

Graphene Supermarket 二硫化钨微片

中文名称: Graphene Supermarket 二硫化钨微片

英文名称: WS2 Micropowder

货号: ML1159

CAS 号: 12138-09-9

包装: 100g

参数: 纯度 99%

粒径范围: 0.4-1 微米

保质期: 1 年常温干燥避光

WS2 Micropowder

平均粒径范围： 0.4-1 微米

纯 度： > 99%

Properties:

Average Particle Size: 0.4-1 microns

Purity: 99%

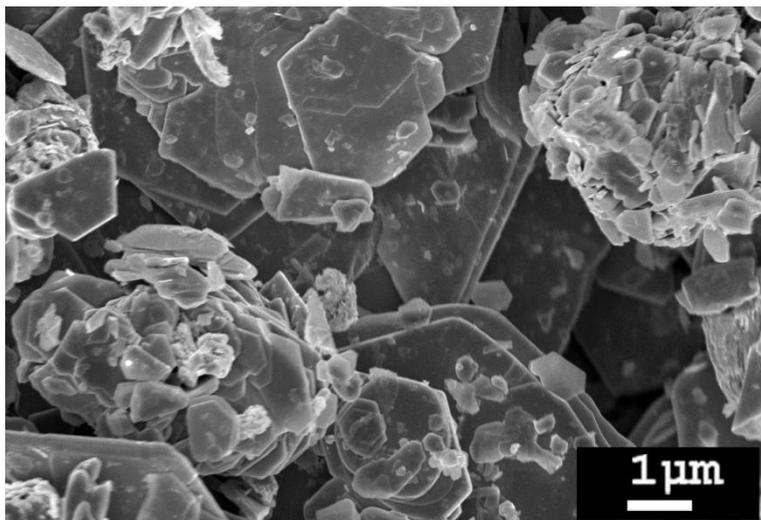
WS2 Micropowder is useful for creating WS2 solutions with applications ranging from electronics to energy storage. The powder may be sonicated in a range of liquid solvents, whereas the longer sonication takes place, the smaller the flake size in solution. Further, before sonication the solution will 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 Micropowder SEM image



Applications:

Transparent and Flexible Electronics

Transistors

Composite Materials

Chemical and bio-sensors

Semiconductor printable inks

Academic References:

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 MoS₂ 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