



Technical Data Sheet

ACS Material Graphite Oxide

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Contact Information:

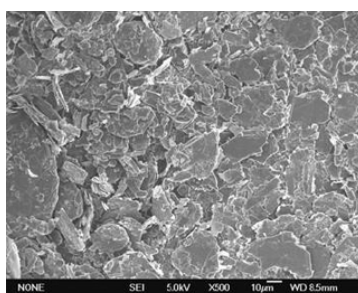
Manufacturer: ACS Material, LLC.
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Revision: 030121

1. Preparation Method

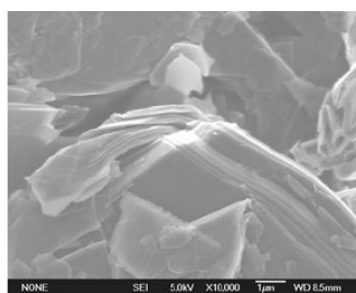
Modified Hummer's Method

2. Characterizations

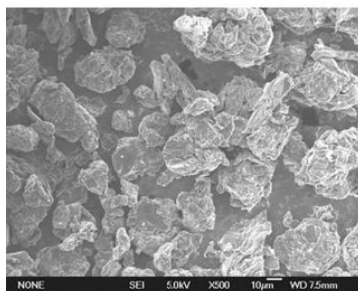
Grade:	Reagent Grade	Industrial Grade
Appearance:	Brownish Yellow Powder	Brownish Yellow Powder
Purity:	~ 99%	N/A
Lateral size:	0.5-5 μm	0.2-10 μm
Thickness:	1-3 nm	~2 nm
pH (1mg/mL):	N/A	~3.57
Singer layer Ratio:	~ 99%	>95%
Carbon Content:	N/A	~42.7 wt.%
Oxygen Content:	\leq 46.0 wt.%	~51.6 wt.%
Sulfur Content:	N/A	<2.1 wt.%
Ash Content	N/A	<1.0 wt.%
Tap Density:	N/A	~0.50 g/mL
Grain Size (mesh):	N/A	<80



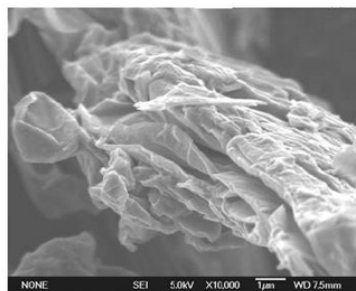
(a)



(b)

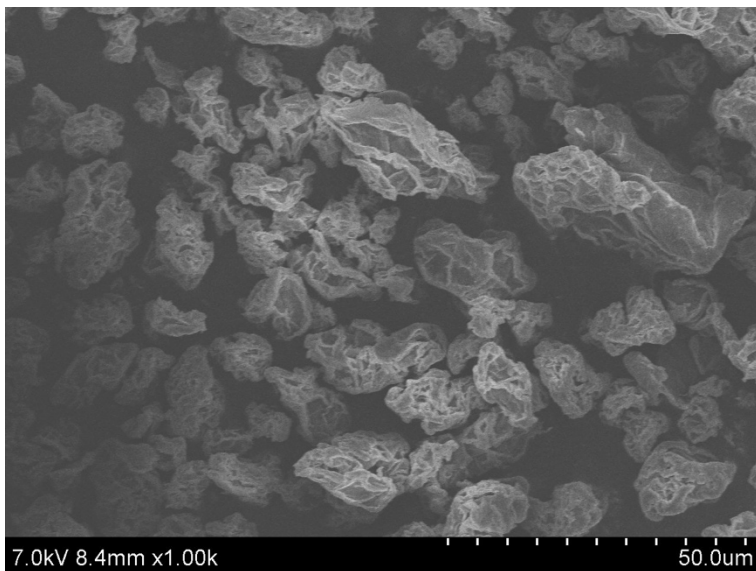


(c)

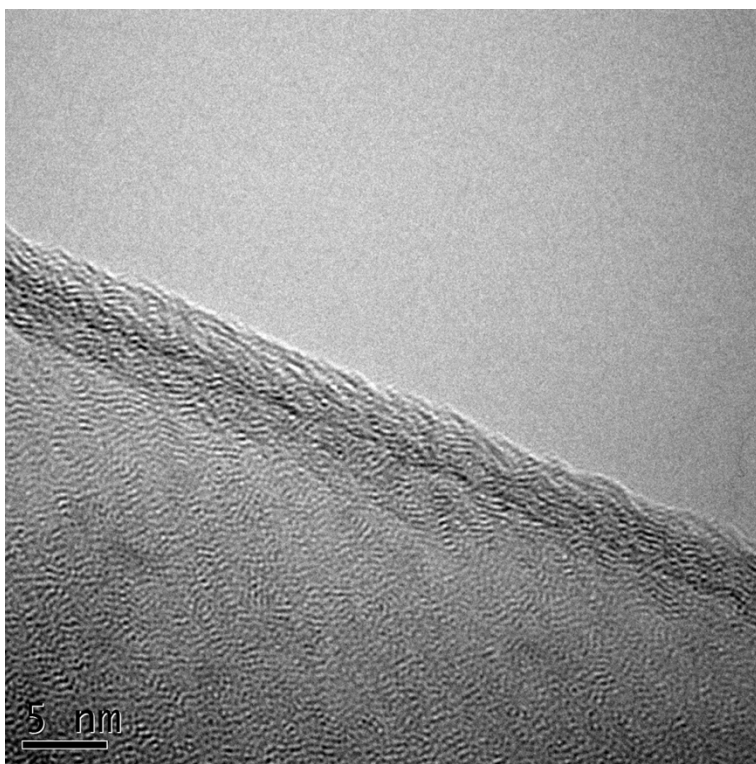


(d)

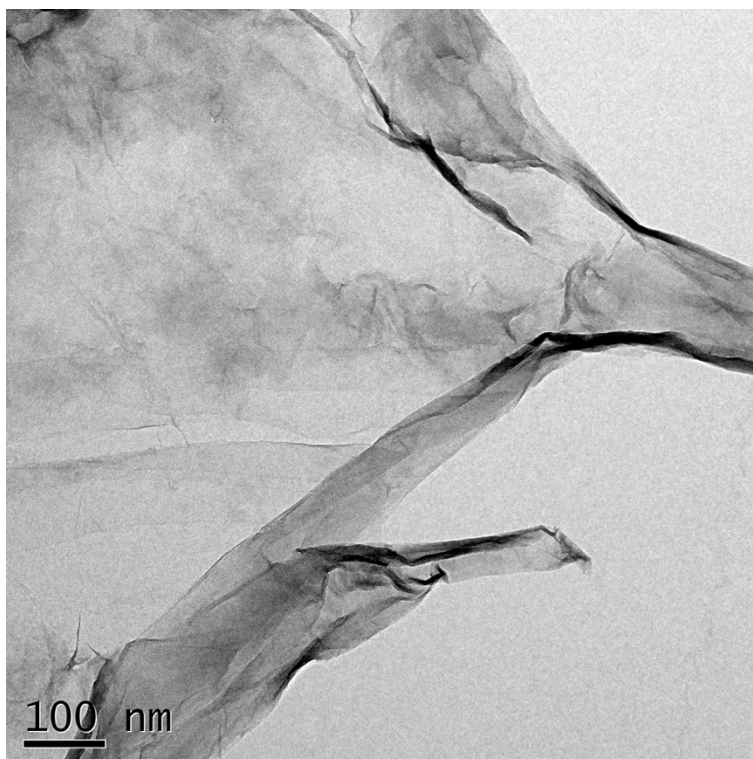
Typical SEM of ACS Material Graphite (a, b) and Graphite Oxide (Reagent Grade, c, d)



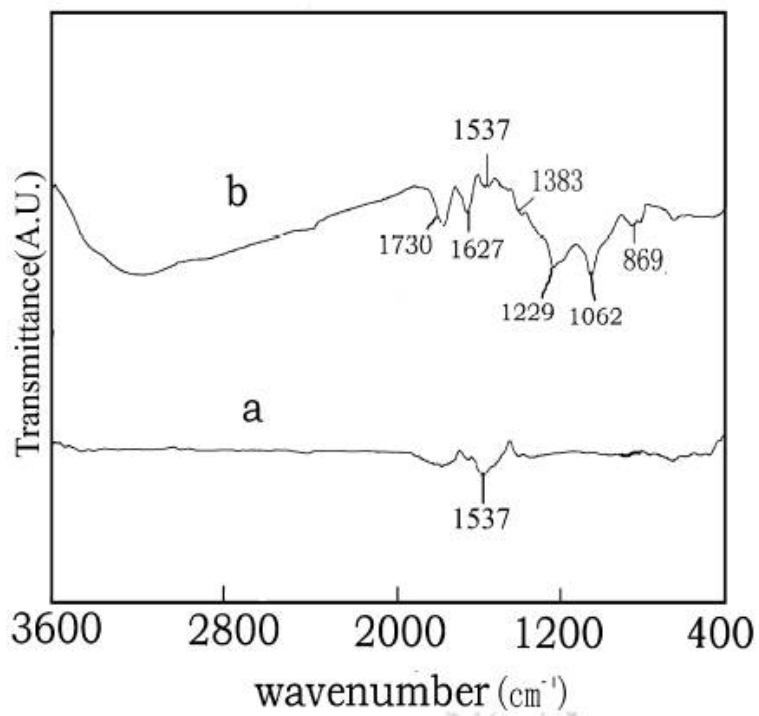
Typical SEM of ACS Material Graphite Oxide (Industrial Grade)



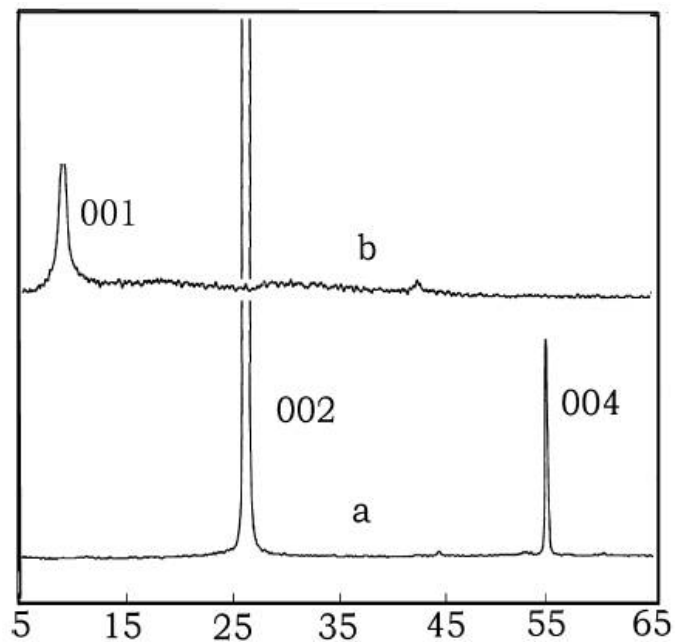
Typical TEM (1) of ACS Material Graphite Oxide (Industrial Grade)



Typical TEM (2) of ACS Material Graphite Oxide (Industrial Grade)



FT-IR of ACS Material Graphite (a) and Graphite Oxide (Reagent Grade, b)



XRD Analysis of ACS Material Graphite (a) and Graphite Oxide (Reagent Grade, b)

3. Application Fields

- 1) Preparation of graphene
- 2) Solar energy
- 3) Graphene semiconductor chips
- 4) Conductive graphene film
- 5) Graphene computer memory
- 6) Biomaterials
- 7) Transparent conductive coatings

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