Supplementary Material

for

Heteroatom-doped graphene oxide-based conductive ink: synthesis, characterization and investigation of conductivity properties for flexible sensor technology

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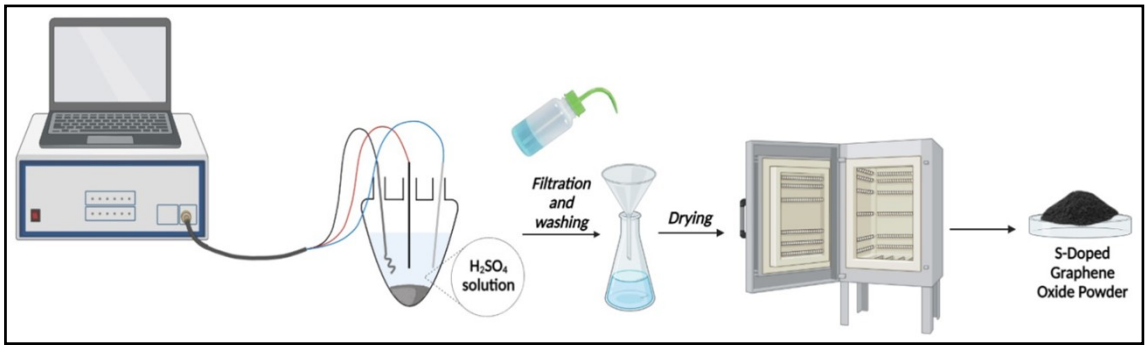
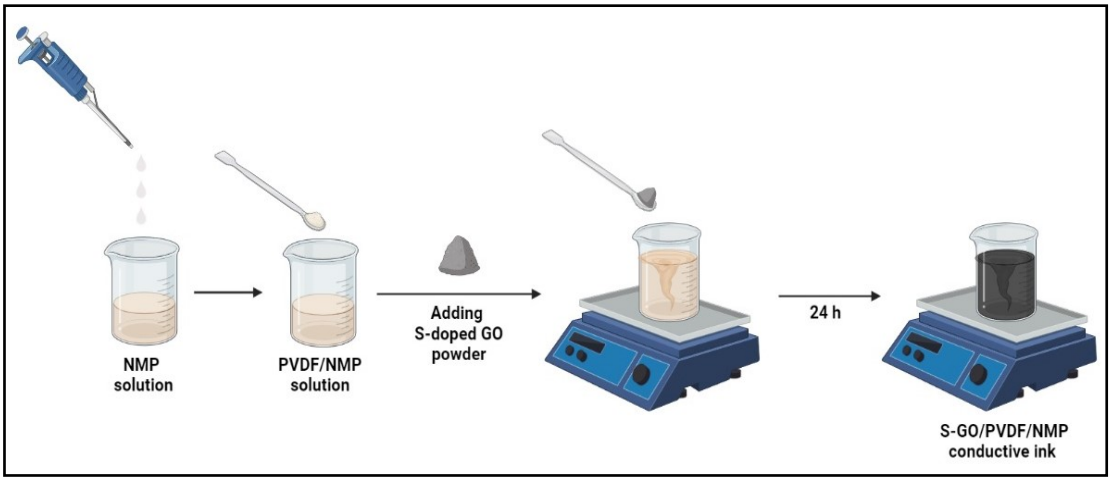


Scheme S1. Schematic illustration of electrochemical S-doped graphene oxidation production.



Scheme S2. Preparation of S-GO/PVDF/NMP conductive ink.

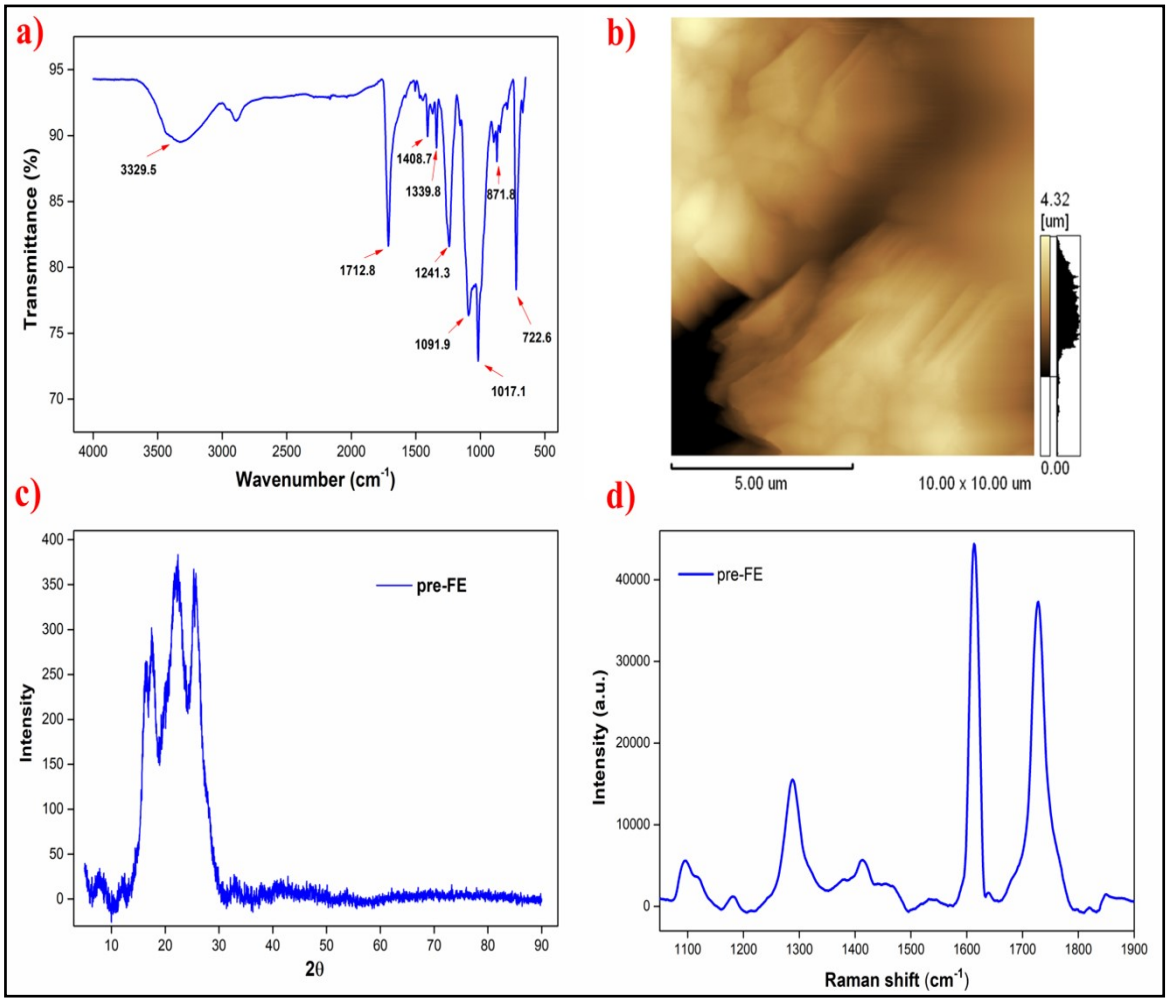


Fig. S1. a) FTIR spectrum of pre-FE, b) 2D AFM images of CFE-5, c) X-ray powder diffraction pattern and d) Raman spectrum of pre-FE.

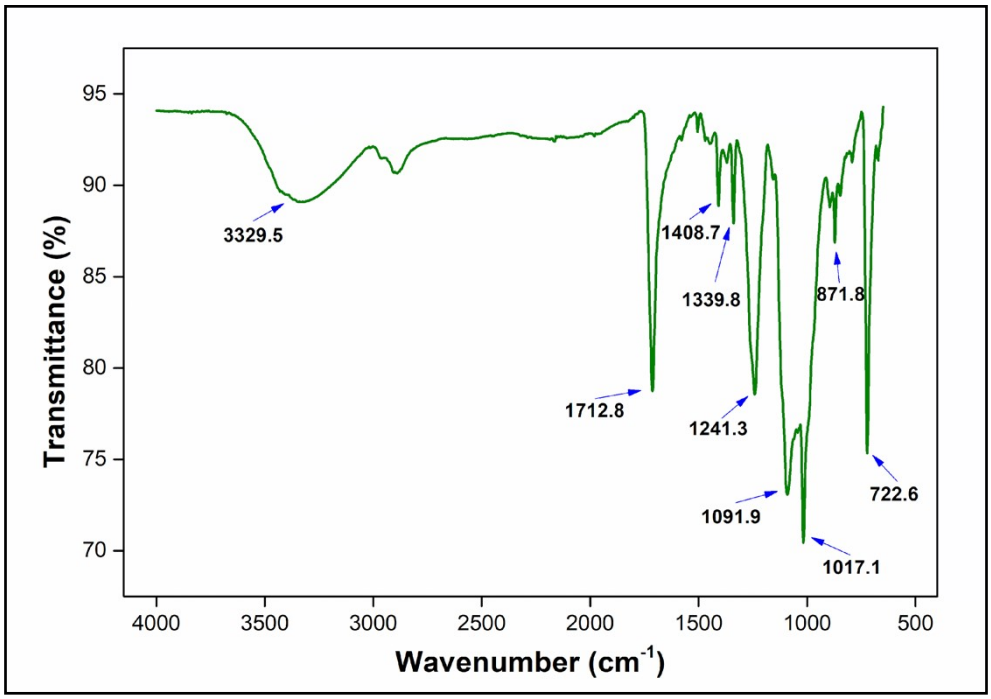


Fig. S2. FTIR spectrum of fabric electrode (FE).

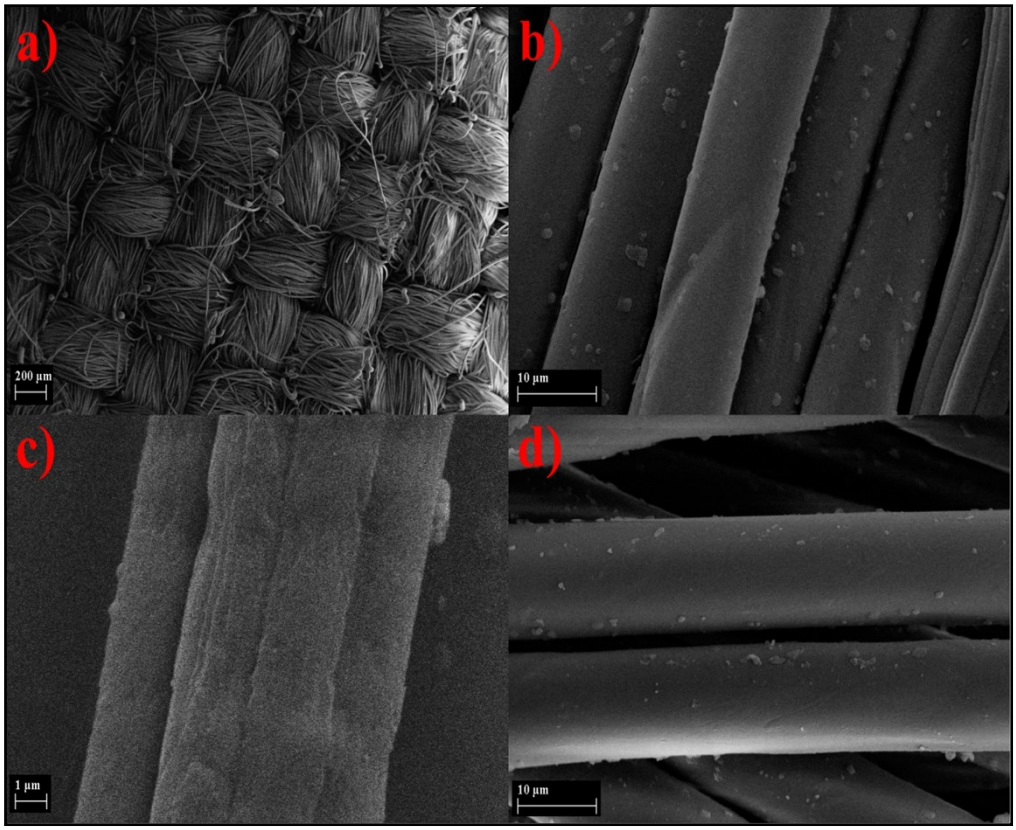


Fig. S3. SEM images at different magnifications of fabric electrode (FE).

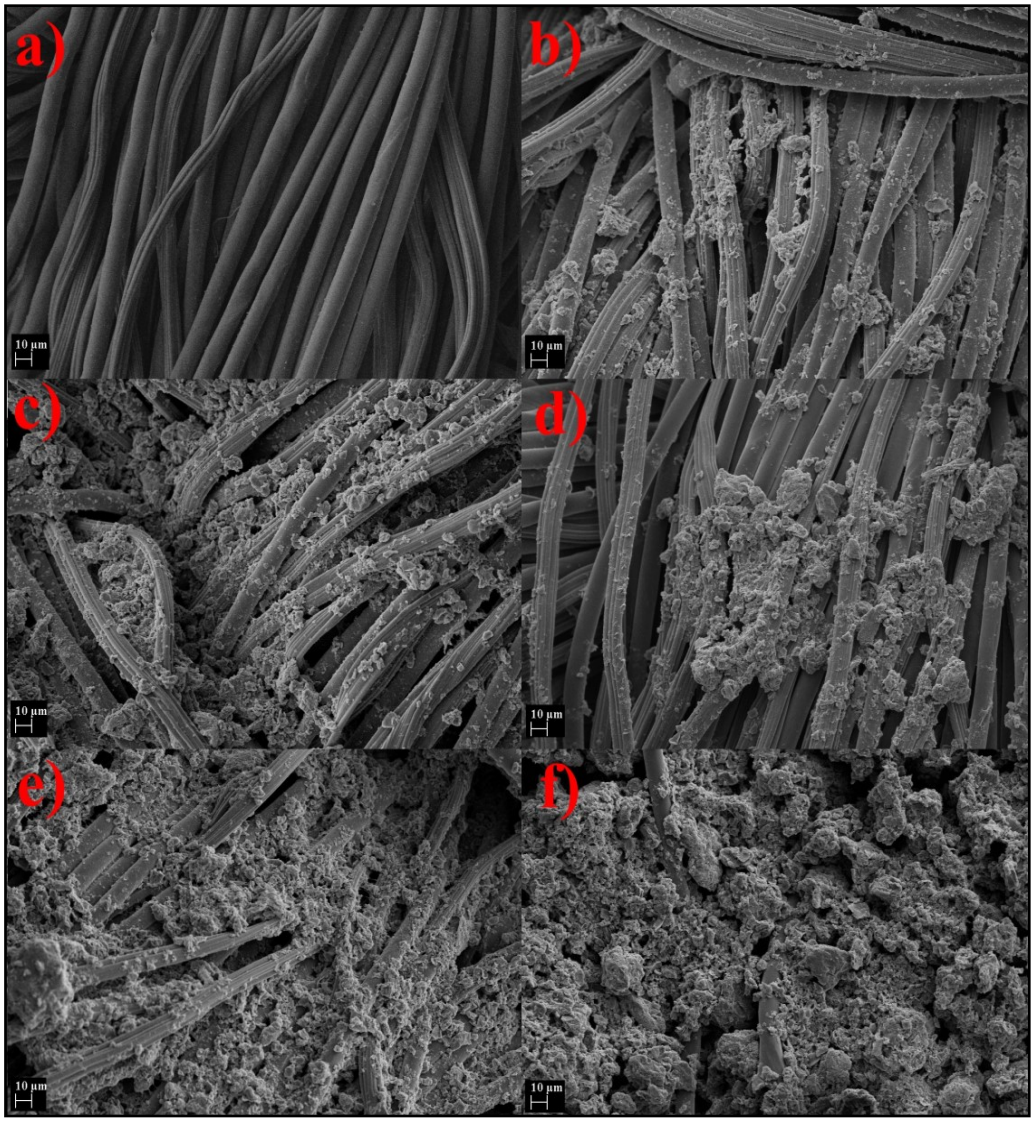


Fig. S4. SEM images at 1000x magnification of a) pre-FE, b) CFE-1, c) CFE-2, d) CFE-3, e) CFE-4, and f) CFE-5.

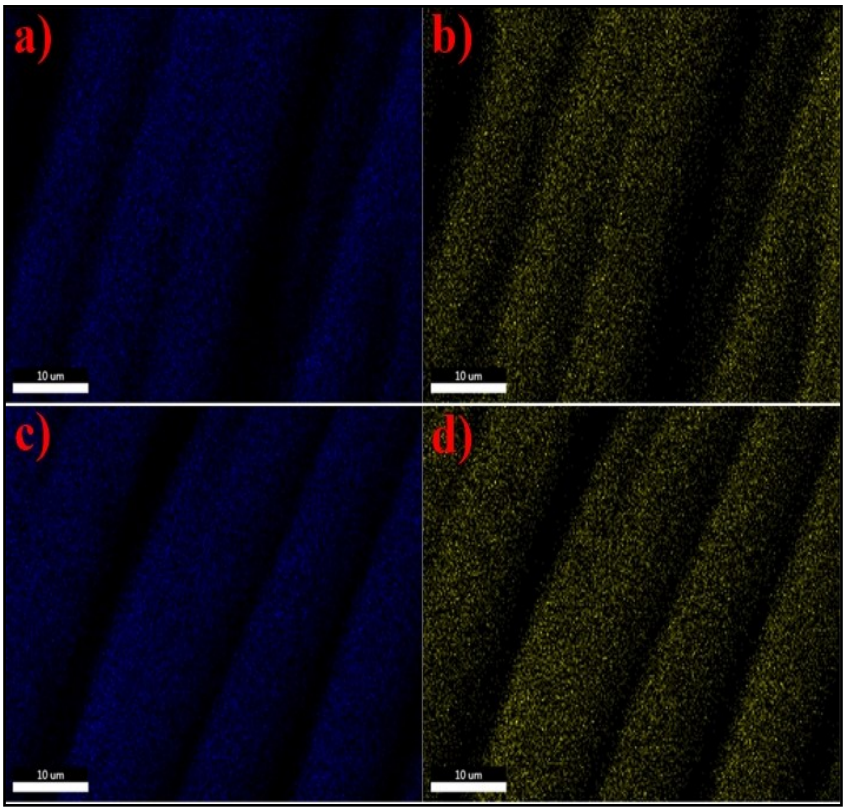


Fig. S5. EDS mapping of a) C element (66%) and b) O element (34%) of FE; c) C element (68%), and d) O element (32%) of pre-FE.

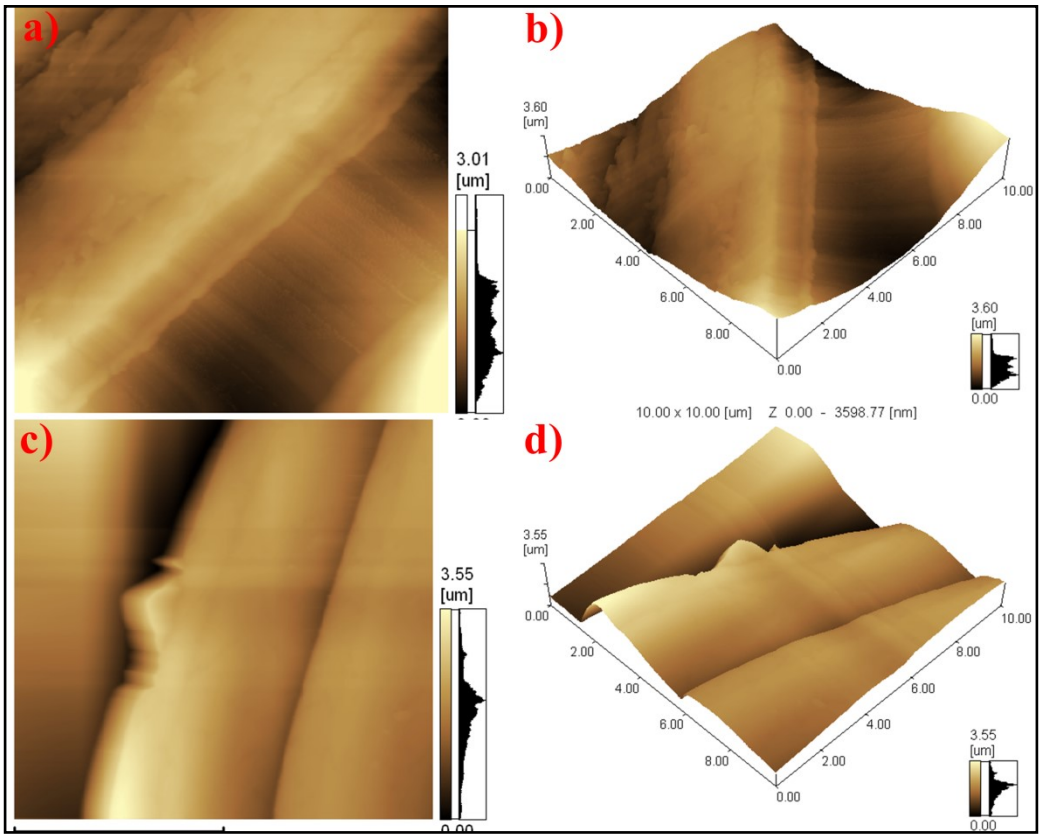


Fig. S6. a) 2D and b) 3D AFM images of FE; c) 2D and d) 3D AFM images of pre-FE.

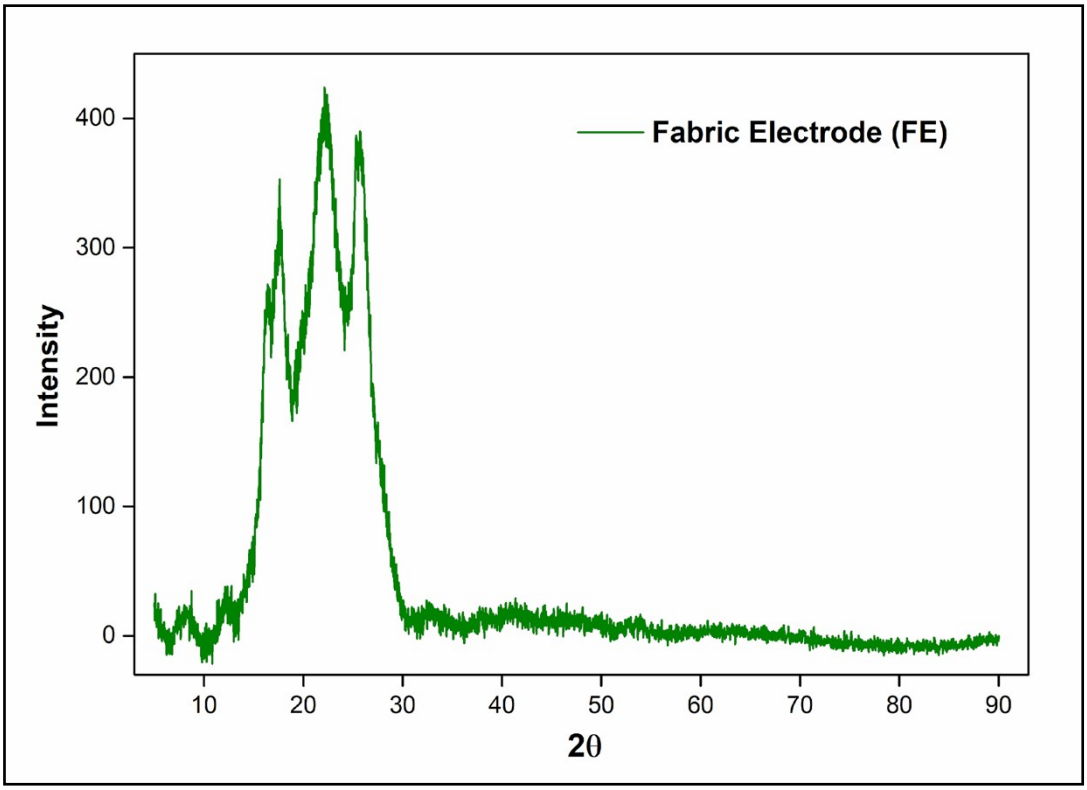


Fig. S7. X-ray powder diffraction pattern of the fabric electrode (FE).

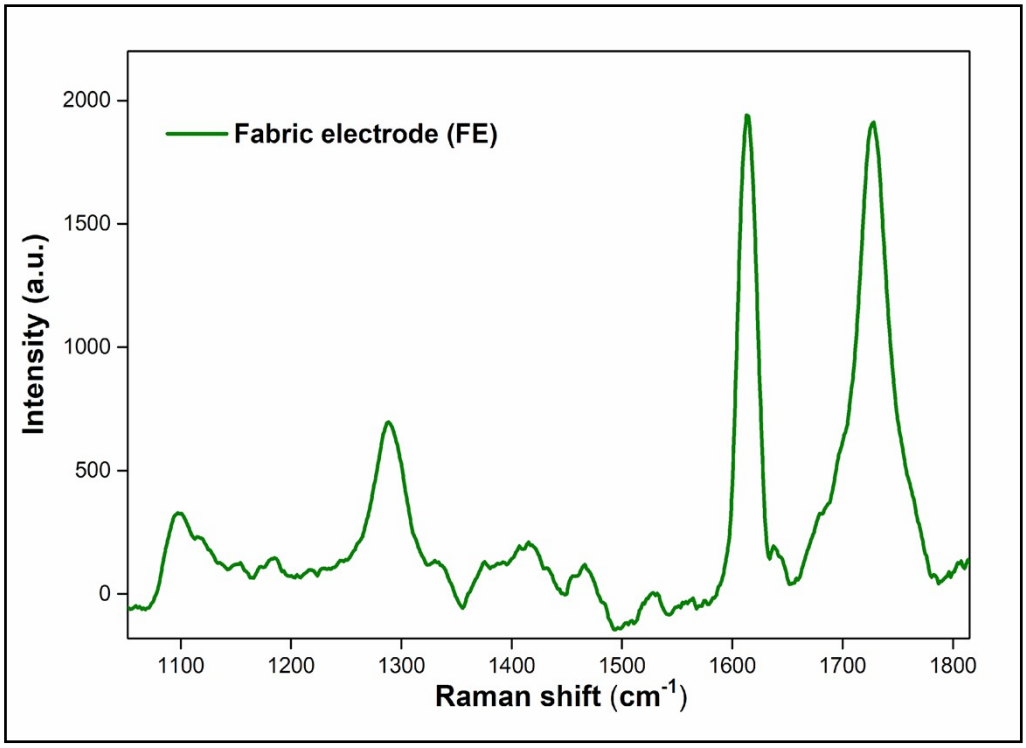


Fig. S8. Raman spectrum of fabric electrode (FE).

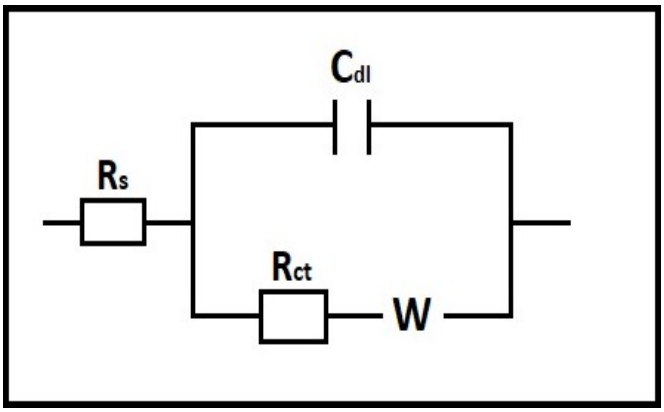


Fig. S9. Simple circuit model used in EIS measurements.

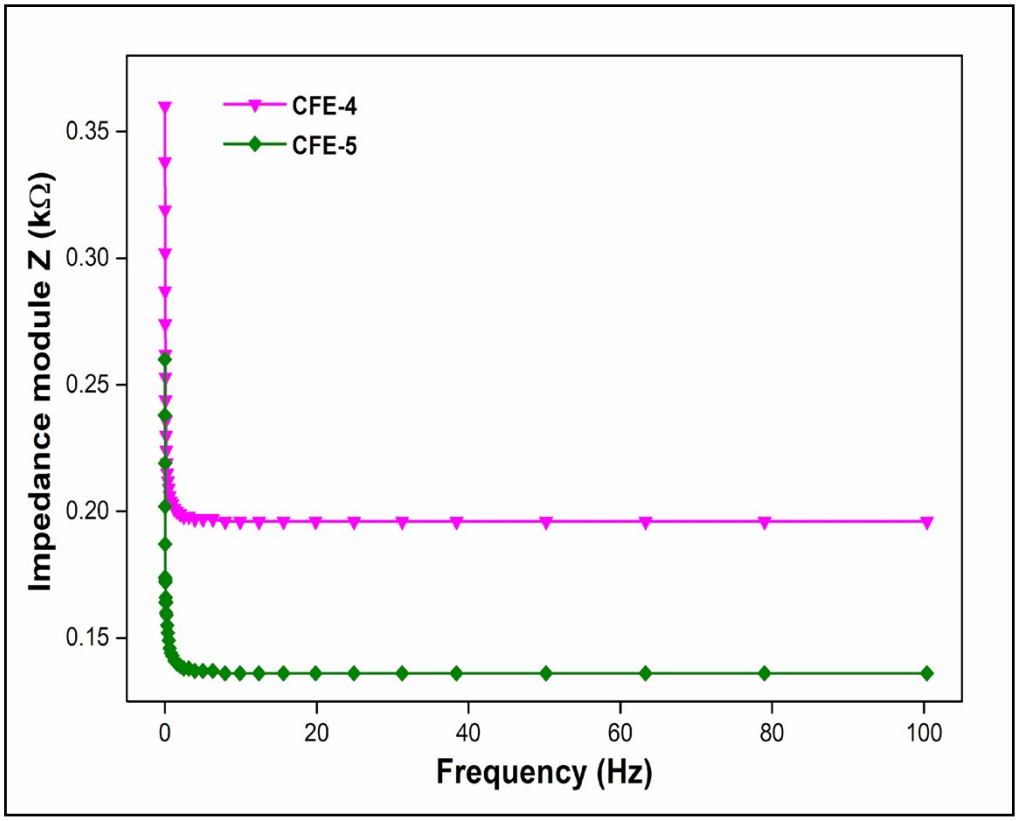


Fig. S10. Bode CFE-4 and CFE-5. Measurements were recorded with a traditional three-electrode system in 0.1 M H_2SO_4 solution, frequency range from 10^4 Hz to 10^{-2} Hz.