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Supporting Information

Expanded Graphene Oxide Fibers with High Strength and Increased Elongation

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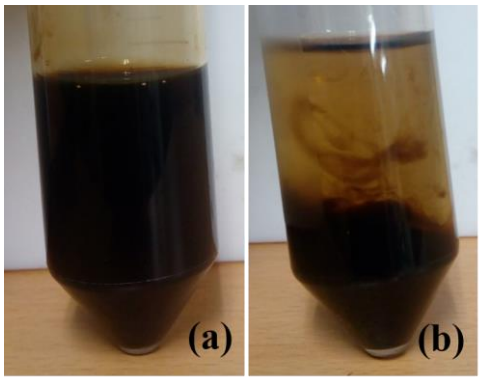

Figure S1. Dispersion solution of (a) EGO and (b) GO in DI water after four days.

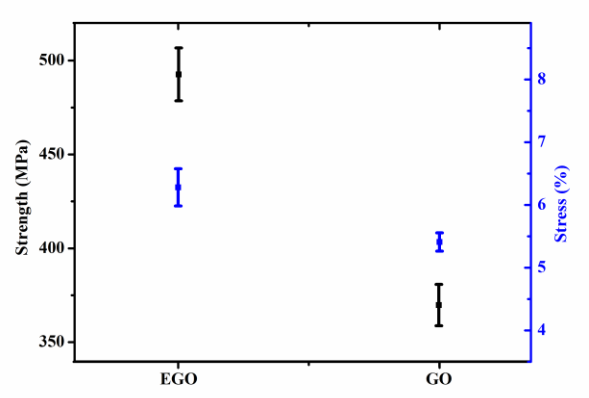

Figure S2. Average mechanical properties of fibers.

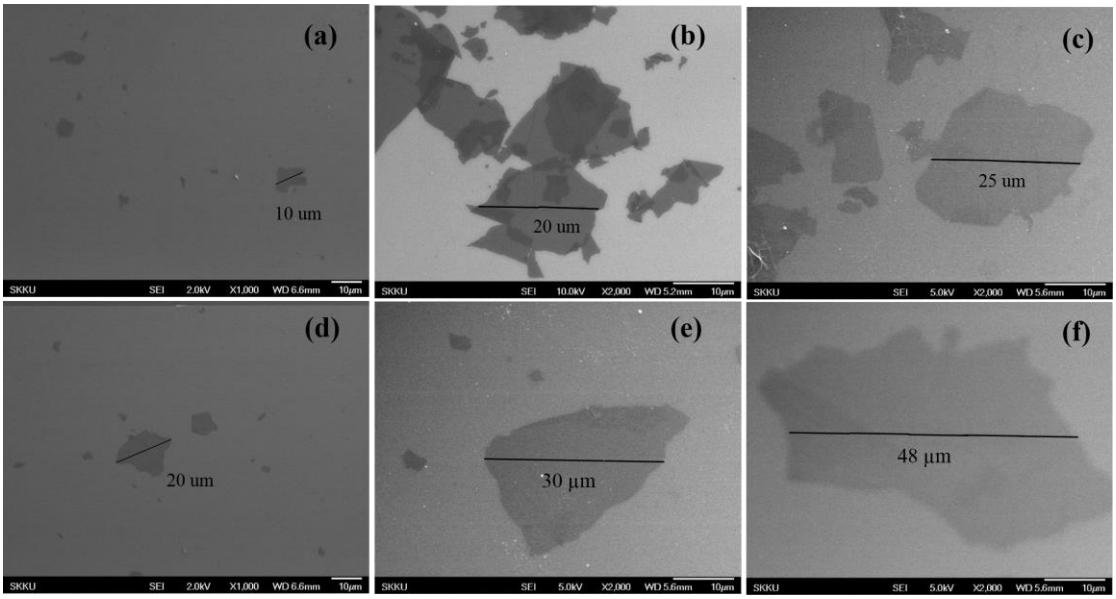

Figure S3. SEM images of (a-c) GO and (d-f) EGO sheets.

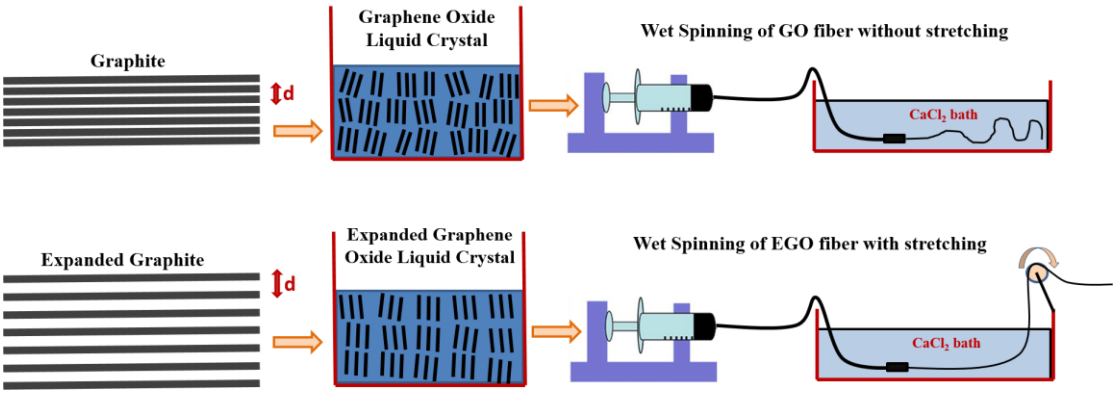

Figure S4. Schematic diagrams of G and EG, their crystalline solutions and wet spinning of fibers with and without stretching in coagulation bath.

Table S1. Summary of different methods to improve the mechanical properties of GO fibers.

No	Methods	Mechanical Strength of GO fibers [MPa]	Elongation break [%]	Reference
1	Chemically expanded graphite	492	6.1	This Work
2	Using phenolic carbon	220	13.4	5
2	Using giant graphene oxide sheets	364.4	6.8	12
3	By introducing artificial nacre composites	652	4	14
4	Intercalating small-sized graphene sheets into fibers consisting of large-sized graphene	300	-	15
5	Trivalent metal ion binders	486.4	0.62	16

Fiber-stretching.mp4

Video 1. Stretching while spinning fiber in the coagulation bath.

Fiber drying.mp4

Video 2. Stretching of fiber while drying.