

Tailoring the robust superhydrophobic silicon textures with stable photodetection properties

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S1 Relationship of nanowire length formed on the pyramids with respect to the etching time

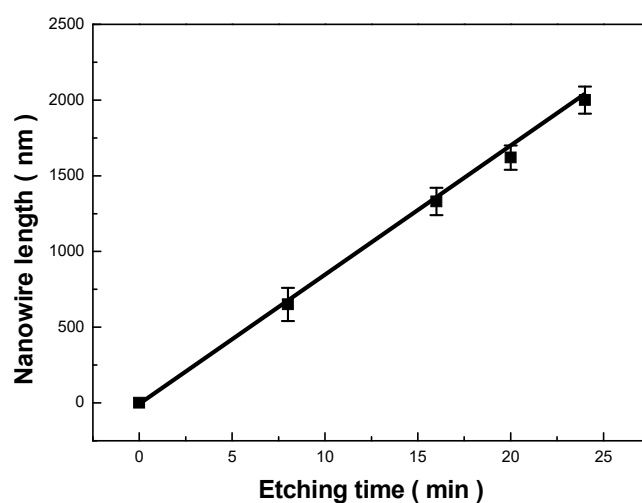


Figure S1 Plot of nanowire length versus etching time prepared with Ag-assisted chemical etching.

S2 Wetting properties of various Si-based samples

Table S1 Detailed wetting results of various samples.

	CA hysteresis	Advancing CA	Receding CA	Static CA
Bare Si	27.2 ⁰	90.2 ⁰	63.0 ⁰	88.5 ⁰
Inverted pyramids	20.0 ⁰	114.5 ⁰	94.5 ⁰	109.4 ⁰
Nanowires	21.3 ⁰	136.4 ⁰	115.1 ⁰	133.1 ⁰
Hierarchical structures	9.4 ⁰	159.8 ⁰	150.4 ⁰	157.2 ⁰

S3 Image of the sandpaper used for the linear abrasion test

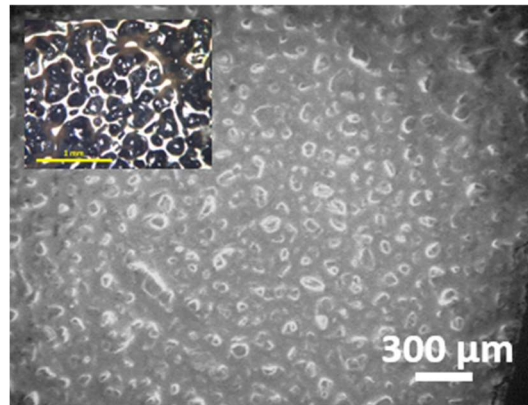


Figure S2 Top- view SEM image of sandpaper used for the linear abrasion test. The insert figure shows the corresponding optical micrograph.

S4 Illustrations of performing the linear abrasion test

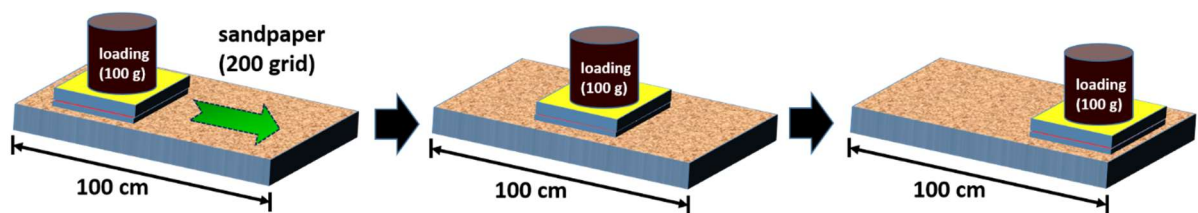


Figure S3 The linear abrasion test was performed by varying the abrasion distances under the fixed normal pressure on the sample.

S5 Wetting properties of hierarchical-structure based photodetectors.

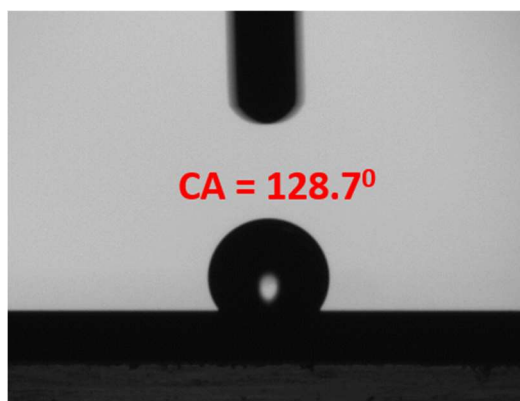


Figure S4 Contact-angle result on the surfaces of hierarchical-structure based photodetectors.