



Technical Data Sheet

ACS Material Monolayer CVD Graphene on Si/SiO₂ (Graphene Factory)

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Contact Information:

Manufacturer: ACS Material, LLC.
Address: 959 E Walnut St., Suite 100
Pasadena, CA 91106, USA
Phone: (866)-227-0656
Fax: (781)-518-0284
E-Mail: contact@acsmaterial.com
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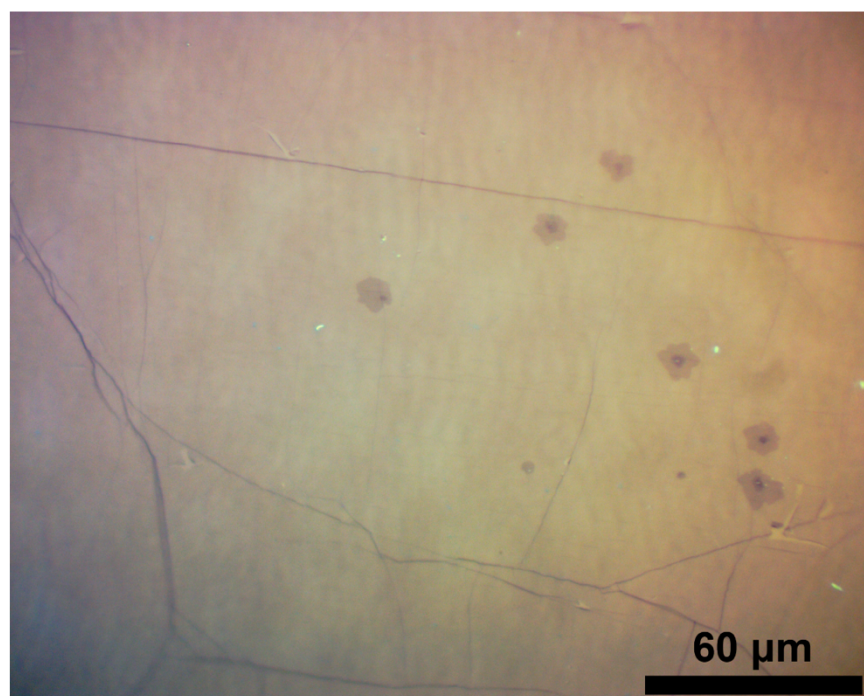
1. Preparation Method

CVD Method and Metal Assisted Exfoliation (MAE Process)

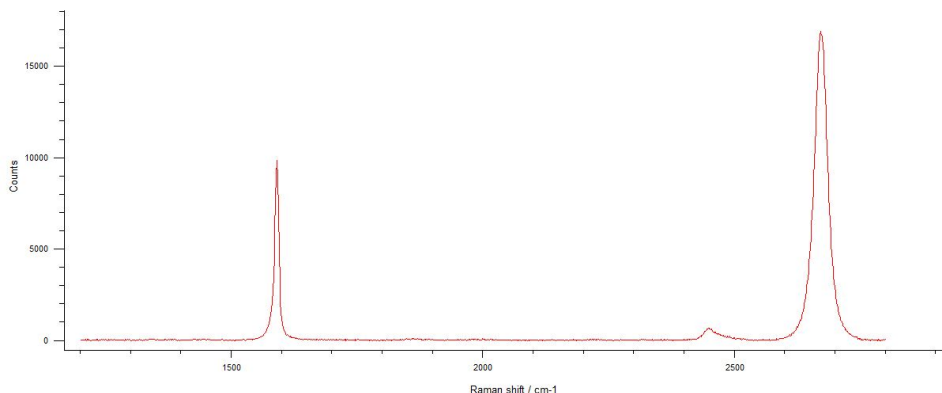
2. Characterizations

Monolayer CVD Graphene (Graphene Factory)	
Transparency	> 97%
Graphene Coverage	100% with sporadic adlayers
FET mobility*	>2700 cm ² / (V·s)
Sheet resistance*	430 ± 50 Ω/sq
Grain size	>40 μm
Raman D/G ratio	Indistinguishable to 0.03

Si/SiO₂ Substrate	
Type/Doing	P/B
Wafer Thickness	700 – 750 μm
Oxide Thickness	300 nm
Resistivity	1-25 (Ω -cm)
Orientation	<1-0-0>
Growth Method	CZ
Metal Impurities	1.00e ¹⁰ – 5.00e ¹⁰ (at/cm ²)Substrate



Typical Optical Image of ACS Material Monolayer CVD Graphene (Graphene Factory)



Typical Raman Spectrum of ACS Material Monolayer CVD Graphene (Graphene Factory)

* The indicated product metrics are generic to our transfer process. For all graphene-on-copper products, the displayed range represents electronic data that we have obtained using our in-house transfer capabilities to transfer graphene to SiO₂. Your own mobility and sheet resistance numbers will depend entirely on the transfer methods that you use, and the resultant quality of your transfers.

3. Application Fields

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

4. User Instruction

- 1) To ensure the maximum shelf life of your graphene sample, it is best stored under vacuum or in inert atmosphere (Argon or Nitrogen) conditions once the vacuum sealed package has been opened.
- 2) The plastic packaging substrate makes a great surface for cutting your large graphene sheet into smaller pieces. The best tools for cutting the foil are a rolling blade or a sharp scalpel blade. Please recycle your substrates when they are no longer needed!

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