

Figure 1: Growth rate as a function of growth temperature and gas chemistry indicating a higher growth rate and large ALD window for pure O<sub>2</sub>.

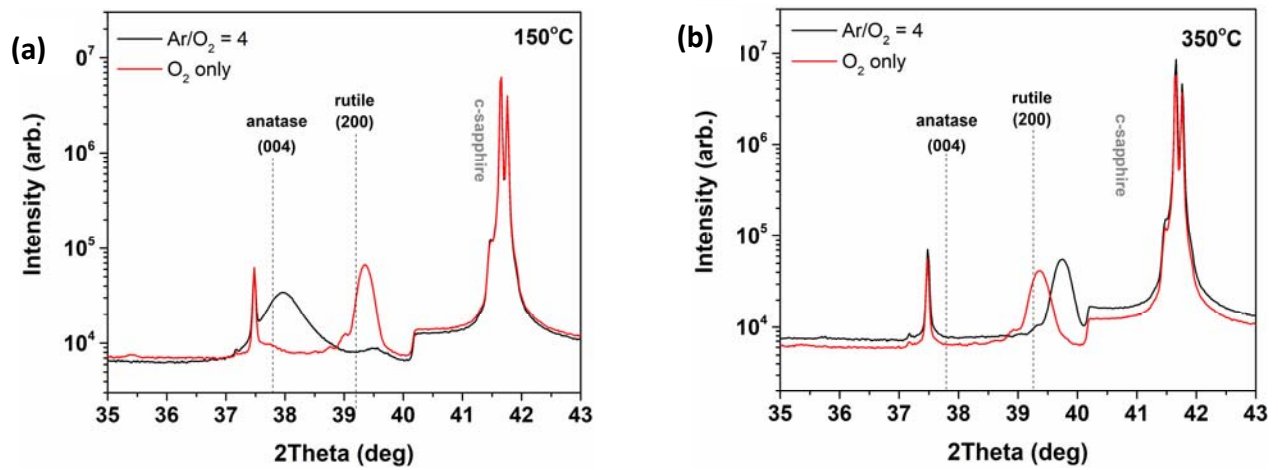


Figure 2: Powder XRD spectra of TiO<sub>2</sub> on c-plane sapphire substrates showing the influence of gas chemistry on the phase and strain for two different temperature extremes.

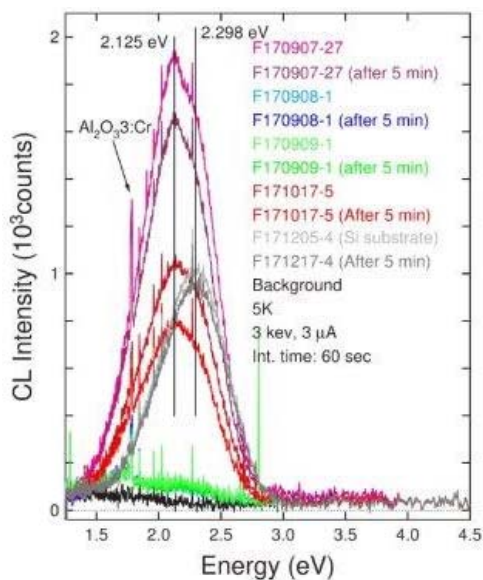


Figure 3: Cathode luminescence results from TiO<sub>2</sub> films with different phases showing the impact of growth parameters on the intensity achieved. The highest intensity is achieved for films with mixed anatase and rutile phases, while the lowest intensity is from the anatase films. All films exhibit two peaks at 2.125 eV and 2.298 eV.