

Electronic Supplementary Information for Reducing Adhesion and Friction Forces of Si by Coating Ultra-thin Al₂O₃ Films

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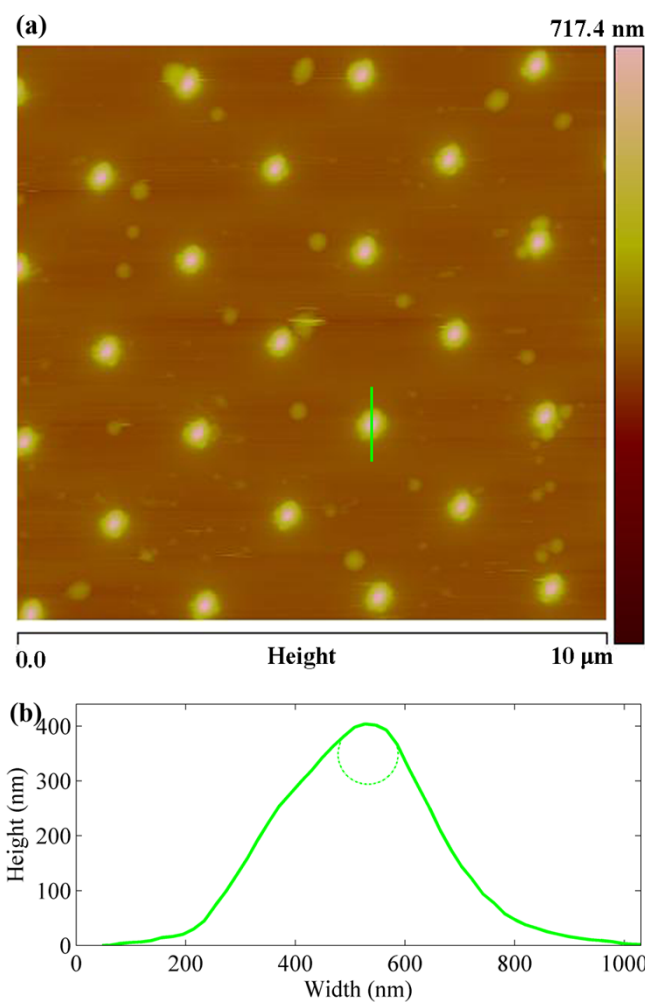
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The NP-10 probe tip was characterized by scanning a calibration grating TGT01¹ (Mikromasch) in a contact mode in an area of 10×10 μm². An array of bumps was obtained thereafter, as shown in Figure 1S (a). Each bump was an image of the same region of the probe tip contacting with the grating during the scanning. Figure 1S (b) shows a cross sectional profile of one of the bump indicated in Figure 1S (a) as a green line. The tip radius was obtained by fitting the cross sectional profile using a circle. The resulting tip radius was ~50 nm.

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Figure 1S. (a) A AFM image of the TGT01 calibration grating obtained with the NP-10 probe tip. (b) Cross sectional profile of a single bump indicated in (a) as a green line. By fitting this profile with a circle, the tip radius is calculated.