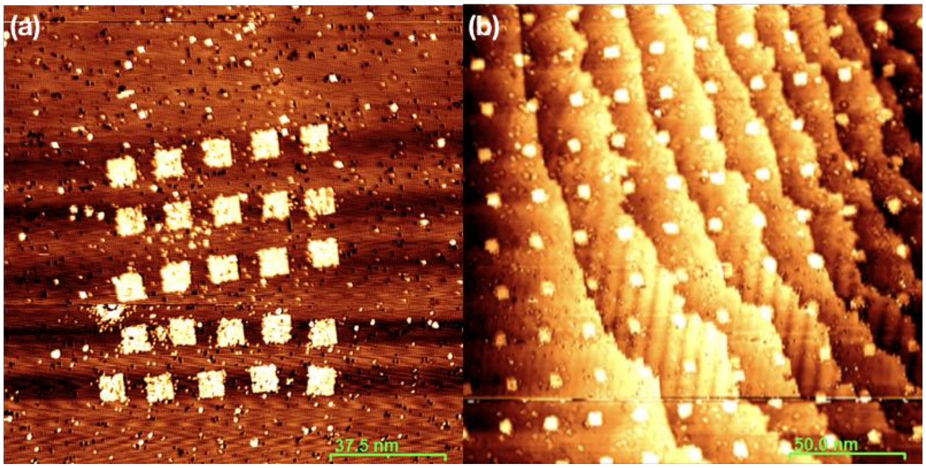

Fig. 1: Experimental arrays showing errors. (a): staircasing, (b): phase shift

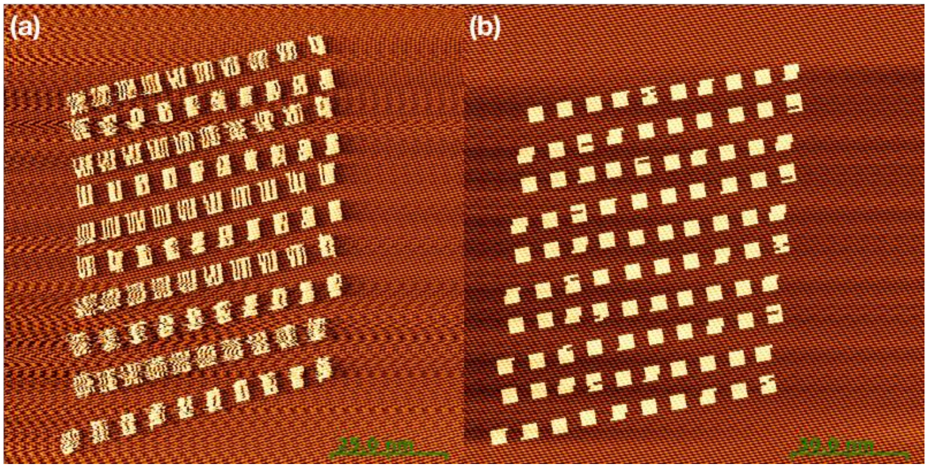

Fig. 2: Simulated STM lithography of arrays, showing the effect of different types of error. (a) : uncorrected creep giving phase shift and a curved edge. (b) : vertical drift, causing staircasing of the rows and shearing of the overall array. The first row distortion is similar in both cases, but drift does not cause a phase shift.

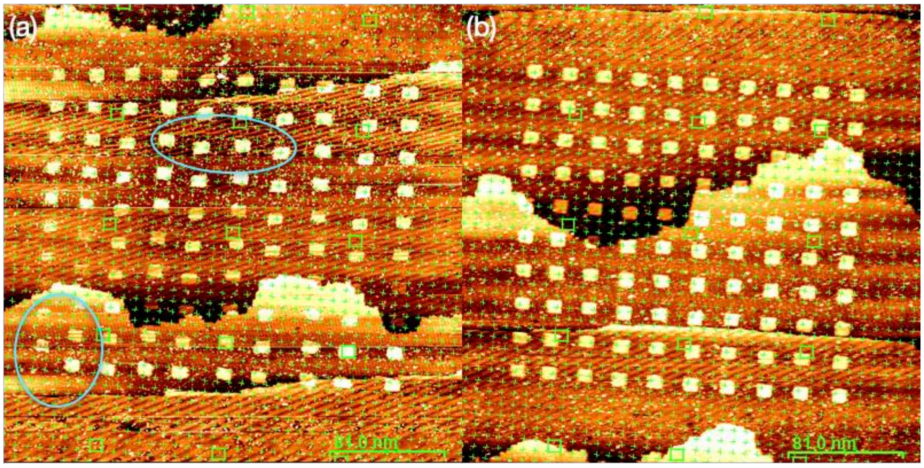

Fig. 3: (a): 10x10 array script showing first-line creep (usually z creep) and phase shift (xy creep) and staircasing (drift). (b): 10x10 array script after adjusting creep and drift correction parameters based on analysis of (a).