Defect Inventory of CVT Grown TaS_2 Crystals

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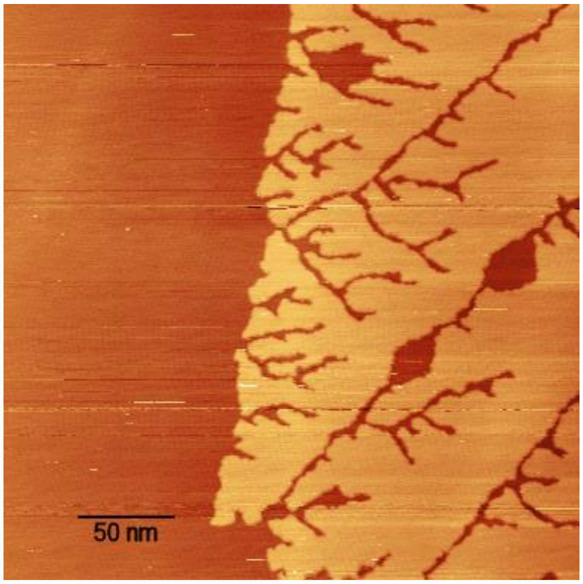

Figure 1. STM image of 2H-TaS_2 with the characteristic line surface defects on the right side of the image. (U_{bias} = 1.0 V, I = 20 pA)

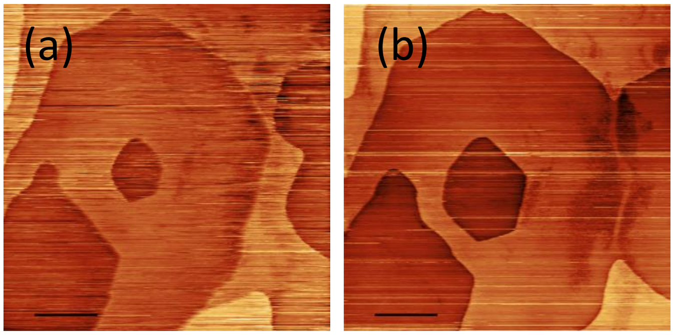

Figure 2. The STM with a vacancy island (v-island) starting imaging with (a) and ending with (b) after several hours of imaging. This illustrates the nanolithography process. On the right hand side of (b) an initially sub-surface line defect has been uncovered. (U_{bias} = 1.5 V, I = 20 pA, scalebar = 150 nm)