

## Supporting Information

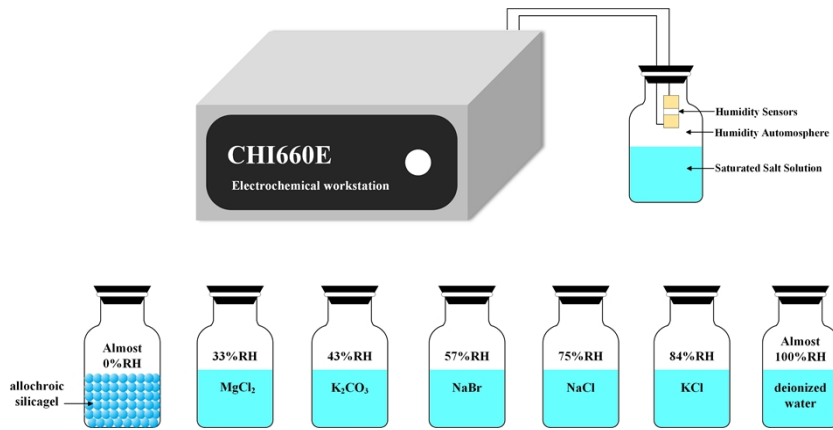
### **High-performance paper-based humidity sensors with tightly embedded Nafion/AgNWs electrodes**

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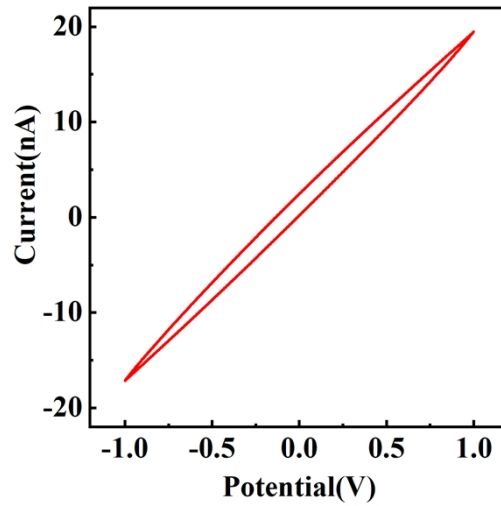
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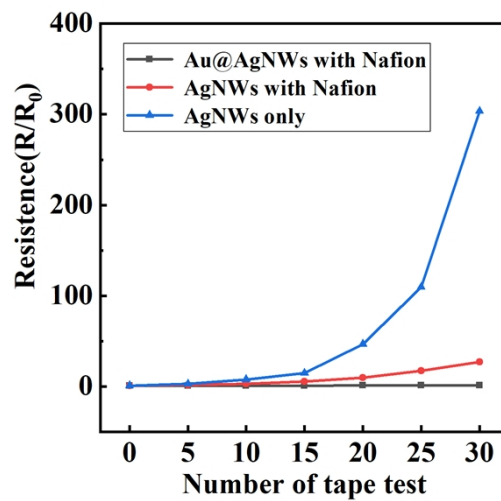
*‡ These authors contributed equally: Yujun Ji, Gangqiang Tang.*



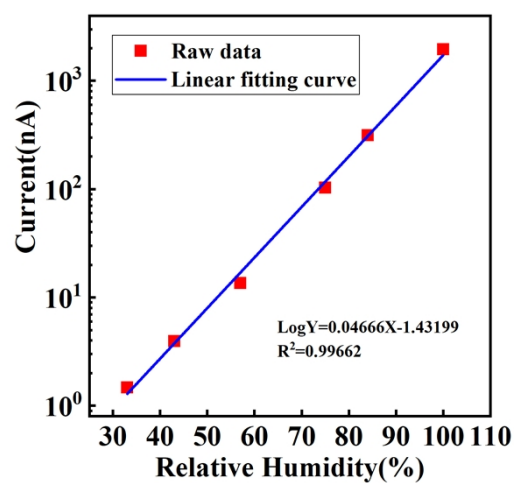
**Figure S1.** Schematic diagram of the measurement setup.



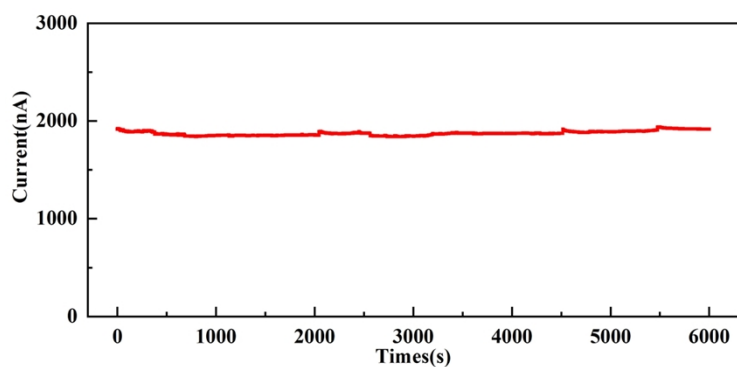
**Figure S2.** The CV curve of the sensor.



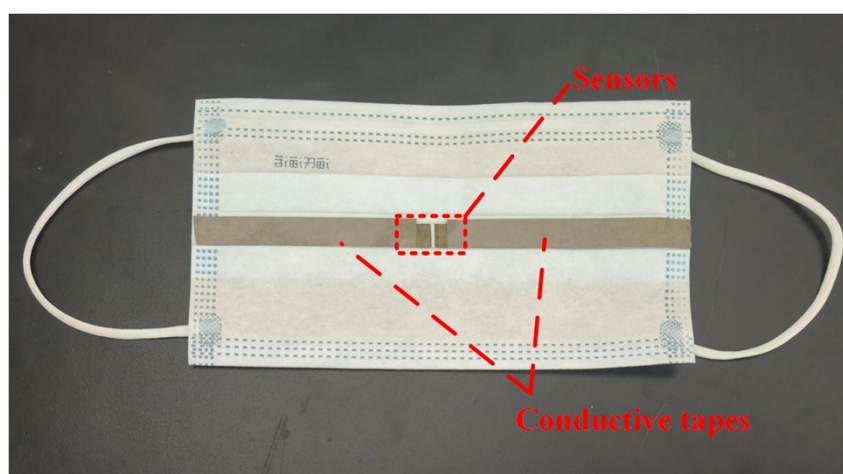
**Figure S3.** The investigation of adhesion force between the electrodes and the filter paper via repeating sticking-peeling test by M&G tape.



**Figure S4.** The linear fitting curve of current and relative humidity.



**Figure S5.** Response curve of the sensor at 100% RH for 6000s.



**Figure S6.** Sensors installed on a mask for humidity detection, where electrodes are extended via conductive tapes.