

SUPPLEMENTARY INFORMATION

A Gecko-Inspired Double-Sided Adhesive

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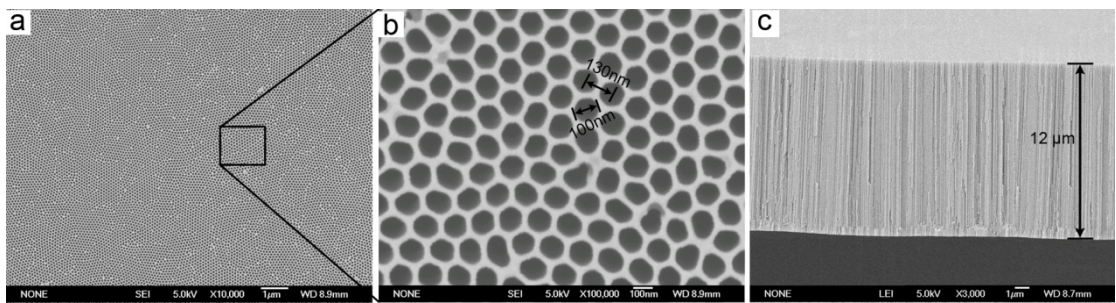


Fig. S1 SEM images of the fabricated AAO template from a) overall top, b) close top and c) side view, indicating the uniform distribution of the nanopores with average size of 100 nm, center-to-center distance of 130 nm and thickness of 12 μm.

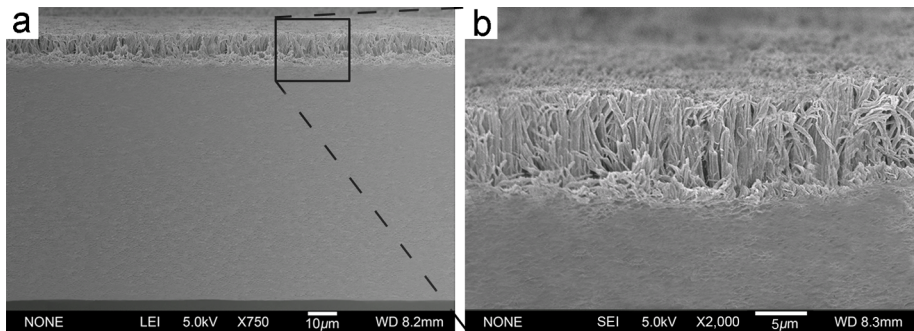


Fig. S2 Cross-sectional views of the fabricated single-sided PP nanofibrillar structure.

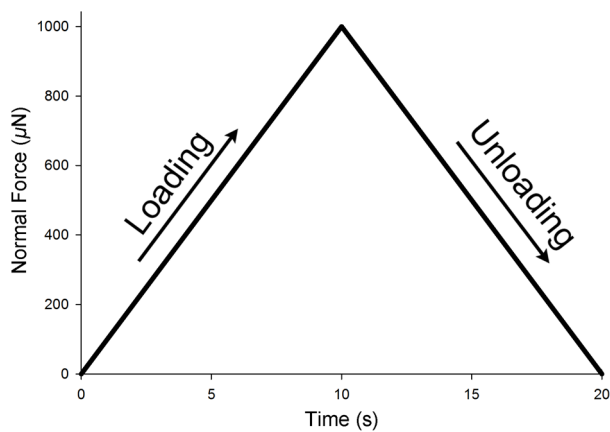


Fig. S3 Prescribed loading function in the micro-indentation tests.

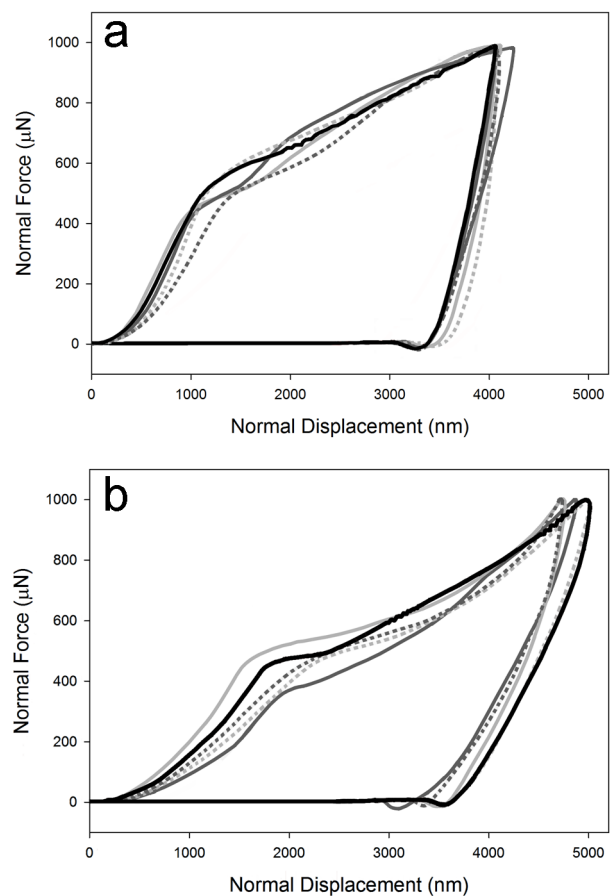


Fig. S4 Force-Displacement curves of the micro-indentation experiments at different random locations for a) 1-side and b) 2-sides test. The solid black curves in a) and b) are selected as two typical results for comparison in Fig. 3c.

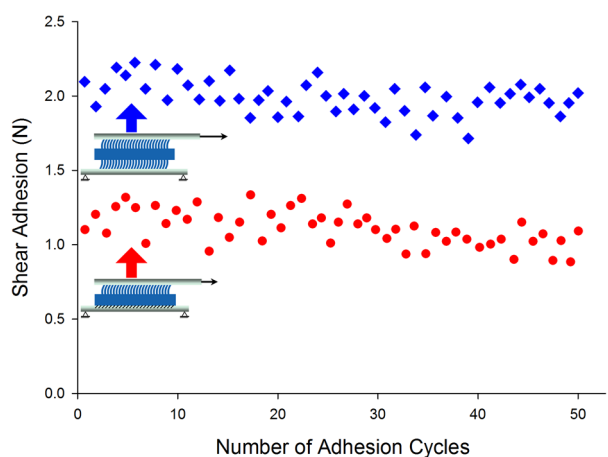


Fig. S5 Results of the 50 repeated trials in the macroscopic shear test for 1-side and 2-sides shear adhesion.

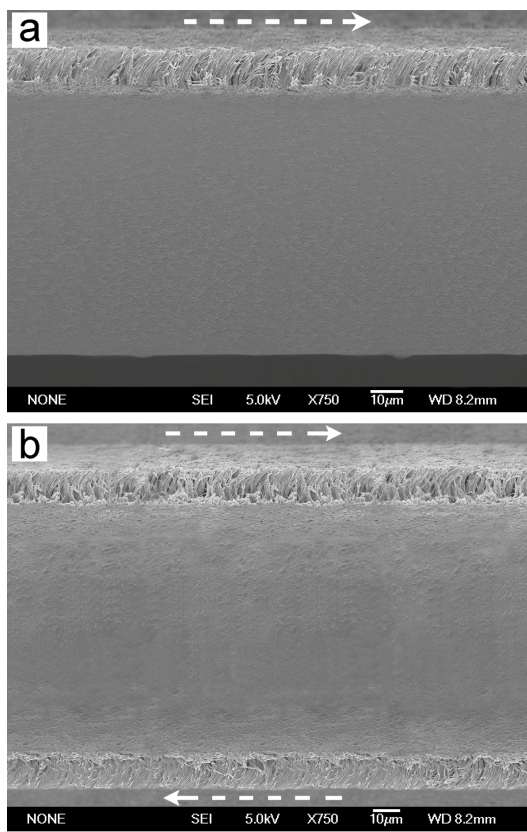


Fig. S6 Cross-sectional SEM images of the SDA after 50 repeated trials of a) 1-side and b) 2-sides shear adhesion tests. The contacted fibers show clear trends of bending towards the directions of relative movements (indicated by the dashed arrows).