

**Supporting materials for:**

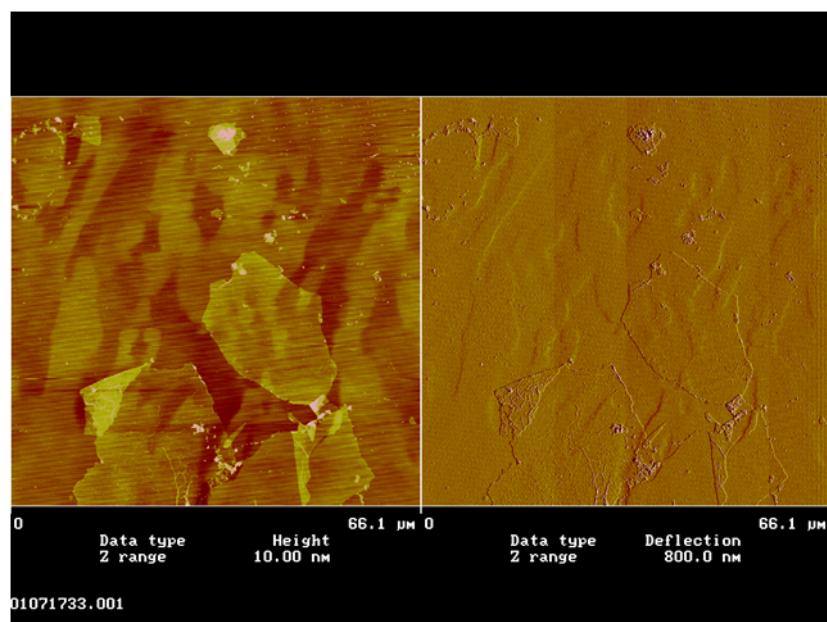
**Preparation of Macroporous Flexible Three Dimensional Graphene Sponge**

**Using Ice-Template as Anode Material for Microbial Fuel Cell**

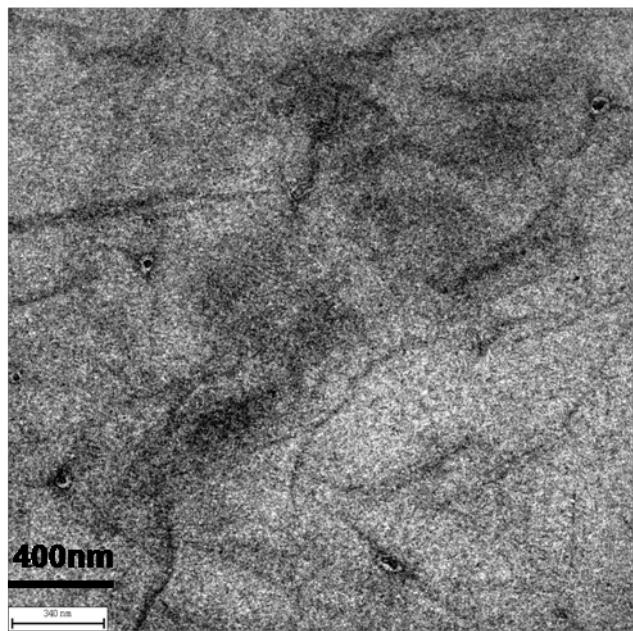
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<sup>a</sup> Hefei National Laboratory for Physical Sciences at Microscale and Department of Chemical Physics, CAS Key Laboratory of Soft Matter Chemistry, University of Science and Technology of China. Hefei, 230026, P.R. China

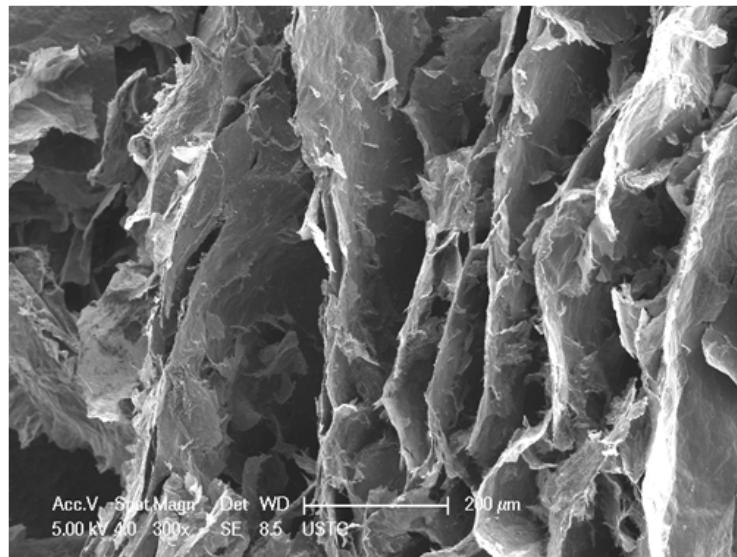
<sup>b</sup> Department of Chemistry, University of Science and Technology of China. Hefei, 230026, P.R. China



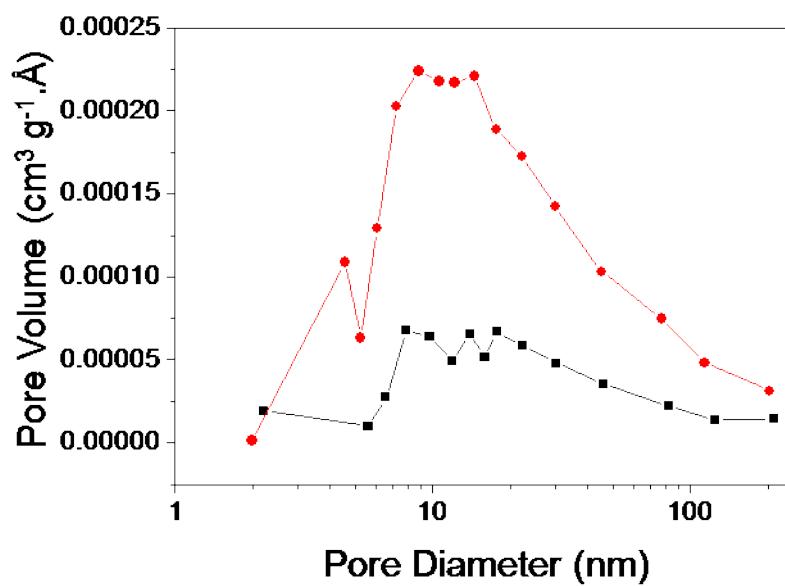
**Figure S1.** AFM image of large GO sheets on the surface of mica.



**Figure S2.** TEM image of reduced graphene sheet from graphene hydrogel.



**Figure S3.** SEM image of hierarchical GS with paralleled graphene films.



**Figure S4.** Pore size distribution of GS (red) and GF (black).

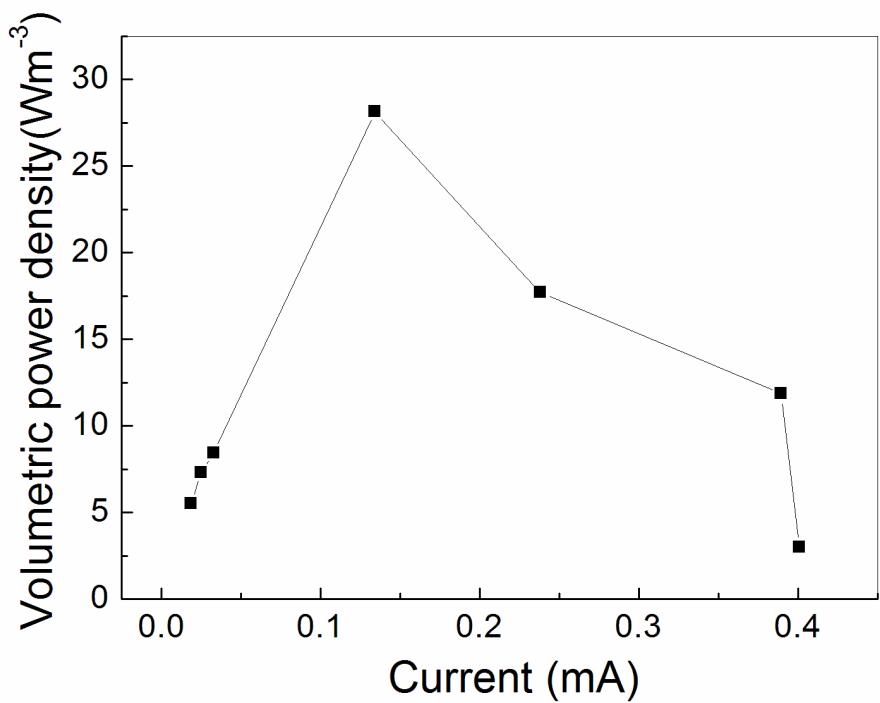
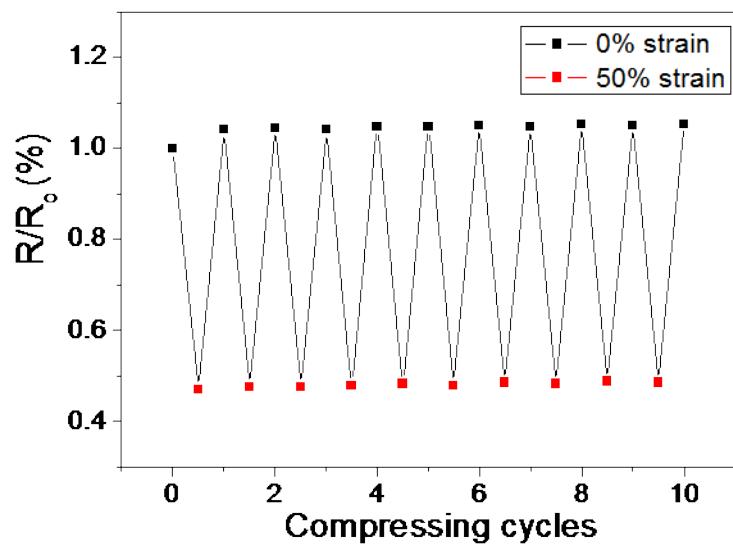
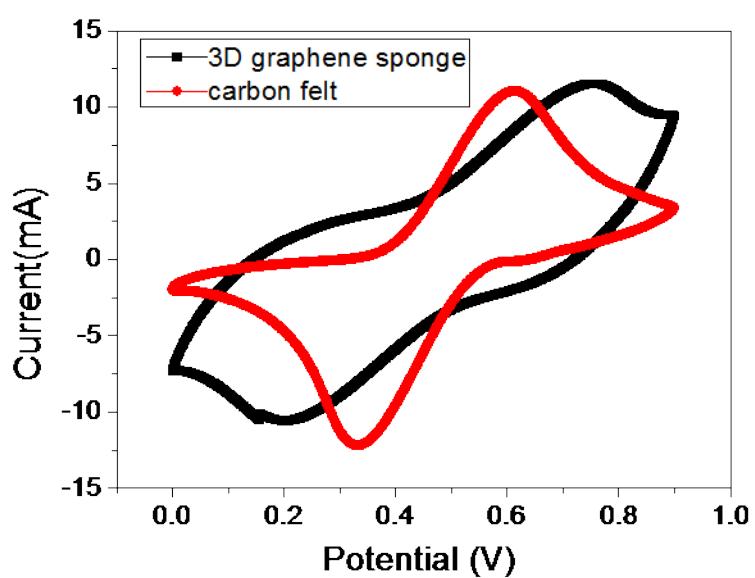


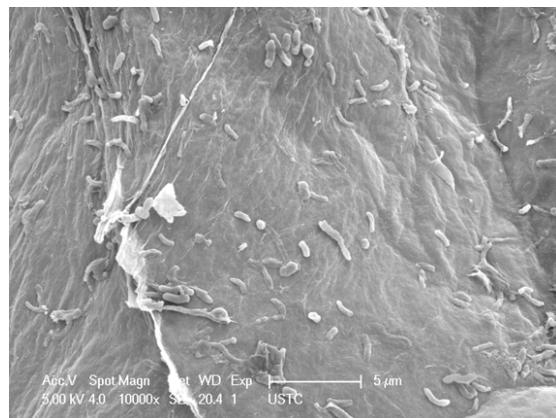
Figure S5. Effect of current on the power density



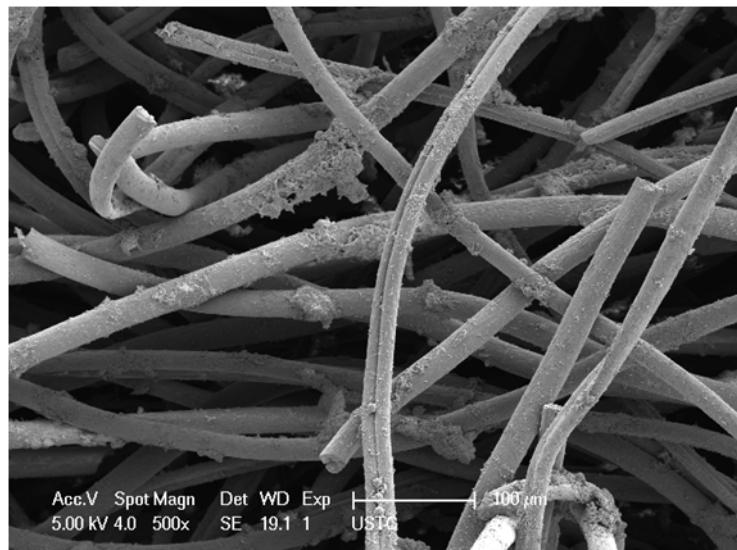
**Figure S6.** Electrical resistance change when GS was repeatedly compressed up to 50% of strain for 10 cycles.



**Figure S7.** CV analysis of GS electrode and carbon felt electrode using a ferrocyanide solution, indicating similar electroactive surface areas of GS and CF.



**Figure S8.** SEM image of microbes deposited on graphene films, more close to the inner of GS.



**Figure S9.** SEM image of the colonized carbon fibers inside carbon felt.

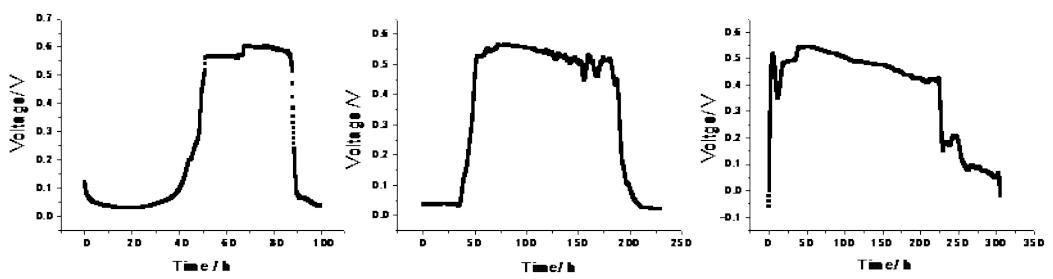


Figure S10. repeat of the experiments