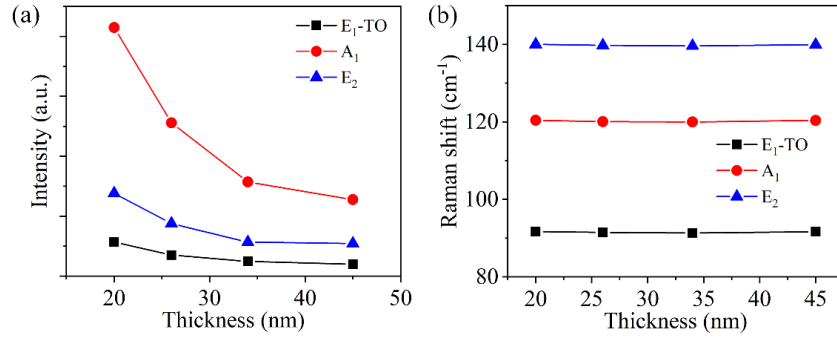
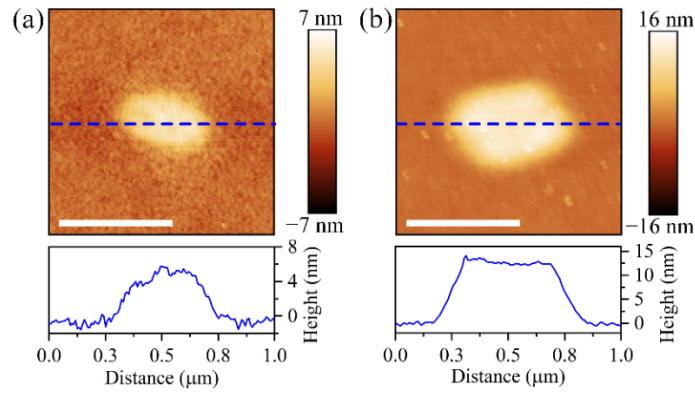


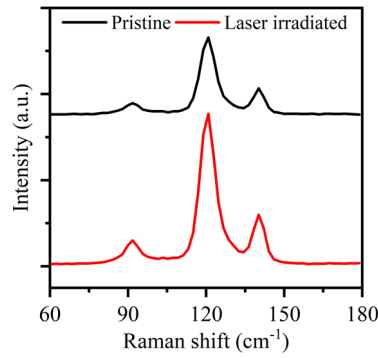
# Supplementary Materials



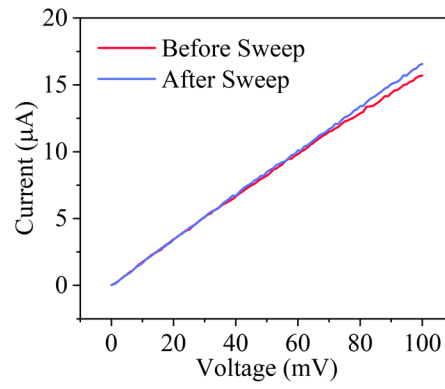
**Figure S1** The variations of fitting positions and intensities of Raman peaks for Te flakes with different thicknesses. (a) fitting intensities; (b) fitting positions.



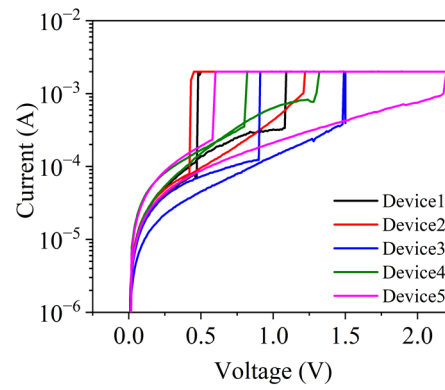
**Figure S2** AFM images (top inset images) of Te flakes after low-power laser (0.72 mW) irradiation using a 50 $\times$  objective lens and the corresponding height profiles (bottom inset images, the positions are shown by the blue dotted lines in the top inset images), scale bar is 500 nm. (a) irradiation time is 60s; (b) irradiation time is 120s;



**Figure S3.** Changes of Raman spectra in a Te flake after laser patterning



**Figure S4.** The current states of a memristor before and after the positive voltage sweep



**Figure S5.** Typical I-V curves of 5 volatile memristors based on laser-irradiated Te flakes