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# Supplementary Information

## Pressure-induced Bending Sensitive Capacitor Based on Elastomer-free, Extremely Thin Transparent Conductor

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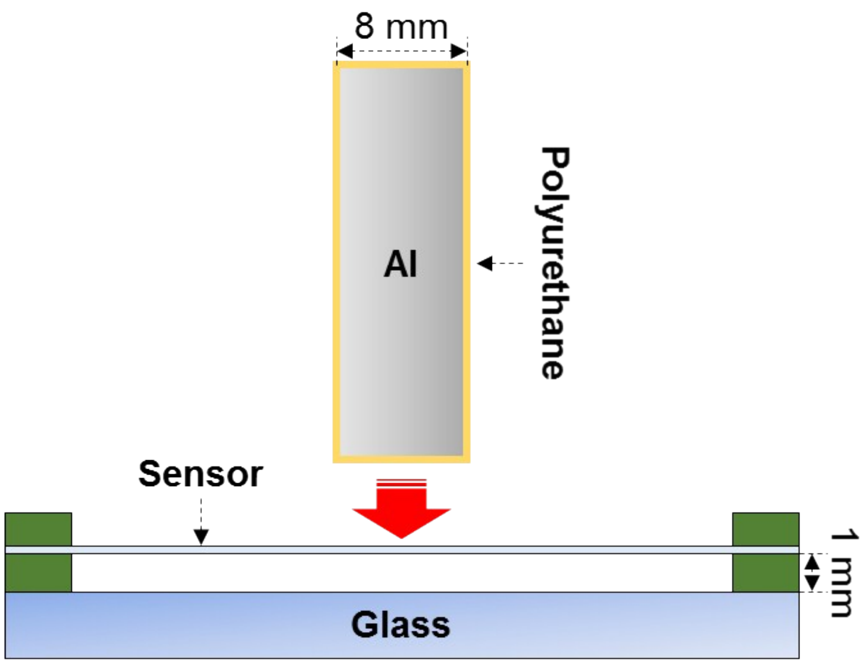


**Figure S1**. A schematic showing the setup for the pressing test.

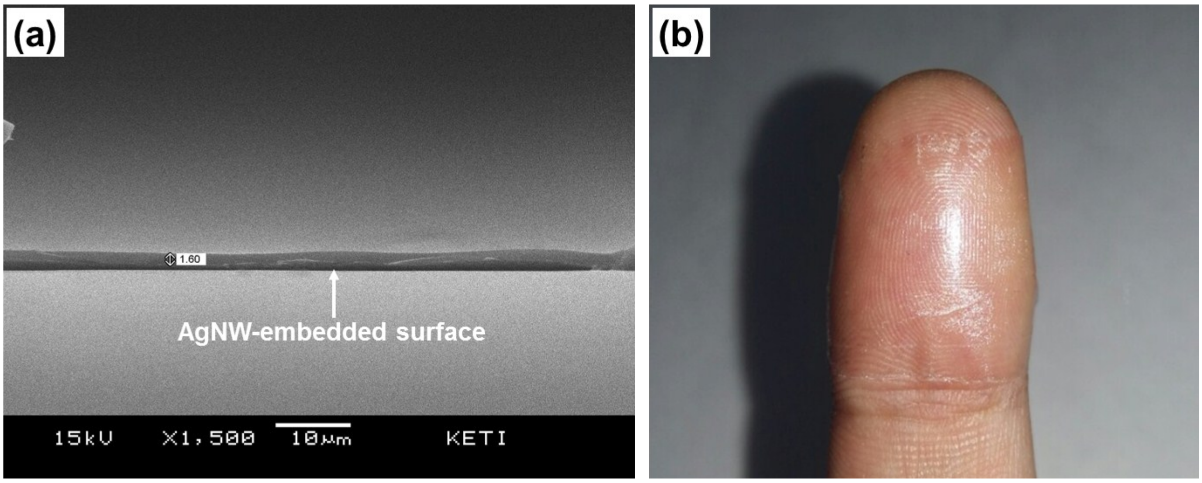


**Figure S2**. (a) SEM micrograph showing the thickness of an AgNWs/PVB film, (b) a sensor perfectly adhered to a human fingertip. In Figure S2b, a AgNW-based sensor in a tandem compound pattern is shown.

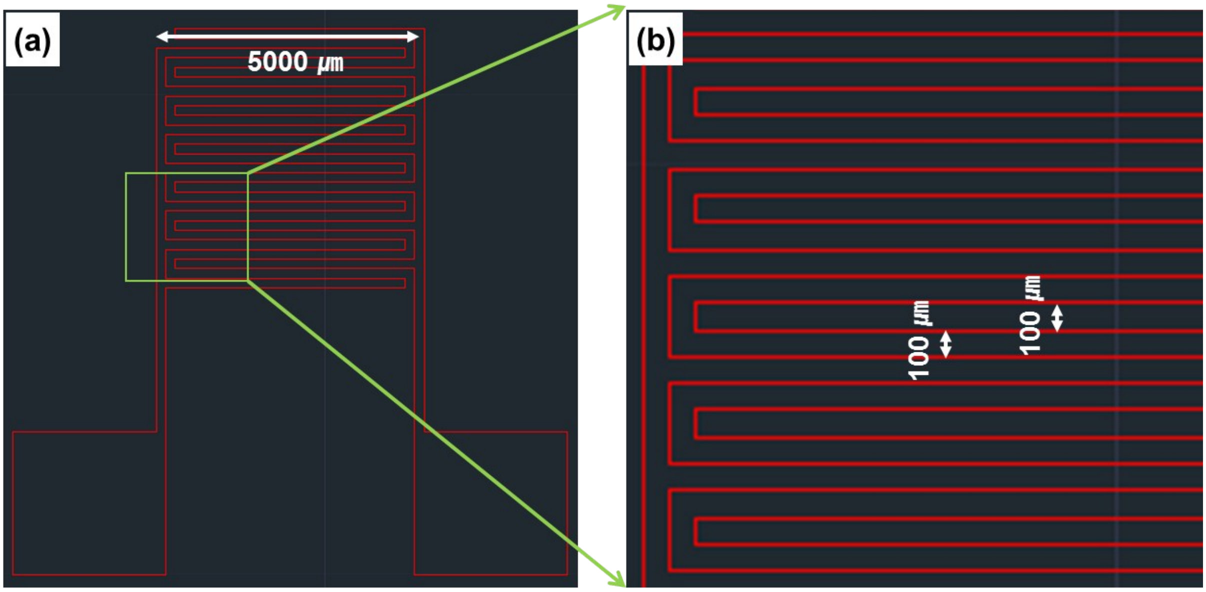


**Figure S3**. A tandem compound electrode pattern designed in this study: (a) a view of the whole sensor and (b) an enlarged view.

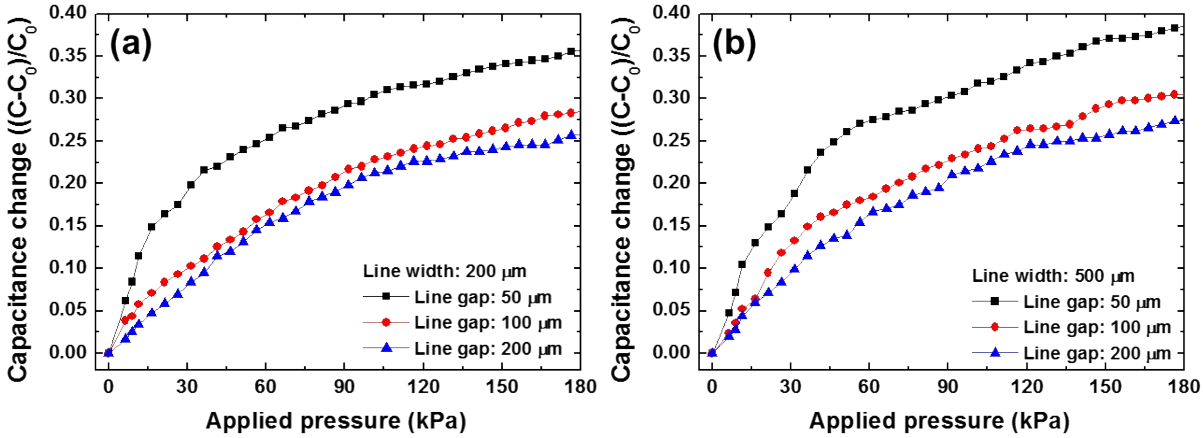


**Figure S4**. Capacitance variation of the fabricated sensors with various geometries (line width and line gap): line width of (a) 200 μm and (b) 500 μm.

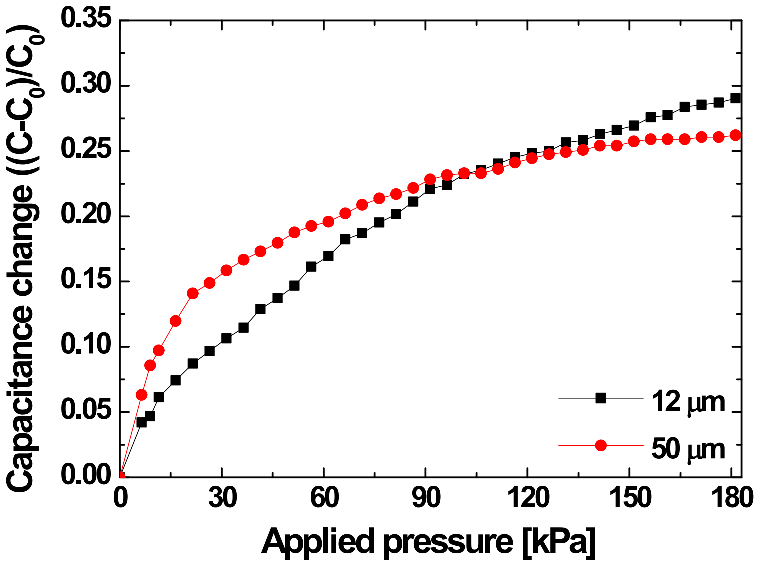


**Figure S5**. Capacitance variation of the fabricated sensors with varying thickness.

From Figure S4 and S5, it was noticed that the smaller gap formed between the electrode lines results in higher sensitivity, while the effects of line width and film thickness are negligible. Regardless of the geometric variations we employed in this study, capacitance changed very sensitively with the applied pressure.

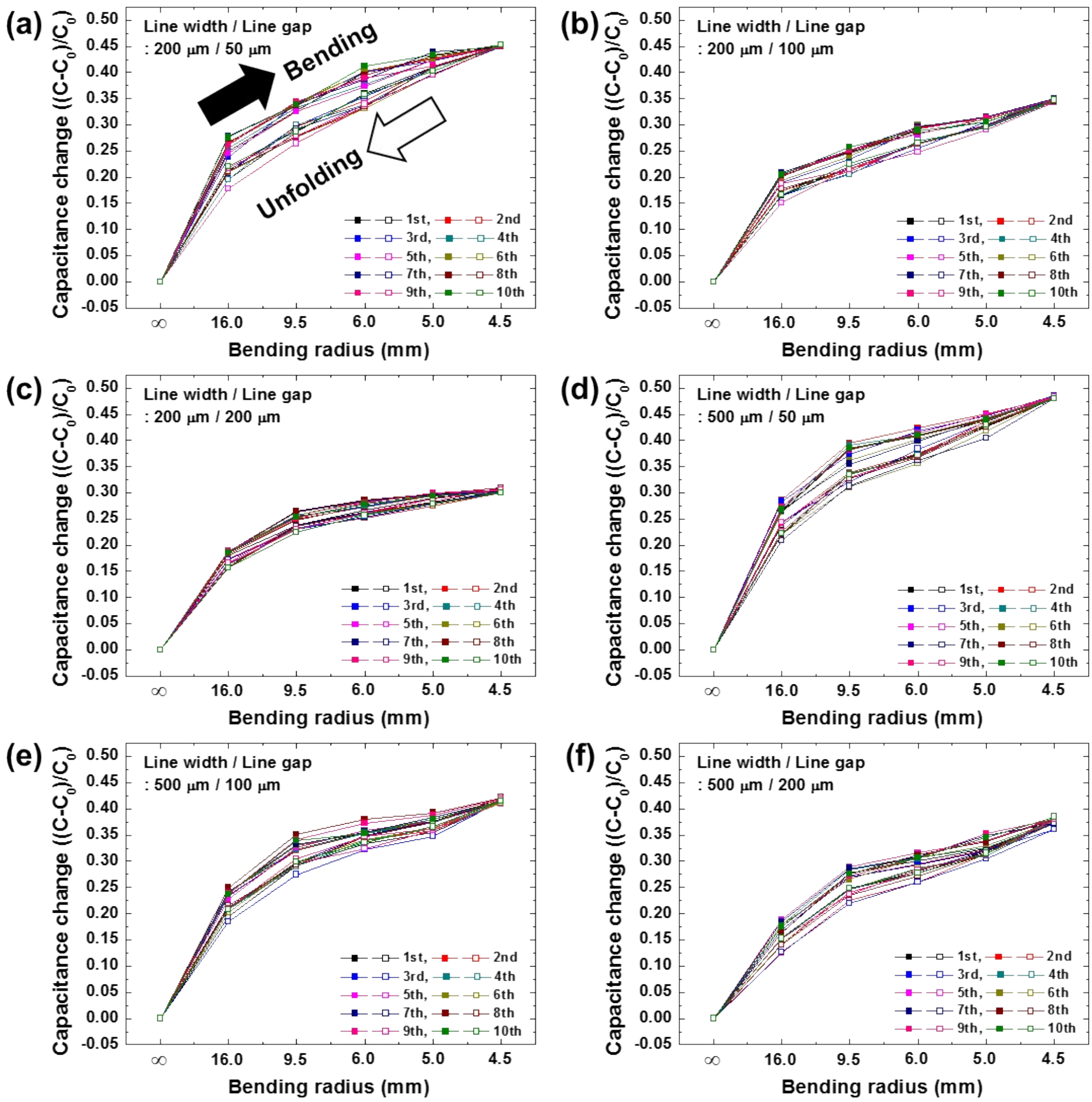


**Figure S6**. Capacitance change of various sensors with bending/unfolding: line width/line gap of (a) 200 μm/50 μm, (b) 200 μm/100 μm, (c) 200 μm/200 μm, (d) 500 μm/50 μm, (e) 500 μm/100 μm, and (f) 500 μm/200 μm.

Figure S6 shows that the capacitance increased very sensitively with bending and decreased with unfolding. Around 45% of the capacitance increased by bending with a radius of 4.5 mm for the line width/line gap of 200 μm/50 μm. The sensitivity slightly decreased with increasing line gap and increased with increasing line width. By testing with multiple bending/unfolding cycles, it could be confirmed that the hysteresis was negligible.

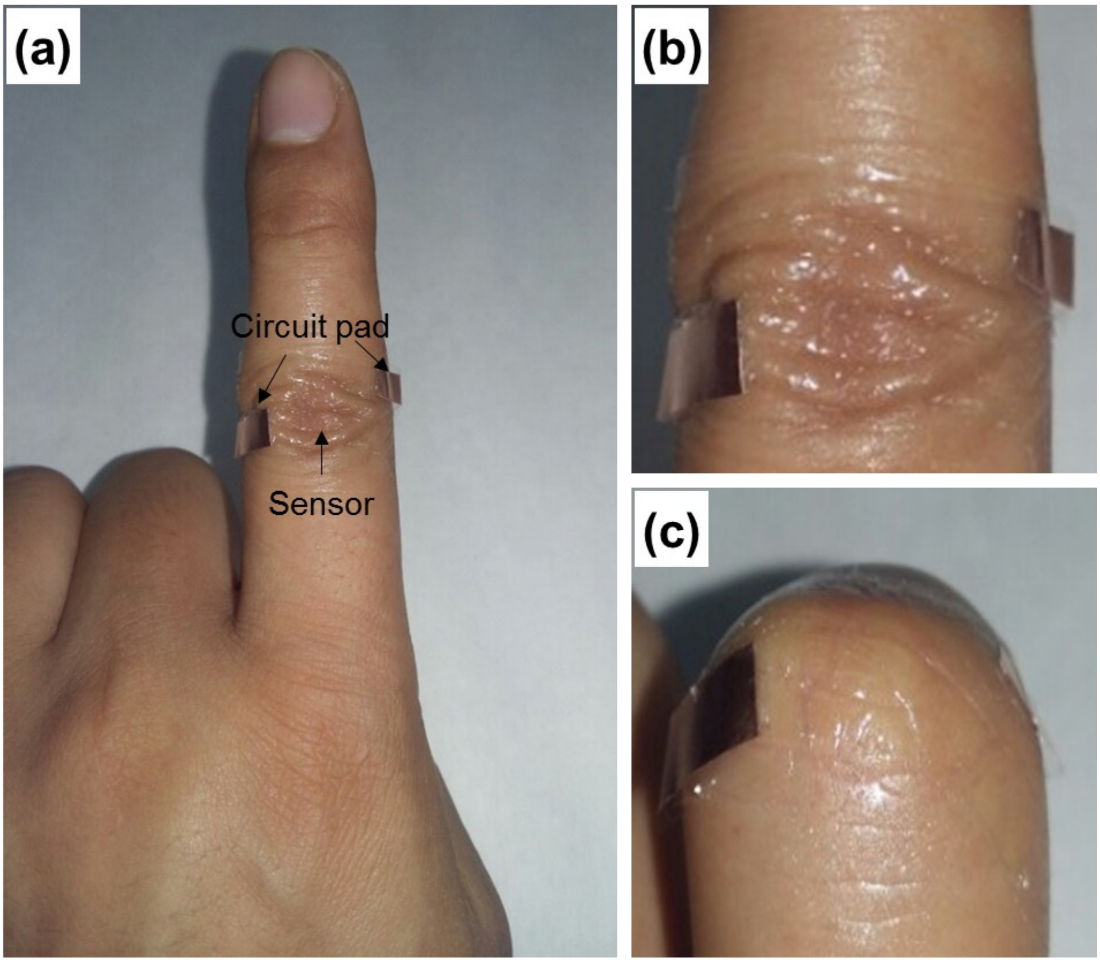


**Figure S7**. A sensor adhered to the skin near a proximal interphalangeal joint: (a) an overall view, (b) a magnified view in a stretched state and (c) a magnified view in a bent state.