Supplementary Information (SI) for Journal of Materials Chemistry B.

Supporting information

CNCs-mediated functionalized MWCNTs reinforced double-network conductive hydrogels as smart flexible strain and epidermic sensors for human motion monitoring

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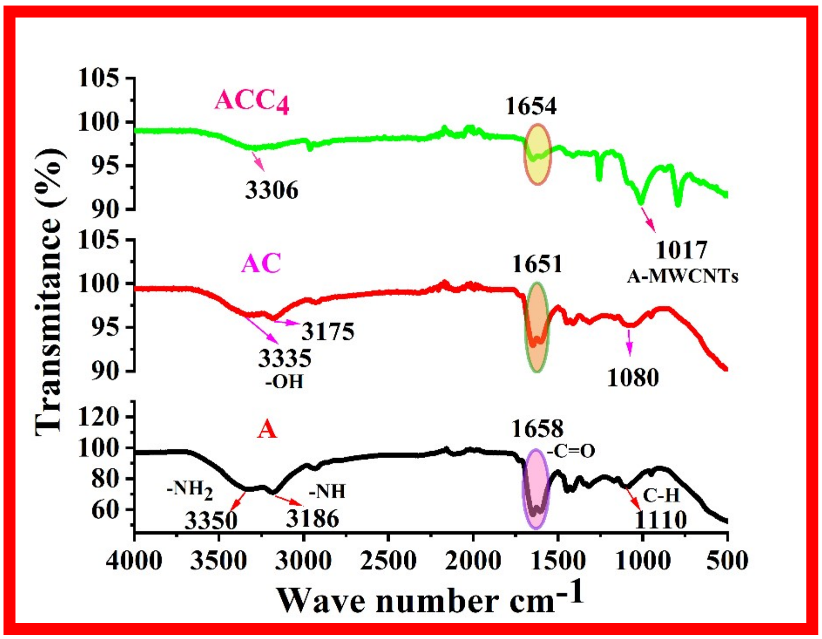

Figure S1. FTIR analysis of prepared hydrogels.

Supporting information

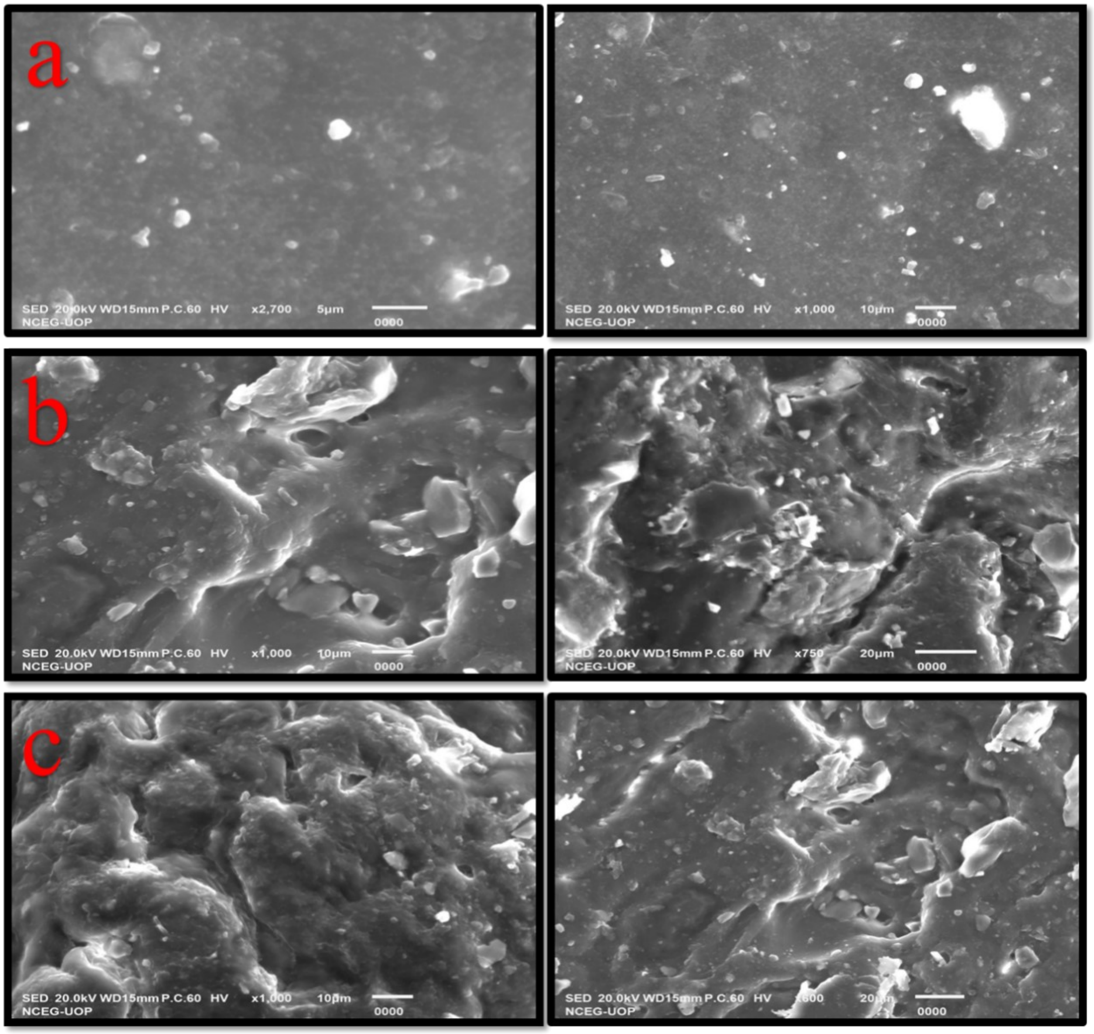

Figure S2. SEM images at different magnification power (a) A, (b) AC, and (c) ACC4 hydrogel systems.

Supporting information

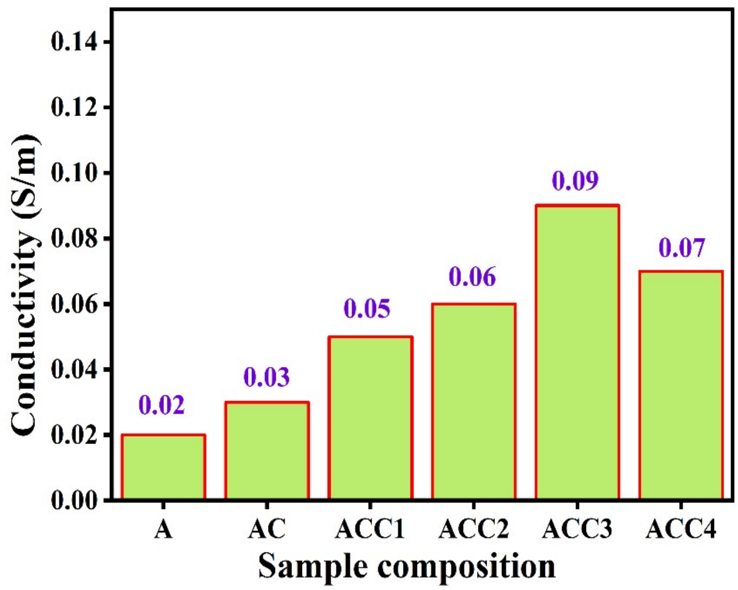

Figure S3. Conductivity vs sample composition of prepared hydrogels.

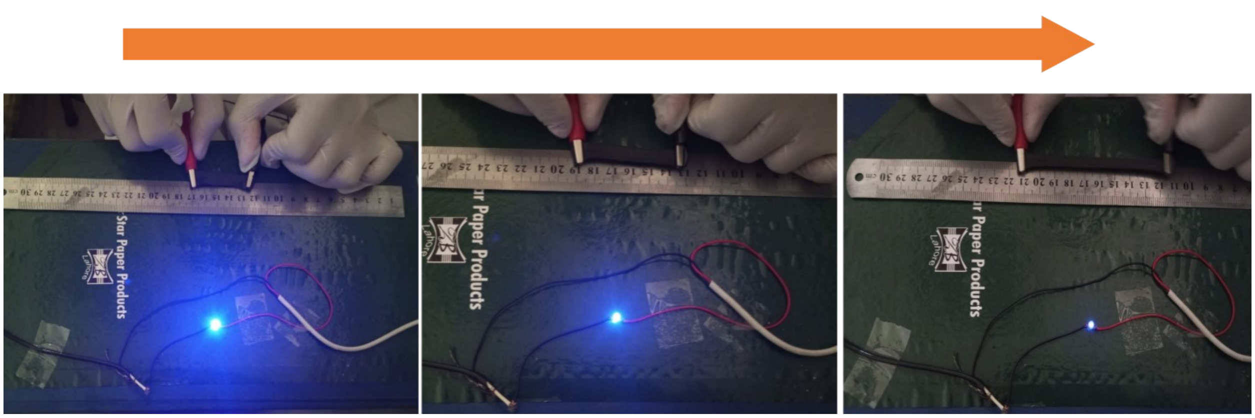

Figure S4. LED response at different stretching modes of the hydrogel.

Table ST1: Comparison between present work and previously reported literature

hydrogels	Conductivity	Gauge factor (GF)	Strain (%)	response/recovery time (ms)	References

Supporting information

PAM@CNC/TA-ag NC hydrogels	5.6 mS/cm	1.2	100	334/175	[1]
P(AM/DA)Al^{3+} hydrogels		3.4	500	-	[2]
P(LM/Amm)/SA hydrogels	8 mS/cm	0.6	200	200	[3]
AMP-regulated hydrogels	-	2.57	100	-	[4]
PVA-PVP hybrid hydrogels	-	0.48	200	-	[5]
GN-CNF@PVA hydrogels	3.55 S/m	3.8	500	-	[6]
PVA/CMC/TA/MXene hydrogel	-	2.9	700	-	[7]
P(CNFs/Agar/Amm) hydrogels	-	1.78	1000	-	[8]
P(QACNF/MXene) hydrogels	1281 mS/m	2.24	1465	141/140	[9]
PAA-PVA/PAM/Zn^{2+} Organohydrogels	1.89 mS/m	0.68	160	280/100	[10]
NCROs	-	1.75	150	721/723	[11]
PAA-PVA/PANI organohydrogels	-	1.81	70	280	[12]
(P(AM-*co*-AA)) hydrogel	-	0.38	225	63	[13]
(PAM)/(k-CG)/Double network hydrogel	2.26 S/m	2.4	-	-	[14]
(P(Amm-co-BA/CNCs)) hydrogel	-	7.4	750	140	[15]
CNCs@PDA-AuNPs hydrogel system	420 mS/m	0.99	-	160	[16]
(p(Amm-co-LM/A-MWCNTs)) hydrogel system	-	9.2	500	<130	[17]
CNCs-mediated A-MWCNTs-based DN hydrogels	0.09 S/m	4.32	400	100/100	current work

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Supporting information

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