Supplementary Information

Highly sensitive and flexible pressure sensor based on silver nanowires filled elastomeric interlayer and silver nanowires electrodes

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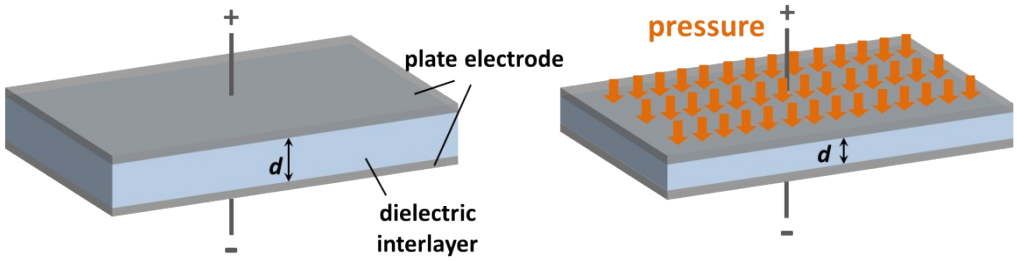

Figure S1 Schematic of capacitive pressure sensor with parallel plate electrodes. d is defined as the distance between two plate electrodes. Generally, if the size of sensitive area is much larger than d, the capacitance change could be calculated as $C=\varepsilon_0\varepsilon_r A/d$. With added pressure, the dielectric interlayer is compressed and d decreases accordingly. Therefore C increases with the pressure trigger as response.

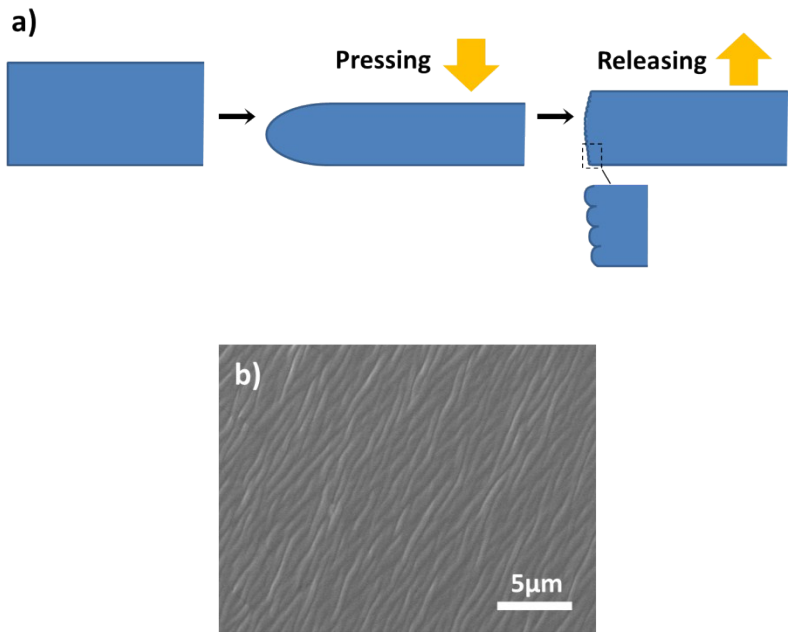

Figure S2 The wrinkle patterns of PU emerging during the deformation. (a) The deformation process during adding and releasing pressure on the PU film. The PU film edge was extruded and the surface of the film edge was stretched when the film was compressed by the added pressure for hours. After releasing the pressure, the film rebounded to a certain extent and the wrinkle patterns emerged on the surface of film edge. Similar wrinkle patterns can be seen in the reference [1-3]. (b) The wrinkle patterned surface of pure PU without AgNWs.

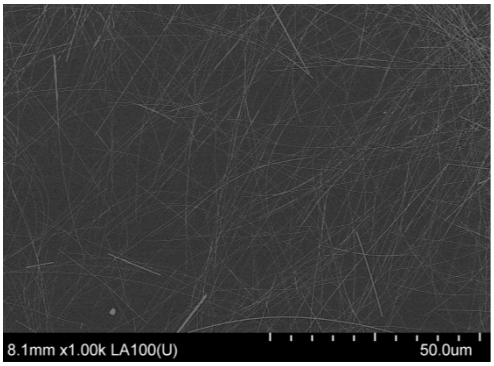

Figure S3 The prepared AgNWs with length over 60 μm.

Table S1 The comparison of the sensitivity of the reported pressure sensors.

Types of devices	Sensitivity (kPa^{-1})	Reference
OFET	0.05	4
	8.4	5
Piezoelectric	0.02	6
	0.131	7
Resistive	1.80	8
Capacitive	0.55	9
	5.54	Our Work

References

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