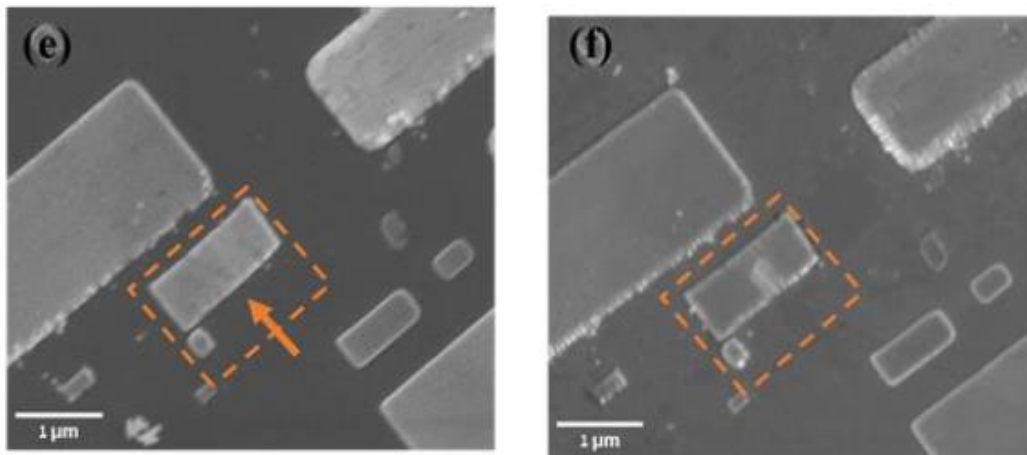


**Figure 1** Demonstration of anisotropy of sliding by AFM. (a) overview of the area of interest, dashed box shows the zoomed area for subsequent images. (b) AFM error signal showing absence of steps in vicinity of platelet. Before and after pushing experiments: (c,d) Pushing on platelet along the short axis does not result in movement. (e,f) pushing along long axis moves the platelet.



**Figure 2.** Before (left) and after (right) SEM images of unsuccessful attempt to move platelet in direction of short axis. Although the platelet remained stationary, the higher force applied resulted in scratching a trough in the platelet.