Supporting Information

Multifunctional, Smart Fabrics through Nanodiamond-Polyaniline Nanocomposites

Aisha Rehman[1], Shadi Houshyar[2]*, Philipp Reineck[3], Rajiv Padhye[1], Xin Wang[1]*

[1]Centre for Materials Innovation and Future Fashion, School of Fashion and Textiles, RMIT University, Brunswick 3056, Australia

[2]School of Engineering, RMIT University, Melbourne 3000, Australia

[3]ARC Centre of Excellence for Nanoscale BioPhotonics, School of Science, RMIT University, Melbourne 3000, Australia

*Correspondence to: shadi.houshyar@rmit.edu.au (S.H.), xin.wang@rmit.edu.au (X.W.)

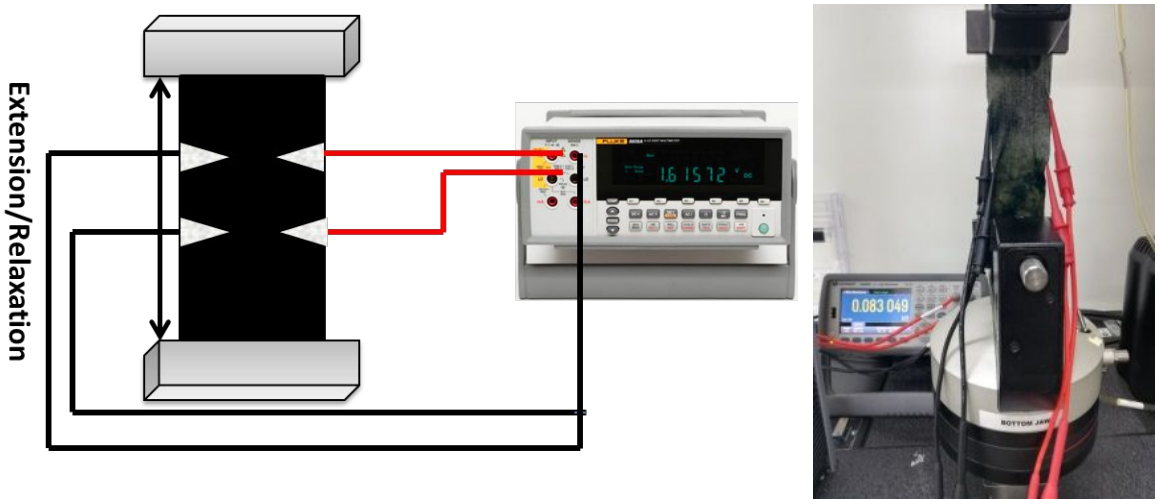

Figure S1. Setup to measure the change in resistance of wool fabrics under a strain along with its schematic

Table S1. Moisture management performance of the fabric specimens.

Sample	W_T		A_R		MWR		SS		AOTI	OMMC
	T	B	T	B	T	B	T	B		
Untreated	6.90	120	20.36	0	5	0	0.71	0	-473.64	0
PANI	3.81	3.13	16.54	7.32	15.00	23.33	3.43	4.83	238.50	0.47
ND-PANI	1.56	4.03	23.40	38.94	25.00	25.00	5.19	4.70	178.43	0.52
BDND-PANI	4.53	4.90	24.76	18.39	21.66	20.00	3.80	5.17	356.35	0.58
PANI-w	6.66	7.59	51.31	29.75	10.00	10.00	0.81	0.71	-56.98	0.05
ND-PANI-w	1.97	4.01	35.41	38.33	20.00	20.00	5.20	4.82	197.03	0.51
BDND-PANI-w	4.41	4.94	40.85	28.18	20.00	20.00	5.05	5.25	318.22	0.51

W_T wetting time (sec); A_R absorption rate (%/sec); MWR maximum wetted radius (mm); SS spreading speed (mm/sec); AOTI accumulative one-way transport index; OMMC overall moisture management capability; T top; B bottom.