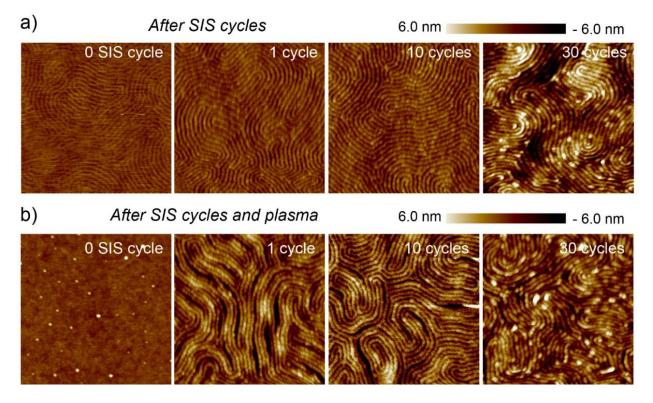


**Figure 1: A)** Overview of the developed Ru SIS process. **a)** PS-b-PMMA template containing both PS and PMMA domains. **b)** Selective RuO<sub>4</sub> infiltration into PS domains. **c)** Chemical modification of the PS domains followed by H<sub>2</sub> infiltration to form metallic Ru inside the PS domains. **d)** H<sub>2</sub> plasma to remove organic components, thereby liberating Ru nanopatterns on the surface. **B)** Selectivity of the Ru SIS process as confirmed by XPS after 30 SIS cycles. A Ru 3p signal is clearly present on PS and PS-b-PMMA, while no signal can be discerned on PMMA.



**Figure 2:** Atomic force microscopy images. **a)** after different number of SIS cycles, and **b)** after an additional H<sub>2</sub> plasma treatment.