

Supporting Information

Stretchable and Durable HD-sEMG Electrodes for Accurate Swallowing Activity Recognition on Complex Epidermal Surfaces

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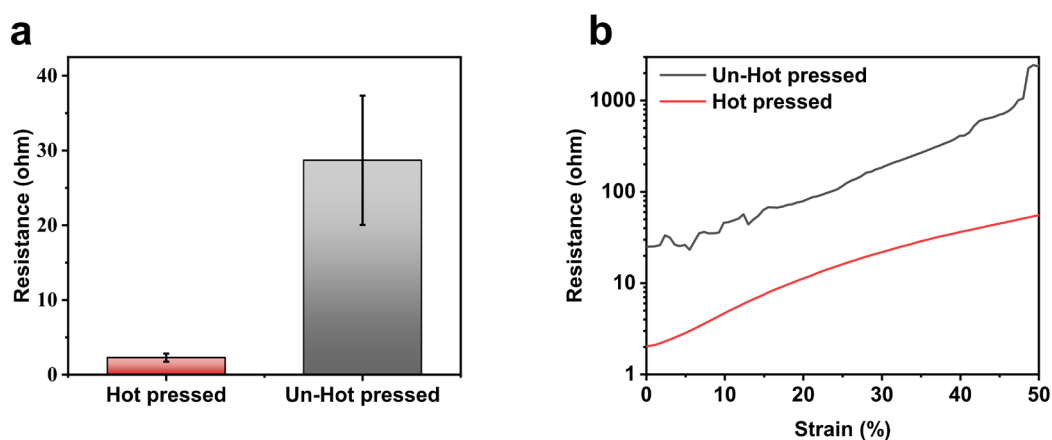


Figure S1. Electrical characteristics of the thermally compressed silver electrode in comparison to the uncompressed one.

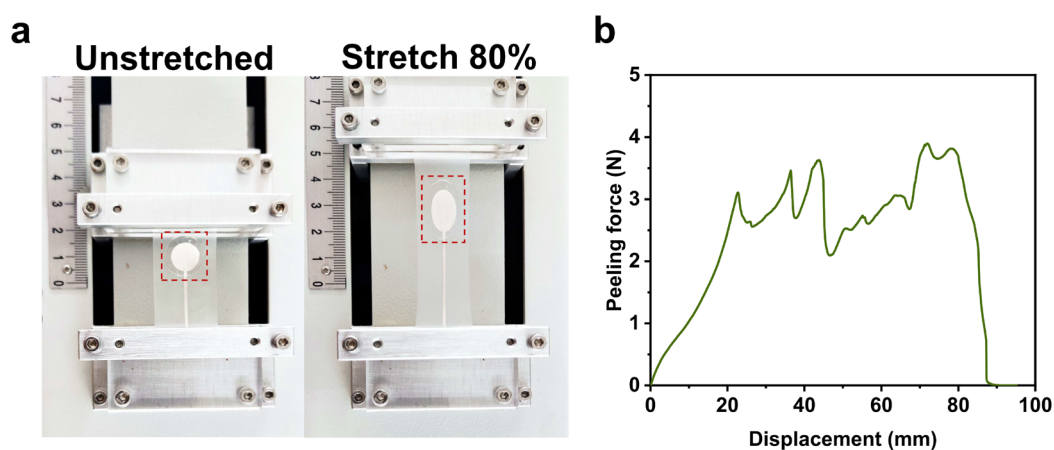


Figure S2. The bonding characterization of the GW-PA gel to the silver electrode showing a strong interfacial bonding between them a) able to withstand 80% deformation b) with a strong adherence strength of 596 J/m².

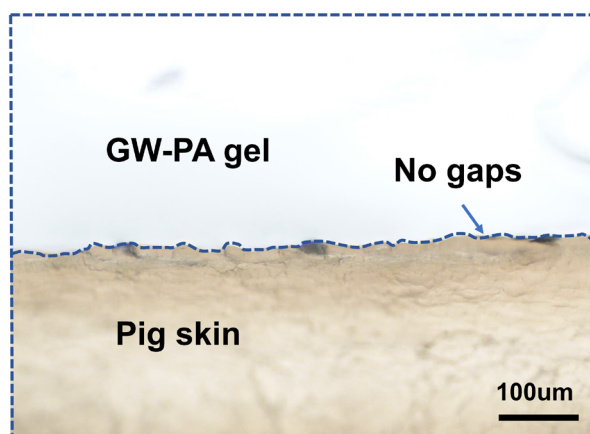


Figure S3. Microscopic optical images of hydrogel and pig skin conformal adhesion.

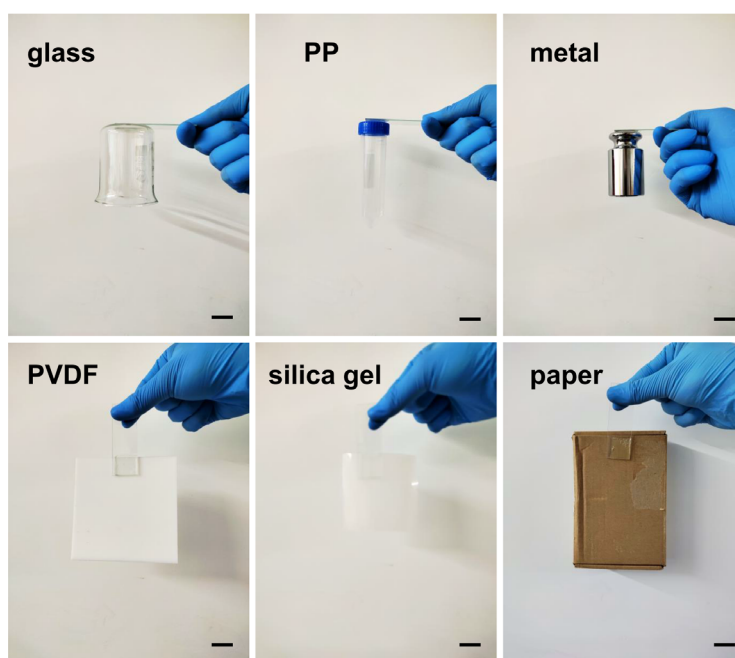


Figure S4. Adhesion ability of GW-PA gel to different materials.

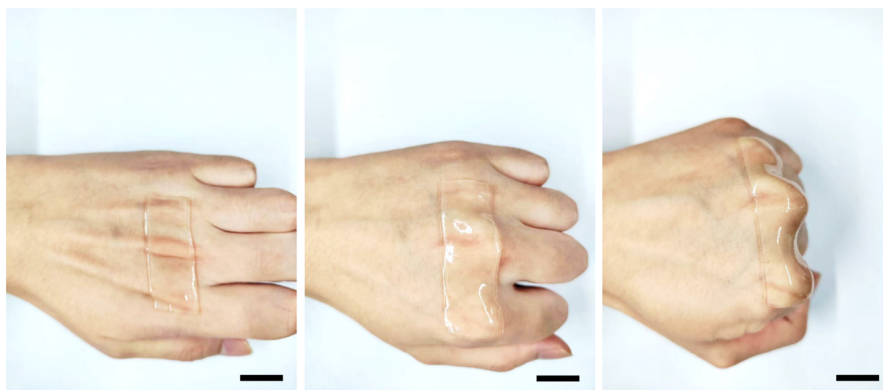


Figure S5. Adhesion ability of GW-PA gel to different hand activities.

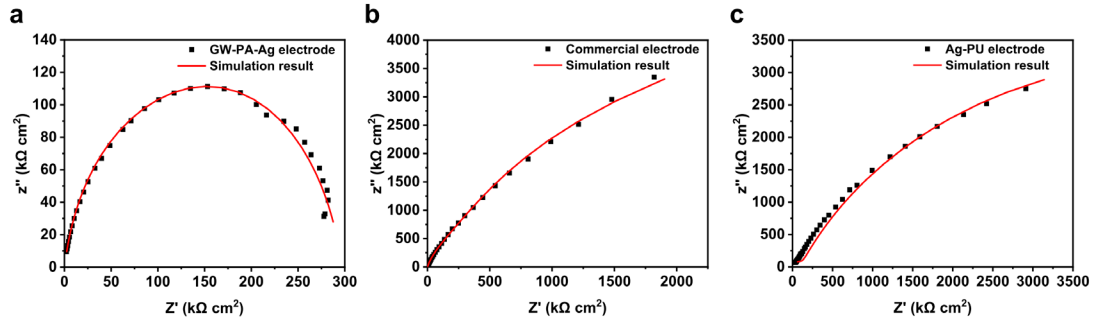


Figure S6. Nyquist plots measured by a) GW-PA-Ag electrode, b) Commercial electrode, c) as well as the corresponding simulation results.

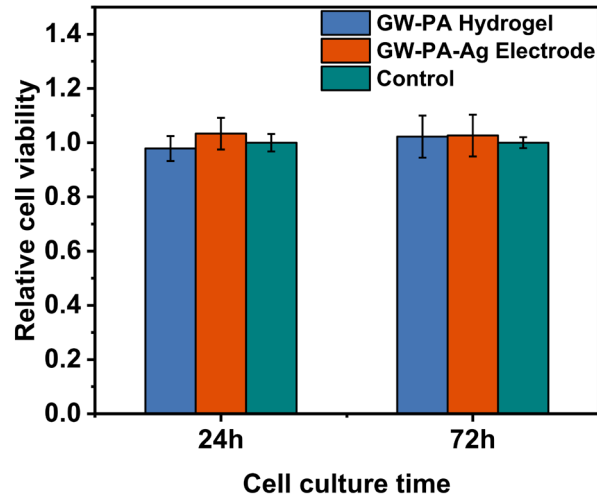


Figure S7. Relative cell viability (Rv) of cells cultured with GW-PA, GW-PA-Ag, and control.

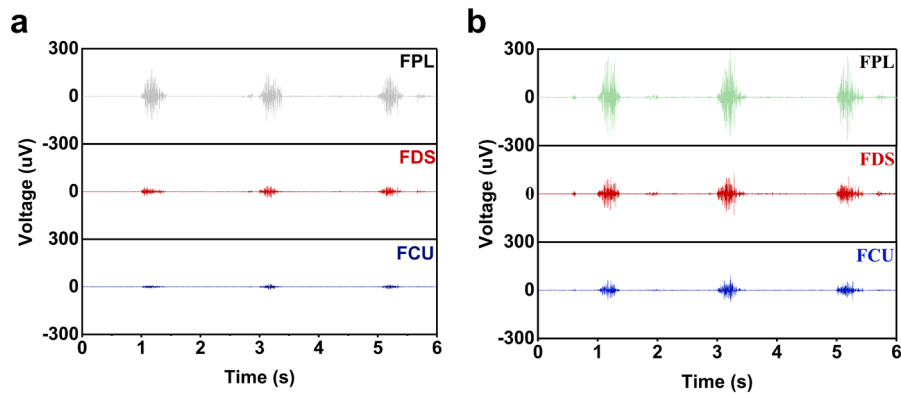


Figure S8. sEMG signals' magnitudes on FPL, FDS, and FCU muscles recorded by a) 3mm, b) 7.5mm diameter electrodes when the thumb finger moves.