

Supplementary Information

Hydrothermal Self-Assembly of Graphene Foams with Controllable Pore Size

Wei Deng,^a Qile Fang,^a Xufeng Zhou,^{*a} Hailiang Cao^a and Zhaoping Liu^{*a}

^aNingbo Institute of Materials Technology and Engineering (NIMTE), Chinese Academy of Sciences (CAS), Ningbo 315201, P. R. China. E-mail: zhouxf@nimte.ac.cn (X. Zhou), liuzp@nimte.ac.cn (Z. Liu).

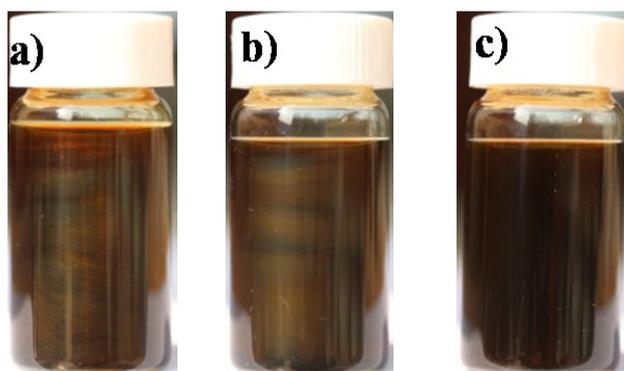


Figure S1. Optical photographs of aqueous dispersions of L-GOs (a), M-GOs(b) and S-GOs (c).



Figure S2. Polarized-light optical microscopy (POM) images of aqueous dispersions of L-GOs (a), M-GOs (b) and S-GOs (c).

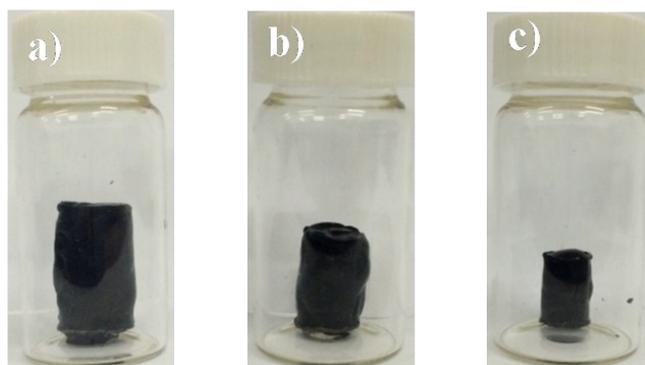


Figure S3. Optical photographs of L-GF (a), M-GF(b) and S-GF (c) prepared from 4 mg mL⁻¹ GOs suspensions for 12 h.

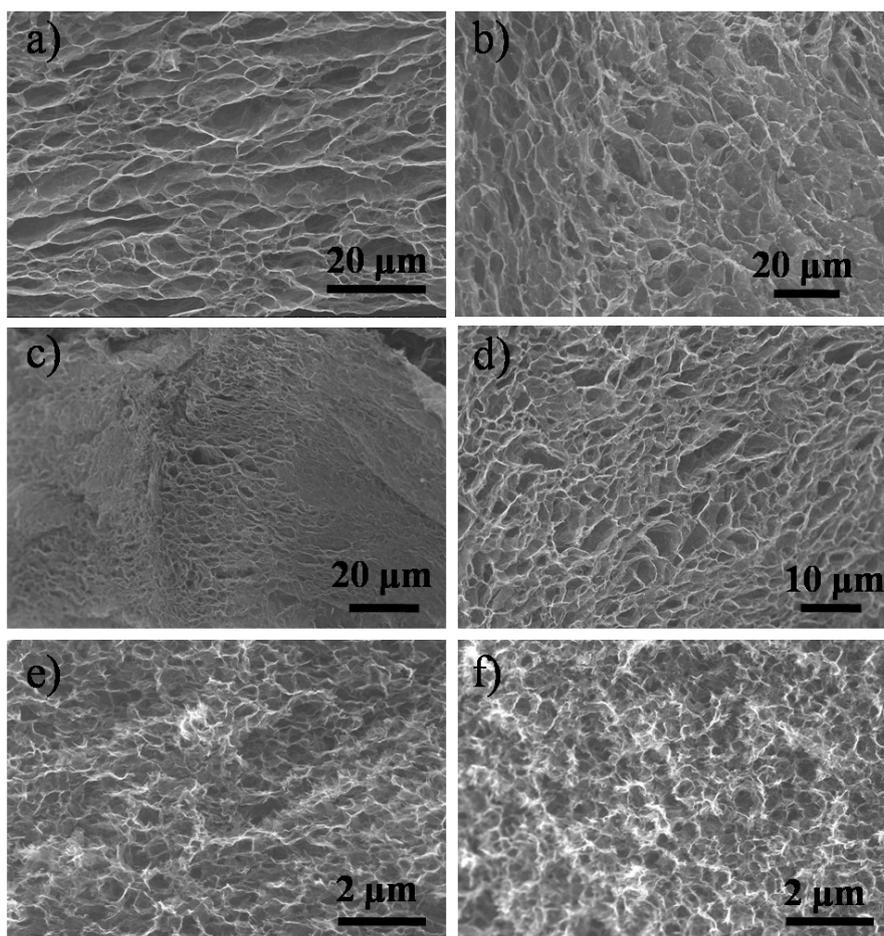


Figure S4. SEM images of interior pores taken along horizontal (a, c, e) and vertical (b, d, f) directions of the as-prepared L-, M- and S-GFs.



Figure S5. Optical photographs of the products prepared from 0.5 mgmL⁻¹ (a), 1.0 mgmL⁻¹ (b) and 2.0 mgmL⁻¹(c) S-GOs suspensions.

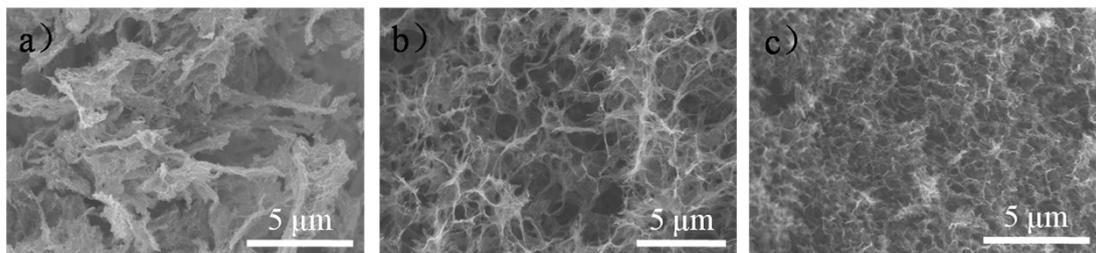


Figure S6. SEM images of the products prepared from 0.5 mg mL^{-1} (a), 1.0 mg mL^{-1} (b) and 2.0 mg mL^{-1} (c) S-GOs suspensions.

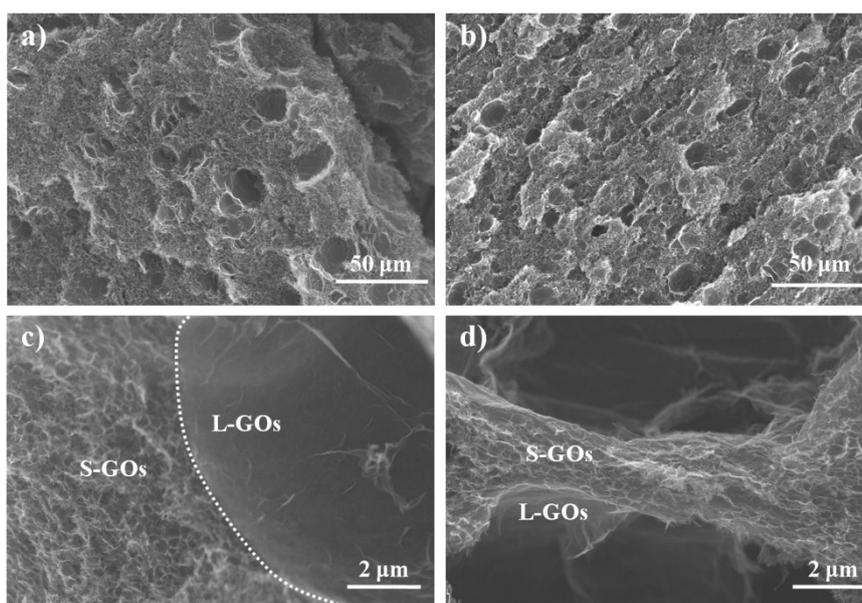


Figure S7. (a) SEM image of graphene foam prepared by a mixture of L-GOs and S-GOs with a mass ratio of L-GOs: S-GOs = 1:5. (b, c and d) SEM images with different magnifications of graphene foam prepared by a mixture of L-GOs and S-GOs with a mass ratio of L-GOs: S-GOs = 1:2.

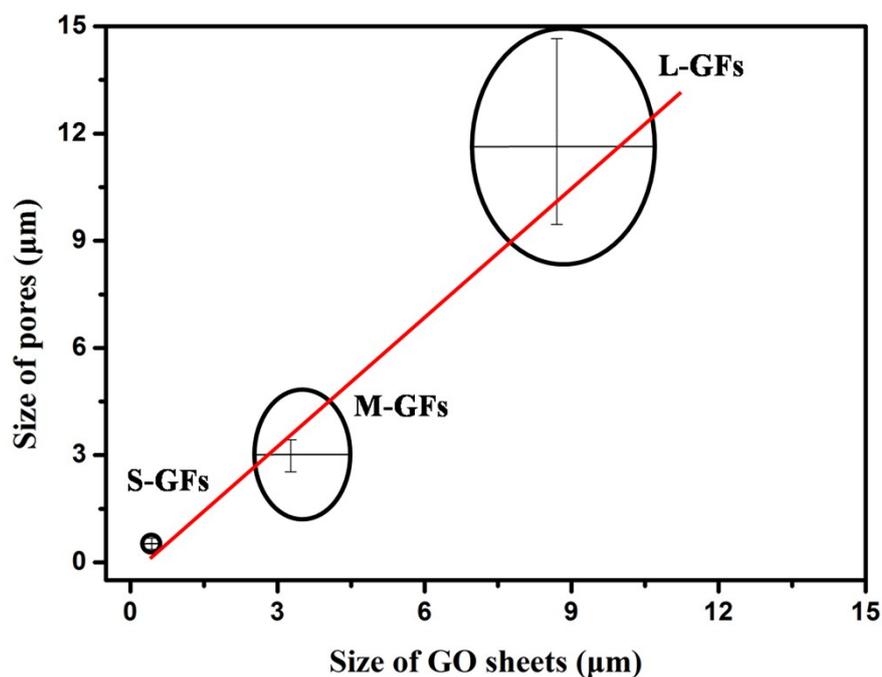


Figure S8. The corresponding relationship between size of GO sheets and pore sizes of GFs.

Table S1. C and O contents and speciation in the (L-, M- and S-) rGO sheets determined by XPS.

Sample	Elemental compositions (wt %)			C1s deconvolution			
	C/O	C	O	C-C	C-O	C=O	C(O)OH
L-rGO	4.87	82.95	17.05	64.9	13.4	9.5	12.2
M-rGO	4.69	82.42	17.58	64.3	12.7	9.8	13.2
S-rGO	4.84	82.87	17.13	64.6	13.2	10.2	12.0