

SUPPLEMENTARY INFORMATION FOR
Self-Healable PEDOT:PSS-PVA Nanocomposite Hydrogel
Strain Sensor for Human Motion Monitoring

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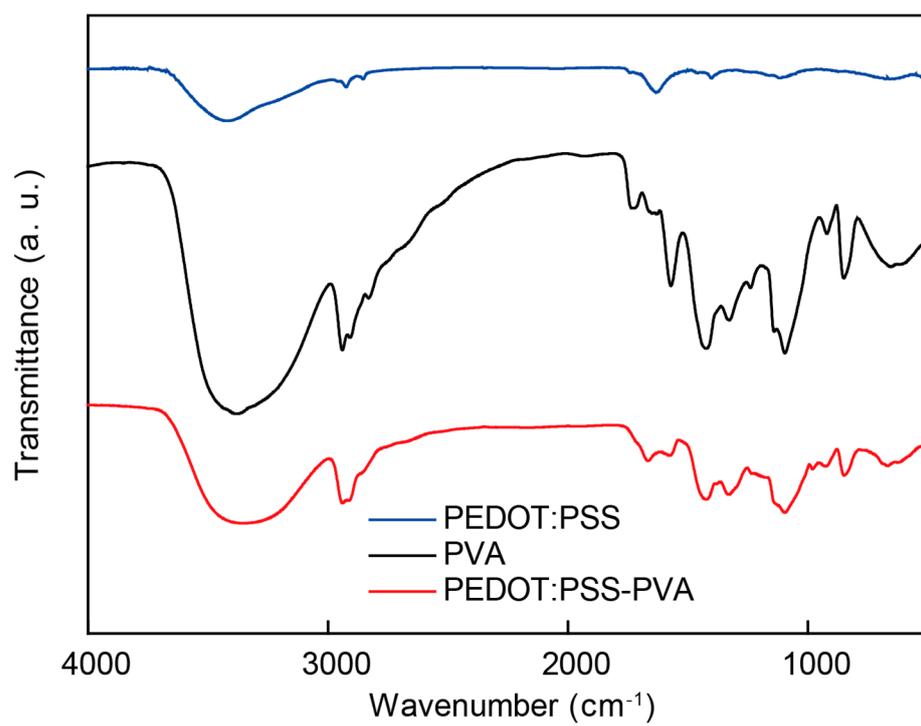


Figure S1. FTIR spectra of PVA, PEDOT:PSS, and PEDOT:PSS-PVA nanocomposite hydrogel.

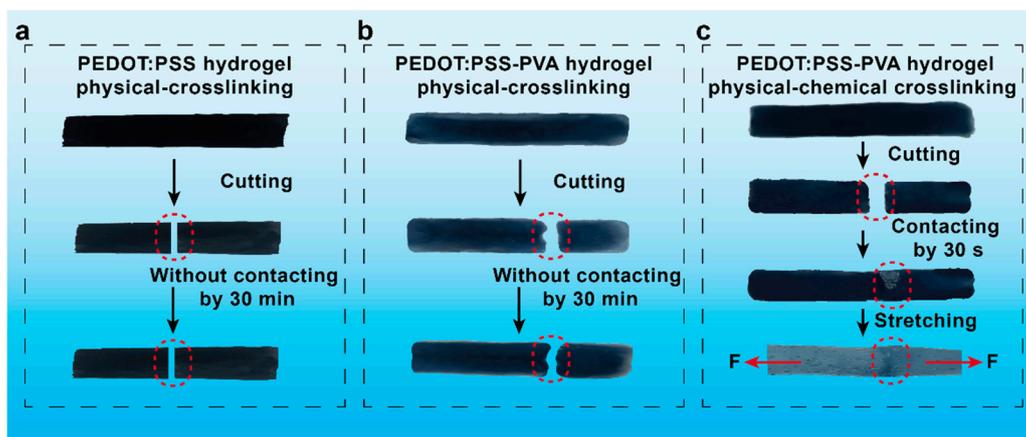


Figure S2. Photographs of the self-healing behavior of physical-crosslinked pure PEDOT:PSS hydrogel (a), PEDOT:PSS-PVA composite hydrogel (b), and physical-chemical crosslinked PEDOT:PSS-PVA nanocomposite hydrogel in this work (c).

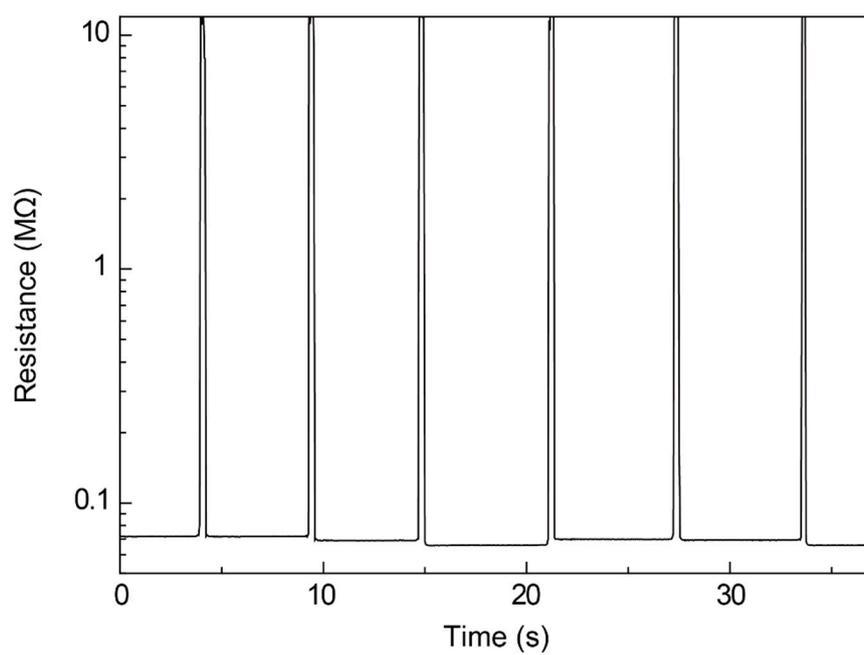


Figure S3. Resistance recovery of the PEDOT:PSS-PVA nanocomposite hydrogel during the cutting-healing cycle.

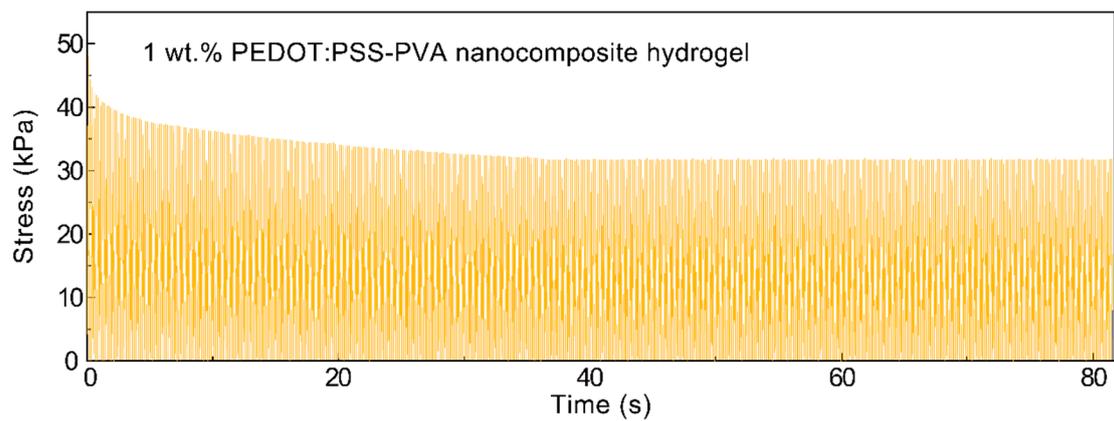


Figure S4. Loading-unloading mechanical performance of 1 wt.% PEDOT:PSS-PVA nanocomposite hydrogels at 400 cycles.

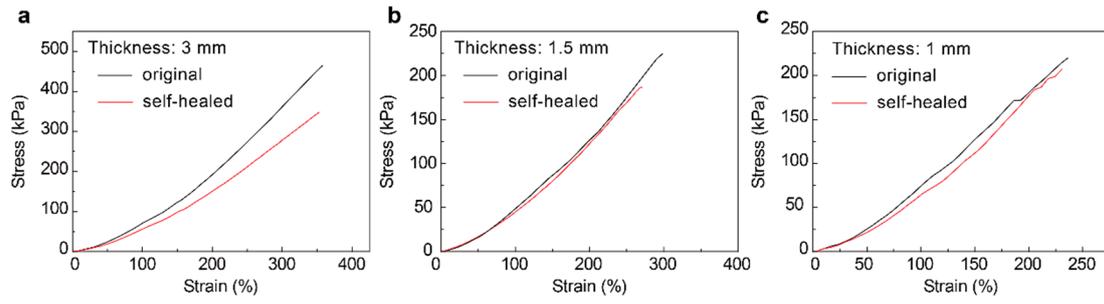


Figure S5. Typical stress-strain curves of the original and healed PEDOT:PSS-PVA nanocomposite hydrogels with (a) 1 mm, (b) 1.5 mm, and (c) 3mm.

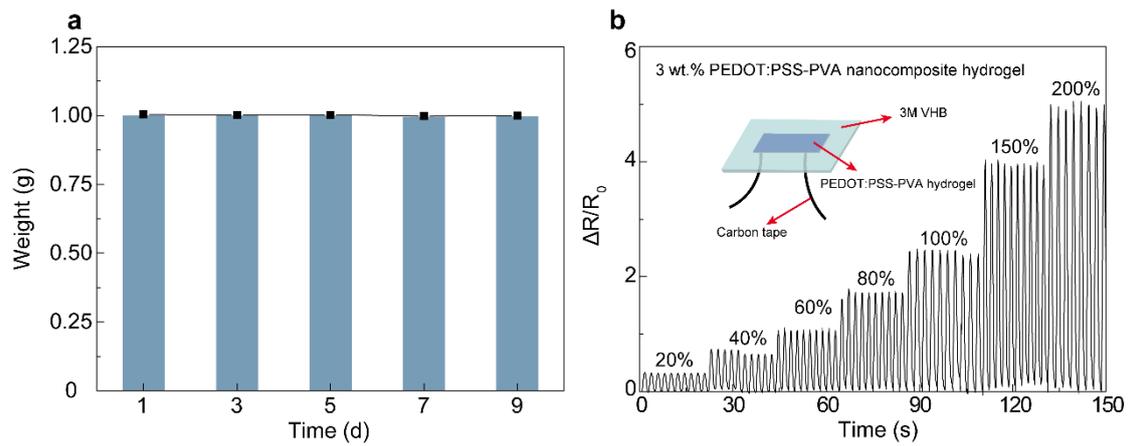


Figure S6. (a) Weight changes of PEDOT:PSS-PVA nanocomposite hydrogel strain sensors within 9 days. (b) Strain sensing performance of 3 wt.% PEDOT:PSS-PVA nanocomposite hydrogel strain sensor under various strains after 9 days.

Table R2 (as Table S1). Compositions of PEDOT:PSS-PVA nanocomposite hydrogels

Hydrogel sample	m (7wt.% PEDOT:PSS)	m (7wt.% PVA)
1 wt.% PEDOT:PSS-PVA	1 g	99 g
3 wt.% PEDOT:PSS-PVA	1 g	32.33 g
5 wt.% PEDOT:PSS-PVA	1 g	19 g
10 wt.% PEDOT:PSS-PVA	1 g	9 g
15 wt.% PEDOT:PSS-PVA	1 g	5.66 g