

Supporting Information

A Flexible Pressure Sensor Array Based on Ionic gel for Pulse Detection

Tong Song^a, Jie Liang^a, Xiling Shi^{*a}, and Zhidong Zhang^{*a}

a. National Key Laboratory of Extreme Environment Optoelectronic Dynamic Testing Technology and Instruments, North University of China, Taiyuan, Shanxi 030051, China

E-mail: shixl@nuc.edu.cn and zdzhang@nuc.edu.cn .

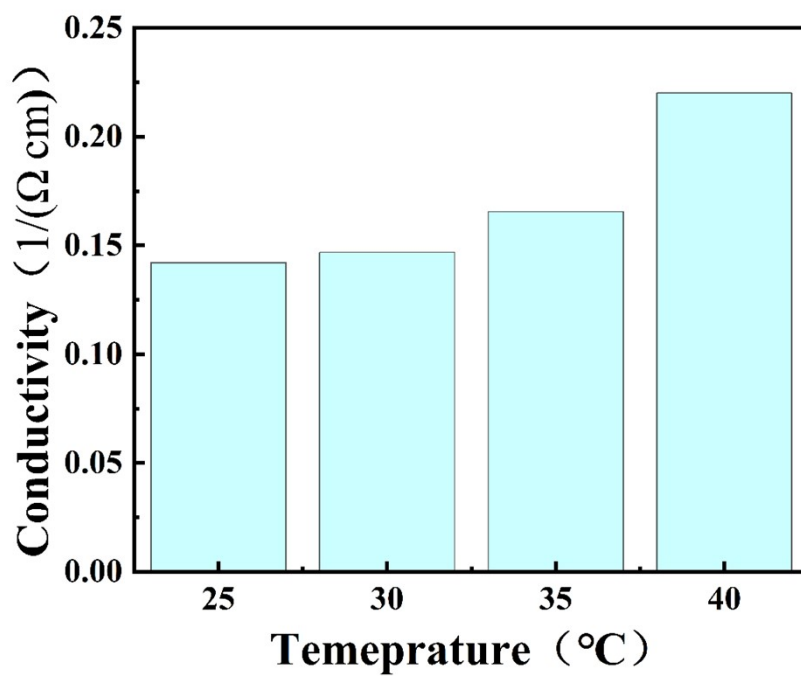


Fig. S1 The conductivity of the ionic gel

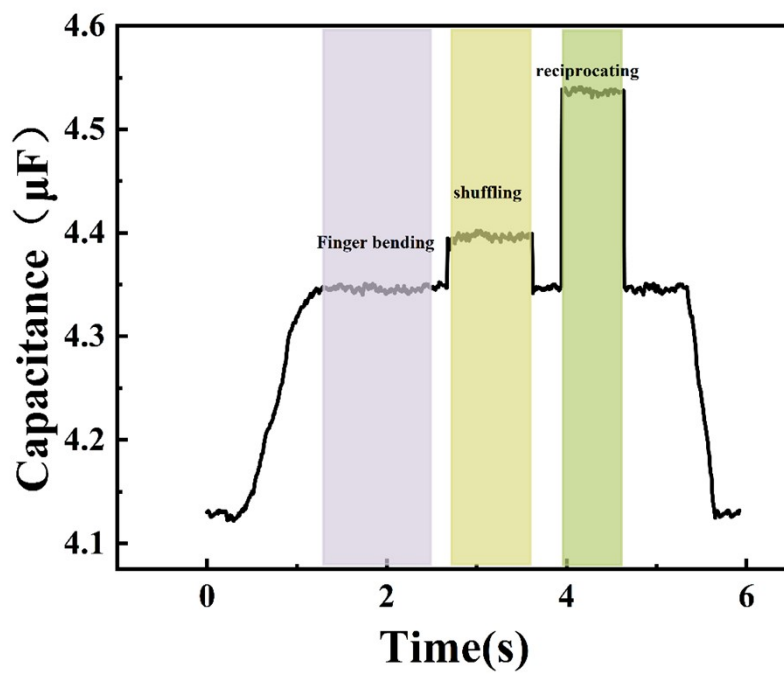


Fig. S2 The signal drift of the subject at moving

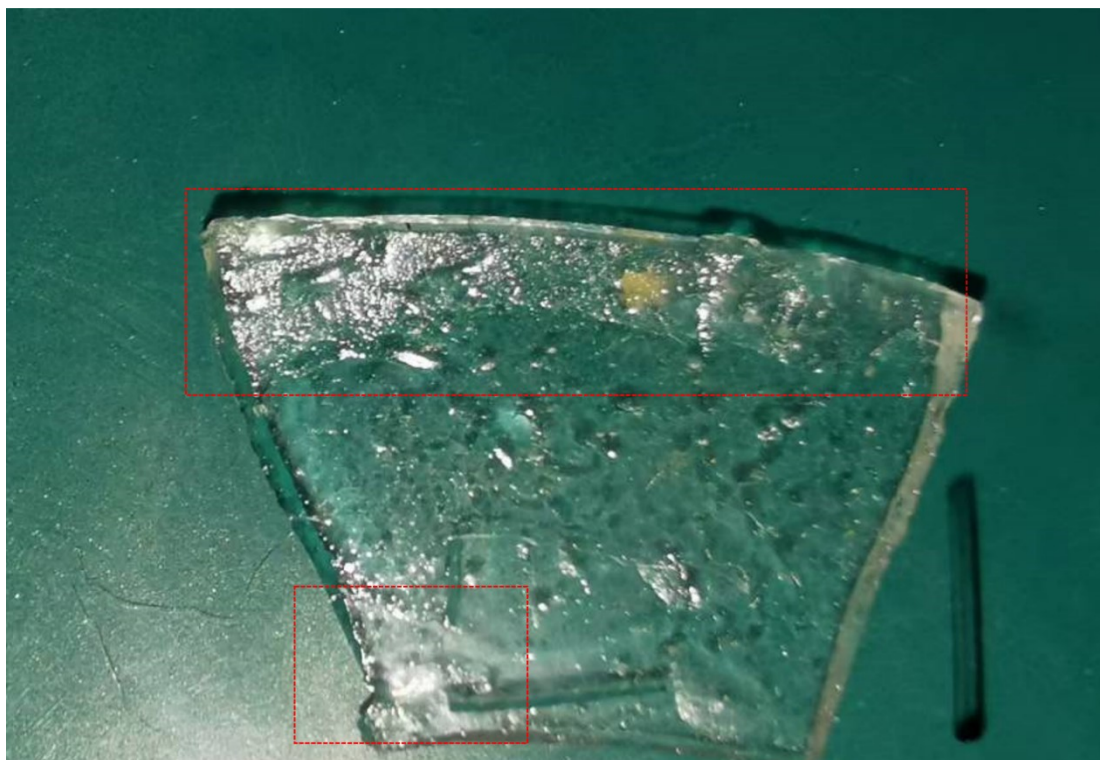


Fig. S3. A small amount of ion leakage.

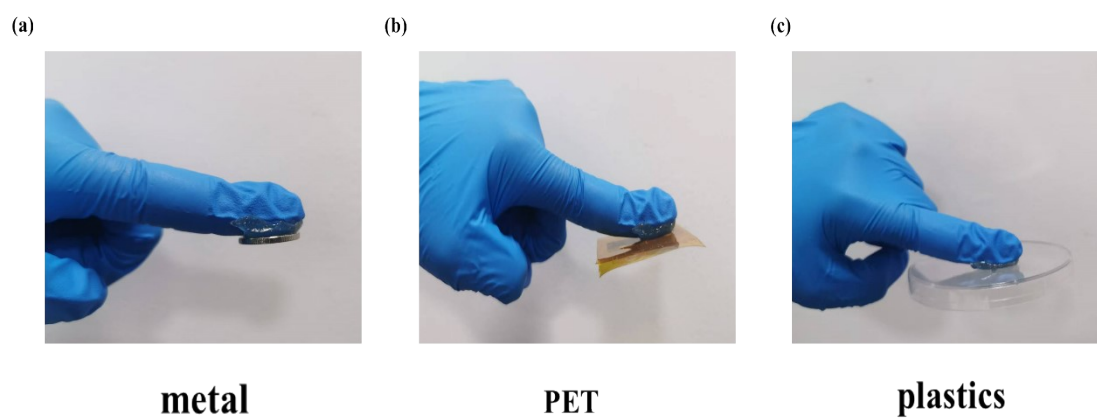


Fig. S4. Viscosity of ionic gels.

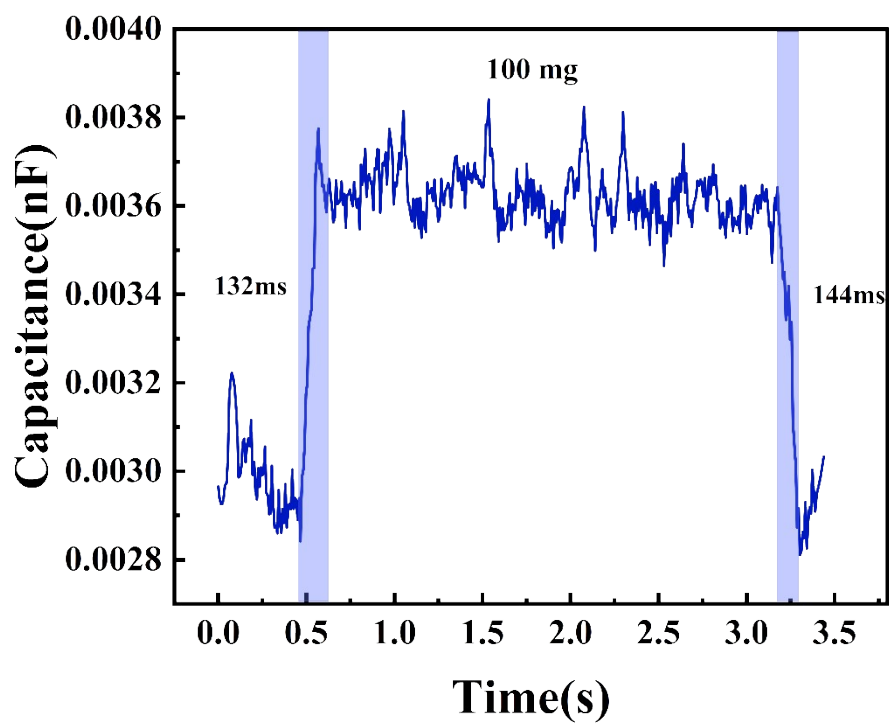


Fig. S5 The response time and recovery time of 2m-after sensor under 100 mg.

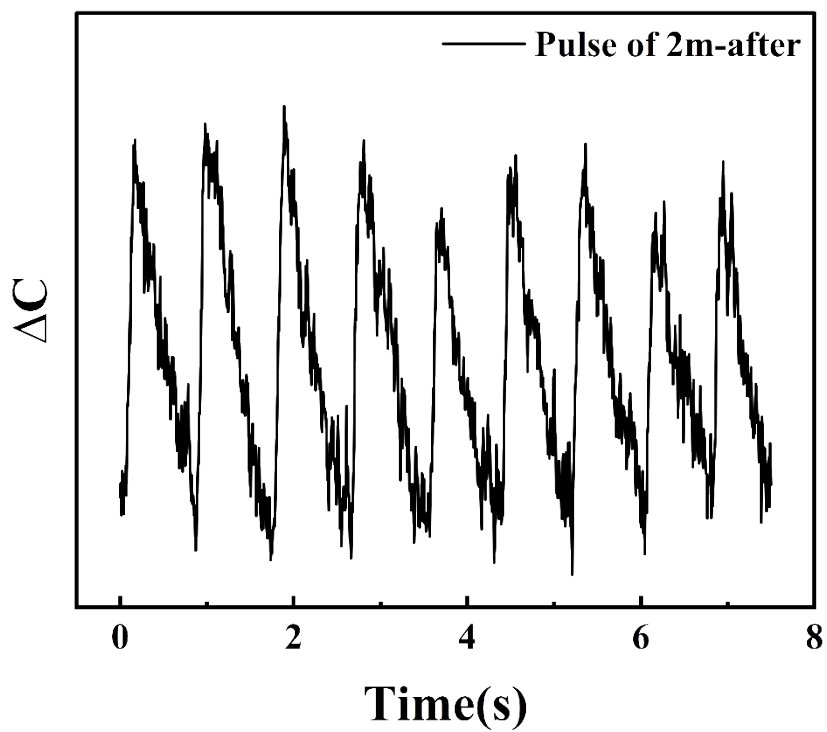


Fig. S6 The pulse monitoring of 2m-after sensor.

Table S1 The comparison of sensing performance with other sensors.

Sensing material	Measurment range (kPa)	Response time (ms)	Sensitivity (kPa ⁻¹)	Low detection limit (Pa)	Ref
TPU- [EMIM][TFSI] gel	0-30	300	221.9	~	[17]
PAAm/PAA-CaCl ₂ ionic gel	0.078-10.93	530	2.79	78	[45]
P(VDF-HFP):[EMIM][TFSI] ionic film	0-50	84	50.95	6	[46]
TPU- <i>h</i> -BN ionic gel	0-500	15	1307.7	50	[47]
PVA/CS- [EMIM][Cl] gel	0-200	160	48584.56	2.8	Our work

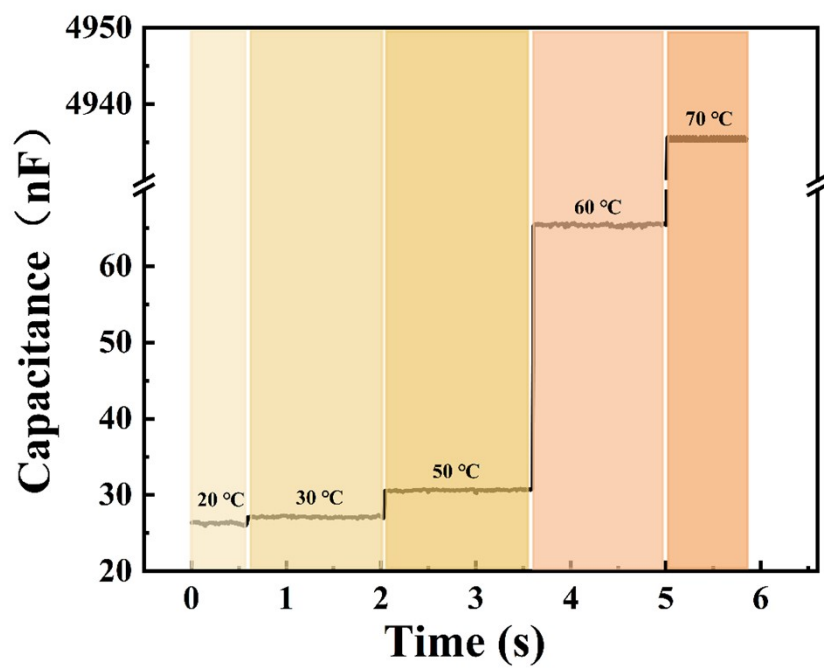


Fig. S7 The influence of the different temperature

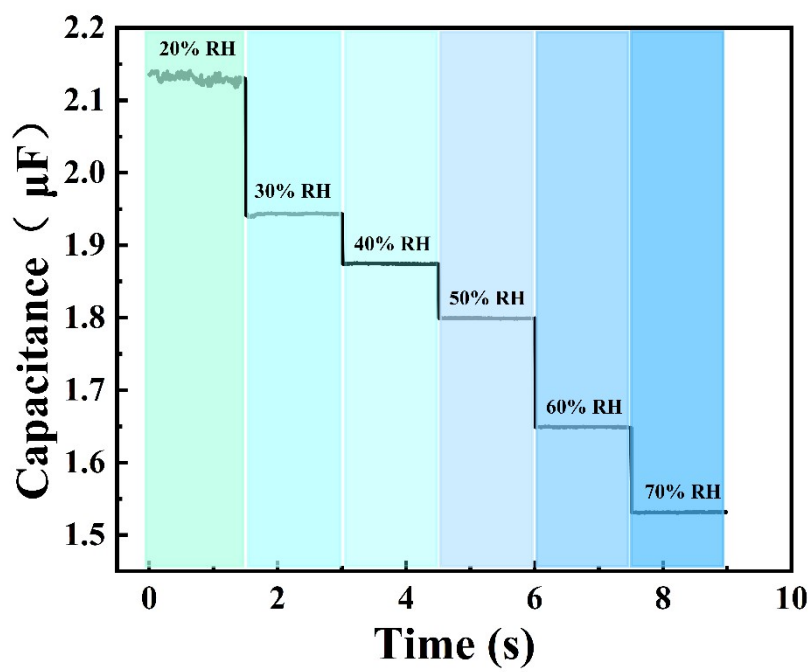


Fig. S8 The influence of the different humidity