

Supporting Information

PEDOT: PSS treated laser induced graphene based smart textile dry electrodes for long term ECG monitoring

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Atomic Concentration (%)	Carbon	Nitrogen	Oxygen	Sulphur
Bare Kevlar	69.902	13.788	16.310	0
LIG/PEDOT: PSS treated Kevlar	82.393	6.183	10.839	0.585

Table S1. Atomic concentration table of Kevlar and PEDOT: PSS treated LIG Kevlar.

Material specifications of PEDOT: PSS treated LIG Kevlar Electrode	
Material	Polymer
Backing material	Kevlar fabric
Sensor	PEDOT:PSS and laser induced graphene
Eye protection	May cause eye irritation

Table S2. Basic specifications of proposed PEDOT: PSS treated LIG Kevlar Electrode.

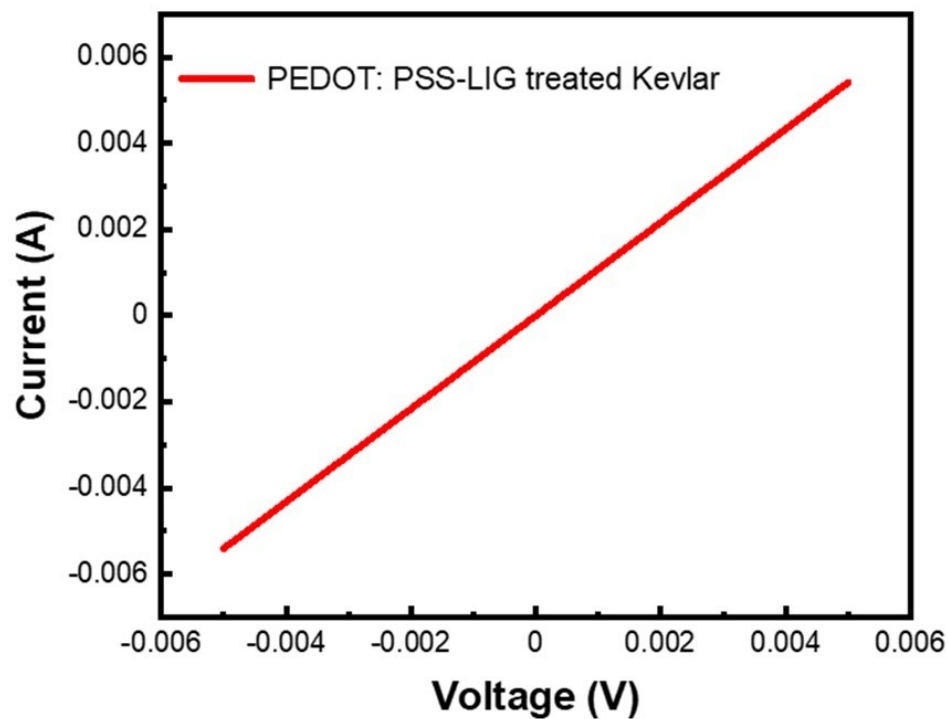


Figure S1: I-V characteristics of PEDOT: PSS treated LIG Kevlar fabric.

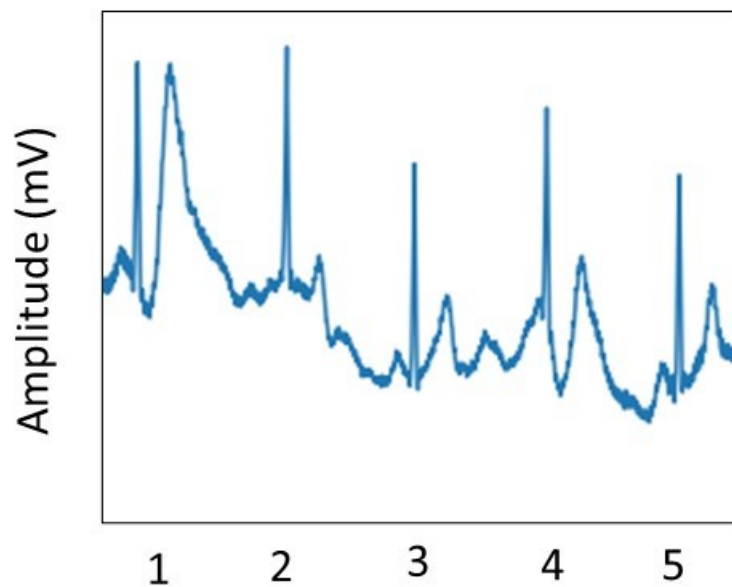


Figure S2: ECG signal obtained using PEDOT: PSS-LIG treated Kevlar dry electrode while subject was moving

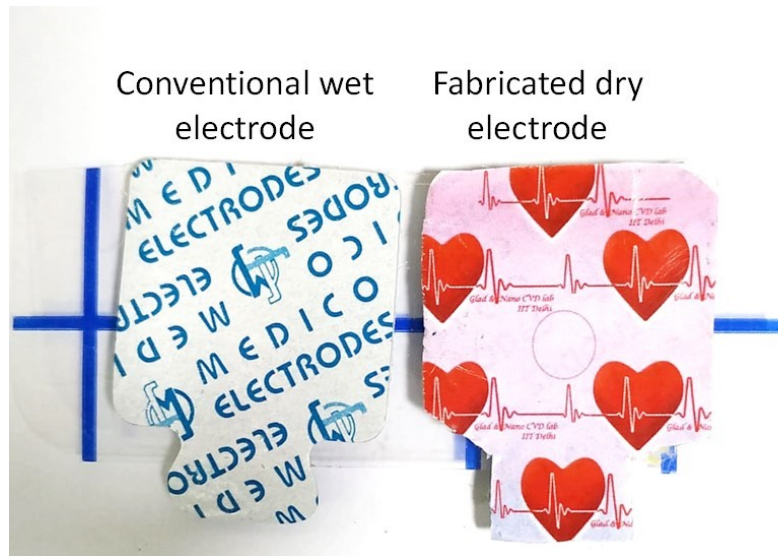


Figure S3: Optical images of conventional wet electrodes and fabricated dry electrode.

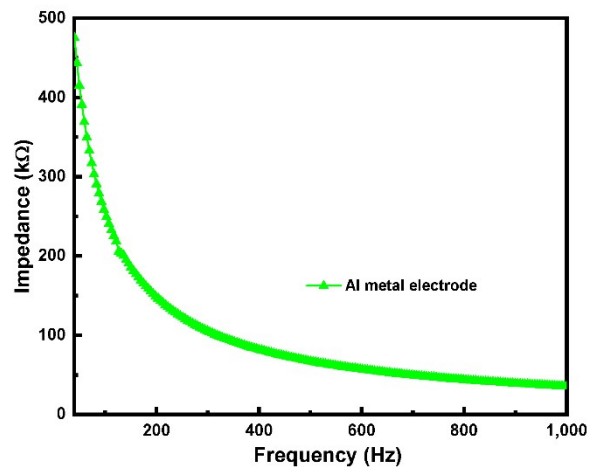


Figure S4: The variation of contact impedance of Al metal electrode with frequency.

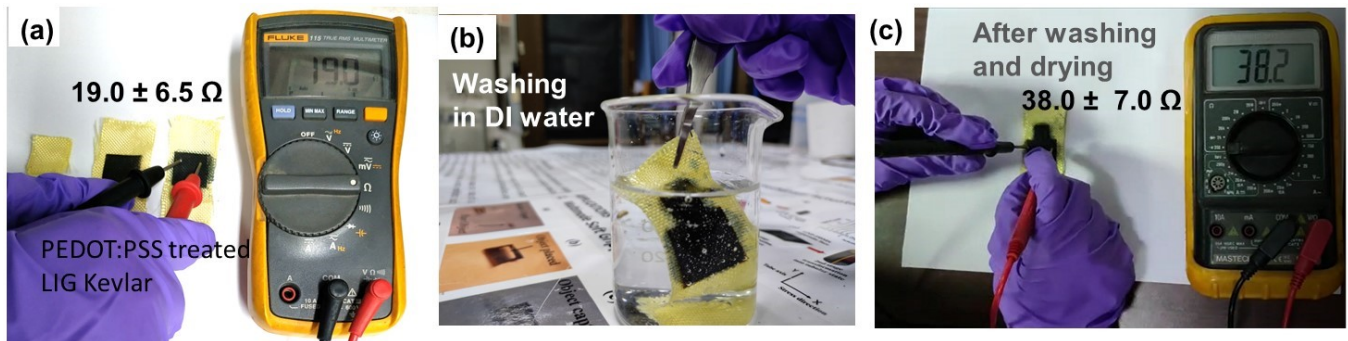


Figure S5: (a) Resistance of PEDOT: PSS-treated Kevlar electrode using a resistance meter before washing. (b) washing of PEDOT: PSS-treated Kevlar electrode with DI water, and (c) resistance after drying the fabricated dry electrode.

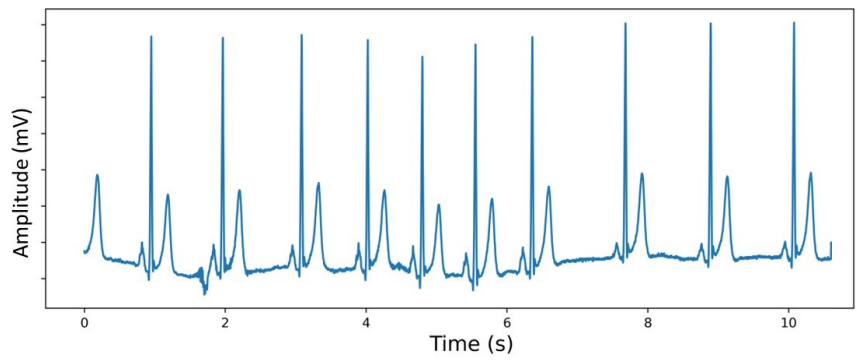


Figure S6: ECG signal recorded using proposed PEDOT: PSS-LIG treated Kevlar dry electrodes after 48 hours of uses.