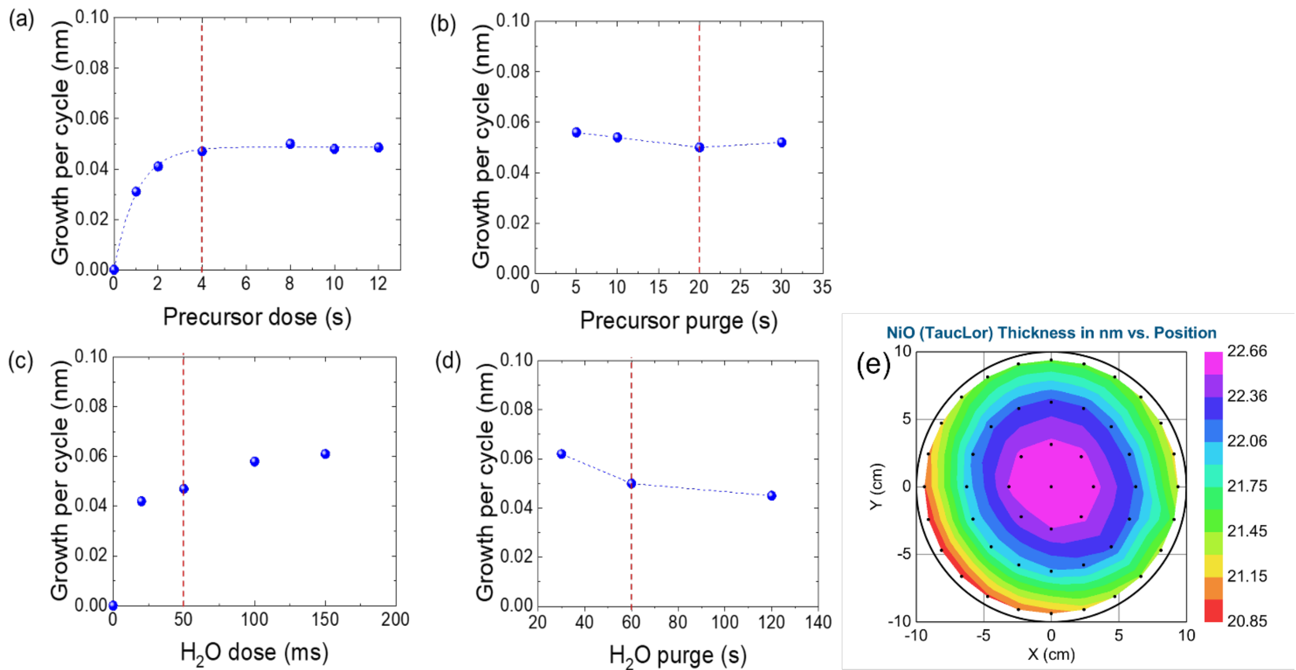

Figure 1: Saturation curves: growth per cycle (GPC) as a function of (a) precursor Ni(tBu-MeAMD)$_2$ dose, (b) Ni(tBu-MeAMD)$_2$ purge, (c) H_2O dose, and (d) H_2O purge. The deposition temperature is 150 °C. The dashed lines serve as guide to the eye. The red dash lines indicate the selected recipe for the process, (e) Thickness uniformity determined by ex-situ spectroscopic ellipsometry based on 8" silicon wafer.

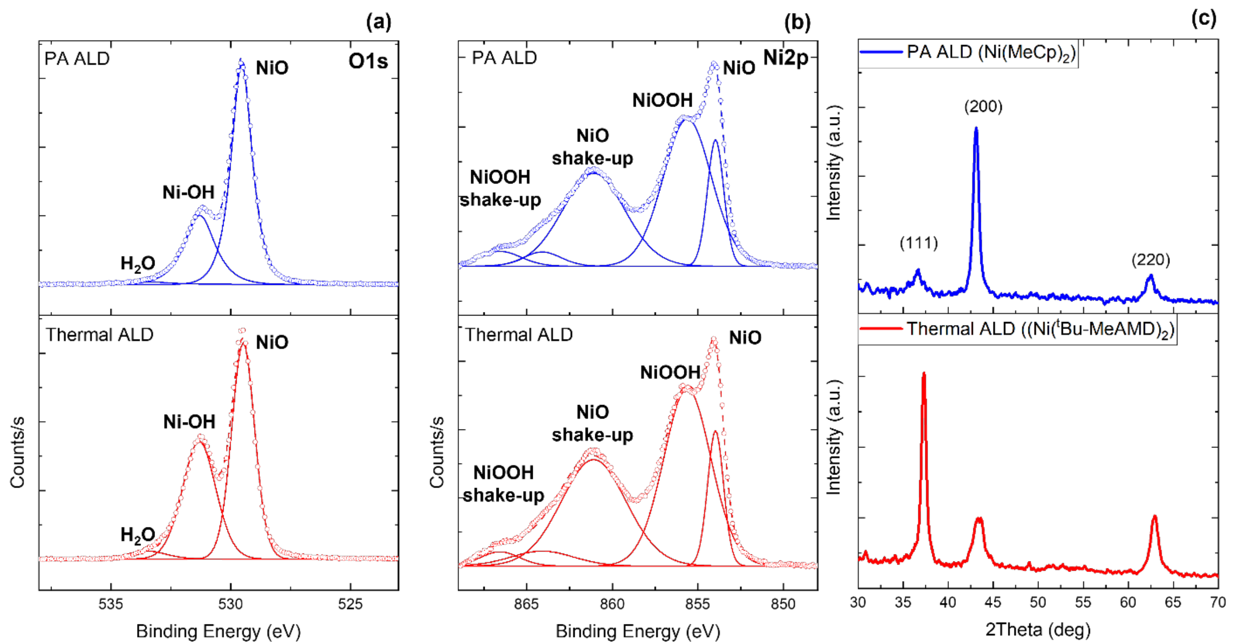

Figure 2: Deconvoluted XPS peaks for O1s and Ni2p for both thermal as plasma assisted ALD, showing the higher hydroxyl concentration for thermal ALD. (c) Grazing incidence XRD pattern showing the difference in crystal orientation between thermal and plasma assisted processed layers.