Electronic Supplementary Material (ESI) for Nanoscale
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Supporting information

Instantly switchable adhesion of bridged fibrillar adhesive via gecko-inspired detachment mechanism and its application to a transportation system

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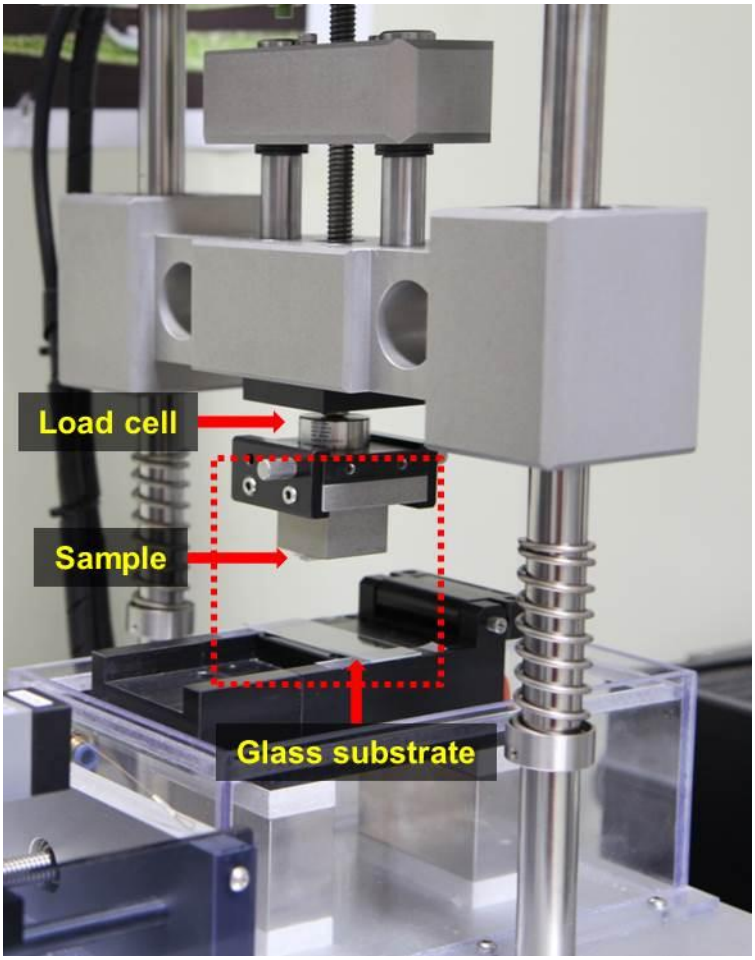

Fig. S1 A custom-built adhesion measurement system. The system is composed of a motorized driving part with a load cell moving in *z* (vertical) direction for installing an adhesive sample and a finely flat stage for contact surface.

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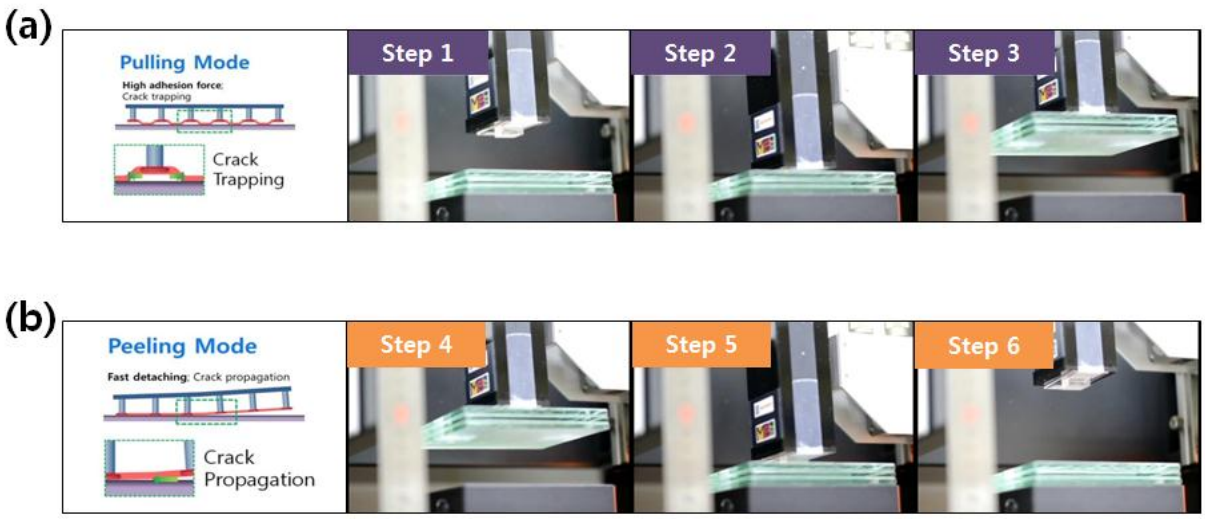

Fig. S2 Video snapshots show the sequential steps of pulling and peeling modes of the bridged micropillars. Each picture corresponds to the schematic illustration of the transportation system presented in Figure 6a.

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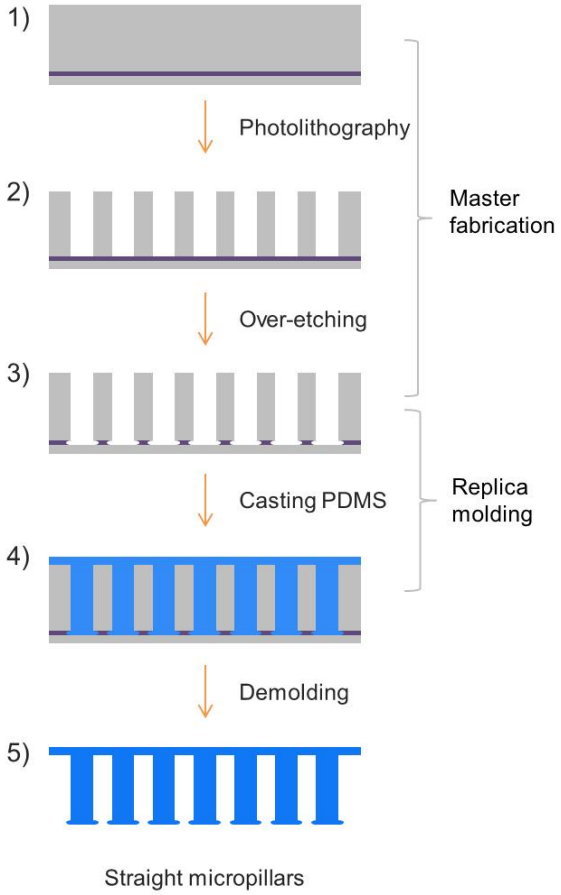

Fig. S3 A schematic illustration for fabricating the SOI master mold and replicating mushroom-like micropillars.

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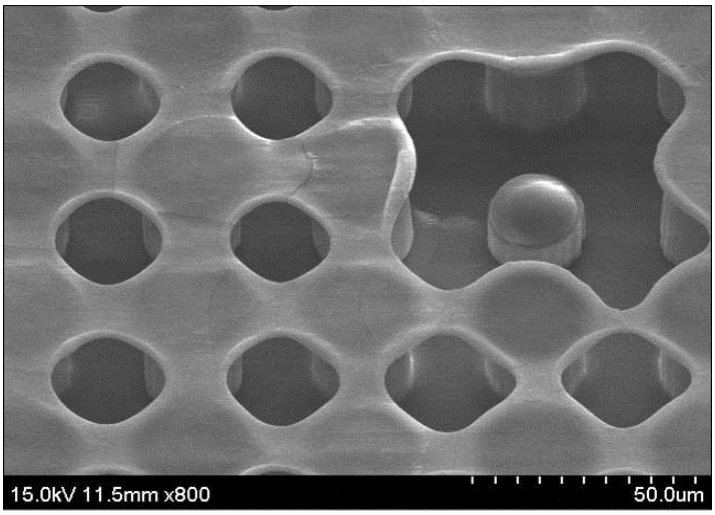

Fig. S4 An SEM image of the bridged micropillars with one arbitrary defect site, showing that the membrane of ~800 nm thickness is uniformly connecting the pillars in a grid, square pattern.