

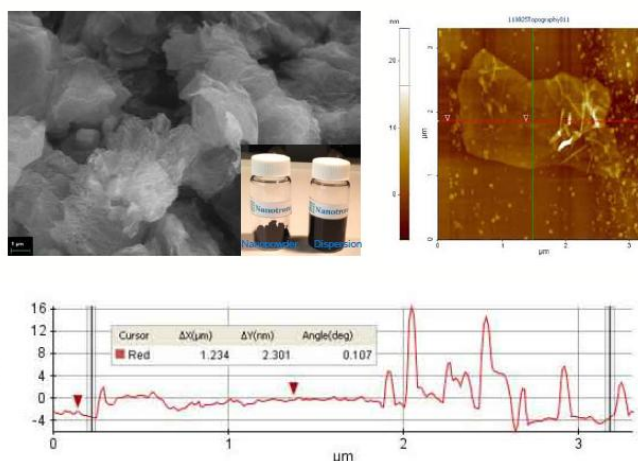
## Graphene Nano Sheets

### Overview

The functionalized graphene sheets (FGS) produced by Nanotrons Corporation have high BET surface areas of over 820 m<sup>2</sup>/g, among the highest on the market. The functional groups (COH, CO, COOH ) allow good dispersion of the graphene sheets in most of solvents through simple sonication. Nanotrons high performance FGS have many great commercial, military, and aerospace applications.

### Advantages

- High surface areas
- High aspect ratio
- Ease of dispersion
- High purity
- Proven performance enhancement



### Technical Data

Thickness	Typically 1-2 nm
Dimension	Typically 1-100 microns
Functional Group	COH, CO, COOH
Format	Nanopowder or liquid dispersion
Dispersing Liquids	IPA, Ethanol, or other organic Solvents
Typical Concentration	1 wt%, 2 wt%, 5 wt% and higher

### Case Study: FGS-Epoxy Nanocomposites

The FGS nano-fillers can improve the resin strength and fracture toughness by 80 to 100% and 300 to 700% at rom and -130°C , respectively, increase the Tg of the epoxy resin about 8°C at low loading of 0.4 w% FGS, and reduce the CTE at both below and above Tg about 25% at loading of 1,6 wt% FGS. Please contact us to discuss your applications and acquire further information.

## Applications

<b>Protective Structural Materials (as Nanofillers and Nanocomposites)</b> Fuel (Cryogenic) Tanks EM Shielding Blast mitigation Ballistic/fragment protection Engine and turbine components	<b>Transparent Conductive Film</b> Organic Photovoltaic cells Organic light emitting diodes Sensors & Catalysts Liquid Crystal Displays Touchscreens Conductive films
<b>Energy Storage and Electric Devices</b> Supercapacitors Li-ion batteries Integrated circuits Electrochromic devices Field-effect transistors E-papers & Conductive inks	<b>Anti-microbial, Chemical, &amp; Thermal</b> Anti-bacterial paper Air & water purification Chemical and explosive detecting sensors Thermal management and interfacial materials Microbial detection and diagnosis devices

## Ordering Information

GRPN-	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	g	100 mg	10 mg	mg
	Status	Solvent	Concentration	Solid Weight (≥300mg)			
	P=powder S=suspension	I=IPA E=ethanol W=water	1=1wt% 2=2wt% 5=5wt%				