

# Supplementary Material: A Highly Sensitive, Ultra-Durable, Eco-Friendly Ionic Skin for Human Motion Monitoring

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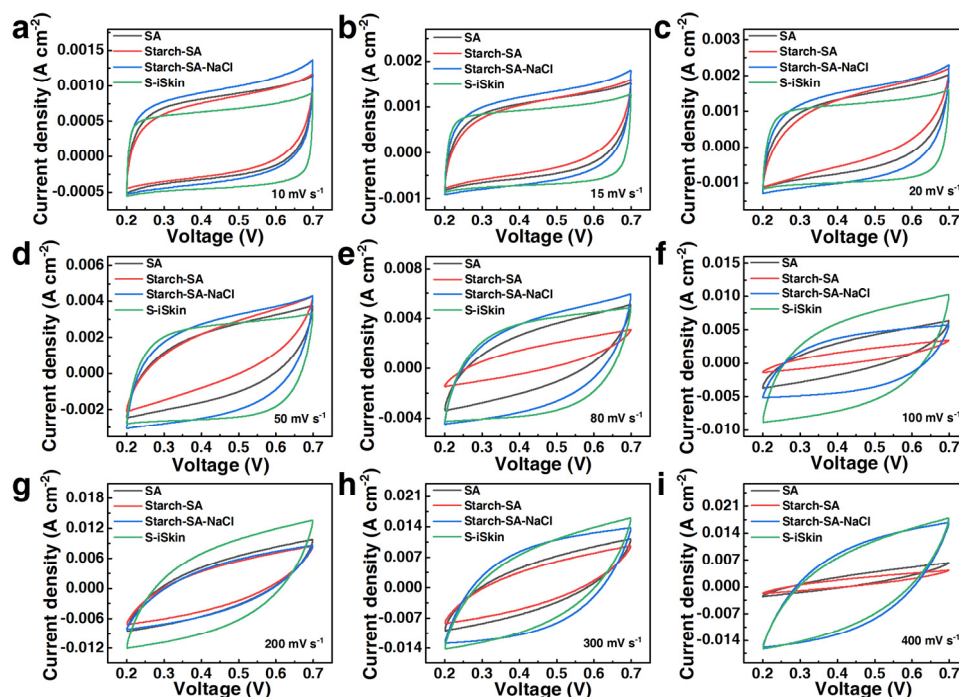


Figure S1. CV curves of the S-iSkin: (a) 10 mV s<sup>-1</sup>, (b) 15 mV s<sup>-1</sup>, (c) 20 mV s<sup>-1</sup>, (d) 50 mV s<sup>-1</sup>, (e) 80 mV s<sup>-1</sup>, (f) 100 mV s<sup>-1</sup>, (g) 200 mV s<sup>-1</sup>, (h) 300 mV s<sup>-1</sup>, (i) 400 mV s<sup>-1</sup>.

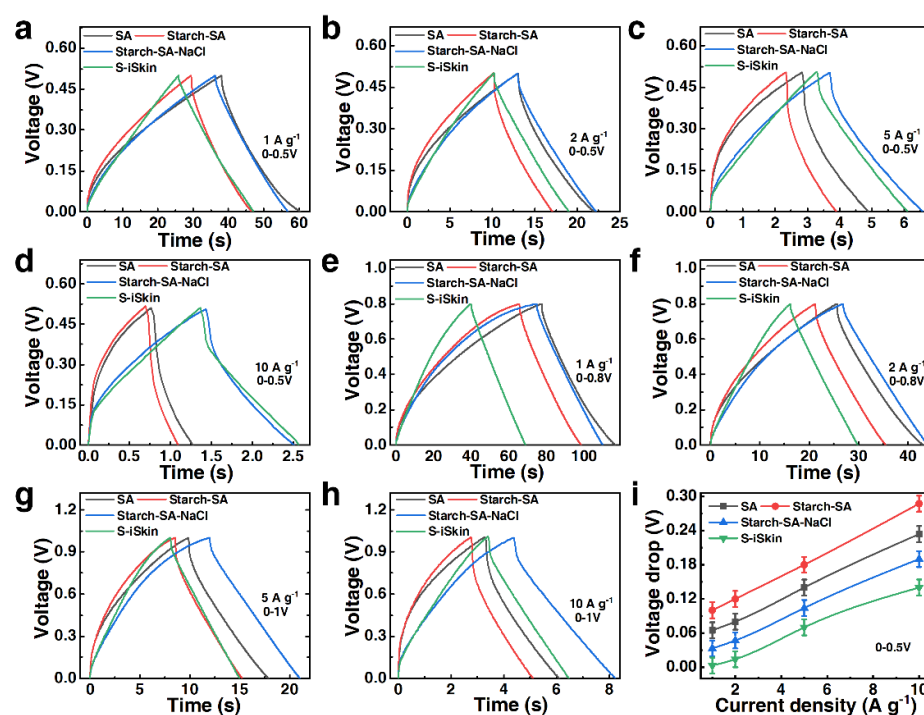


Figure S2. GCD curves of the S-iSkin under different current densities: (a)–(h) GCD curves, (i) Relationship curves of voltage drop varied with the current density.

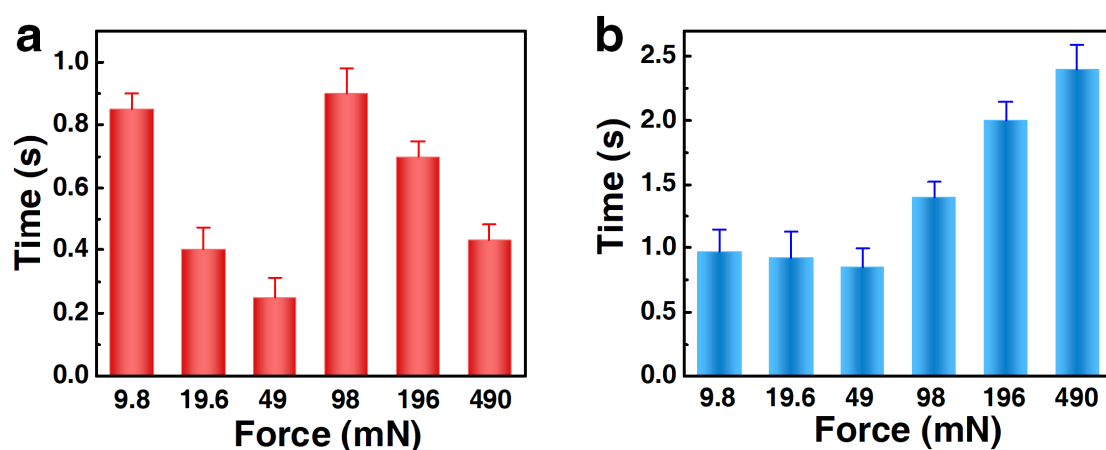


Figure S3. Response time and recovery time of the S-iSkin: (a) Response time and (b) Recovery time.

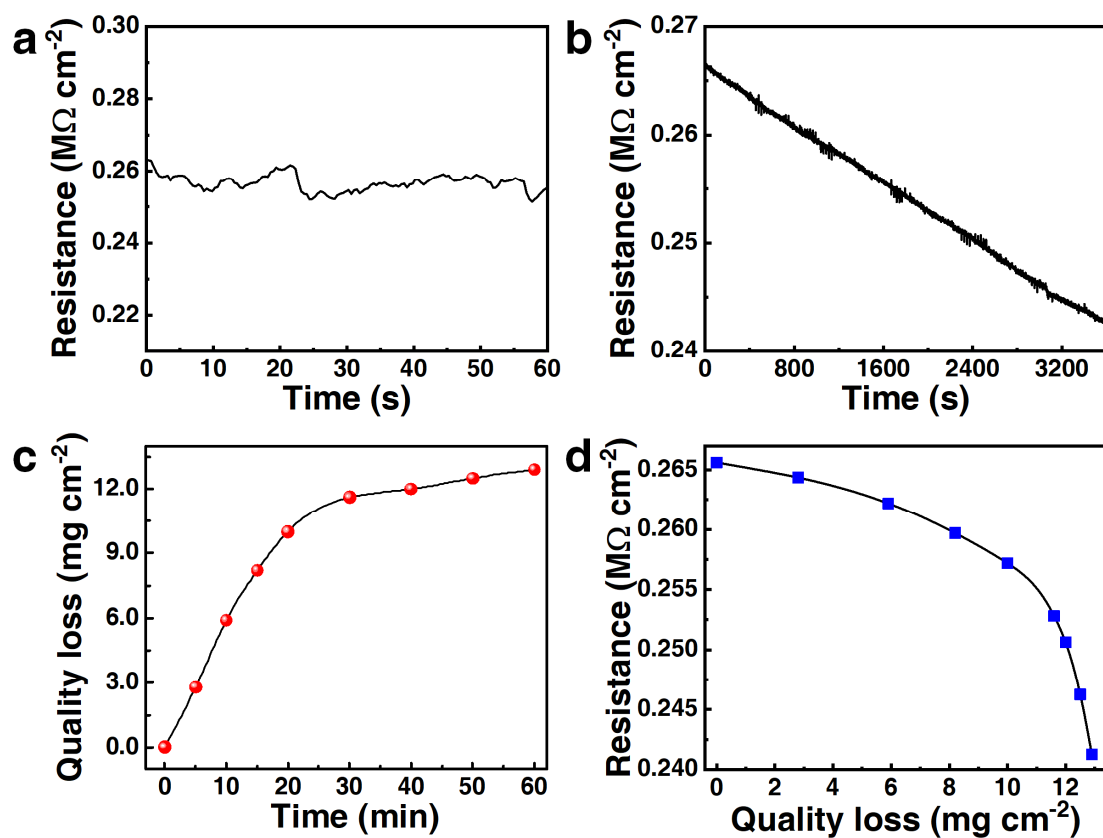
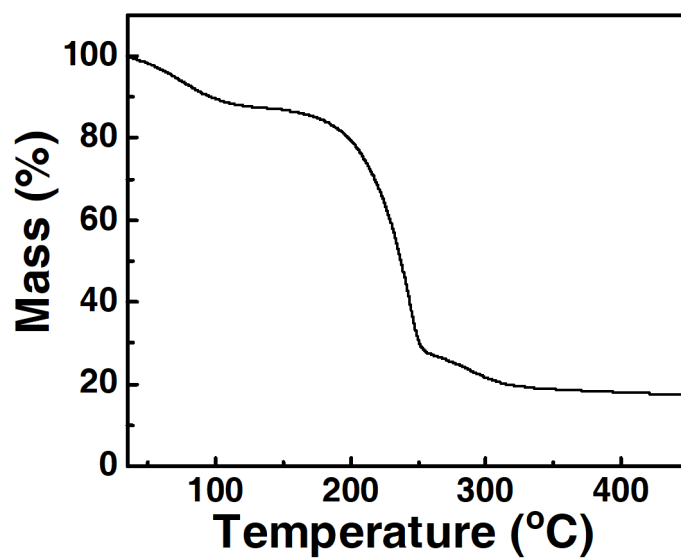


Figure S4. Variation curve of resistance and humidity of the S-iSkin: (a) Resistance of S-iSkin. (b) Variation of resistance value of the S-iSkin with evaporation of water. (c) The water loss rate of the S-iSkin. (d) The relationship between the water loss of the S-iSkin and its resistance value.



**Figure S5.** The thermogravimetric analysis of the S-iSkin.

**Table S1.** Comparison of sensitivity, response time and recovery time with other articles.

	Sensitivity	Response time(ms)	Recovery time(ms)
S-iSkin	52.04	15	48
Ref.31	0.055	60	90
Ref.32	0.23	27.9	18.1
Ref.33	74.8	36	30
Ref.34	64.2	720	2820
Ref.35	1.2	86	101