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Zinc Sulfide Nanoparticles
ZSN404

Description:

Zinc sulfide is an inorganic compound with crystal structure of sphalerite and wurtzite. Both sphalerite and wurtzite are intrinsic, wide-band gap semiconductors. Nanostructures of ZnS take a wurtzite phase at lower and higher temperatures. ZnS has a band gap of 3.66 eV at 300 K, negative conductivity and a small exciton Bohr radius of about 2.5 nm. Particle size reduction has a tremendous effect on the properties of ZnS, such as a blueshift in the optical absorption spectrum, increased luminescence, and enhanced oscillator strength, non-linear optical effects, geometrical structure, chemical bonds, ionization potential, mechanical strength, and melting point.

Characterization	
CAS	1314-98-3
Stock No.	ZSN404
Molecular formula	ZnS
Molecular weight (g/mol)	97.46
Form	Powder
Color	White Cream
Morphology	Spherical
Crystal structure	Hexagonal wurtzite
Size range (nm)	5-10
Total impurity (%)	N/A
Density (g/cm3)	4.079
Solubility	Insoluble

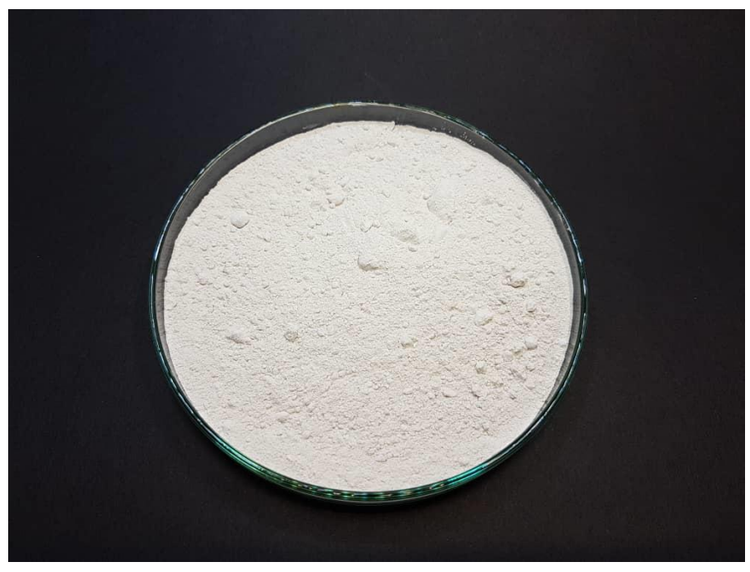

Image of zinc sulfide nanopowder (ZSN404)

Note: product specifications are subject to amendment and may change over time.

Applications (but not limited to the following)**:**

In electronic or optoelectronic applications such as in flat-panel displays, white light LEDs, electroluminescent devices, sensors, lasers, infrared windows, ultraviolet (UV) lasers, anti-reflection coating on solar cells, for both in vivo and in vitro imaging applications, As a photocatalyst, for degradation of water pollutants, reduction of toxic heavy metals and water-splitting for H2 evolution

Safety:

Avoid breathing dust.
Always use protective gloves and safety glasses.
Wash with soap and water after exposure.
Refer to MSDS prior to handling this material.

www.armina-eng.com
Sales@armina-eng.com

حرکت بسوی آینده پایدار
A mission for sustainable future

Address: Tehran-Damavand road, Pardis technology park, commercialization and techmart building, No. 1304
Postals Code: 16541 20708
Telefax: +98 21 7625 1689

(+98) 933 759 6565

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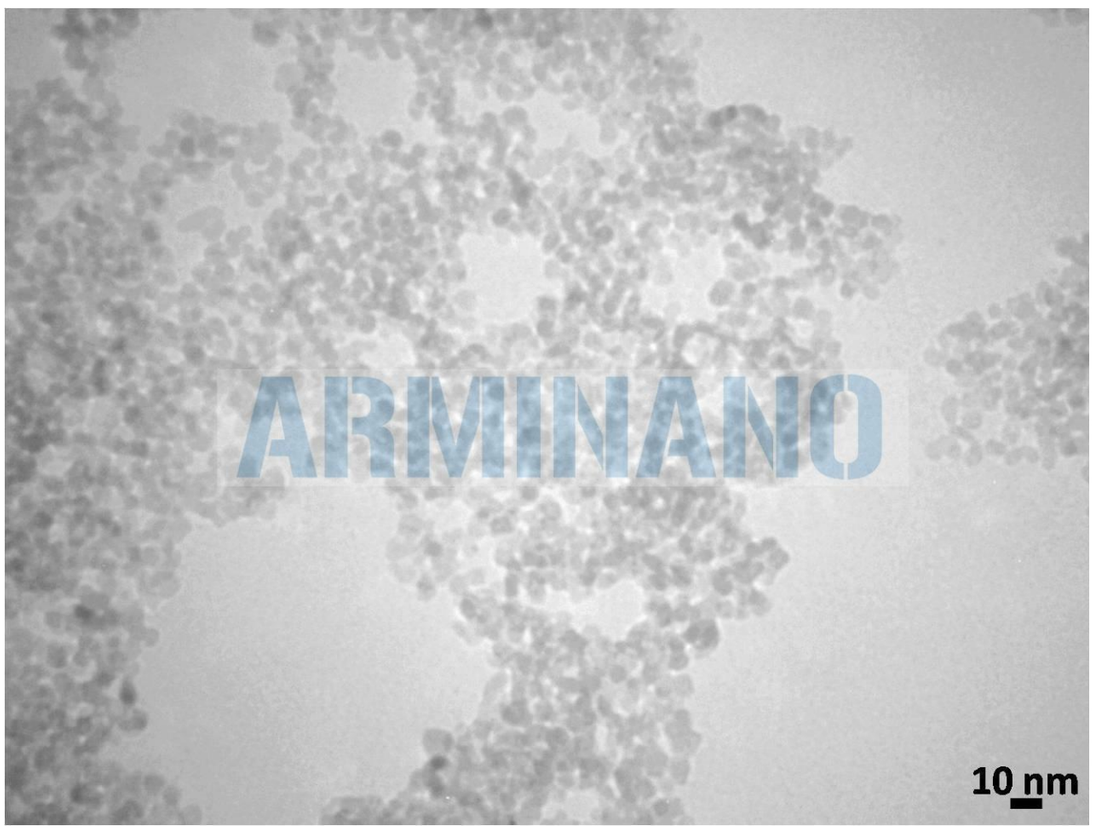
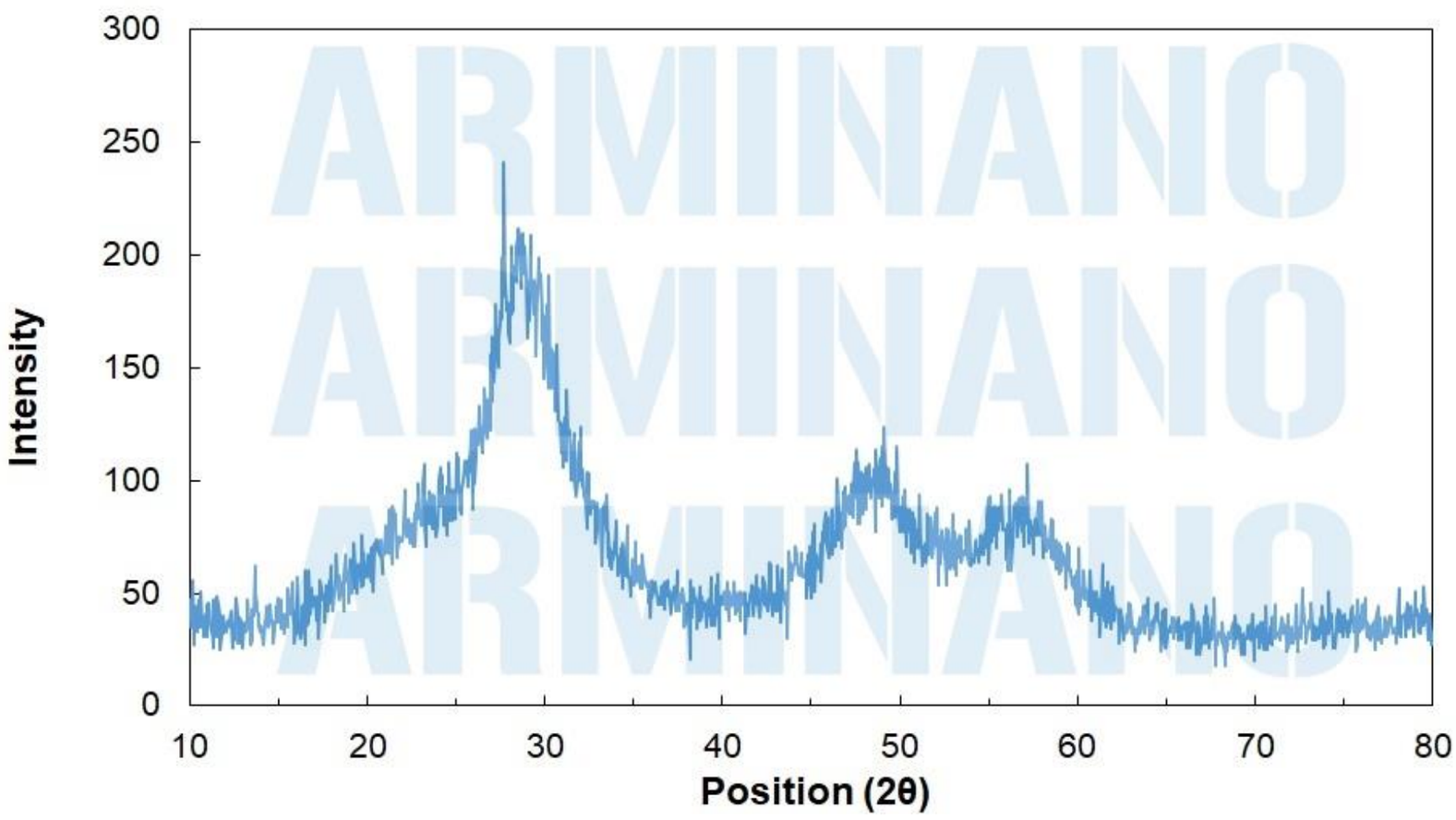


TEM images of ZNS404



XRD pattern of ZSN404

Storage:

Keep it in cool dry place.
Avoid direct sunlight.
Do not freeze.
To disperse nanoparticles sonication could be used.

Shelf life:

When stored as specified the product is stable for at least 6 months.

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