

Supporting information to manuscript:

Adhesion of bioinspired micropatterned surfaces: Effects of pillar radius, aspect ratio and preload

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Table 1A: SU-8 processing conditions

Figure 1A: SEM micrographs of selected pillar structures $r = 5 \mu\text{m}$ and $\lambda = 0.5, 1, 2$ and 4 .

Specimens were coated with 10 nm Au/Pd before taking pictures.

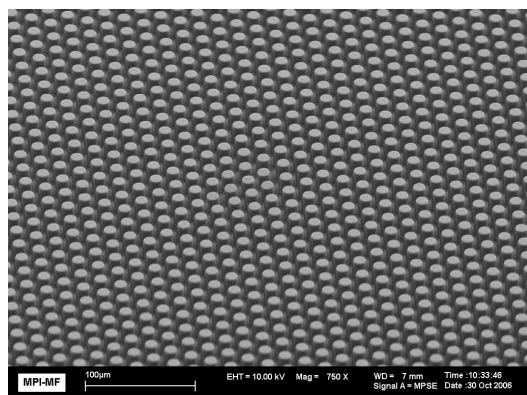
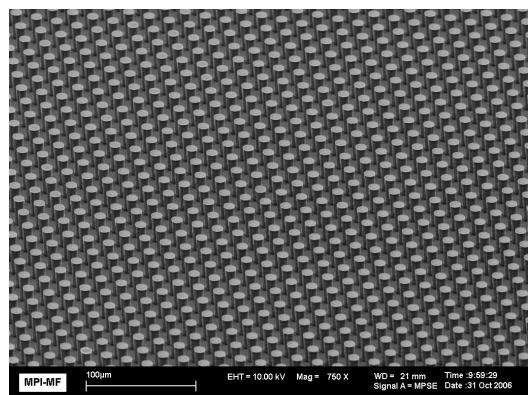
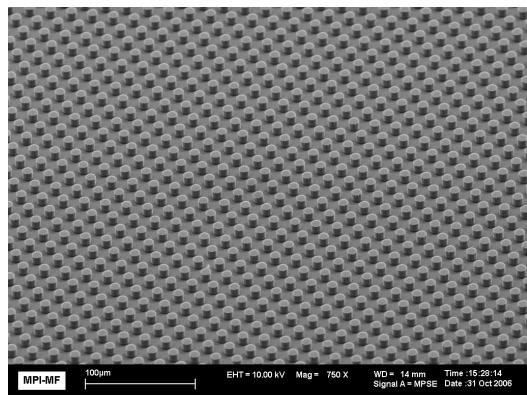
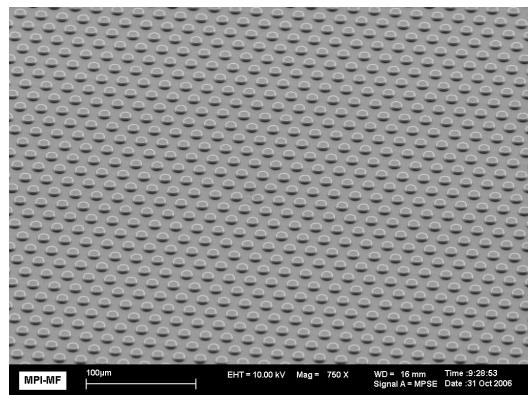


Figure 2A: Load-displacement curves at different preloads obtained on patterned surfaces ($r = 25 \mu\text{m}$, $\lambda = 1$). Each graph contains data corresponding to five experiments to demonstrate the high reproducibility of the measurements.

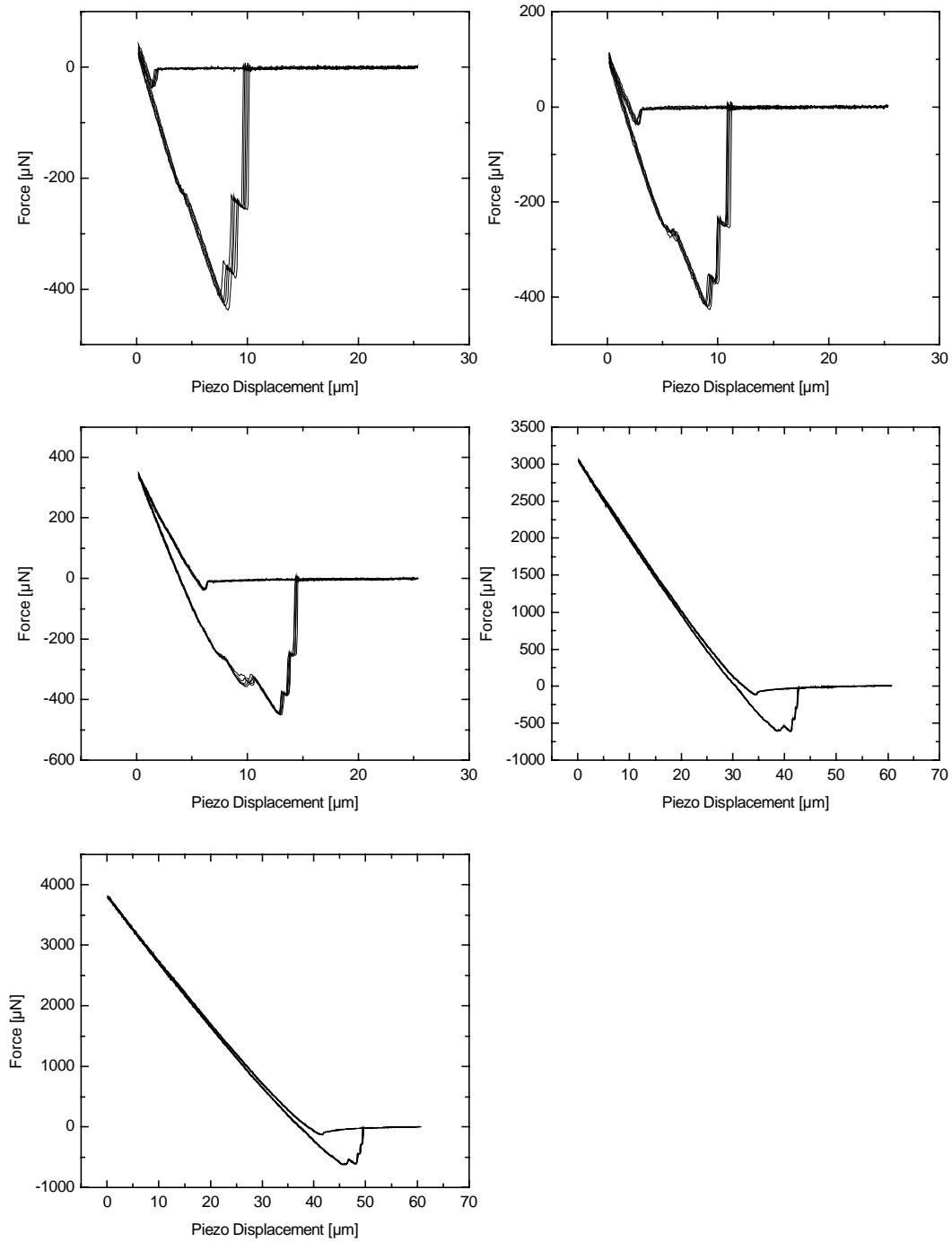


Figure 3A: Tenacity of pillars arrays of different radius ($\lambda = 1$) compared to flat surface.

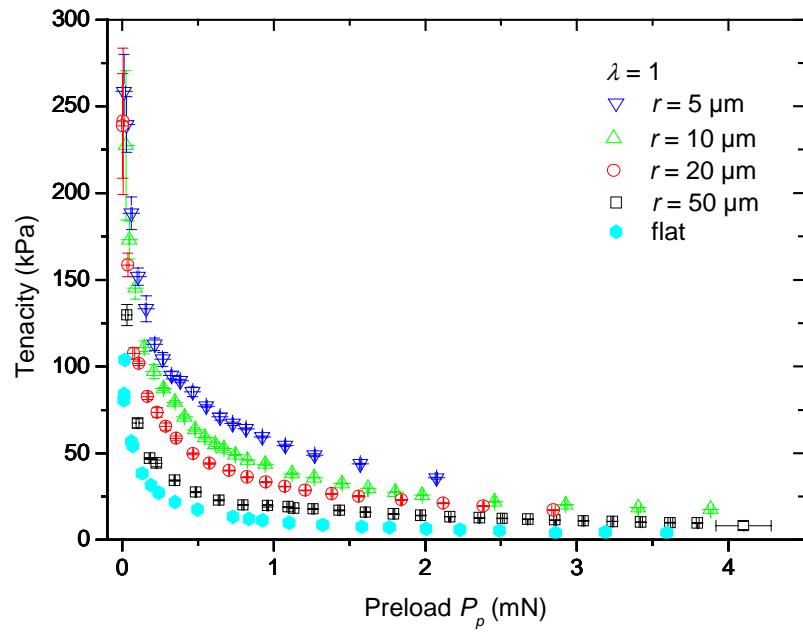


Figure 4A: Variation of E^* of patterned surfaces with different radii, heights and λ . E^* has been calculated by fitting the loading curves to the Hertz model.

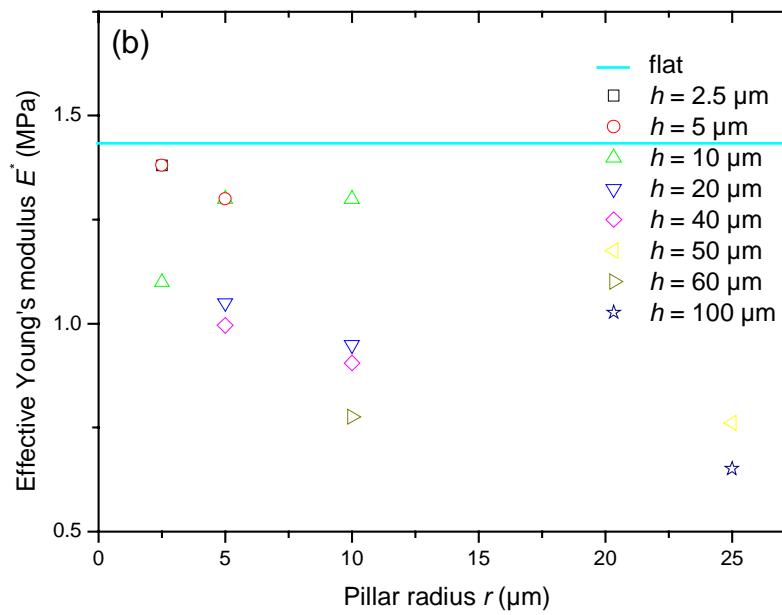
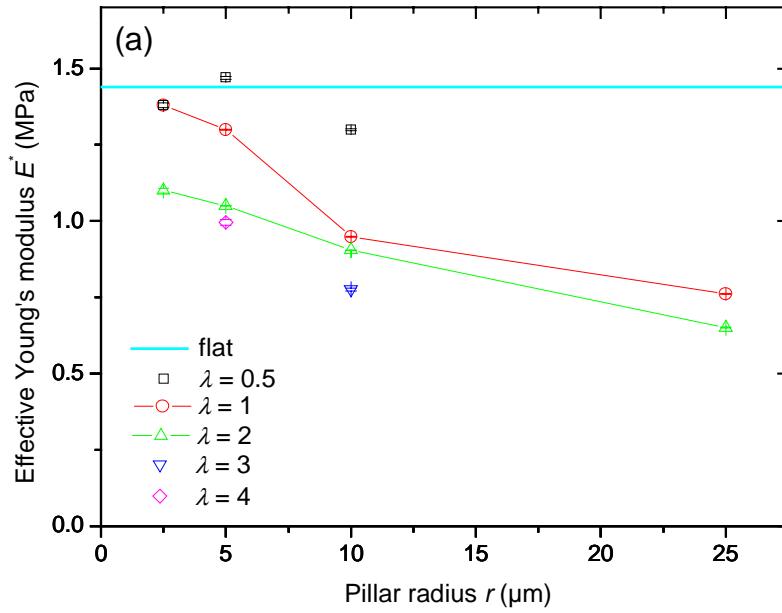


Figure 5A: Critical contact radius, a_{crit} , and number of pillars in contact at a_{crit} for different pillar radii, heights and λ . The values for a_{crit} were determined by fitting the P_c - P_p data with the spring model³³.

