

Boron nitride microfiber reinforced polyacrylic acid hydrogels with excellent self-adhesion, fast pH response, and strain sensitivity

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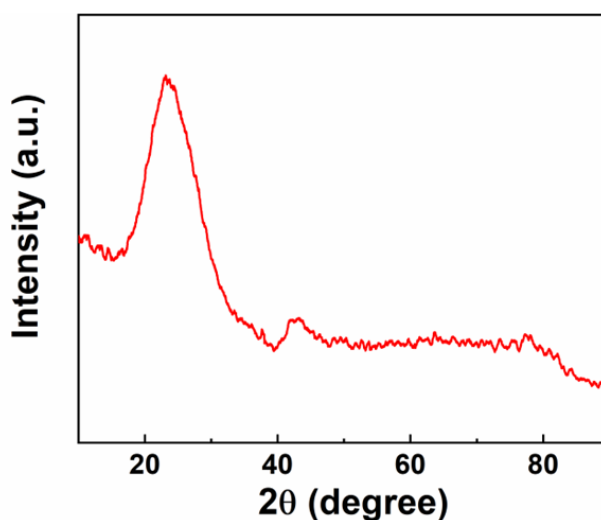


Fig. S1 XRD pattern of BNMFs,

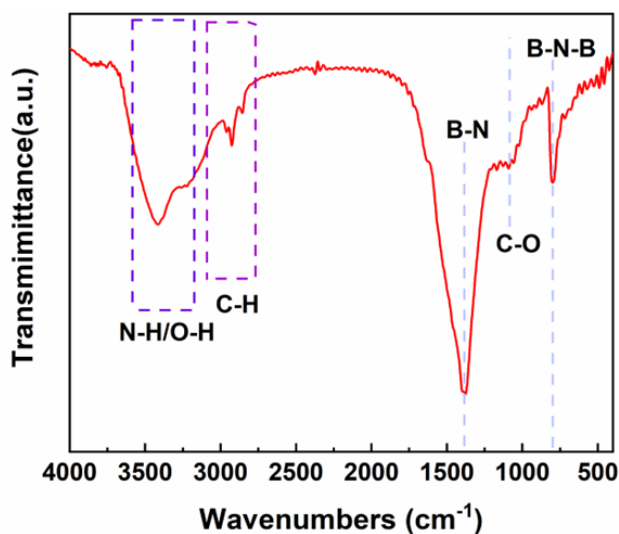


Fig. S2 FTIR spectrum of BNMFs,

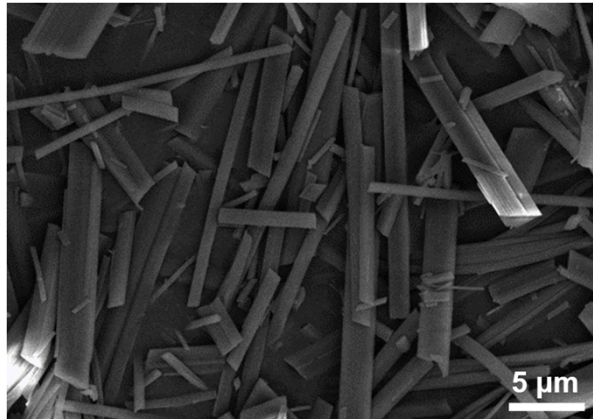


Fig. S3 SEM image of BNMFs

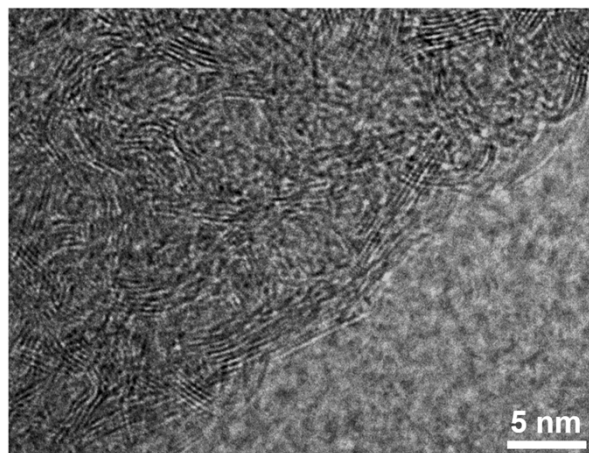


Fig. S4 TEM image of BNMFs

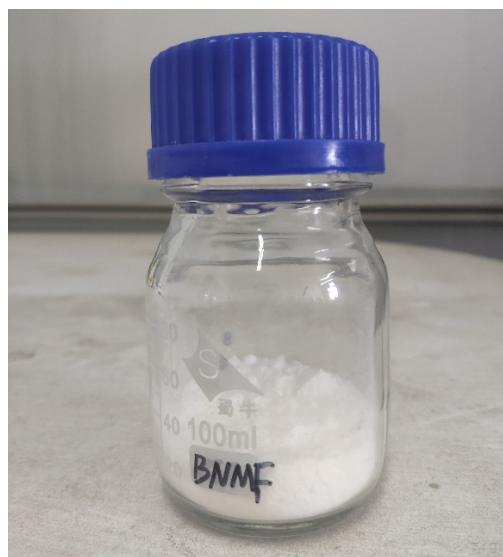


Fig. S5 Optical photograph of BNMFs

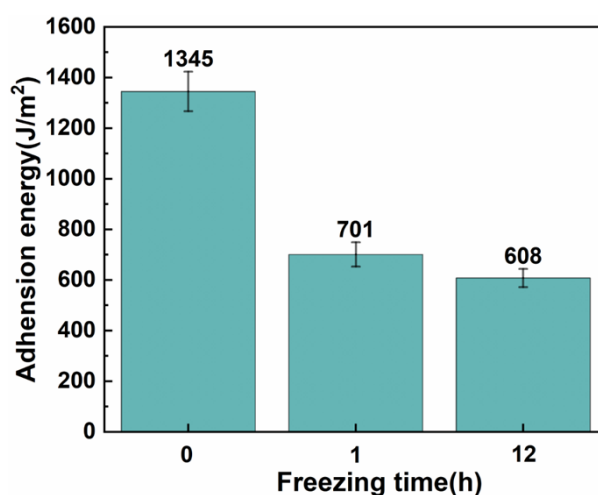


Fig. S6 The adhesion energy of the composite hydrogels after undergoing freezing of 1 and 12 h at -20°C .

Table S1 Comparison of adhesive strength of the composite hydrogels with other similar hydrogels

Hydrogels	Adhesive strength to pig skin (kPa)	Adhesive strength to iron (kPa)	refs
TA@CNC/PAA/PAM hydrogel	29.28	-	1
PDA/clay/PSBMA hydrogel	22.3	-	2
TA@CNC/pectin/PAA hydrogel	168	-	3
PAA/CNF-Gly hydrogel	-	23.3	4
Starch/PAA hydrogel	46.51	-	5
Gelatin/PAA/ AlCl_3^+ hydrogel	26.8	12.6	6
SL/ Fe^{3+} /PAA hydrogel	36.4	-	7
BNMFs/PAA hydrogel	41.2	222	This work

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