
CERTIFICATE OF ANALYSIS

Product name:

Graphene Oxide (GO)



Fig. 1. Graphene Oxide (GO).

Manufacturer : PBR

Product Number : 000-001

Manufacturer Date : 1 November 2025

Emergency Phone : +66(0)86 3636 324

Quality Release Date: 1 November 2025

PROPERTIES

Specifications		Appearance
Size of sheet		≈ 4-6 μm
Layer		3-5
Thickness		0.6-1.8 nm
Particle size		300-500 nm
Reduction process		Hummer's Method
Color		Brown
Smell		odorless
Water Solubility		soluble
Electrical Conductivity		≈ 100 S/m
Specific surface area		100-300 m ² /g
purity		>99%
Component Element	Carbon	<60.0-80.0%
	Oxygen	20.0-35.0%

Production Process : Hummer's Method

Application

- 1) Supercapacitors
- 2) Catalyst
- 3) Biomaterials
- 4) Tensile strength and Elasticity
- 5) Membranes and coating

CHARACTERIZATION

X-ray diffraction (XRD)

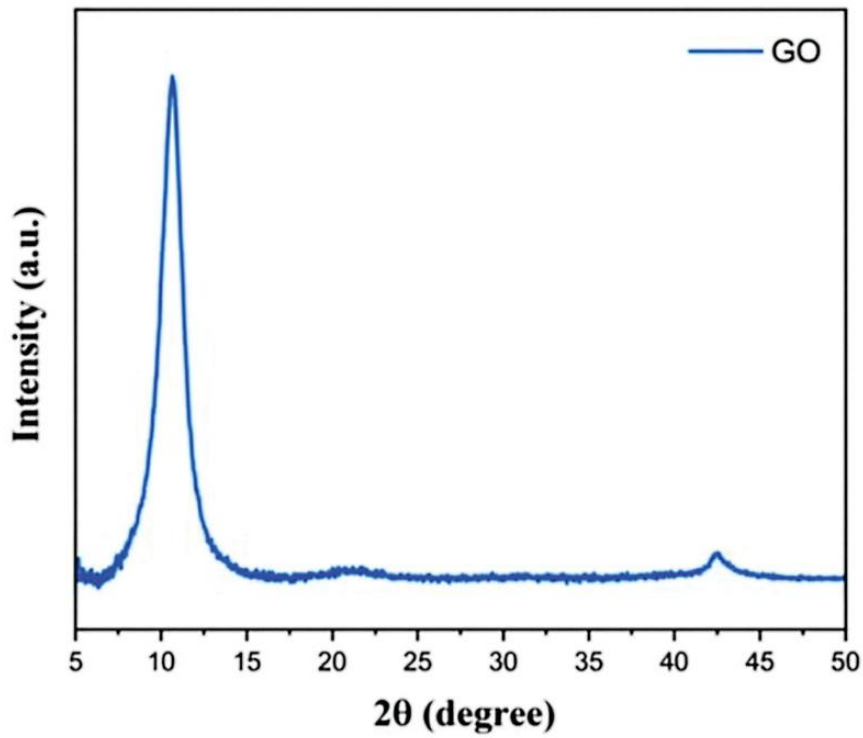


Fig. 2. X-ray diffraction of GO.

RAMAN SPECTROSCOPY (RAMAN)

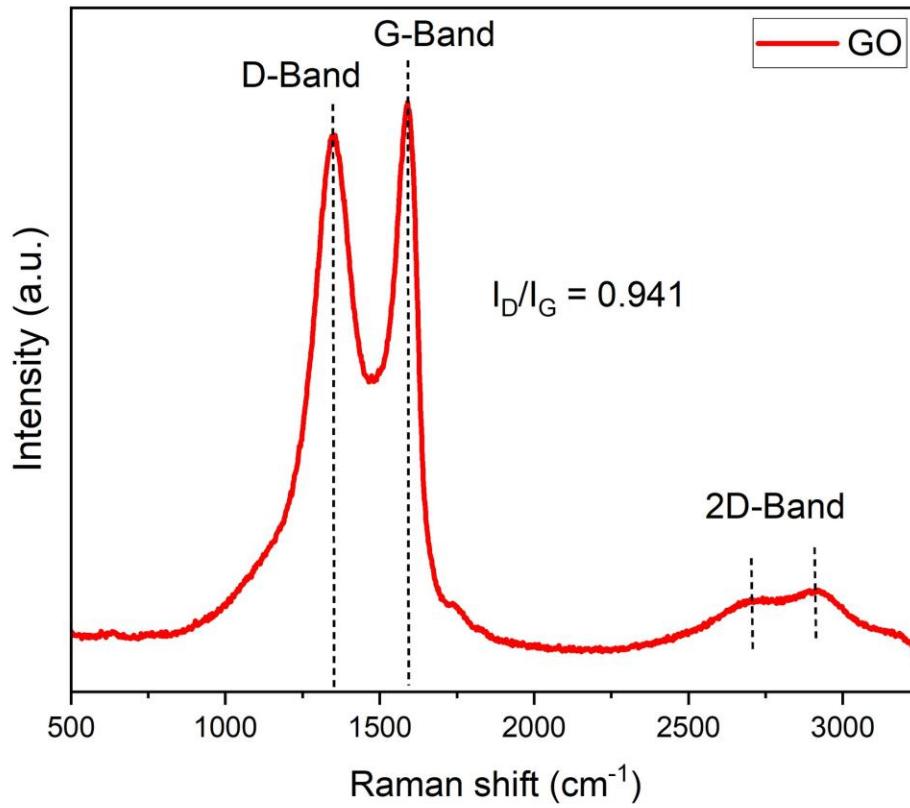


Fig. 3. Raman Microscope of GO.

SCANNING ELECTRON MICROSCOPE (SEM)

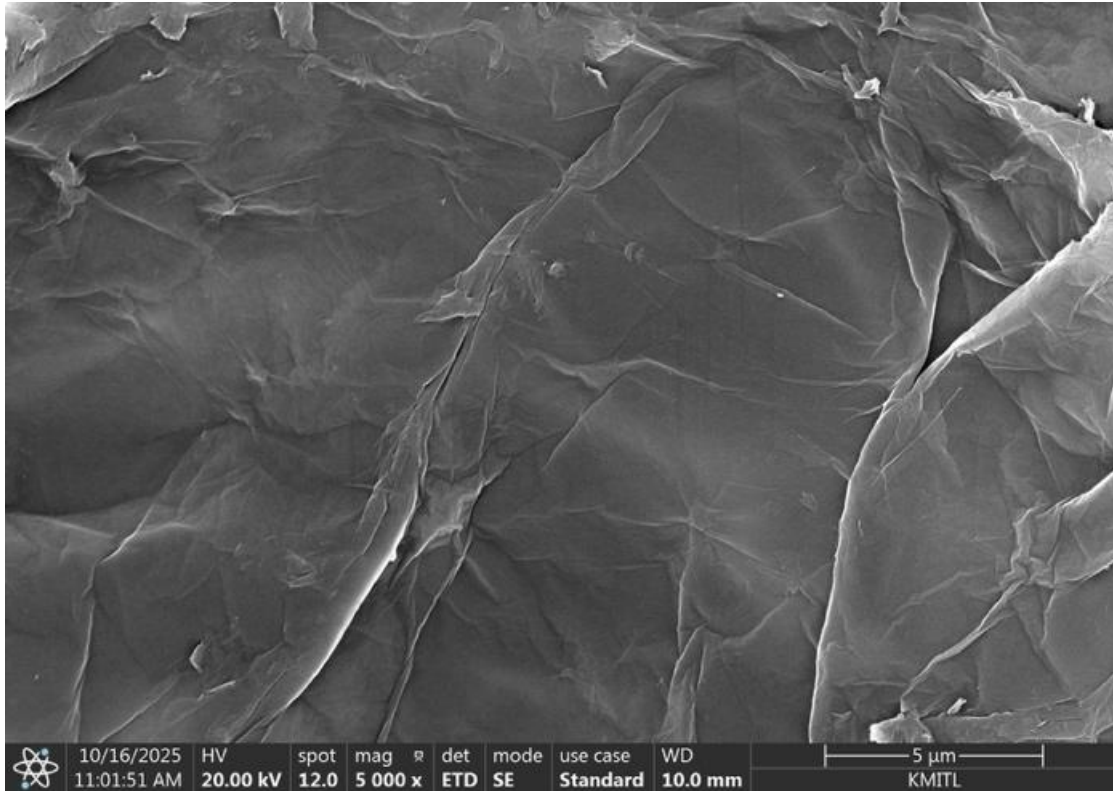


Fig. 4 Scanning electron microscope (SEM) of GO

SPECIFICATION AND CHARACTERIZATIONS



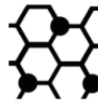
Mechanical Properties:

High Mechanical Properties



Appearance (Color) :

Brown to very Dark Brown



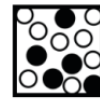
Appearance (Form) :

Powder or Suspension



Electrical conductivity :

Non-conductivity Insulator



Concentration :

1-8 (mg/ml)
(Dispersion in H₂O)