

Supplementary files

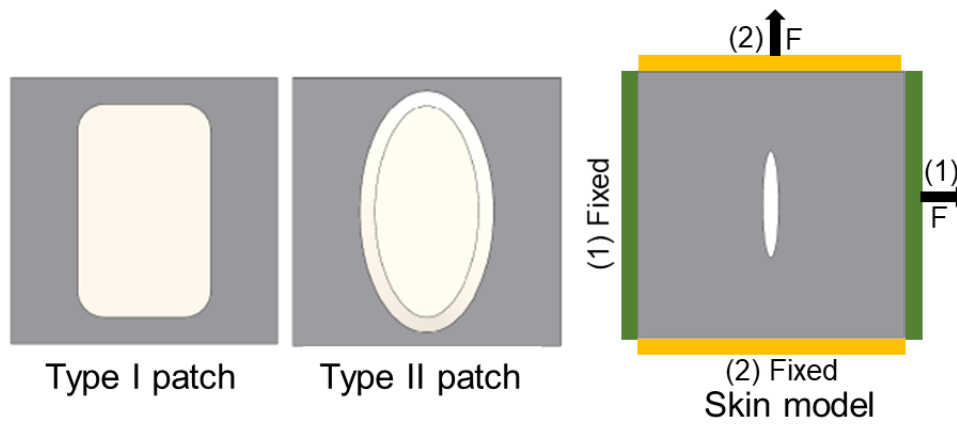


Figure S1. Models used in FEA studies for the patch design and illustration of the skin model with fixtures and loads applied in two directions used on all models of FEA.

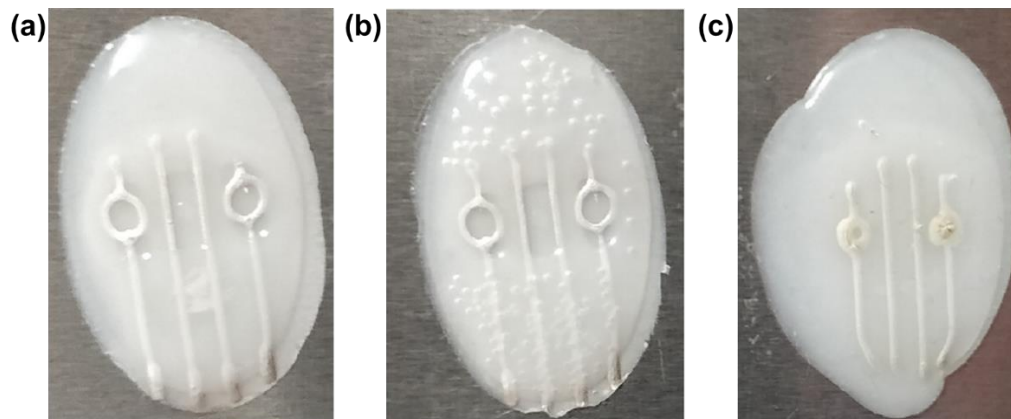


Figure S2. Printed top layers with (a) 20 wt%, (b) 15 wt%, and (c) 15 wt% SiO_2 NPs. The substrates were allowed to cure at room temperature, 50°C , and room temperature, respectively.

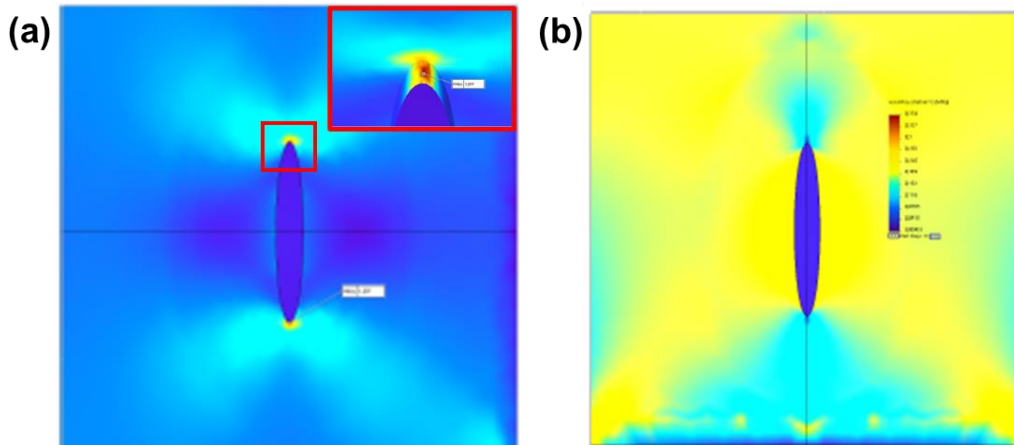


Figure S3. Von mises stress plot, where the maximum stress is indicated with a value box. The force is applied in the (a) horizontal and (b) vertical directions.

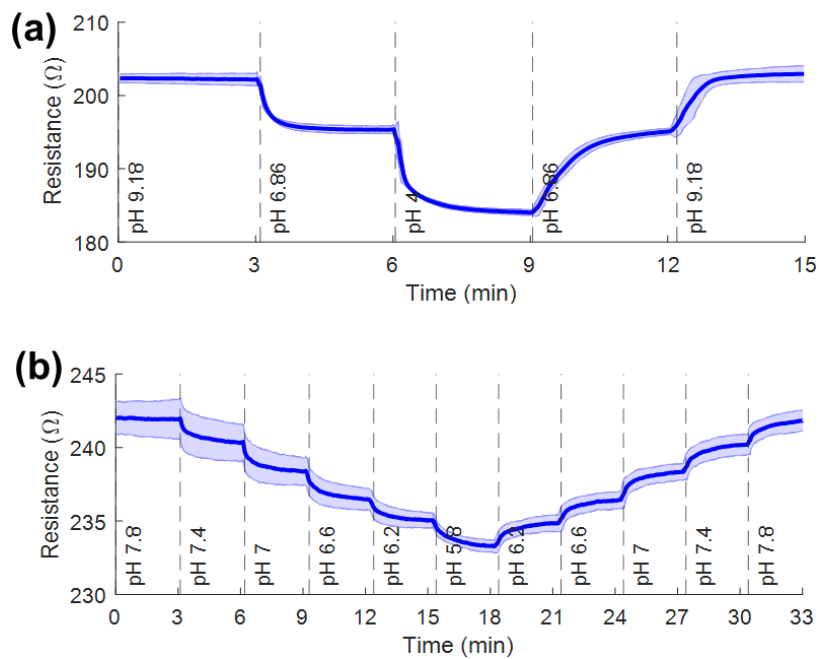


Figure S4. Mean values of measured resistance for different buffer solutions with 3 minutes intervals.