

Figure 1.  $\text{Al}_2\text{O}_3$  optical layer thickness in the real-time course of 50 ALE cycles for different process temperatures, respectively.

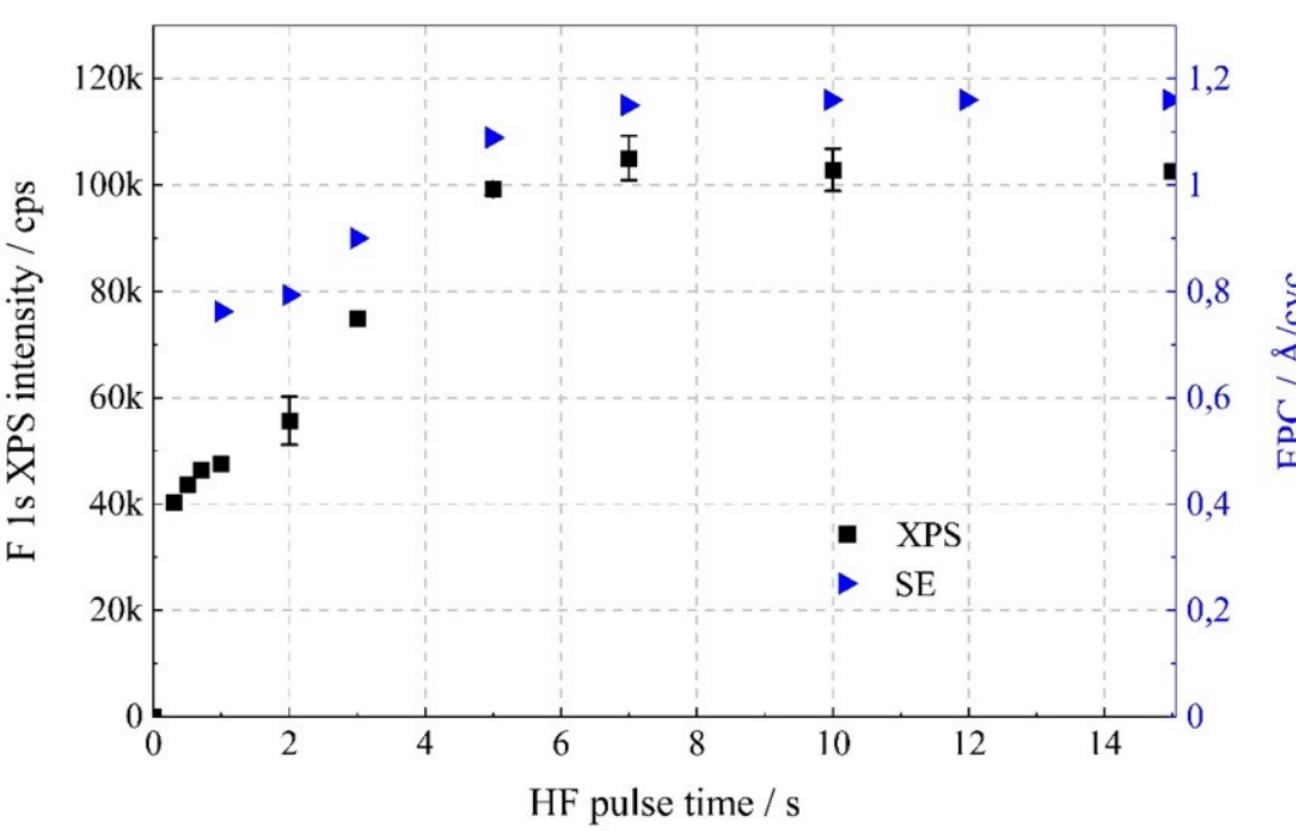


Figure 2. F 1s XPS intensity after the first HF pulse from in vacuo XPS measurements and  $\text{Al}_2\text{O}_3$  etch rate from in situ SE measurements as a function of HF pulse time, respectively.