Mussel-inspired PDA@PEDOT nanocomposite hydrogel with excellent mechanical strength, self-adhesive, and self-healing properties for flexible strain sensor

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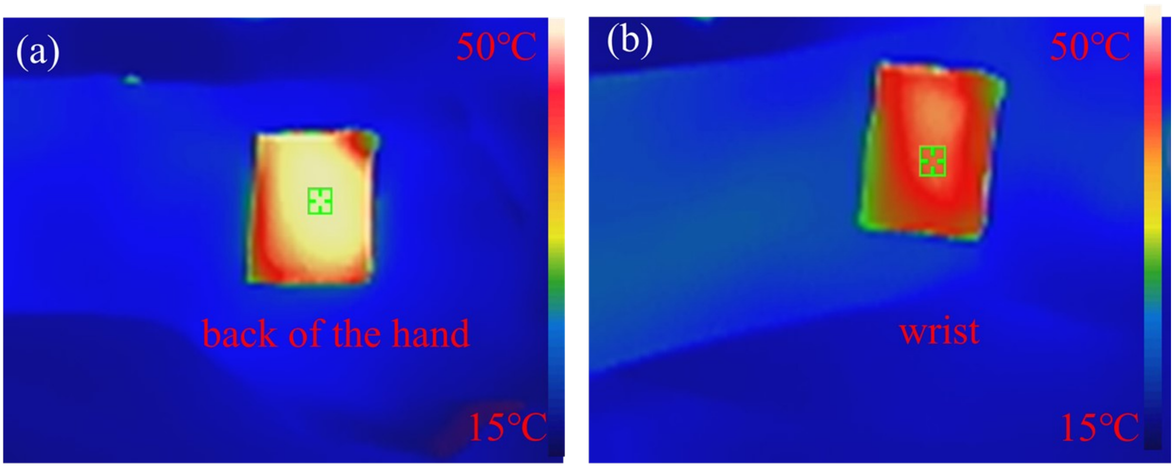

Fig. S1. Infrared thermography during thermotherapy. (a)Back of hand and (b) wrist.

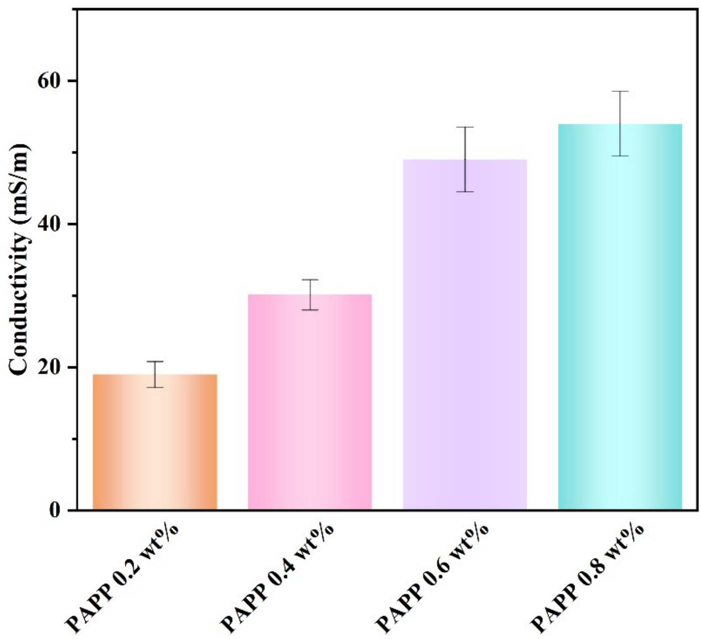

Fig. S2. Conductivity of hydrogels with different PDA@PEDOT content

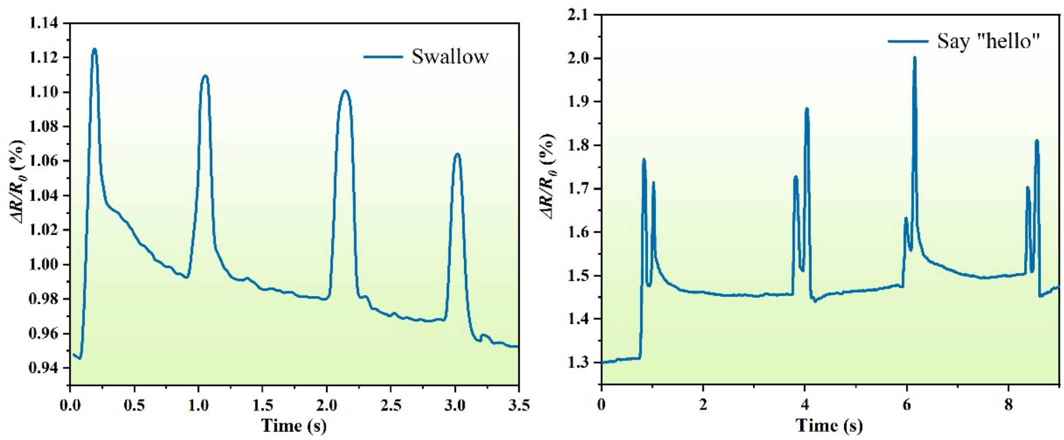

Fig. S3. The PAPP sensors for mechanotransduction signal applications: swallow and speaking.

Table S1. Performance summary of representative hydrogels.

Materials	Sensitivity	Response Time (ms)	Mechanical strength (KPa)	Elongation at break (%)	Self-healing Rate (%)	Reference
PAA/PANI hydrogels	12.63	222	120	2830	/	1
PNIPAM/CMCS/MWCNT/PANI hydrogels	3.6	/	47	225	/	2
PSA/LiCl/PANI hydrogels	1.74	223	470	600	/	3
PEDOT:PSS-PVA hydrogels	3.18	/	186	270	83.5	4
PL（PEDOT:LS）-Fe^{3+}-PAA/PVA hydrogels	1.64	253	98.2	460	/	5
CNC-PEDOT：PSS/PVA hydrogels	7.97	/	989. 6	989.6	92.57	6
CMC/PTh/AHC hydrogels	/	/	758	107.4	93.37	7
SDS/PPy/LMPAm hydrogel	/	300	345	1021	/	8
PVA-EGaIn-x@PAAm/PAA@FeCl_3 @PPy hydrogel	0.28	/	344.7	700	/	9
PVA@MXene@PPy hydrogel	1	100	26.78	4351	100	10
PAM/PDA@PEDOT hydrogel	2.82	140	187	3383	95	This work

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