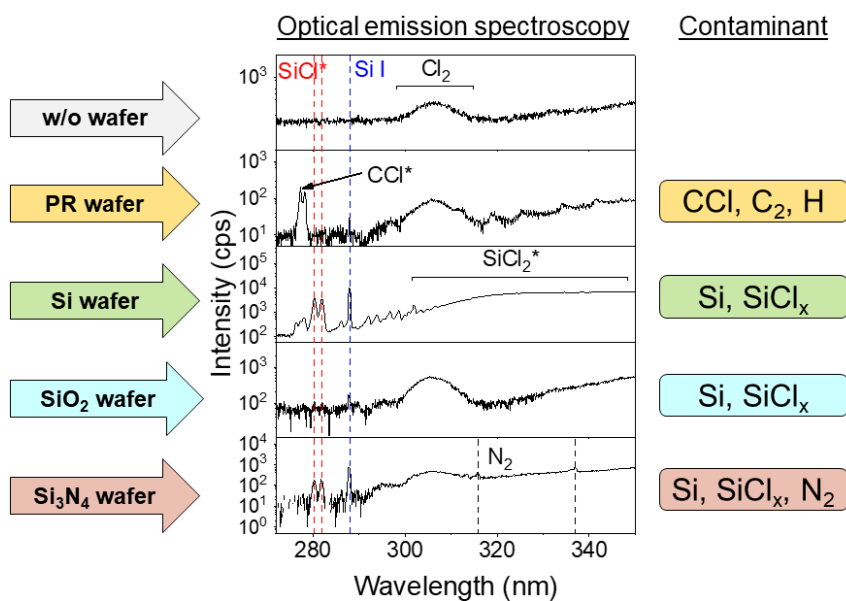
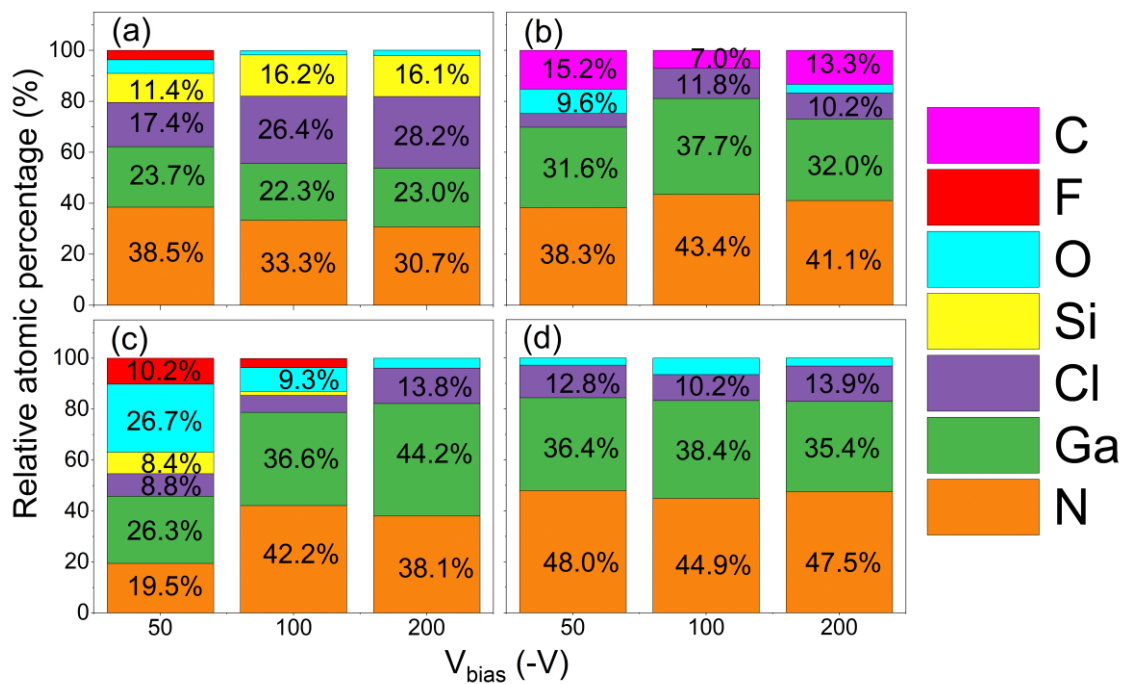


**Figure 1.** (a) Carrier wafers etch rate (b) GaN etch rate (c) GaN roughness as function of the bias potential after Cl<sub>2</sub> etching.



**Figure 2.** Optical emission spectra recorded during the Cl<sub>2</sub> etching of different carrier wafers at -200 V.



**Figure 3.** XPS surface composition (take off angle = 14°) of (a) GaN on Si (b) GaN on photoresist (c) GaN on SiO<sub>2</sub> (d) GaN on Si<sub>3</sub>N<sub>4</sub> according to the bias potential.