Screen-Printed Wearable Sweat Sensor for Cost-Effective Assessment of Human Hydration Status through Potassium and Sodium Ion Detection

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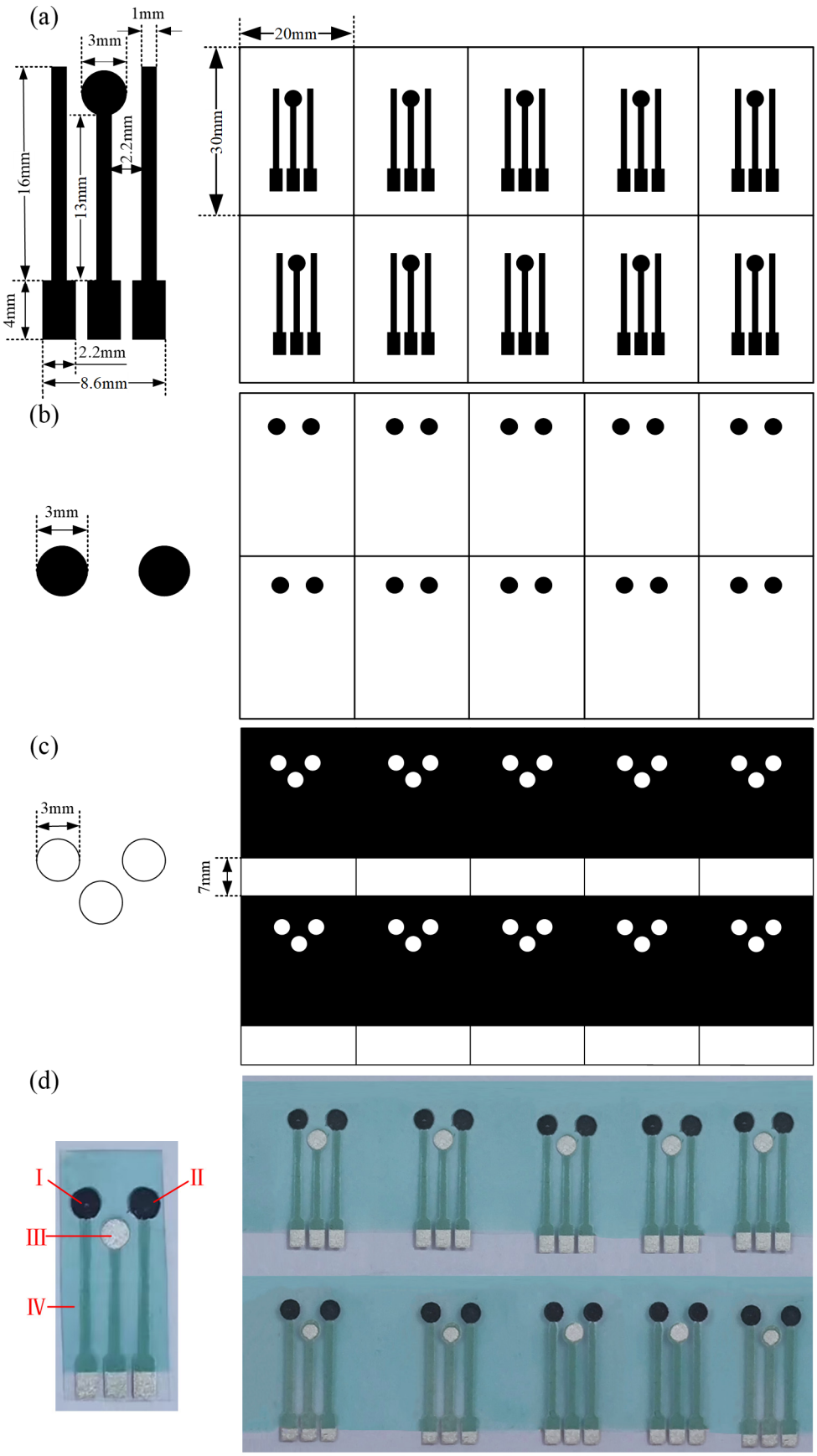

Figure S1. Design and fabrication of the screen-printed substrate electrodes. (a) Graphic representation and dimensions of the Ag/AgCl layer; (b) graphic representation and dimensions of the carbon layer; (c) graphic representation and dimensions of the insulating layer; (d) physical appearance of the screen-

printed substrate electrodes: I-substrate electrode for K^+ ISE, II-substrate electrode for Na^+ ISE, III-substrate electrode for RE, IV-insulating layer.

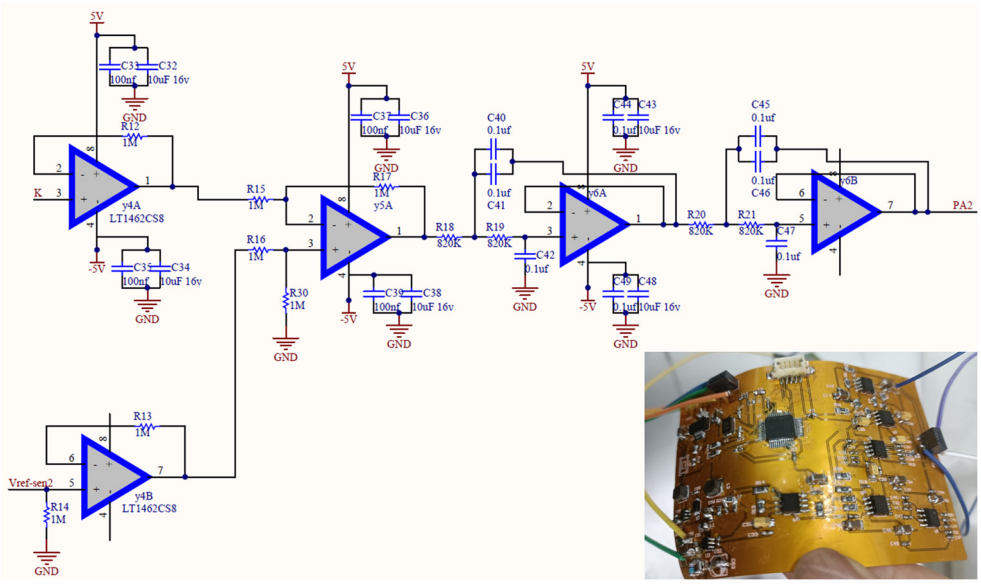

Figure S2. Signal conditioning circuit and the physical representation of the FPCB for the sensor.

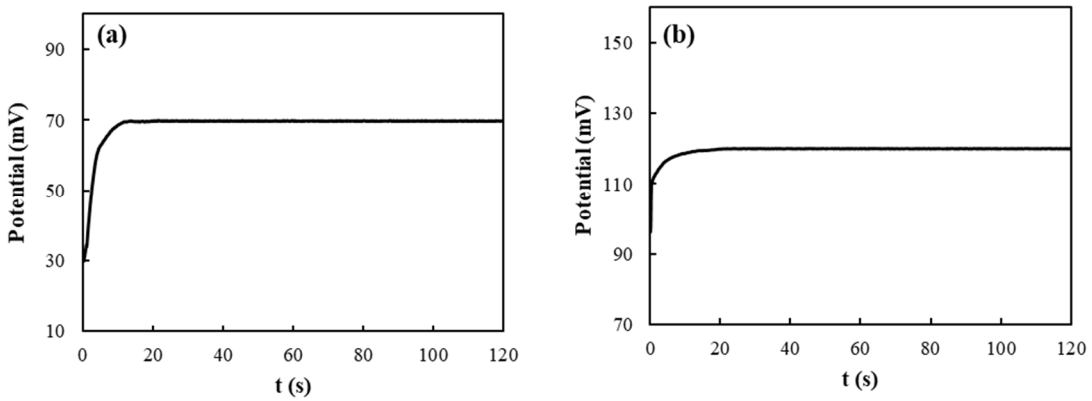

Figure S3. Open Circuit Potential (OCP) vs. time curves for the (a) K^+ ISE and (b) Na^+ ISE of the sensor, illustrating the temporal variation of OCP values from the initial unstable state to the gradual stabilization. The two electrodes were immersed individually in a 50 mL solution of 2 mM KCl and a 50 mL solution of 10 mM NaCl, respectively.

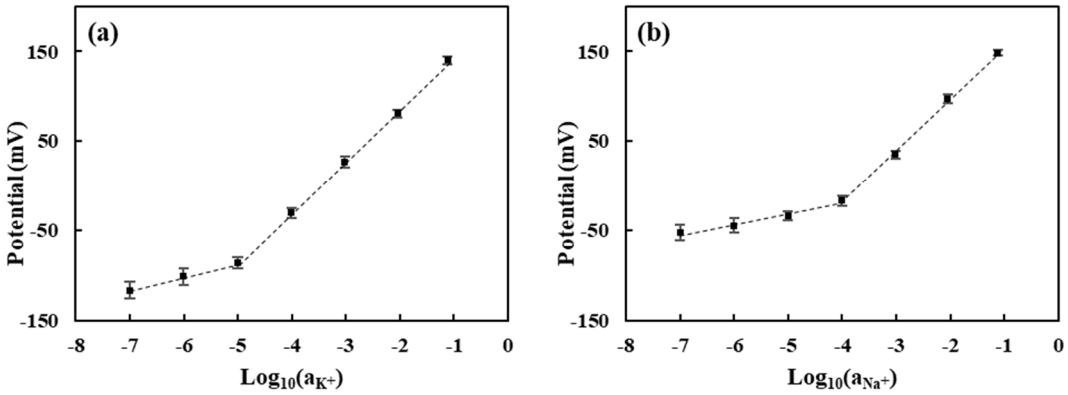

Figure S4. Calibration curves with an extended concentration range (from 10^{-7} to 10^{-1} mol L^{-1}) for (a) K^+ ISE and (b) Na^+ ISE of the sensor.