Electronic Supplementary Material (ESI) for Nanoscale.

Supporting Information

Controlled Porous Structures of Graphene Aerogels and Their Effect on Supercapacitor Performance

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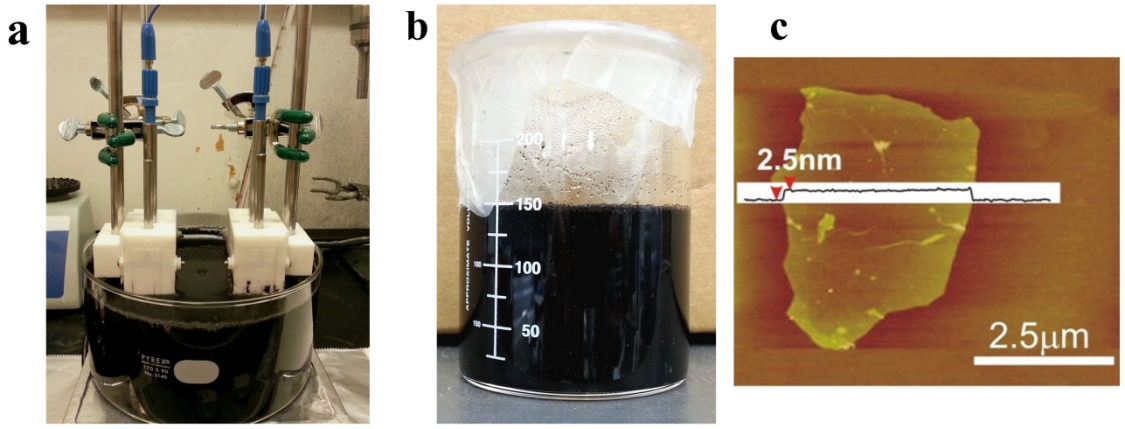

Fig. S1 (a) Photograph of the experiment setup for the electrochemical exfoliation. Natural graphite flake is employed as two electrodes. (b) Uniformly dispersed graphene suspension. (c) AFM image of one exfoliated graphene sheet made with 30 wt% KOH in H_2SO_4 electrolyte.

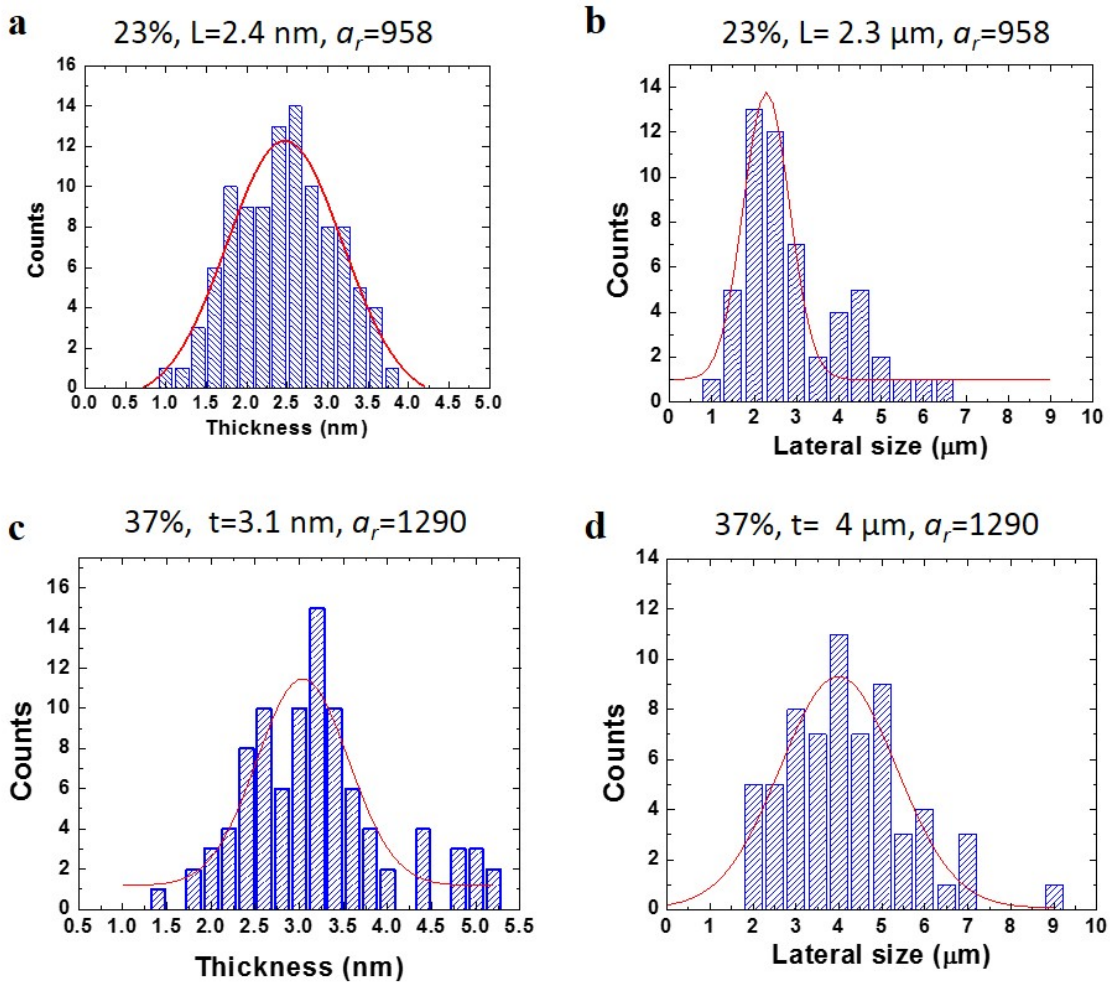

Fig. S2 Histograms of the exfoliated graphene sheet size and thickness at 23 and 37 wt% of KOH in H_2SO_4 solution. (a) and (b) the exfoliated graphene sheet size and thickness at 23 wt% of KOH. (c) and (d) the graphene sheet size and thickness at 37 wt% of KOH.

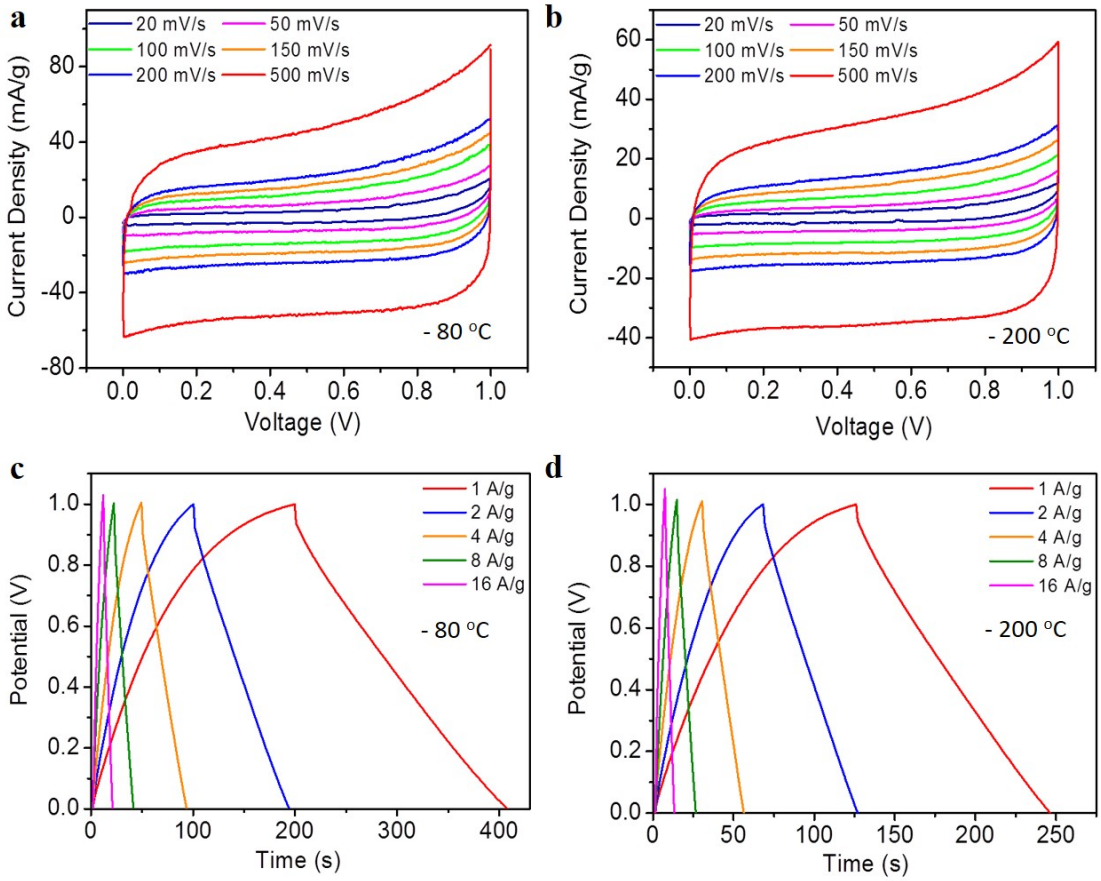

Fig. S3 The graphene aerogel supercapacitors fabricated at freezing temperature of -80 and -200 °C. (a) and (b) the CV curve of graphene aerogel supercapacitors fabricated at freezing temperature of -80 and -200°C, respectively. (c) and (d) galvanostatic charge/discharge curves of the graphene aerogels (freezing temperature of -80 and -200 °C) supercapacitors as function of current densities.