Supporting Information

A Flexible and Highly Sensitive Pressure Sensor Based on Microdome-Patterned PDMS Forming with Assistance of Colloid Self-Assembly and Replica Technique for Wearable Electronics

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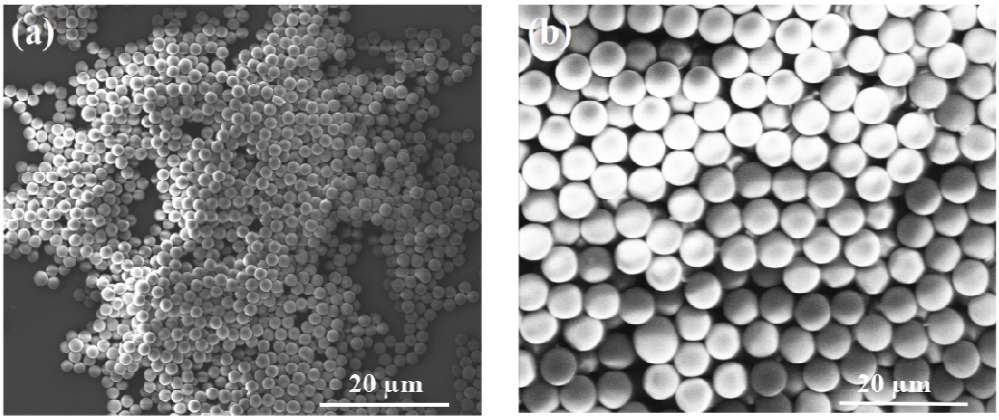

Figure S1. (a) SEM image of PS beads with 2 μm diameter. (b) SEM image of PS beads with 5.6 μm diameter.

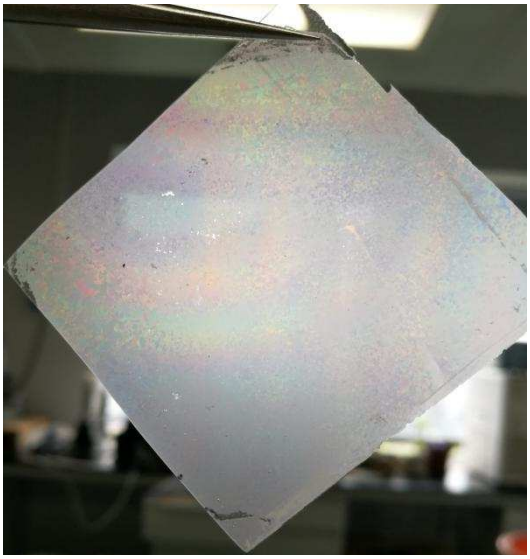

Figure S2. The photograph of the concave PDMS film, showing the optical characteristics.

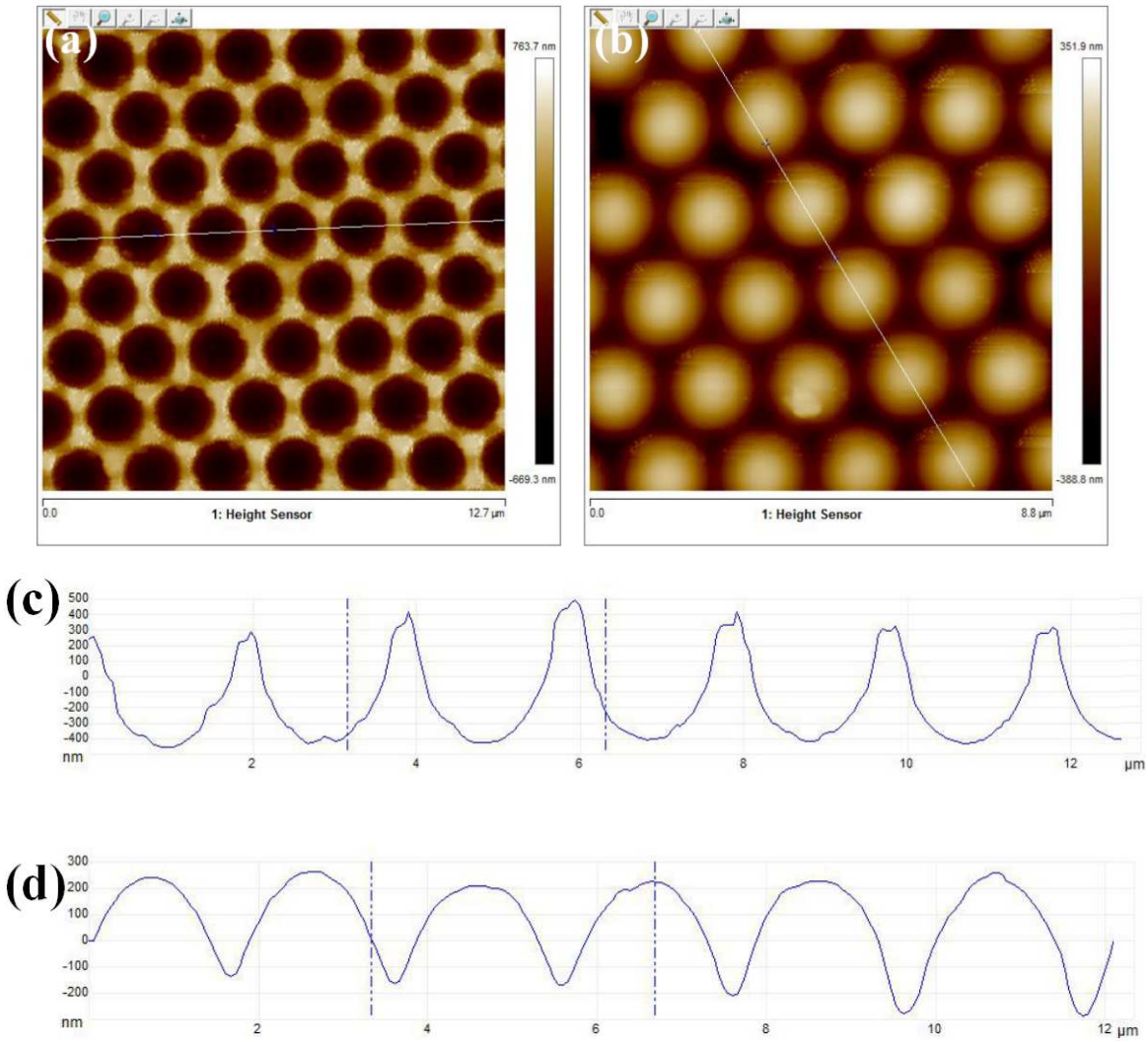

Figure S3. (a) The 2D SPM image at the bottom of the concave PDMS film based on 2 µm-PS microspheres. (b) The 2D SPM image at the top of the microdome PDMS film based on 2 µm-PS microspheres. (c) The 2D line profile at the bottom of the concave PDMS film based on 2 µm-PS microspheres. (d) The 2D line profile at the top of the microdome PDMS film based on 2 µm-PS microspheres.

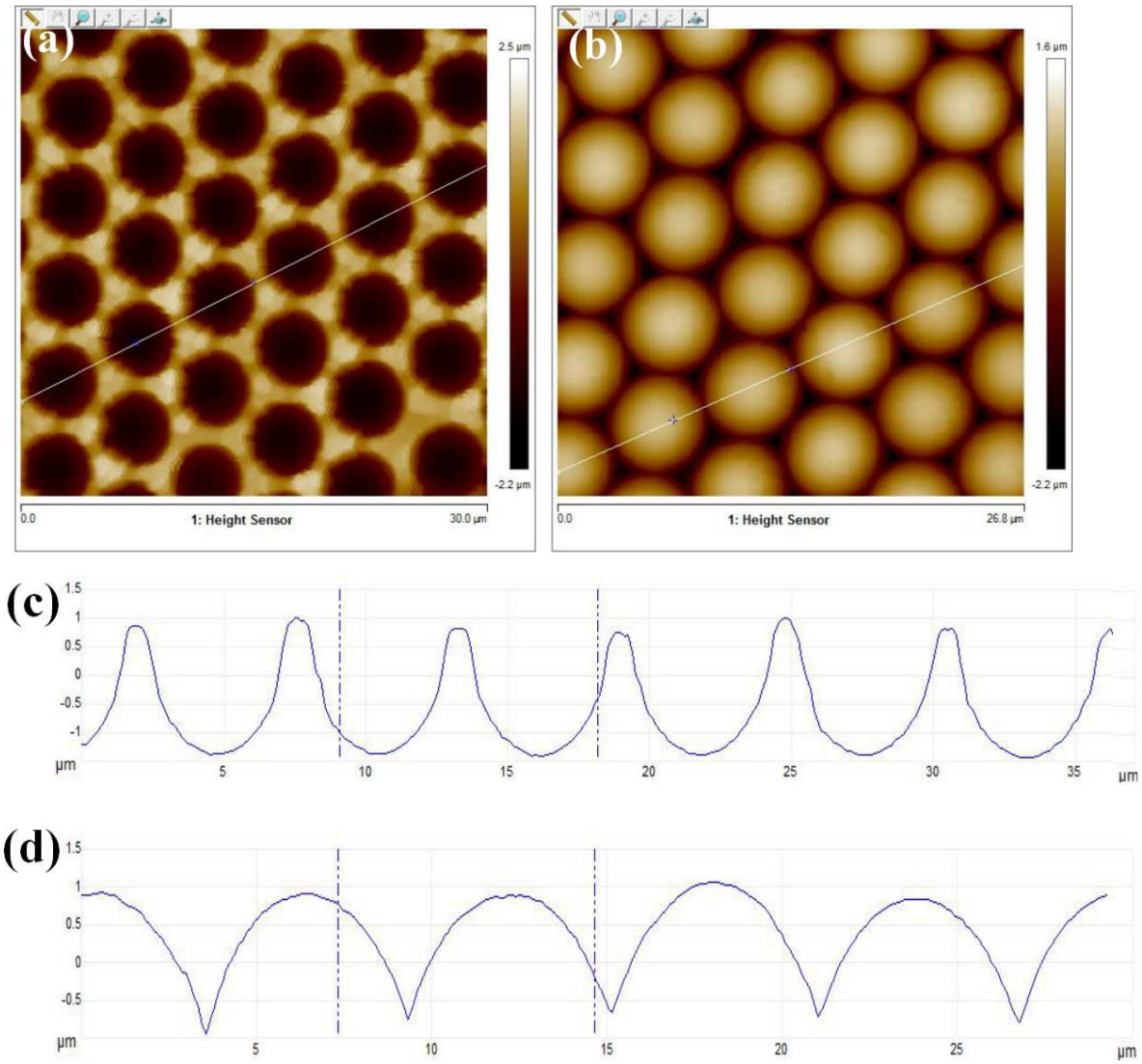

Figure S4. (a) The 2D SPM image at the bottom of the concave PDMS film based on 5.6 µm-PS microspheres. (b) The 2D SPM image at the top of the microdome PDMS fillm based on 5.6 µm-PS microspheres. (c) The 2D line profile at the bottom of the concave PDMS film based on 5.6 µm-PS microspheres. (d) The 2D line profile at the top of the microdome PDMS fillm based on 5.6 µm-PS microspheres.

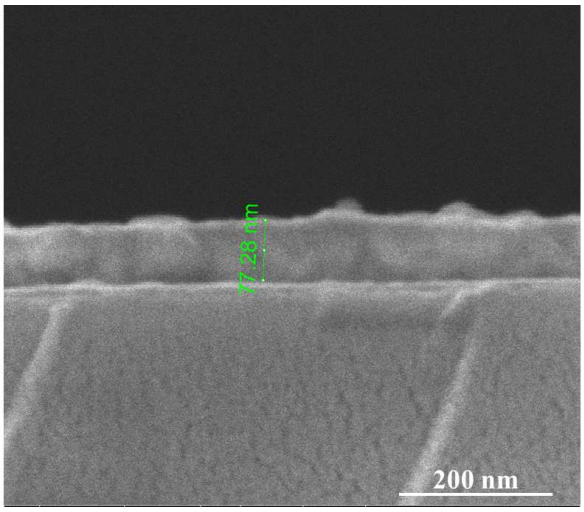

Figure S5. Cross-sectional SEM image of gold layer sputtered on PDMS surface.

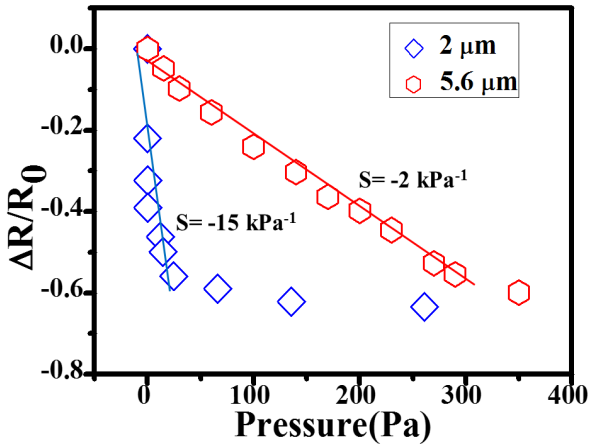

Figure S6. Sensitivity of different pressure sensors based on 2 μm and 5.6 μm sized PS sphere in low-range pressure.

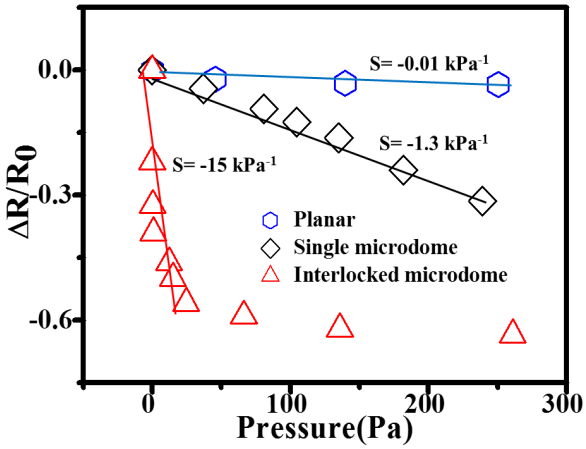

Figure S7. Sensitivity of different pressure sensors based on the planar film, single microdome film, and the interlocked microdome film in low-range pressure.

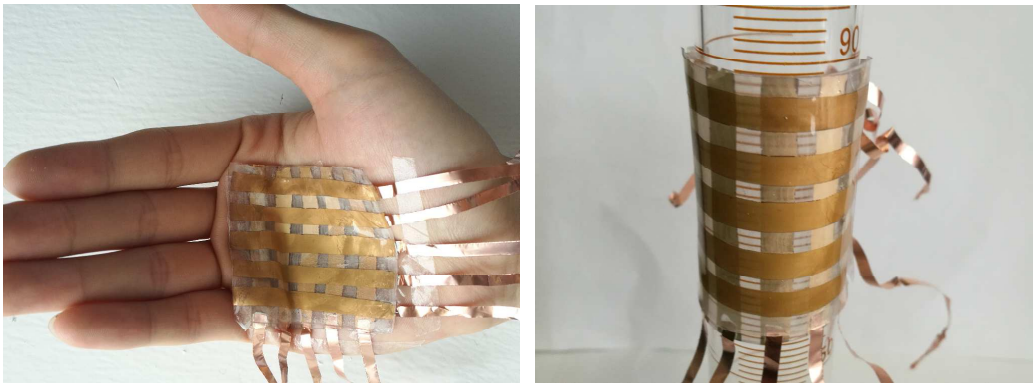

Figure S8. Photographs of the flexible pressure sensor array attached on human palm and graduated cylinder.