

# Specification Sheet



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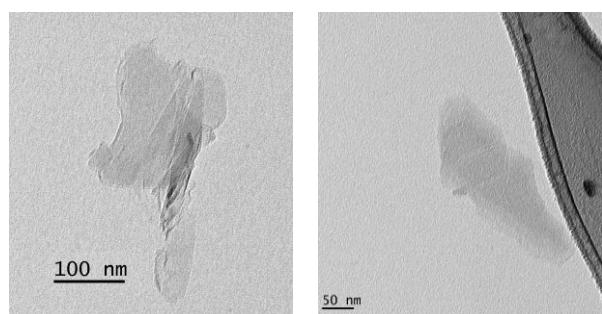
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## Reduced Graphene Oxide (RGO)

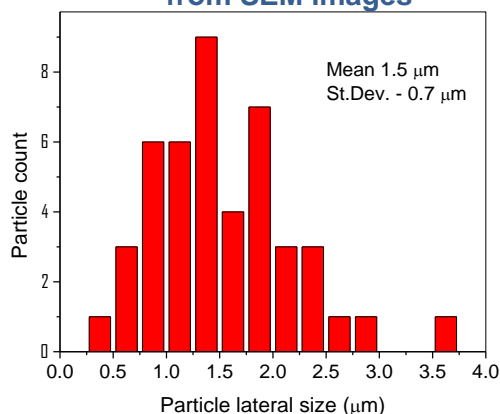
**Product Description:** Reduced graphene oxide prepared by borohydride reduction of graphene oxide (Hummer's method)

**Lateral Dimension:** 0.1 – 3.0  $\mu\text{m}$  Mean – 1.5  $\mu\text{m}$   
**Price per Gram:** \$200  
**Minimum Order:** 0.5 gram

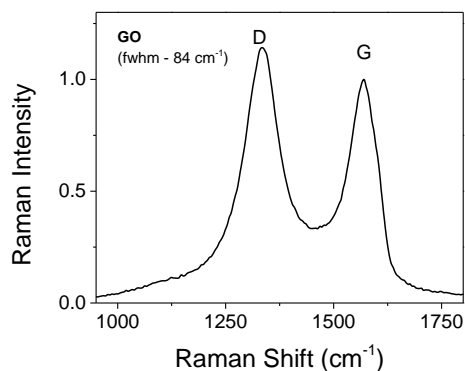
### Transmission Electron Microscopy (SEM)



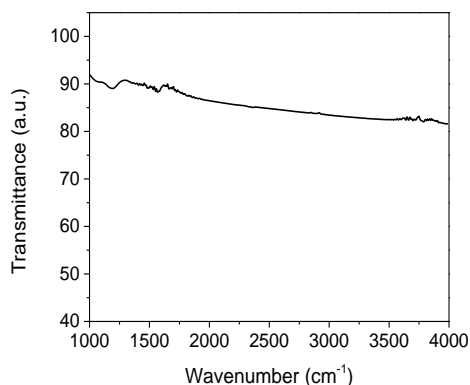
### Distributions of Lateral Size of RGO Sheets from SEM images



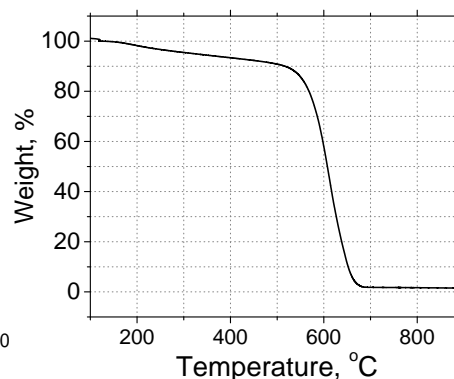
### Raman Spectrum ( $\lambda_{\text{ex}} = 532 \text{ nm}$ )



### Mid-IR Spectrum



### TGA in air at 5°C/min



Note: The images shown above are from a typical sample of RGO material. They should be used as a basis and not as an absolute value. There may be slight deviations from batch to batch, but all parameters will fall within the specifications listed above.

**Areas of applications: Biomedical, Fuel Cell, Supercapacitor and Battery**

### Selected References:

1. Ha et al., Free standing reduced graphene oxide film cathodes for lithium ion batteries. *ACS Appl. Mater. Interfaces* **2013**, 5, 12295.
2. Chung et al., Biomedical applications of graphene and graphene oxide. *Acc. Chem. Res.* **2013**, 46, 2211.
3. Jha, N.; Ramesh, P.; Bekyarova, E.; Itkis, M. E.; Haddon, R. C., High Energy Density Supercapacitor Based on a Hybrid Carbon Nanotube–Reduced Graphite Oxide Architecture, *Adv. Energy Mater.* **2012**, 2, 438.
4. Li et al., Catalytic performance of Pt particles on reduced graphene oxide for methanol electro-oxidation. *Carbon* **2010**, 48, 1124-1130.