

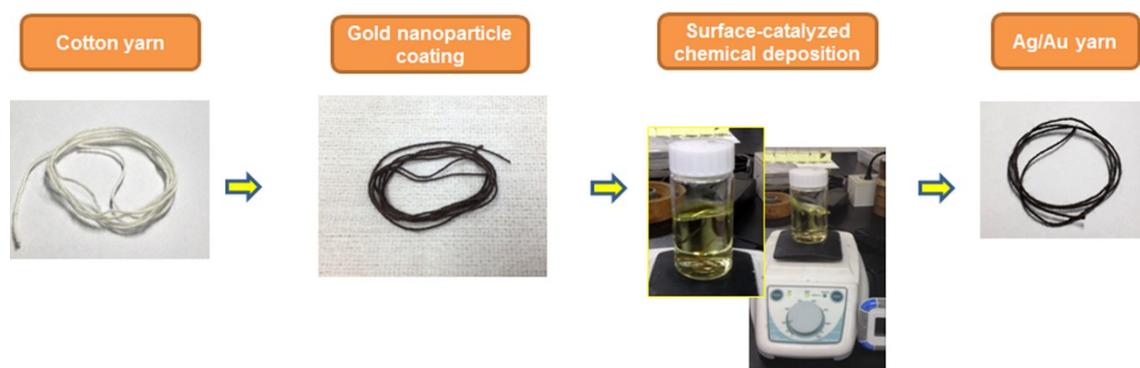
## Electronic supporting information

# Solution-processed Au-Ag core-shell nanoparticle-decorated yarns for human motion monitoring

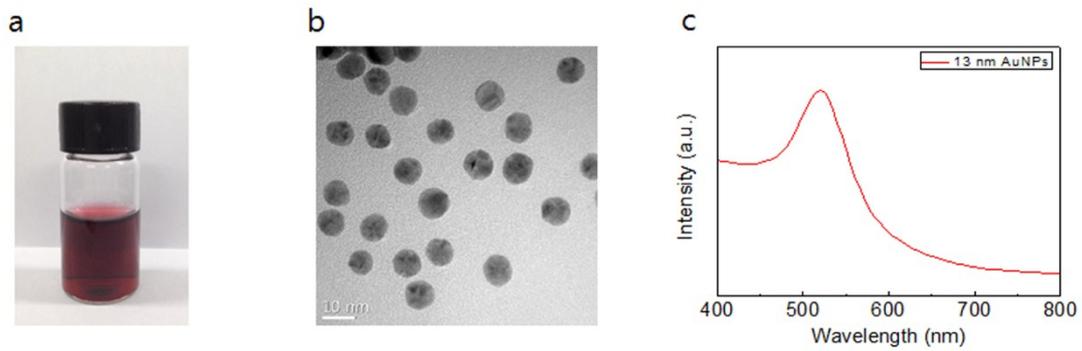
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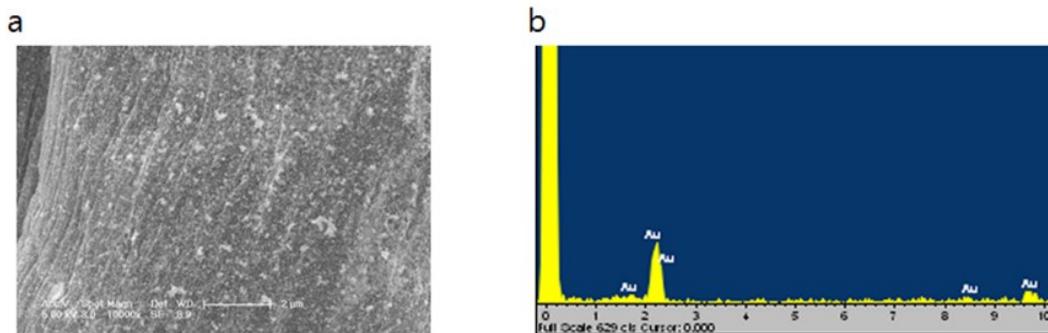
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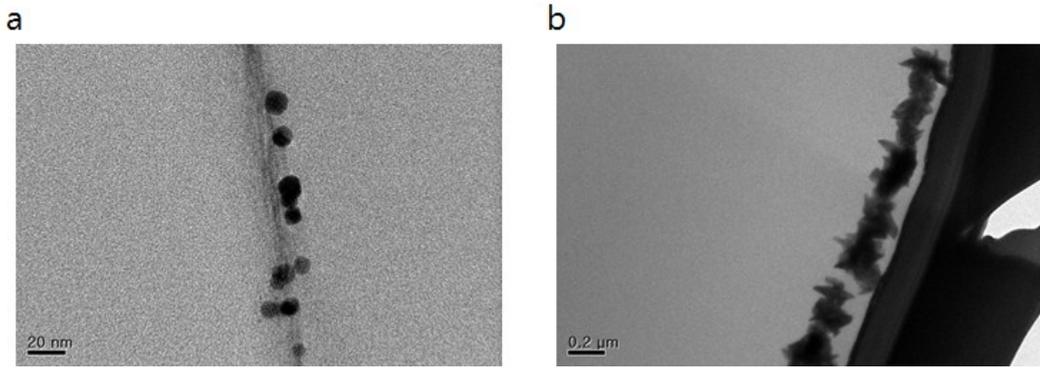
**Figure S1.** Preparation of the AuAgCSCY strain sensor.



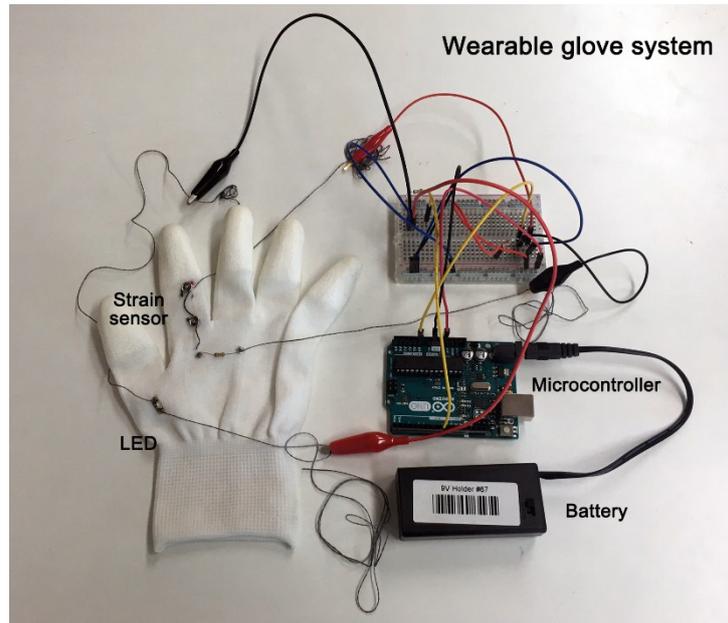
**Figure S2.** a, b, Photograph and TEM image of 13 nm gold nanoparticles. c, UV-VIS spectrum of gold nanoparticle solution.



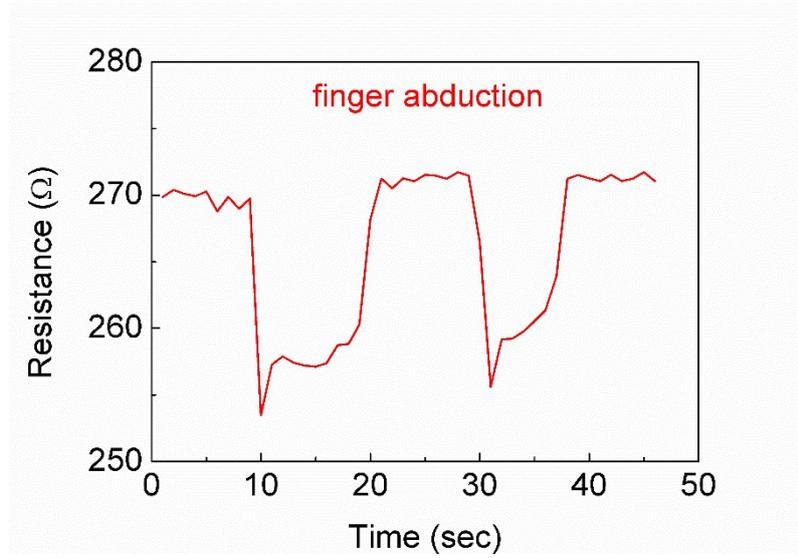
**Figure S3.** a, b, FESEM image and EDX spectrum of gold nanoparticle coated cotton yarn.



**Figure S4.** a, b, TEM images of AuCYs and AgAuCSCYs.



**Figure S5.** Wearable glove system for human motion detecting and LED display.



**Figure S6.** The selectivity of the strain sensor to other types of deformation (finger abduction).