# Supporting Information

## Sugar-plastic Assisted Fabrication of Hollow PDMS Wearable Fabrics toward Excellent Sensory Capabilities

*Mei Liu* [a], *Shiqiang Song* [a,c]*, *Zhenlin Jiang* [a]*, *Yujie Xiong* [b], , *Yong Zhang* [c]

[a] School of Chemistry and Chemical Engineering, Shanghai University of Engineering Science, Shanghai 201620, P. R. China

[b] School of Electronic and Electrical Engineering, Shanghai University of Engineering Science, Shanghai 201620, P. R. China

[c] State Key Laboratory for Metal Matrix Composite Materials, School of Chemistry and Chemical Engineering, Shanghai Jiao Tong University, Shanghai 200240, P. R. China.

*E-mail: polymer_song@hotmail.com (S.Q. Song)

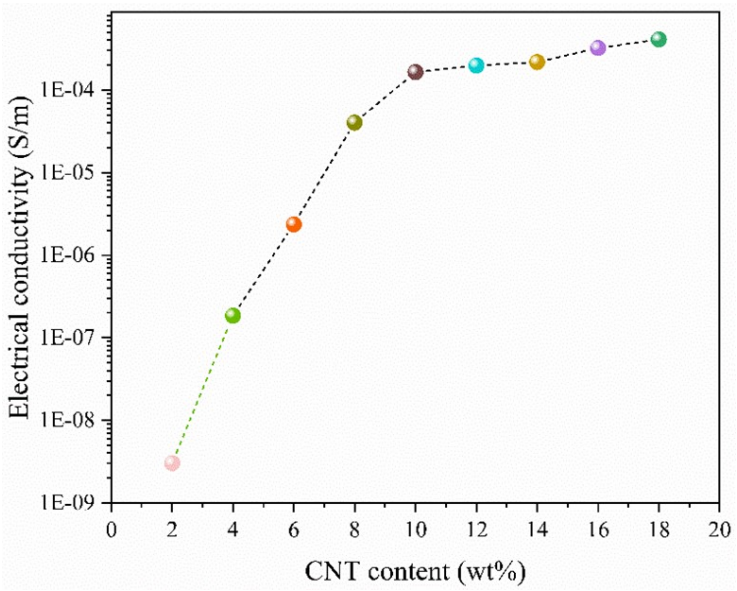


**Fig. S1** The conductivity of the hollow PDMS/CNT composite as a function of CNT contents

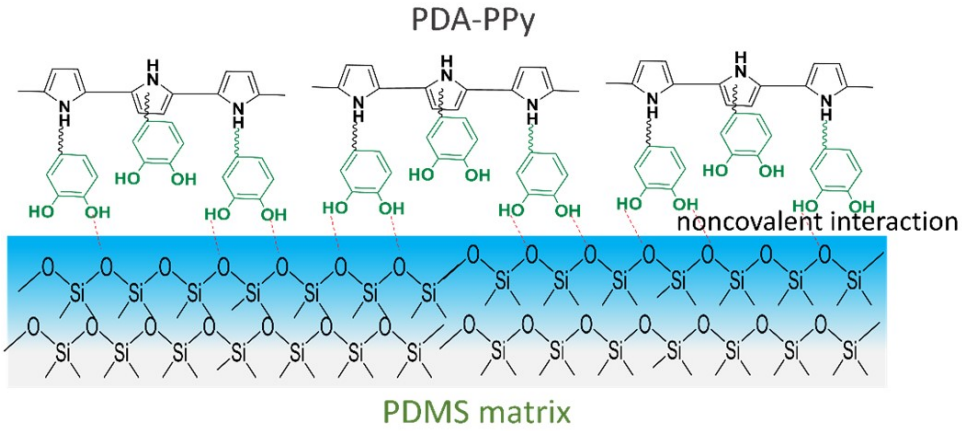


**Fig. S2** Schematic diagram of adhesion between PDA-PPy and PDMS matrix

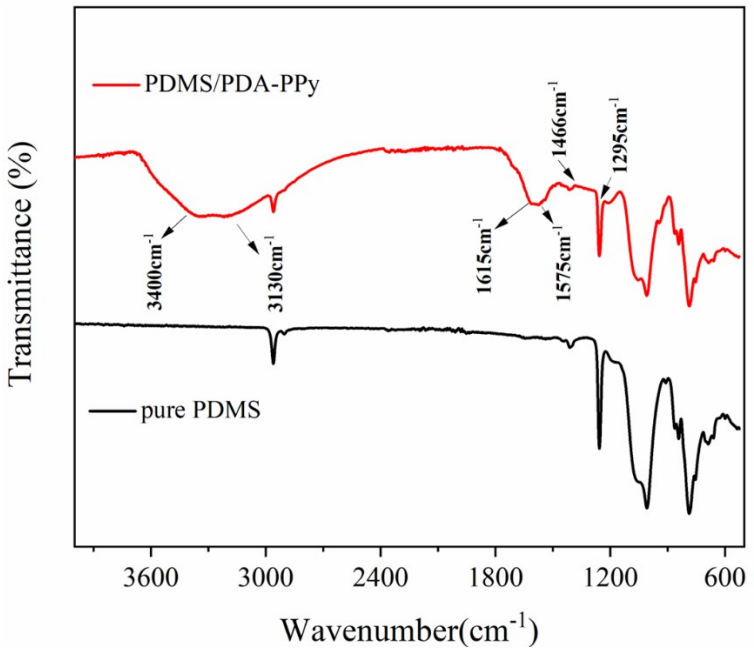


**Fig. S3** FTIR spectra of the pure PDMS fiber and PDMS/PDA-PPy composite fiber

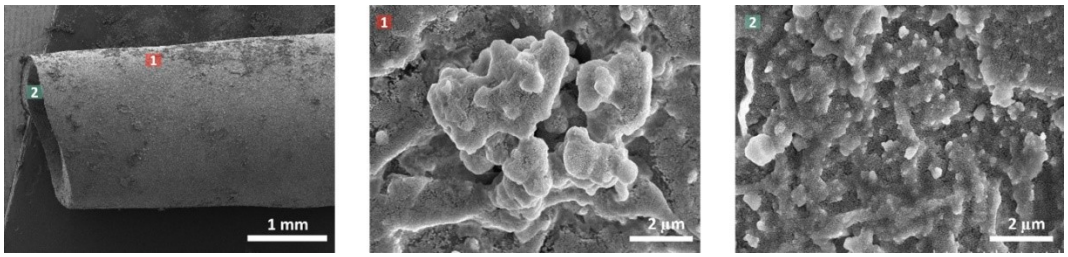


**Fig. S4** SEM morphology of the outer and inner surfaces of the PDMS/PDA-PPy composite fiber

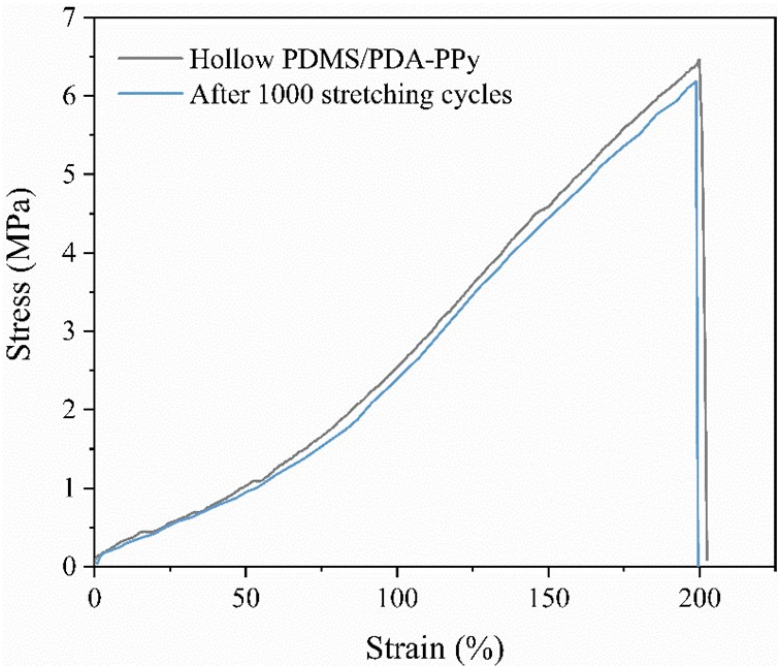


**Fig. S5** Stress-strain curves of hollow PDMS/PDA-PPy fiber and its curve after 1000 stretching cycles

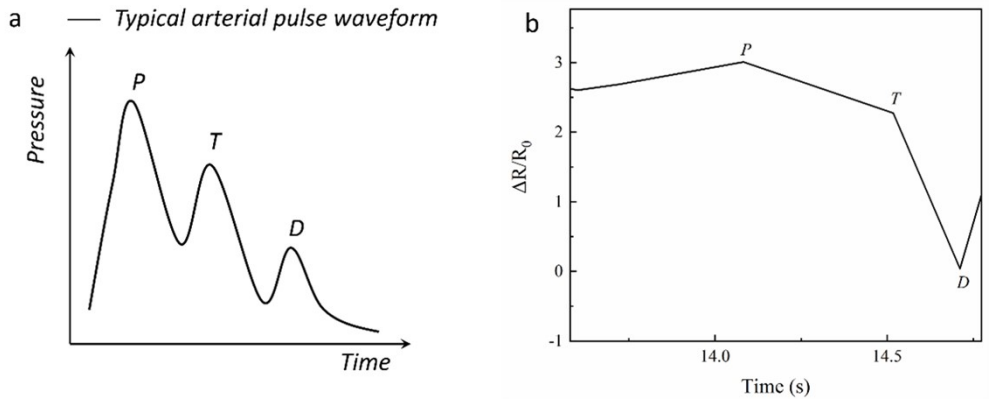


**Fig. S6** a) Typical arterial pulse waveform with P, T and D peaks. b) Change in relative resistance of arterial pulse waveform by sticking the sensor to the wrist artery

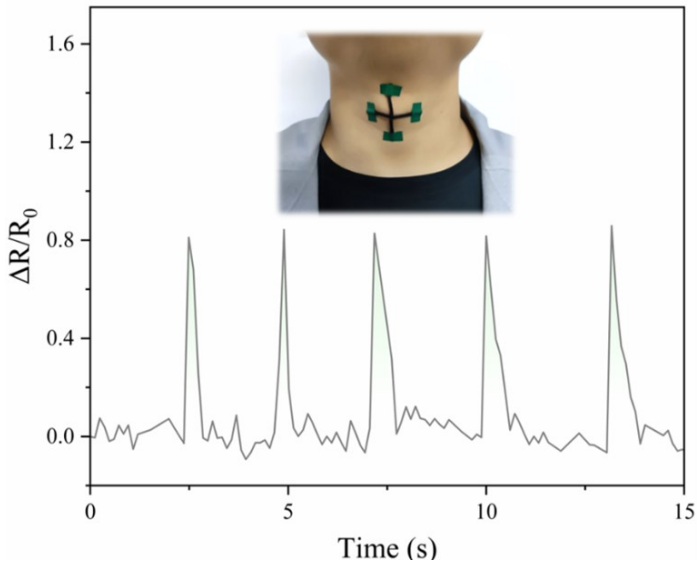


**Fig. S7** Relative resistance response to detecting the swallowing action

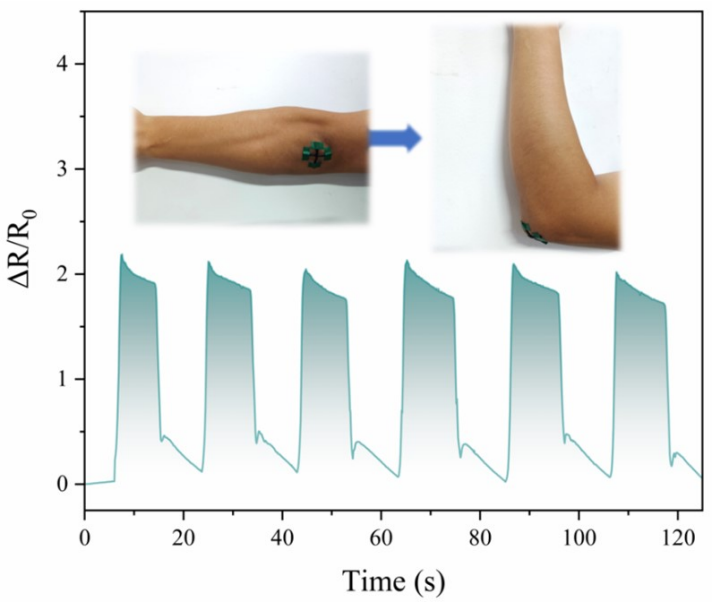


**Fig. S8** Relative resistance response to detecting the elbow bending

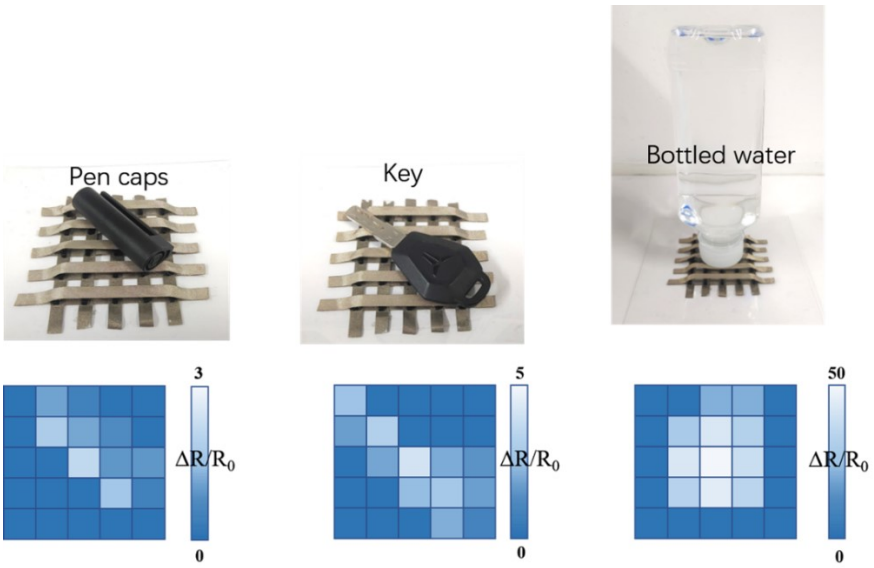


**Fig. S9** Different objects applied to the sensor array and their pressure mapping

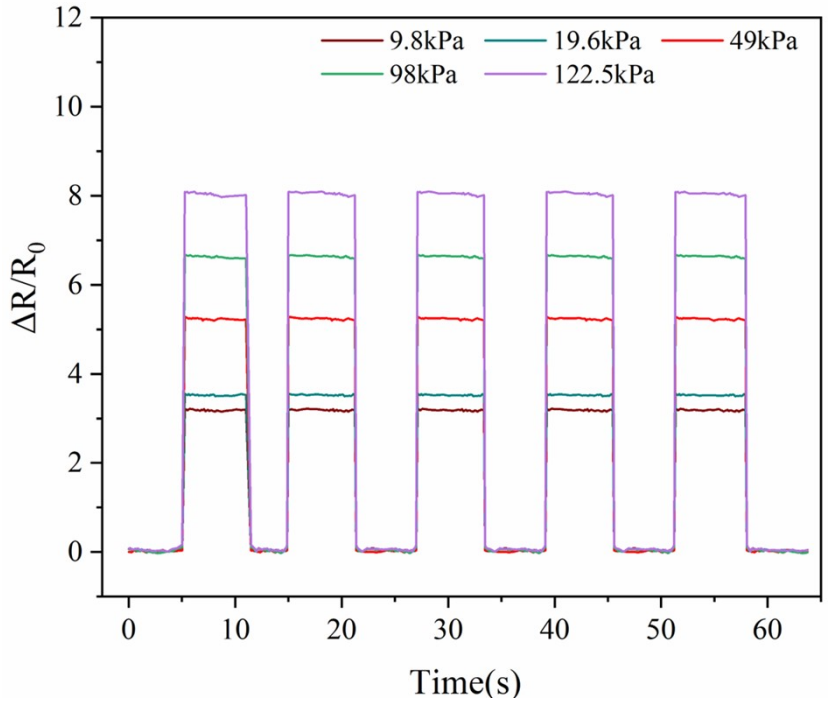


**Fig. S10** Relative resistance response to different cyclic external forces

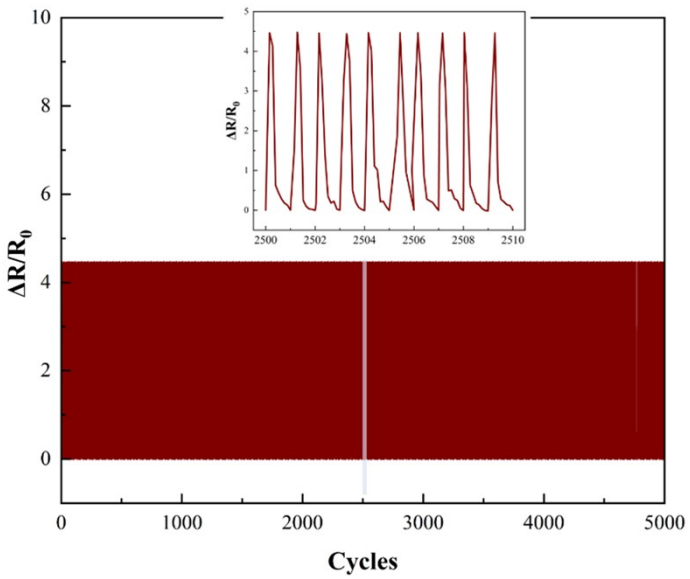


**Fig. S11.** Relative resistance change of the pressure sensor under 500 cycles of loading and unloading the 300 kPa pressure

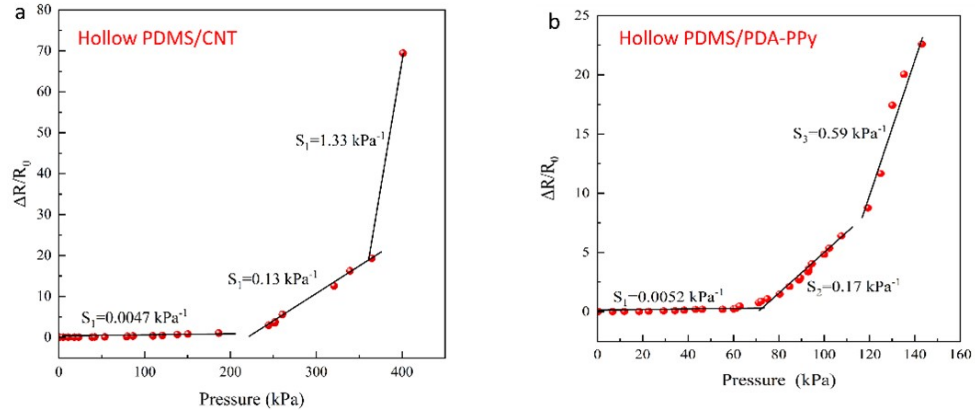


**Fig. S12** Pressure sensitivities of the sensors based on the hollow PDMS/CNT and PDMS/PDA-PPy

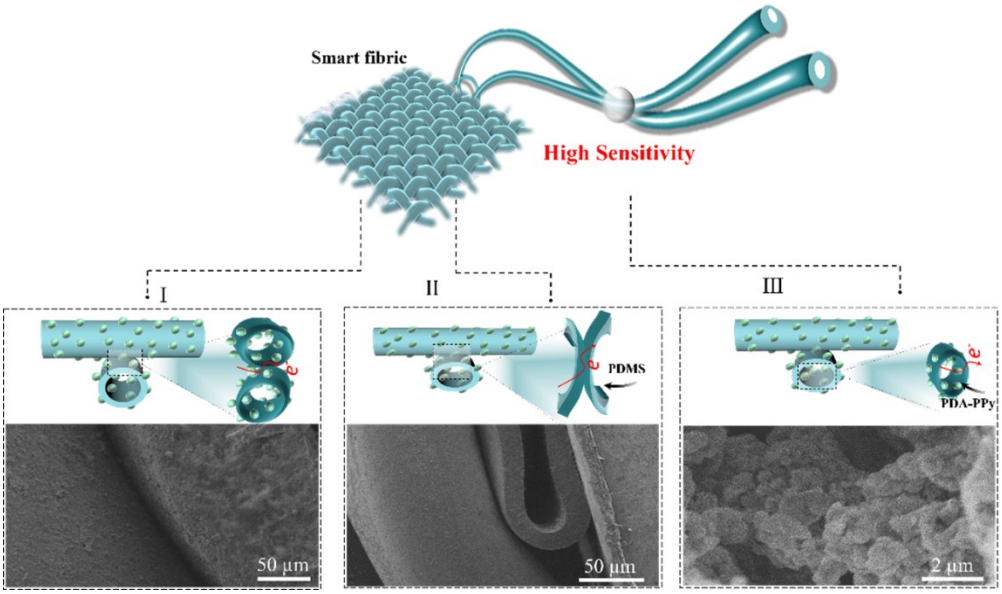


**Fig. S13** Schematic diagram and SEM images of the morphology changes of the sensor under continuous external force

**Table S1** The sensitivity of recently reported fiber-based pressure sensors

| **Materials** | **Sensitivity ($kPa^{-1}$)** | **Ref** |
|---|---|---|
| microbeads/PVDF nanofibers | 1.12 | [1] |
| rGO/P(VDF-TrFE) fibers | 0.072 | [2] |
| GO/PPY/PU fibers | 0.79 | [3] |
| PDMS-grafted PPy fiber | 0.07 | [4] |
| Mxene/PVB fiber | 1.15 | [5] |
| ZnO/$SiO_2$ nanofibers | 2.06 | [6] |
| SSTO-5 nanofiber | 2.24 | [7] |
| AuNPC-MoS 2 composite-coated fiber | 0.19 | [8] |
| Hollow PDMS/PDA-Ppy fiber | 1.71 | This work |

**Table S2** Description of the appearance of five common objects and their surface roughness

| Materials | Appearance | Roughness description |
|---|---|---|
| Sandpaper |  | Rough |
| Steel plate |  | Smooth |
| Brush |  | Very rough |
| PU cotton |  | Rough |
| Silicon film |  | Rough |
| PTFE film |  | Smooth |

## References


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