

Supporting Information

Frequency-Tunable Acoustic Absorption in Anisotropic Graphene Aerogels via Morphological Engineering of Internal Barriers

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Supporting Information Table S1

Table S1. C1s XPS Analysis of LGO, MGO and SGO.

	<i>L-GO</i>	<i>M-GO</i>	<i>S-GO</i>
C-C/C=C	57.35%	53.04%	47.66%
C-OH	1.20%	2.75%	2.92%
C-O	34.15%	35.82%	36.72%
C=O	5.12%	5.45%	7.29%
O-C=O	2.18%	2.94%	5.41%

Supporting Information Fig. S1

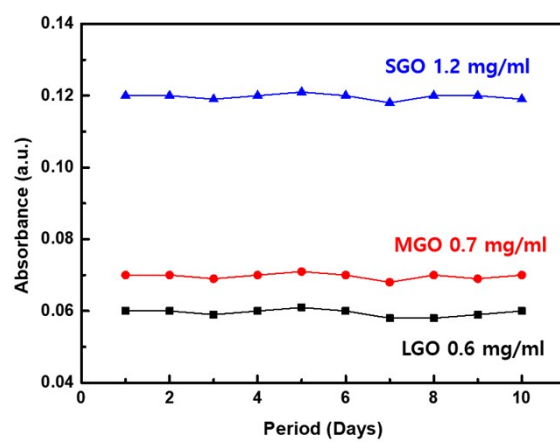


Fig. S1. Time-dependent UV-Vis analysis of LGO, MGO, and SGO dispersions at fixed concentrations of 0.6 mg/mL, 0.7 mg/mL, and 0.12 mg/mL, respectively.

Supporting Information Fig. S2

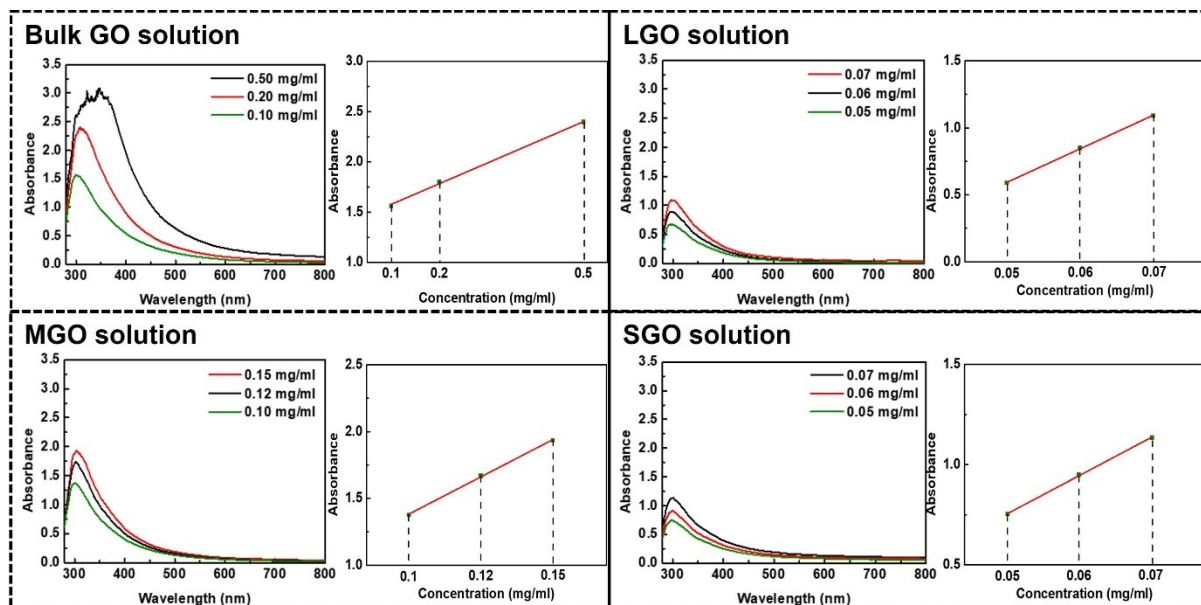


Fig. S2. UV-Vis Analysis of LGO, MGO and SGO as a function of concentration in water showing Beer Lambert behavior.

Supporting Information Fig. S3

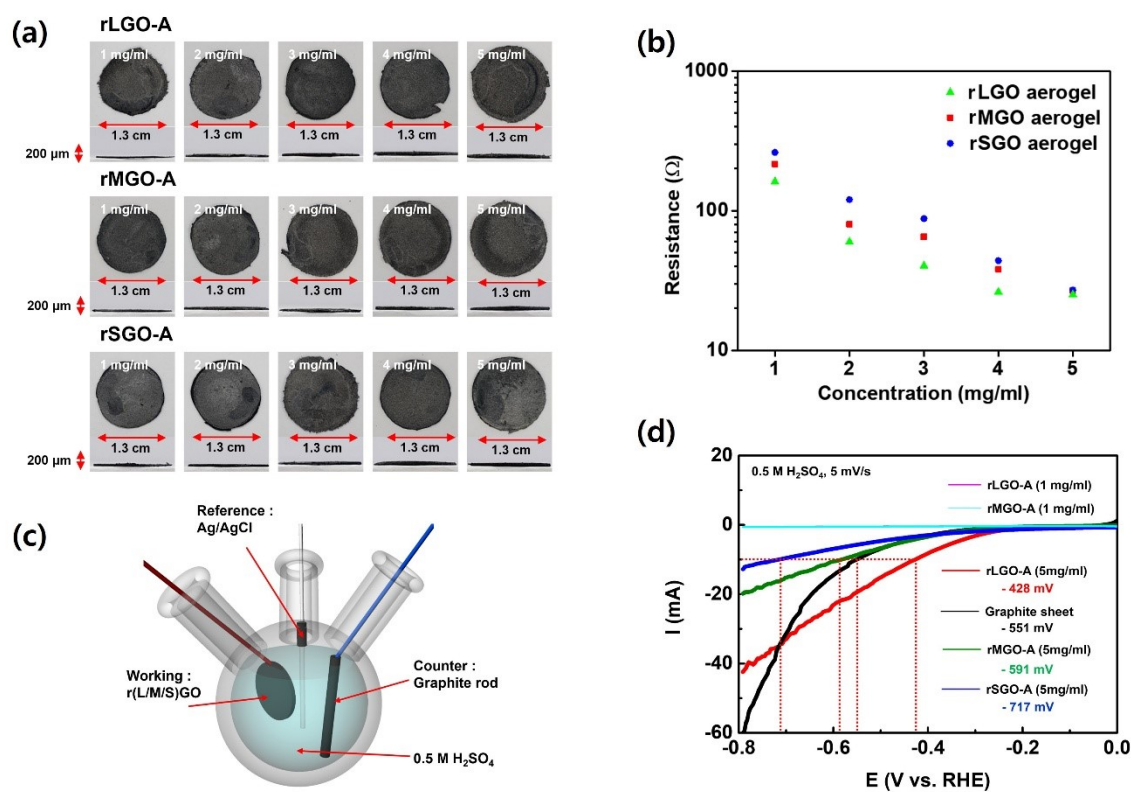


Fig. S3. Electrochemical Performance and Structural Properties of Reduced Graphene Oxide Aerogels (rGO-A). (a) The digital images of rLGO-A, rMGO-A, and rSGO-A via concentration (b) Characterization of electrical resistance of rLGO-A, rMGO-A, and rSGO-A via concentration. (c) Schematic illustration of the three-electrode system for HER (Hydrogen Evolution Reaction) measurements. (d) Hydrogen Evolution Reaction (HER) characteristics for rLGO-A, rMGO-A, and rSGO-A electrodes.

Supporting Information Fig. S4



Fig. S4. Digital images of SGO-A, MGO-A, and LGO-A before and after reduction.

Supporting Information Fig. S5

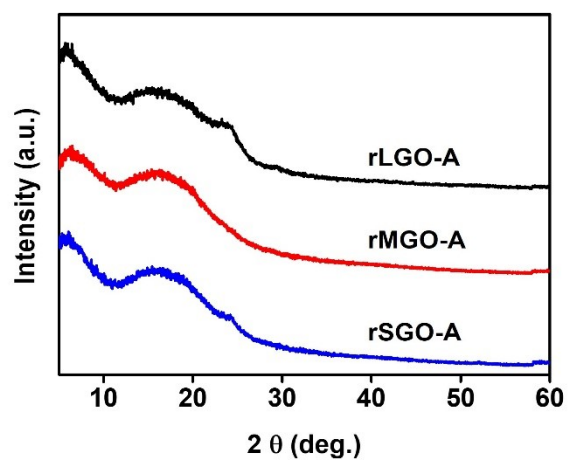


Fig. S5. X-ray diffraction of rLGO-A, rMGO-A and rSGO-A.

Supporting Information Fig. S6

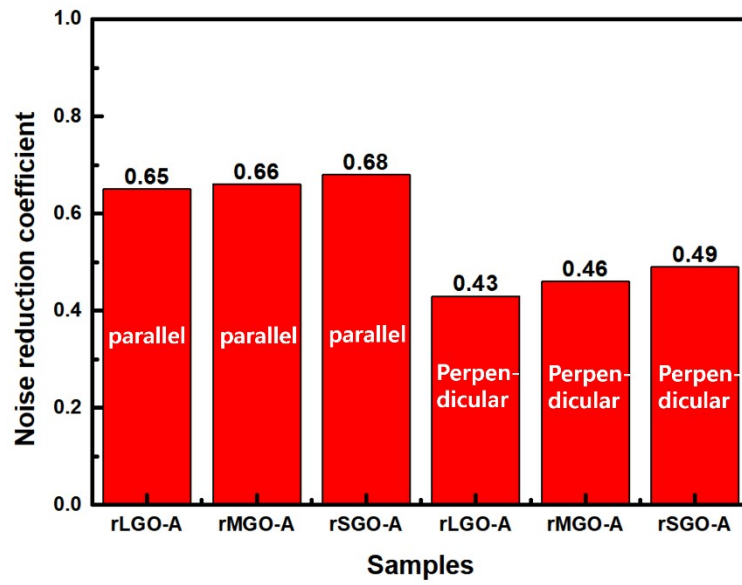


Fig. S6. Comparison of NRC(Noise reduction coefficient) values of the Parallel rGO-A and the Perpendicular rGO-A