Ionic liquid microemulsion-mediated heterogels with bicontinous conductive channels for ionic flexible sensor

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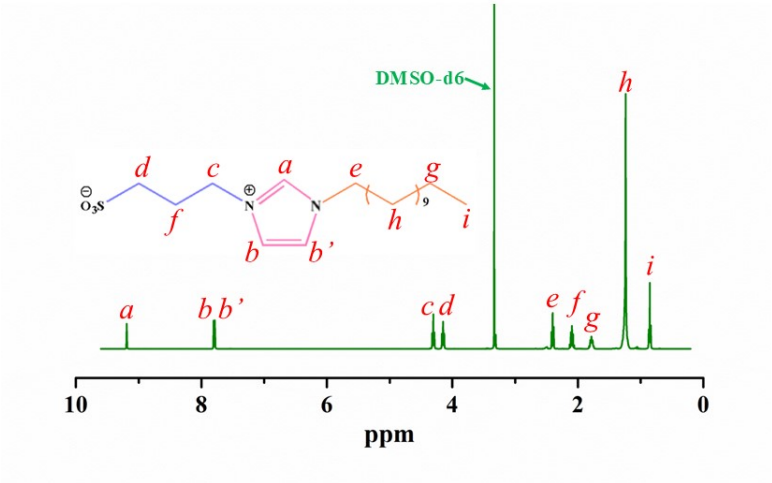

Fig. S1 ^{1}H NMR spectrum and proton assignments of ZC12.

Table S1 Sample composition.

Sample	ZC12 (wt%)	C2MImTFSI (wt%)	C12-DMA (wt%)	Photoinitiator (wt%)[a]
C_{12}30-10	10	60	30	0.3
C_{12}30-15	15	55	30	0.3
C_{12}30-20	20	50	30	0.3
C_{12}30-25	25	45	30	0.3
C_{12}30-30	30	40	30	0.3
C_{12}30-35	35	35	30	0.3
C_{12}30-40	40	30	30	0.3

[a]UV initiator 0.3% w/w of monomers C12-DMA.

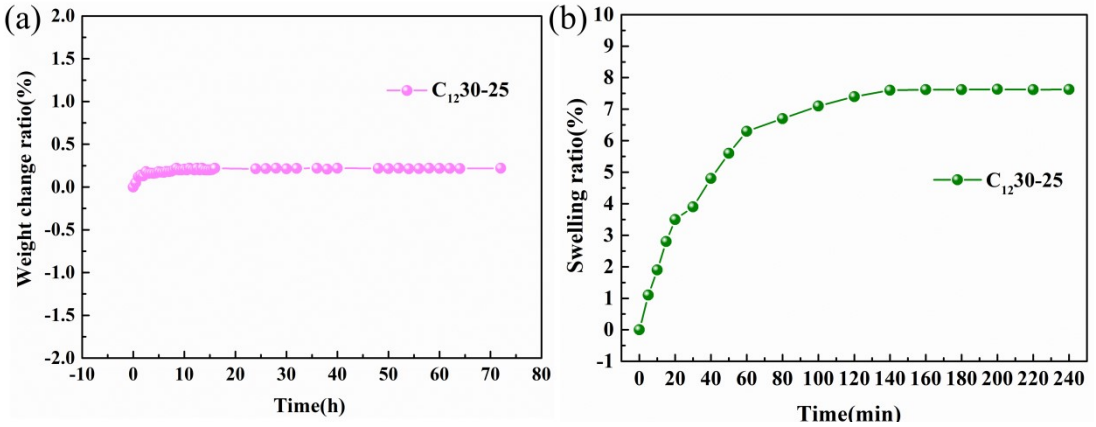

Fig. S2 (a) The weight change over time of C_{12}30-25 heterogel at ambient temperature18℃~22℃ and the humidity40-56%. (b) The swelling ratio of C_{12}30-25 heterogel in sweat.

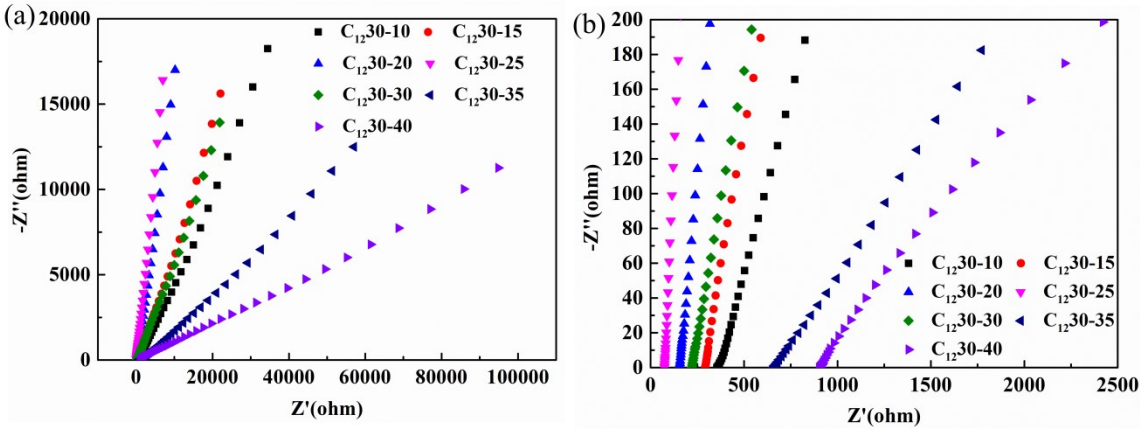

Fig. S3 (a) The electrochemical impedance spectroscopy (EIS) of different heterogels; (b) High-frequency region of the EIS.

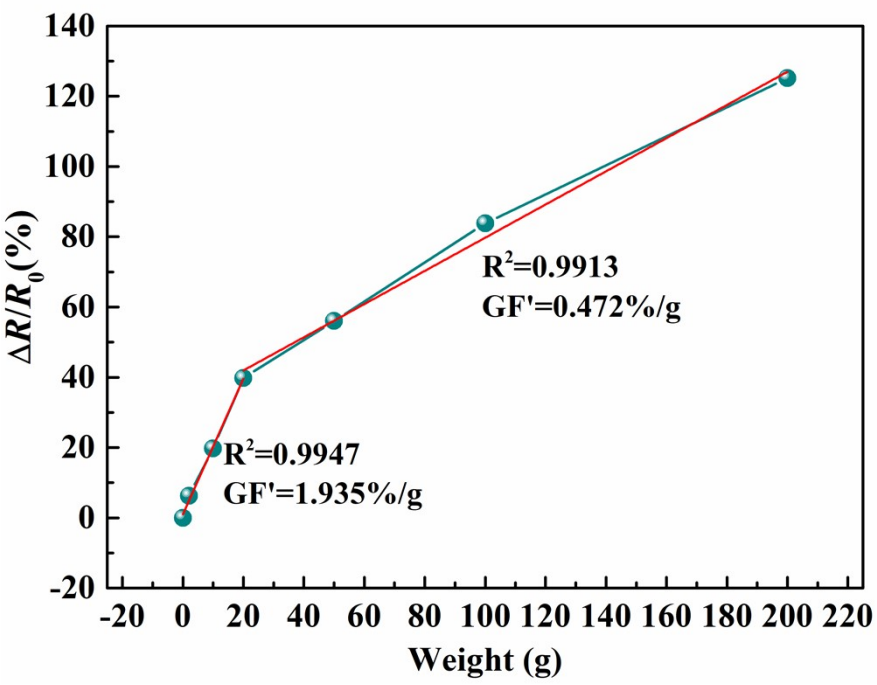

Fig. S4 The correlation curve between relative resistance change and weight.

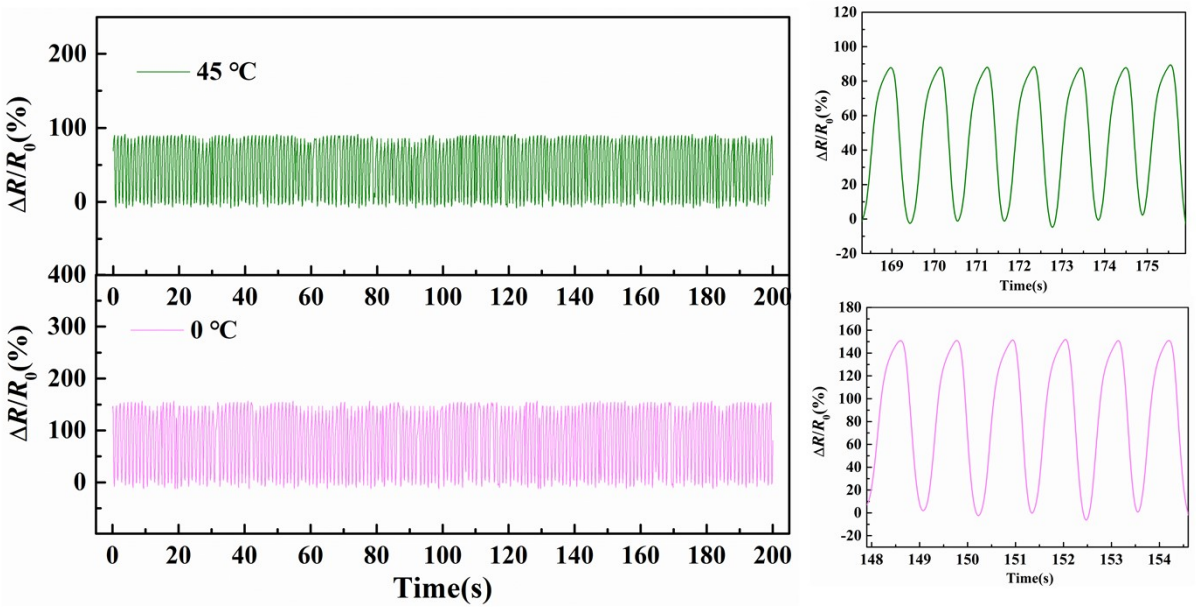

Fig. S5 Relative resistance changes when When the finger was subjected to continuous 90° bending for 200 s at 0°C and 45°C, respectively.