

Graphene Oxide

Graphene oxide produced through well-optimized low-temperature method of chemical synthesis. Due to a mild chemical way of preparation, individual flakes contain only very few defects. Our GO is available either as water suspension or as dry product. In either case, it is made of high percentage of single-layer graphene oxide flakes.

FEATURES

- High content of monolayer GO flakes
- GO flake size up to 2 μm
- Very low density of structural defects in the hexagonal lattice
- Oxygen content of about 35% in a fully oxidized state
- Less oxidized state available with about 20% of oxygen content
- Might be chemically reduced to an electrically conducting graphene-like material (reduction in liquid or dry phase)

CHARACTERISTICS

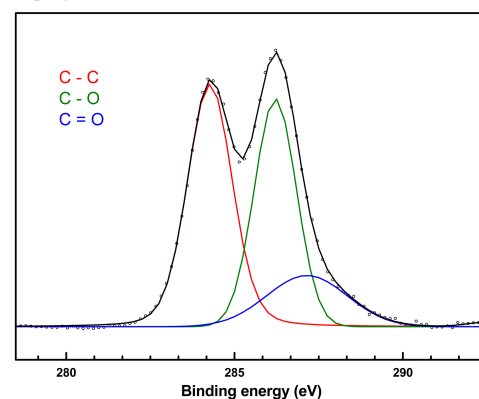
- Graphene sheets functionalized with different oxide groups
- Oxygen content ~ 35 at. %, carbon content ~ 60 at. %, Sulphur content $\sim 4\%$, N below 0.5 at. %, (measured by XPS)
- Easily re-dispersible in water using sonication bath
- Content of monolayer flakes: $> 95\%$ (measured by AFM)
- Average lateral sizes of individual graphene oxide flakes: 0.1 – 2 μm (measured by SEM)

APPLICATIONS

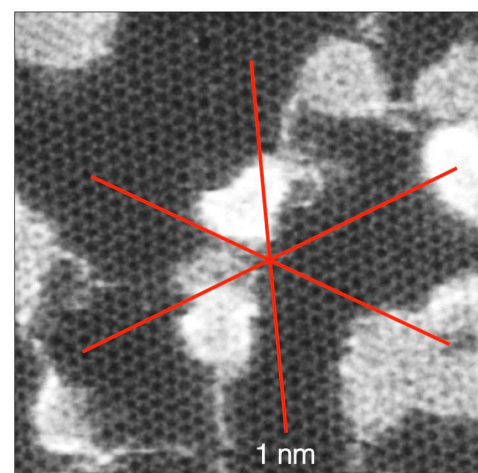
- Battery electrodes
- Supercapacitors
- Flexible Solar cells
- Water purification
- Coatings
- Biosensors
- Polymer additives
- Large screen displays
- Sensors
- Electrostatic shielding



RT Deconvoluted XPS spectrum of graphene oxide



Very good crystallinity for superior electrical, thermal and mechanical properties



Danubia NanoTech

Ilkovičova 3

84104 Bratislava, Slovakia

Phone: +421 915 695617

Email: info@danubiananotech.com

www.danubiananotech.com