

## Refining the friction force through periodically grooved surfaces

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### 1. Effects of normal load on the friction

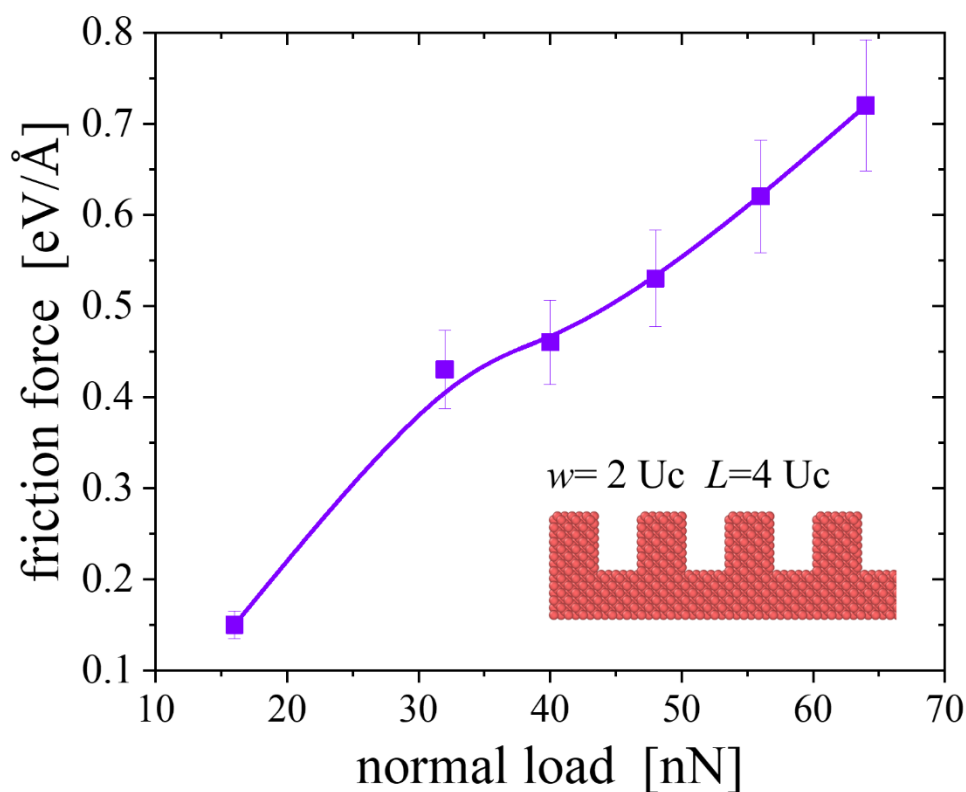


Figure S1. Effects of the normal load on the friction for grooved surface with geometrical parameters of  $w = 2 U_c$  and  $L = 4 U_c$ .

### 2. Surface morphology of the tip before and after the friction tests

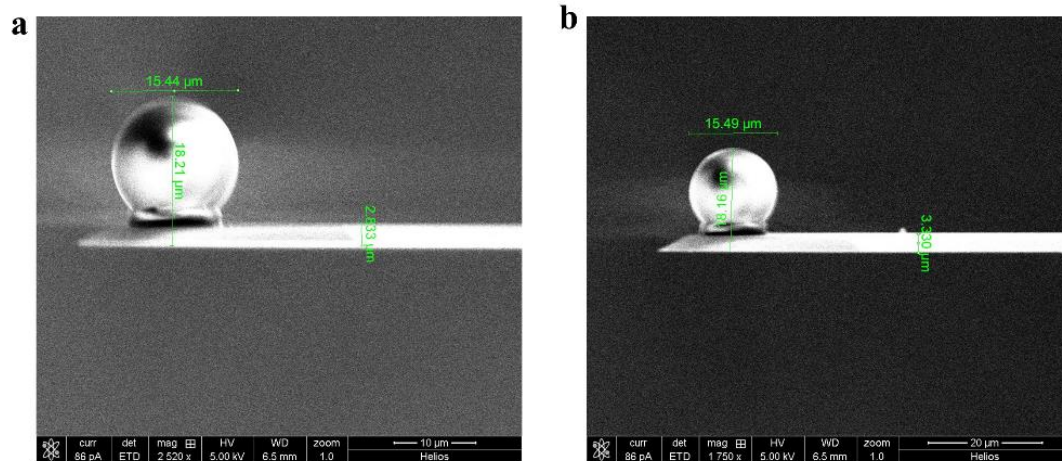


Figure S2. The surface morphology of the probe before (a) and after (b) the friction tests.