Electronic Supplementary Material (ESI) for RSC Advances.

Supporting Information

Impact of different nanostructures of PEDOT decorated 3D multilayered graphene foam by chemical methods on supercapacitive performance

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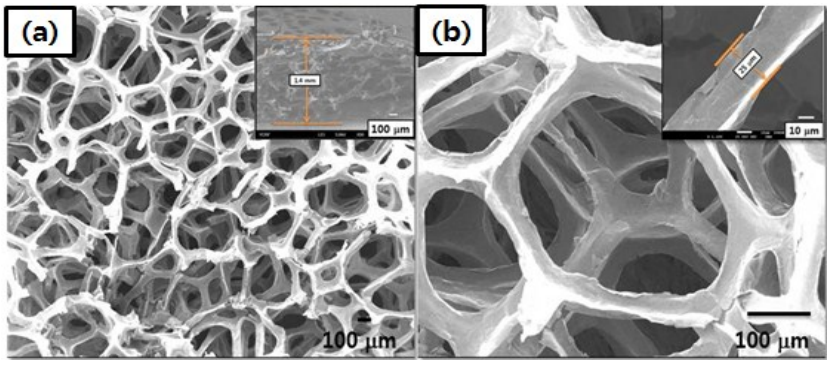

Fig. S1 (a, b) shows SEM images of MGF electrode which replicates 3D structure of the nickel foam template with thickness about 1.5 mm (shown in the inset of figure), and all the graphene sheets in the foam are interconnected with each other without any breaks.

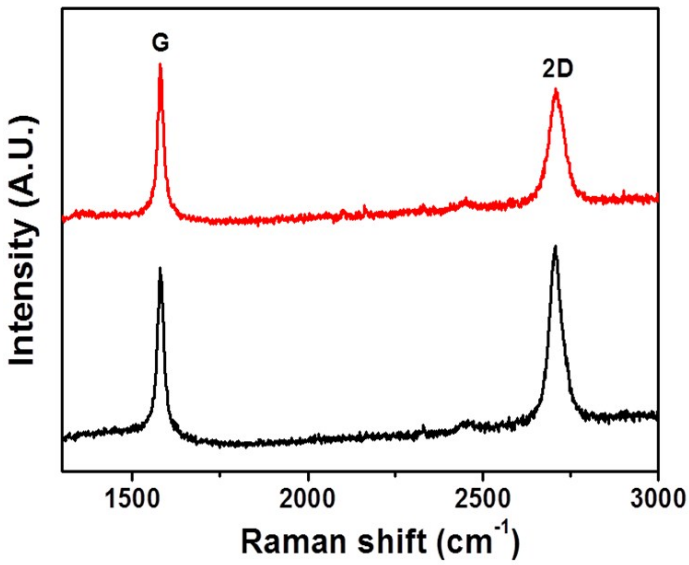

Fig. S2. The Raman spectra of 3D graphene at different places on the foam exhibited two distinct peaks at ~1,559 cm^{-1} (G-band) and ~2,699 cm^{-1} (2D-band). The integral ratio of the 2D and G band indicates few layered domains (multilayers) contained as-grown GF.

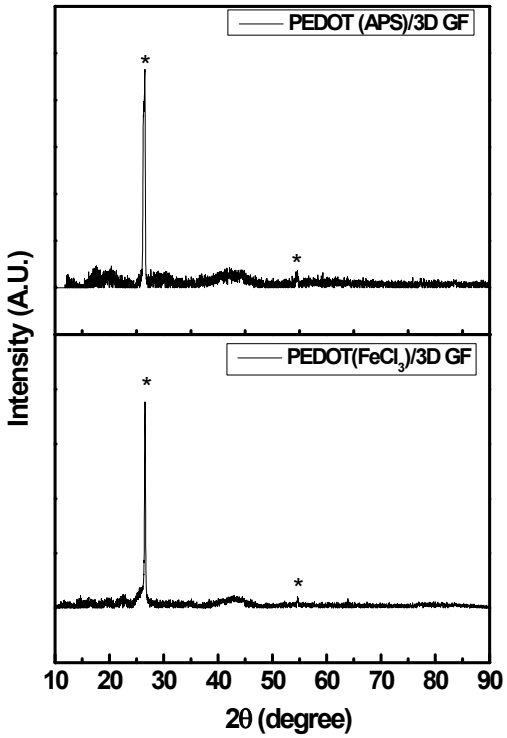

Fig. S3 XRD patterns of PEDOT($FeCl_3$)/3D GF and PEDOT(APS)/3D GF electrodes.

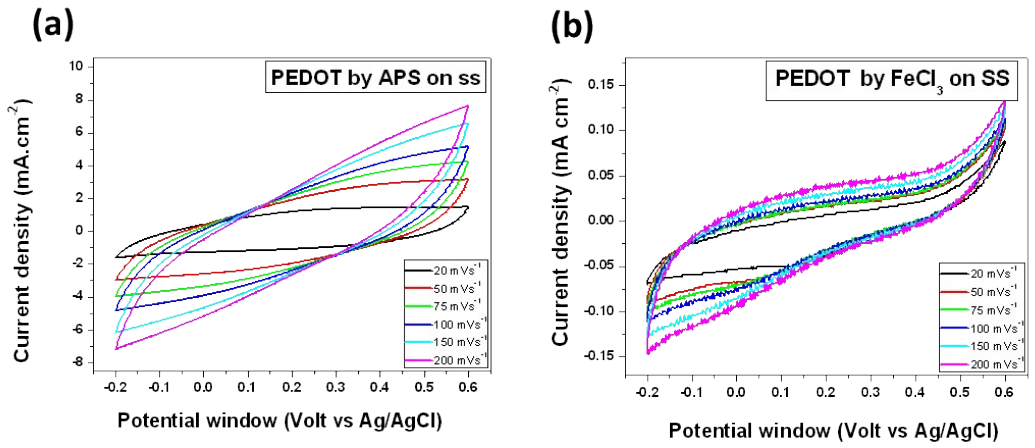

Fig. S4 Scan rate dependent (20-200 mV s^{-1}) CV curves of PEDOT(APS)/SS and PEDOT($FeCl_3$)/SS electrodes in 1M H_2SO_4 electrolyte.

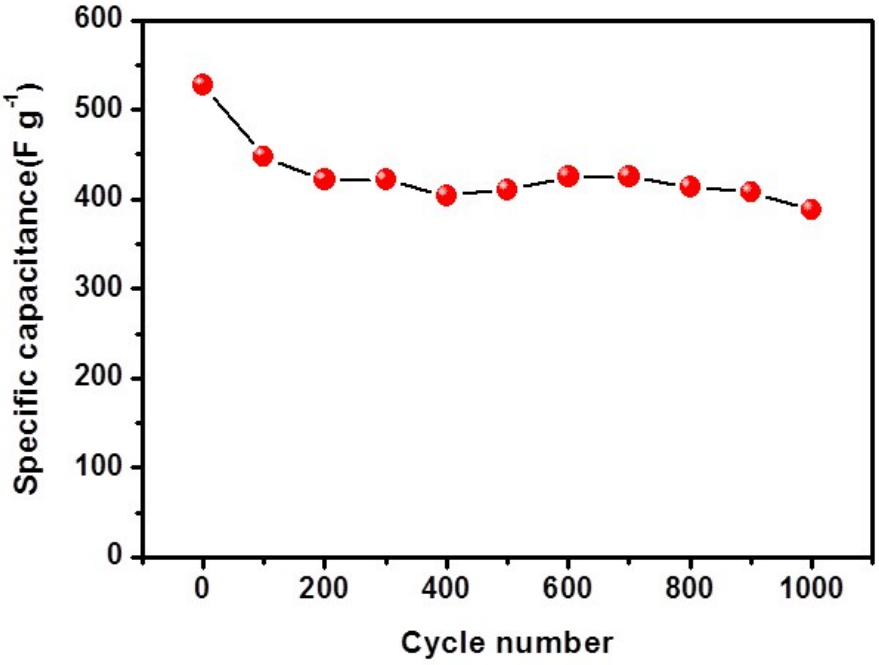

Fig. S5 Stability test of PEDOT(APS)/3D GF electrode in 1M H_2SO_4 for 1000 cycles.