

Figure 1. *In situ* FTIR difference spectra of the ALD half-cycles for each of the three TiO₂ processes. The TDMAT pulses for each of the processes can be seen at the top, while the corresponding reactant pulses are shown at the bottom.

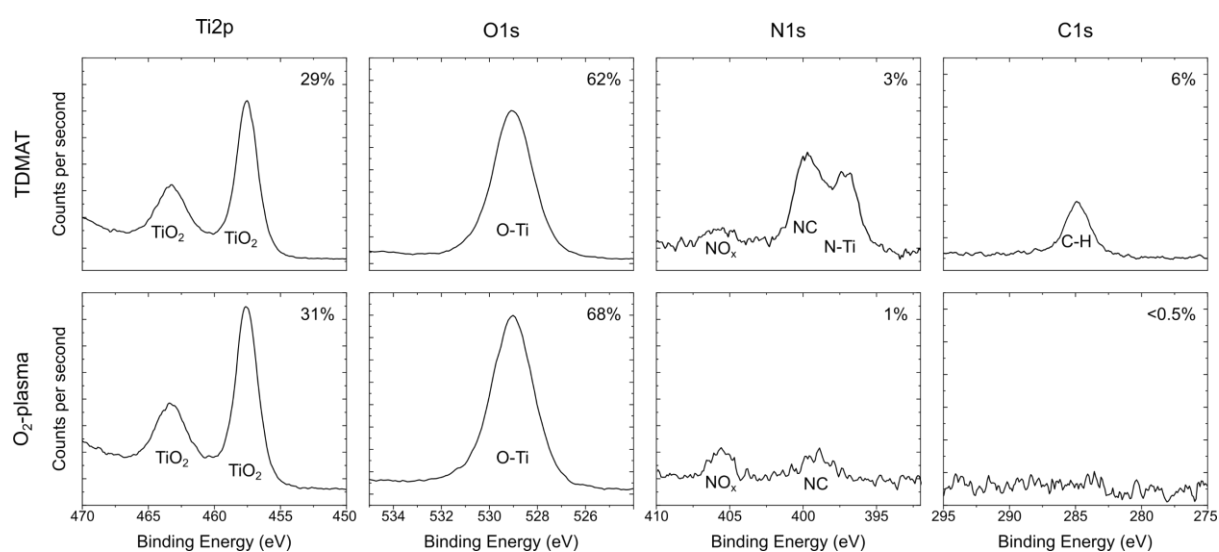


Figure 2. *In vacuo* XPS spectra of the ALD half-cycles of the TDMAT/O₂-plasma process. A clear feature of the ligands of the TDMAT molecule and nitrites are detected at the surface after exposing the surface to TDMAT.

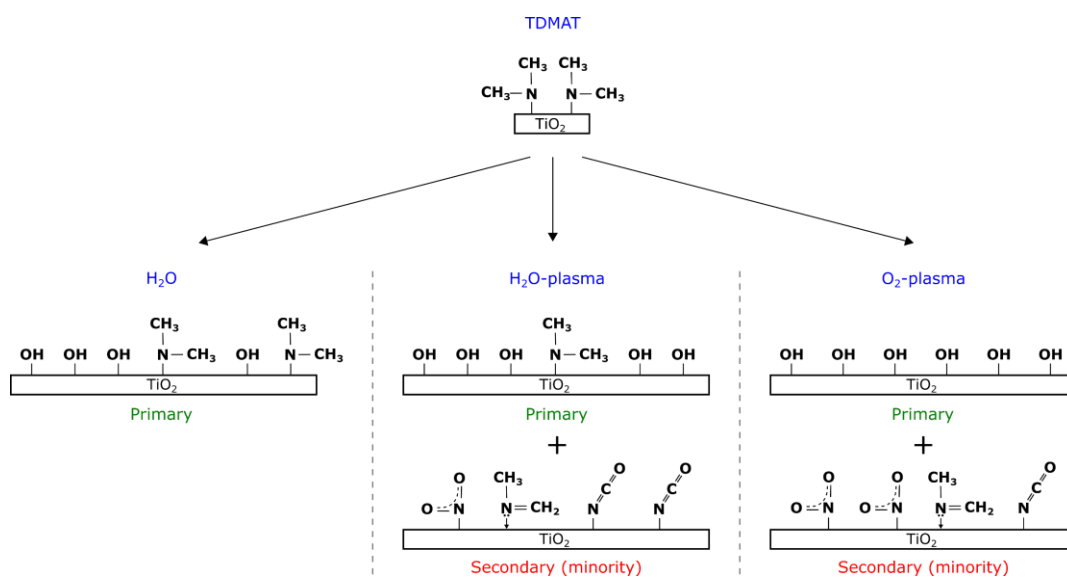


Figure 3. A schematic overview of all surface species present during the ALD TiO₂ processes. A ligand exchange reaction mechanism is the primary mechanism for all processes. An additional decomposition and combustion mechanism is present during the plasma enhanced ALD processes.