

Electronic Supplementary Information

Anisotropic Hydrogel with High-sensitivity and Self-adhesion for Wearable Sensors

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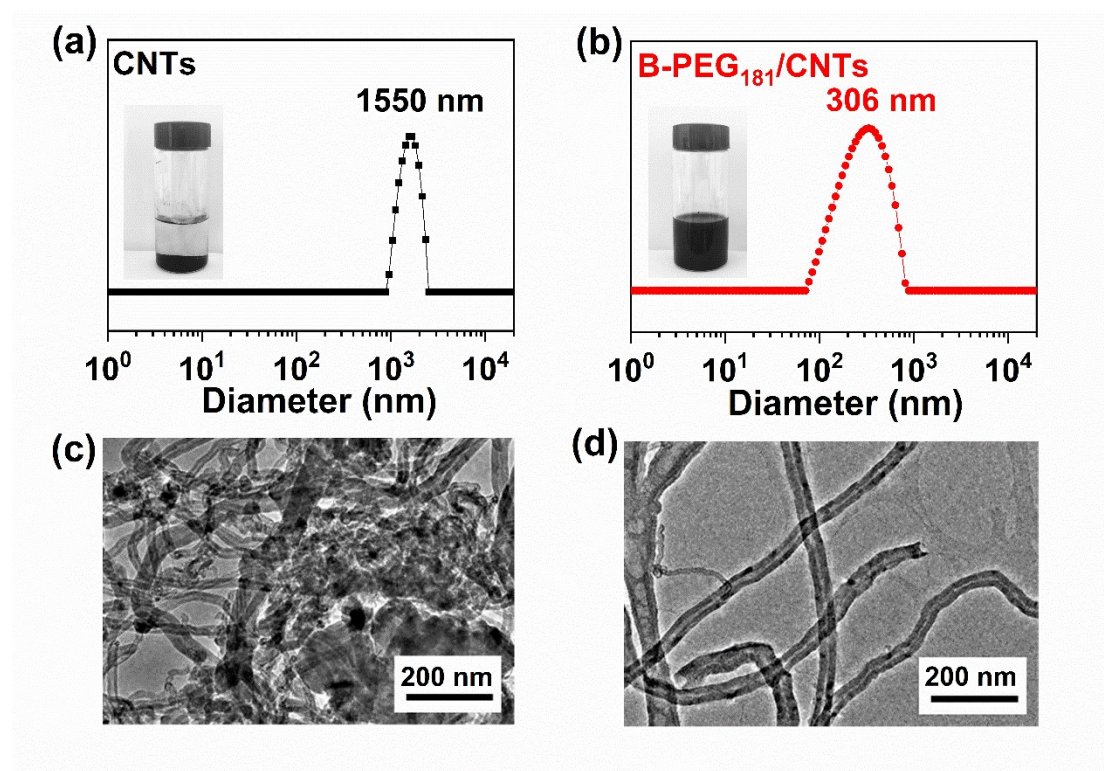


Fig. S1 The diameter and distribution of CNTs solution without (a) and with (b) B-PEG₁₈₁. TEM images of the CNTs solution before (c) and after adding (d) B-PEG₁₈₁.

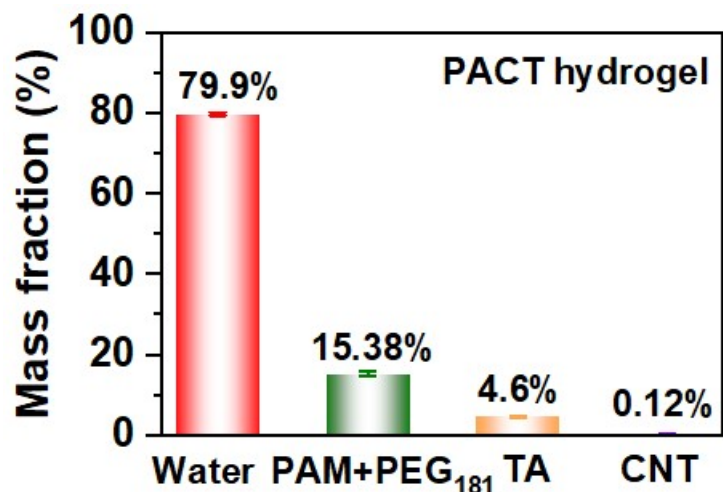


Fig. S2 Mass fraction of each component in the PACT hydrogel.

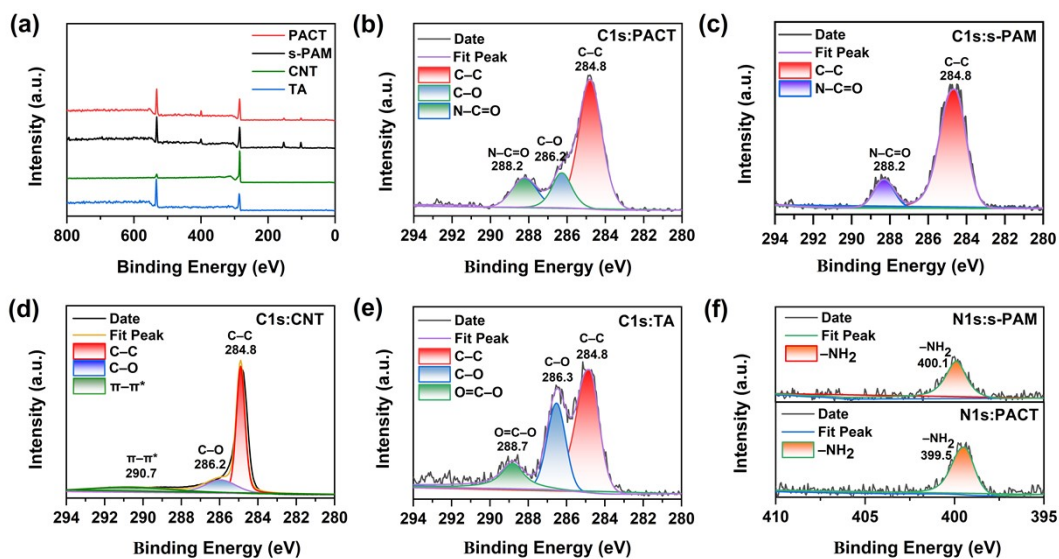


Fig. S3 XPS pattern of PACT hydrogels, s-PAM hydrogels, CNT and TA (a). C1s spectrum of PACT hydrogels (b), s-PAM hydrogels (c), CNT (d) and TA (e). N1s spectrum of s-PAM hydrogels and PACT hydrogels (f).

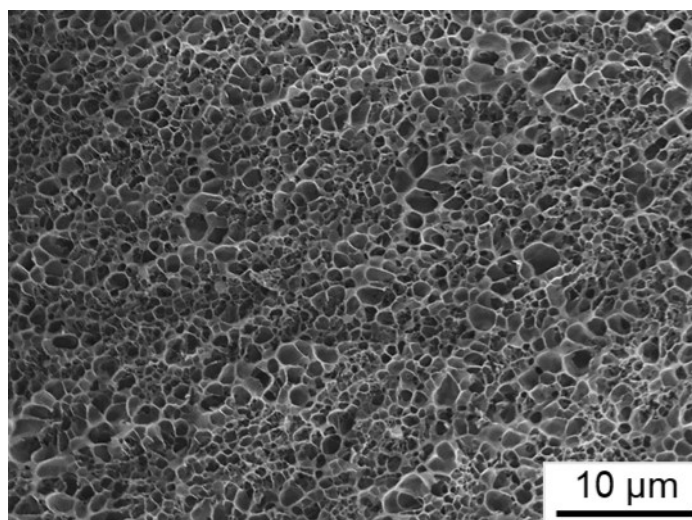


Fig. S4 SEM image of the s-PAM hydrogel.

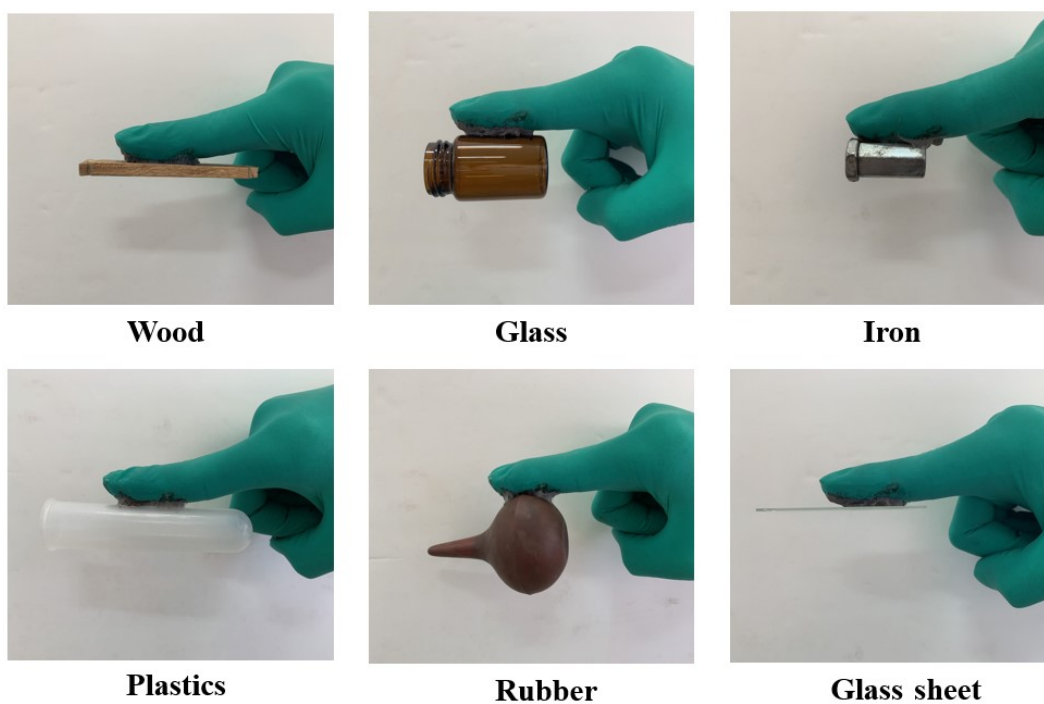


Fig. S5 The PACT hydrogel can spontaneously adhere to a variety of substrates with different properties.

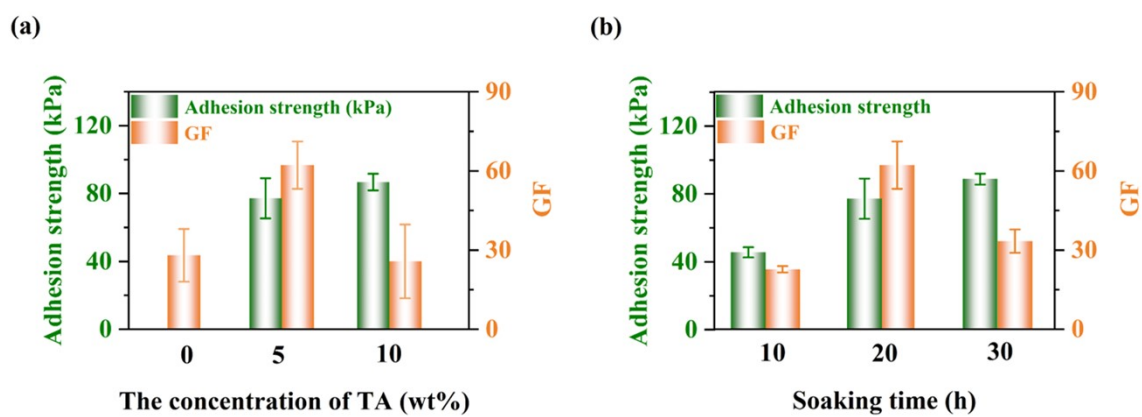


Fig. S6 Adhesion strength and GF of hydrogels at different TA concentrations (a) and soaking times (b).

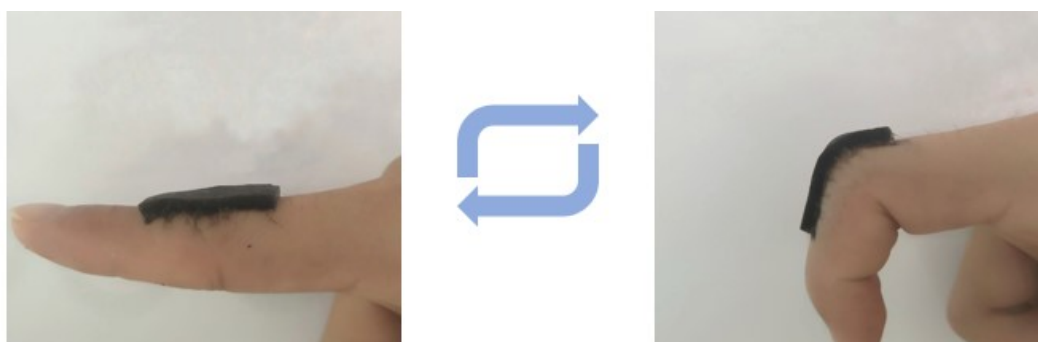


Fig. S7 The finger was repeatedly bent more than 1000 times.

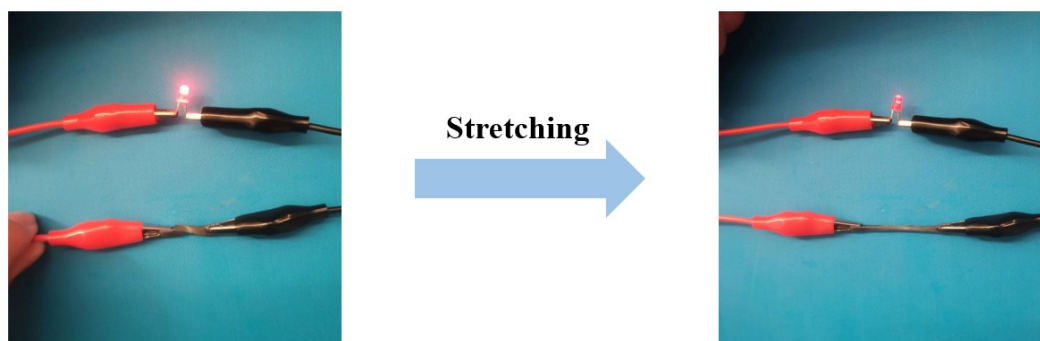


Fig. S8 The LED became dim after stretching.

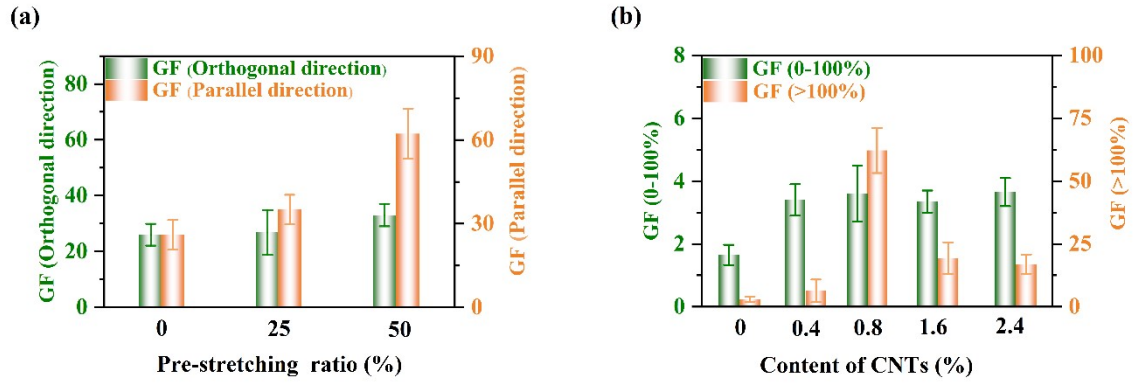


Fig. S9 GF of PACT hydrogel in parallel and orthogonal directions for different stretching ratios (a), GF of PACT hydrogel with different CNT contents (b).

Sample	GF (strain < 100%)	GF (strain > 100%)	Adhesion strength (kPa)	Reference
PACT-P	3.2	62.2	77.2	This Work
PAM/LiCl/CNT	1.07	2.32	N.A.	[1]
HSAH/PHEAA	2.49	10.47	28.5	[2]
MXene/PVA/ZnSO ₄	4.77	5.82	N.A.	[3]
P (THAM/AM))/CNF/Fe ³⁺	2.40	3.69	N.A.	[4]
MASTA/PANI	1.13	2.18	N.A.	[5]
PAA/CMC/Al ³⁺	1.97	3.60	N.A.	[6]
PVA/PAM/NaCl	4.178	24.901	N.A.	[7]
AAM/SDS/LMS/LiCl	1.47	5.44	N.A.	[8]
PVA/Borax/CNT	0.24	1.51	N.A.	[9]
AM/Eg/GI/KCl	1.9	6.0	N.A.	[10]
Mxene/PVA	2.0	25.0	N.A.	[11]

Table. S1 Comparison of existing gels in terms of GF and adhesion strength.

References

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