

7. 金属和非金属的表面导电涂层处理。由于纳米铝、铜、镍有高活化表面，在无氧条件下可以在低于粉体熔点的温度实施涂层。此技术可应用于微电子器件的生产。

The superficial conductive coating processing of metal and non-ferrous metal: Due to their high-activity surface, aluminum, copper and nickel nanoarticle can coat under oxygen-free condition below smelting point of the particles. This technology can be adopted in the manufacture of microelectronic devices.

化学成分Chemical composition:

牌号 Grade	化学成分/ w% Chemical composition		
	O	杂质Impurities	Ni
FNiN-20	<2	<0.4	余量margin
FNiN-50	<1.5	<0.45	余量margin
FNiN-80	<1	<0.5	余量margin

注：牌号中的杂质包括B, Al, Si, Cr, Mn, Fe, Co, Cu, Mo, W, P, C, S等元素，需方有要求时，供方可供
The impurities includes elements such as B,Al,Si,Cr,Mn,Fe,Co,Cu,Mo,W,P,C,S. We offer at your requirement.

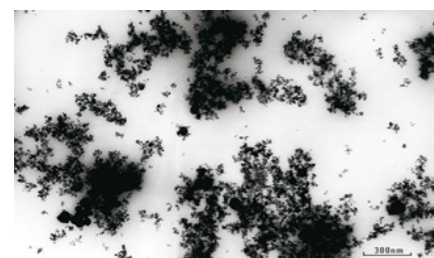
物理性能Physical properties:

牌号 Grade	中位径范围/nm Particle size	比表面积/(m2/g) Specific surface area	松装密度/(g/cm3) Bulk density
FNiN-20	<30	>20	0.04~5
FNiN-50	≥30~60	>15	0.05~0.7
FNiN-80	≥60~100	>8	0.06~0.8

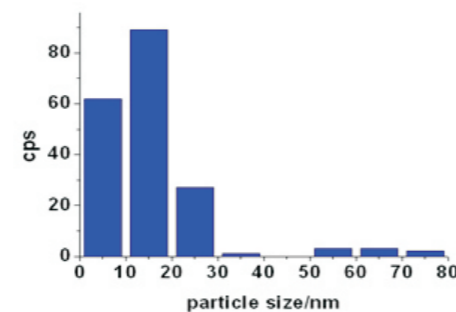
纳米级铜粉FCuN Nano Cu

外观：不同粒度纳米铜粉呈紫黑色至黑色，无其他颜色混杂，球形，无明显结块。

Appearance: purple black; sphere; without clusters



纳米铜粉TEM测试结果
Nano-copper powder TEM test results



纳米铜粉粒度分布测试结果
Nano-copper particle distribution test result

用途USAGES:

1. 金属和非金属的表面导电涂层处理。纳米铝、铜、镍粉体有高活化表面，在无氧条件下可以在低于粉体熔点的温度实施涂层。此技术可应用于微电子器件的生产。

The superficial conductive coating processing of metal and non-ferrous metal: Due to their high-activity surface, aluminum, copper and nickel nanoarticles can coat under oxygen-free condition below smelting point of the particles. This technology can be adopted in the manufacture of microelectronic devices.

2. 高效催化剂。铜及其合金纳米粉体用作催化剂，效率高、选择性强，可用于二氧化碳和氢合成甲醇等反应过程中的催化剂。

Efficacious catalyzer: Copper and copper alloy nanometer, feature high efficacy and selectivity, can be used as catalyzer in some reactions, e.g. carbon dioxide compound hydrogen to produce methanol.

3. 导电浆料。用纳米铜粉替代贵金属粉末制备性能优越的电子浆料，可大大降低成本。此技术可促进微电子工艺的进一步优化。

Conductive slurry: The electronic size with good performance made of copper nanoparticle instead of valuable metal particles cuts cost to a large extent. This technology is used to the preference of microelectronic processes.

4. 块体金属纳米材料用原料：采用惰性气体保护粉末冶金烧结制备大块铜金属纳米复合结构材料。

Raw material for bulk nanomaterial: Adopt the inert gas to make bulk copper nano composite material with powder metallurgy.

5. 药物添加材料：用于治疗骨质疏松，骨质增生等新特效药的添加材料。

Medicine append material: Ideal append material to the new and highly efficient medicine for curing the osteoporosis and calcaned spur.

6. 纳米金属自修复剂：添加至各种机械设备金属摩擦副润滑油中，实现金属摩擦已磨损部分自修复，节能降耗，提高设备使用寿命及维修周期。

Metallic nanometer self-repairer: Applied to the self-repairing when adding the metallic nanometer powder to the kinds of machinery.

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FCuN-50	<2	<0.45	余量margin
FCuN-80	<2	<0.5	余量margin

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