



Product Datasheet

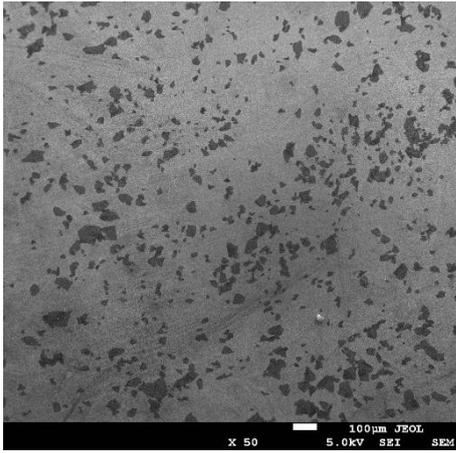
Carbonylated Graphene (C-ny Graphene, aqueous dispersion)

Properties

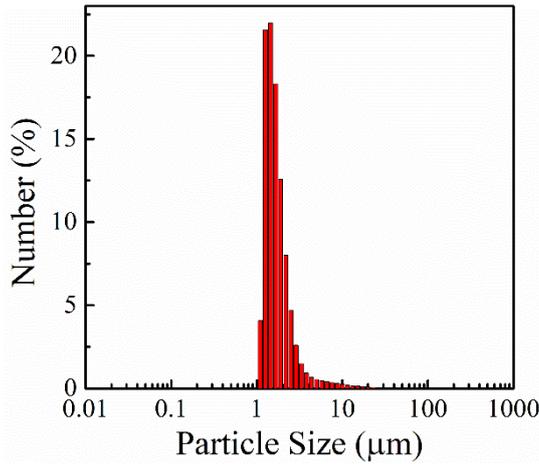
Color:	Black
Dispersant:	Demineralized water
Concentration:	1 wt.%
Dispersion stability:	Medium (up to few hours). It is recommended to 1-2 min sonication before using of dispersion
Material form:	Individual and stacked platelets in the dispersant
Platelets Size: (Laser Diffraction & SEM images)	d90: 2.41-2.68 μm
	d50: 1.47-1.66 μm
	d10: 1.14-1.23 μm
Single layer sheets content: (TEM and XRD Data)	>80% Monolayer platelets
Crystalline quality, single platelet: (TEM)	Perforated structure, arrays of nanoscale holes with size of 10-20 nm
Conductivity:	$\approx 0.025 \text{ S/m}$
Storage conditions: at a temperature of 3-5 °C, without access of the light, with a tightly closed lid	

Chemical Composition

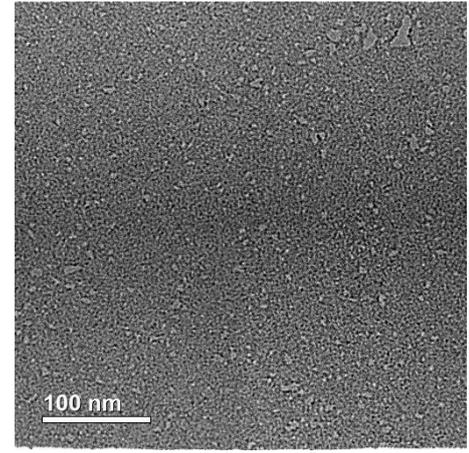
Elemental composition: (Elemental analysis & XPS)	C: _____ 82.5-85.2 at.%
	O: _____ 13.1-16.7 at.%
	Na: _____ 0.7-1.3 at.%
	N, S: _____ <0.5 at.%
	Other Impurities: _____ <0.5 at.%
C/O ratio: (XPS)	4.9-6.1
Functional groups composition: (XPS & FTIR)	C(sp ²): _____ 79.5-83.5 at.%
	C-OH&C-O-C: _____ 5.5-6.7 at.%
	C=O: _____ 7.6-8.9 at.%
	COOH: _____ 2.1-2.5 at.%



SEM Image

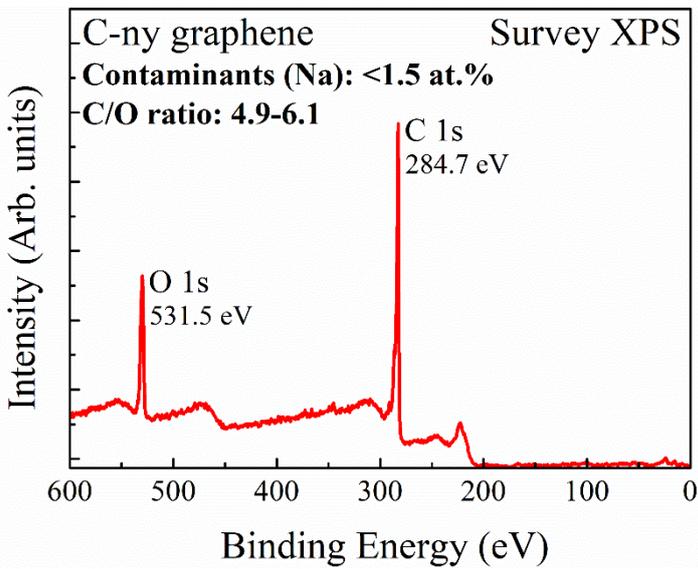


Size Distribution*

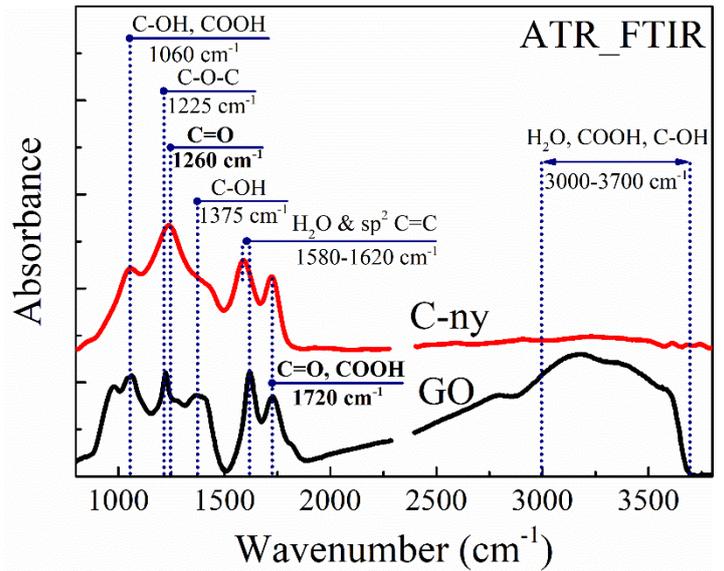


TEM image and SAED

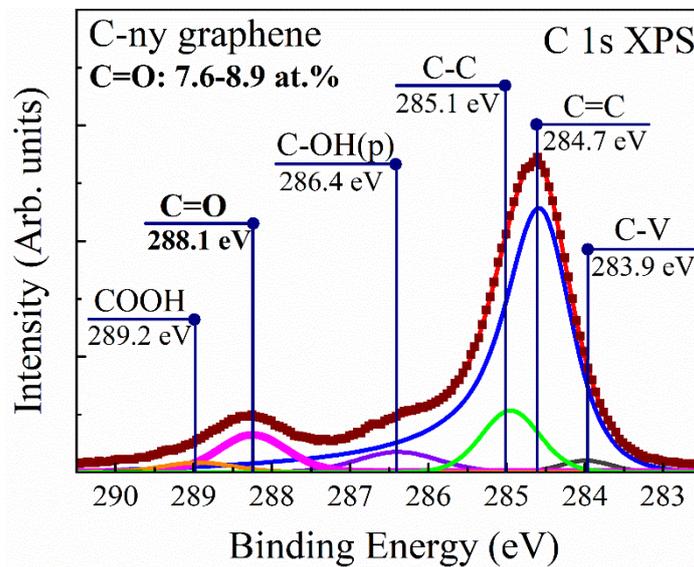
*according to both Laser Diffraction and SEM analysis



Survey XPS



FTIR



C 1s XPS