

# Graphene Supermarket 二硫化钨纳 米片

中文名称: Graphene Supermarket 二硫化钨纳米片

英文名称: Tungsten Disulfide Nanoplatelets

货 号: ML1160

CAS 号: 12138-09-9

包 装: 5 g

参 数

纯 度: 99wt%

平均粒径: 90nm

保质期: 1 年常温干燥避光

## 性质

Purity: 99.0% 纯度

Average Particle Size: ~90 nm 平均粒径 90nm

Specific Surface Area: ~30 m<sup>2</sup>/g 比表面积

Morphology: nearly spherical 近似球形

Bulk Density: N/A

True density: 7.50 g/cm<sup>3</sup> 堆密度

## 应用

Transparent and Flexible Electronics

Transistors

Composite Materials

Chemical and bio-sensors

## Semiconductor printable inks

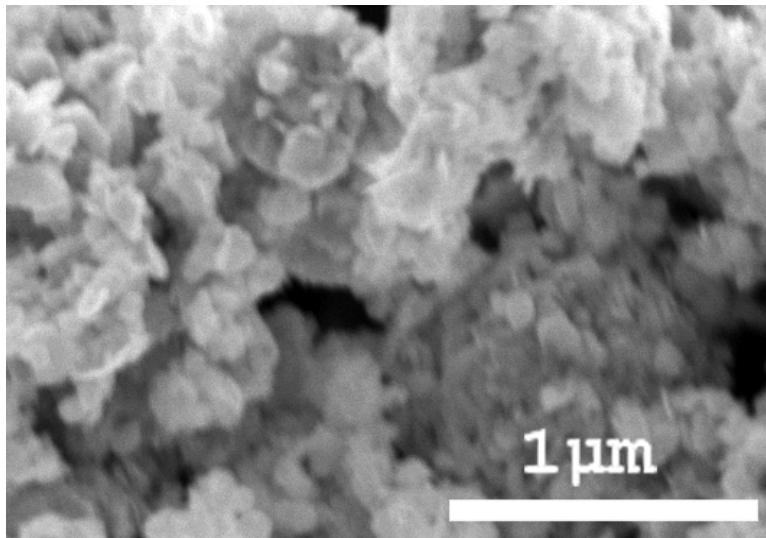
WS2 Ultrafine Powder is ideal for creating WS2 solutions with applications ranging from electronics to energy storage. The powder may be sonicated in a range of liquid solvents, whereas the longer sonication takes place, the smaller the flake size in solution. Further, before sonication the solution will be silvery, and after it will turn a greenish-yellow. The solvents useful during sonication include benzyl benzoate, isopropanol, acetone, methanol, and many others.

The liquid dispersion may then be used to create a thin film on the substrate of your choosing. These thin-films have a range of applications, such as transistors, solar cells, and energy storage devices.

WS2 solution can also be used in composite materials.

The difference between our micropowders and ultrafine powders are their flake sizes. Ultrafine powders have smaller flakes, and create dispersions with smaller particle sizes after sonication than micropowder. Micropowders require more sonication and will result in flakes with larger lateral dimensions. Micropowder is a low-cost alternative to our ultrafine powder.

WS2 Ultrafine Powder SEM image



Electrical Characteristics of Molybdenum Disulfide Flakes Produced by Liquid Exfoliation, Lee et al. Adv. Mater. 2011, 23, pp. 4178-4182

Gelatin-assisted fabrication of water-dispersible graphene and its inorganic analogues, Ge et al. J. Mater. Chem. 2012, 22, pp. 17619-17624

Preparation of High Concentration Dispersions of Exfoliated MoS<sub>2</sub> with Increased Flake Size, O'Neill et al. Chem. Mater. 2012, 24, pp. 2414-2421

Two-Dimensional Nanosheets Produced by Liquid Exfoliation of Layered Materials, Coleman et al. Science, 2011, 331, pp. 568-571