

Figure 1: PS, PMMA, and PET-G thickness evolution measured in situ using SE upon exposure to TMA (5 min) and the subsequent waiting period of 30 min, below (a) and above (b) the glass transition temperature.

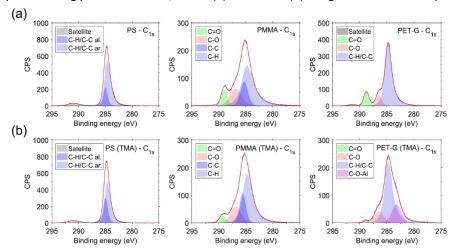


Figure 2: XPS peak models for the deconvolution of the  $C_{1s}$  elemental peak in PS, PMMA, and PET-G thin films before (a) and after (b) TMA exposure (al. = aliphatic, ar. = aromatic).

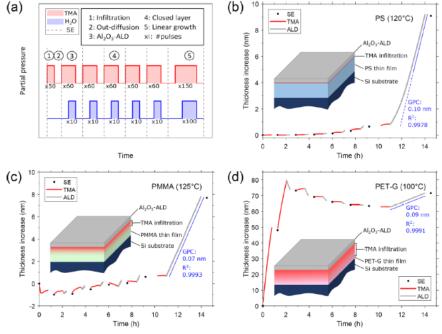


Figure 3: (a) Overview of the pulsing sequence. Thickness evolution of the PS (b), PMMA, (c) and PET-G (d) thin films when exposed to repeated TMA pulses. By interchanging the TMA pulses with full  $Al_2O_3$  ALD cycles, the onset of a closed layer is observed, resulting in linear growth for the final 100 ALD cycles.