

Zinc Oxide Nanoparticles ZNP4

Description:

ZnO NPs have superior antibacterial, antimicrobial, and excellent UV blocking properties. Properties of nano zinc oxide such as low toxicity and biodegradability make it prominent element for the health care industry. ZnO with large electromechanical coupling, results in strong piezoelectric and pyroelectric properties and the consequent use of ZnO in mechanical actuators and piezoelectric sensors. In addition, ZnO is a wide band-gap (3.37 eV) compound semiconductor that is suitable for short wavelength optoelectronic applications.

Characterization	
CAS	1314-13-2
Stock No.	ZNP401 ZNP402 ZNP403
Molecular formula	ZnO
Molecular weight (g/mol)	81.38
Form	Powder
Color	White
Morphology	Spherical (ZNP401) Spherical (ZNP402) Irregular (ZNP403)
Crystal structure	Hexagonal wurtzite
Size range (nm)	5-10 (ZNP401) 10-30 (ZNP402) 50-100 (ZNP403)
Total impurity (%)	N/A
Density (g/cm ³)	5.606
Solubility	Insoluble

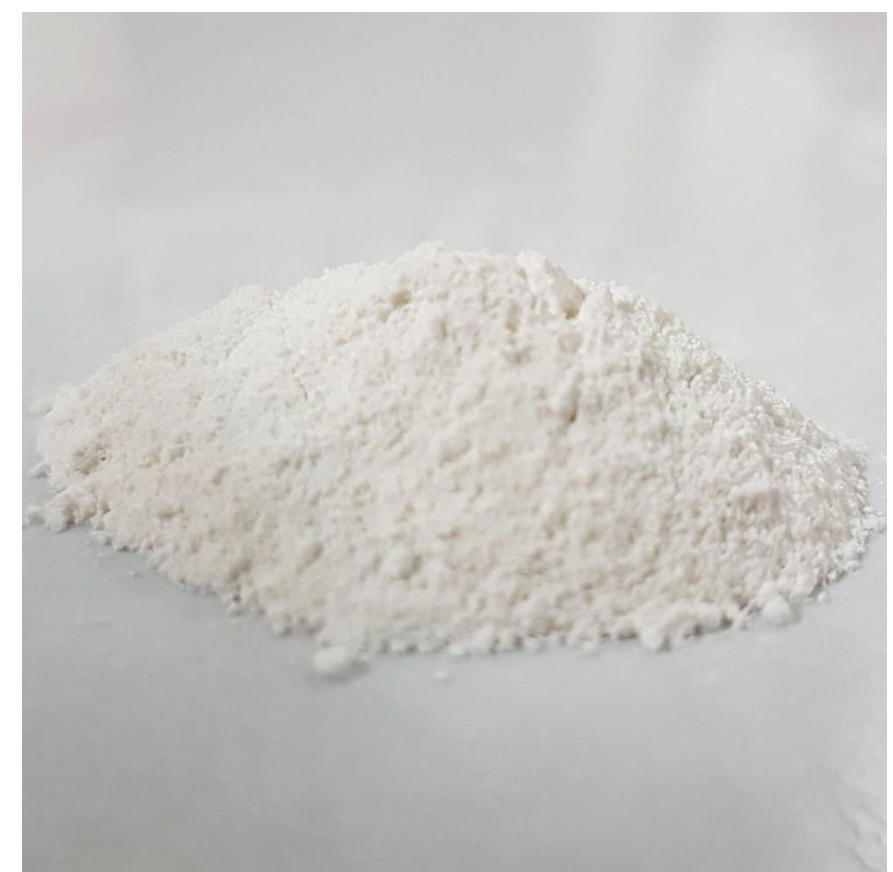


Image of zinc oxide nanopowder (ZNP4)

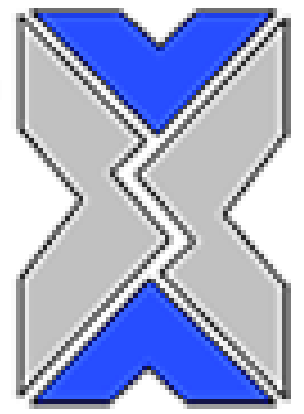
Note: product specifications are subject to amendment and may change over time.

Applications (but not limited to the following):

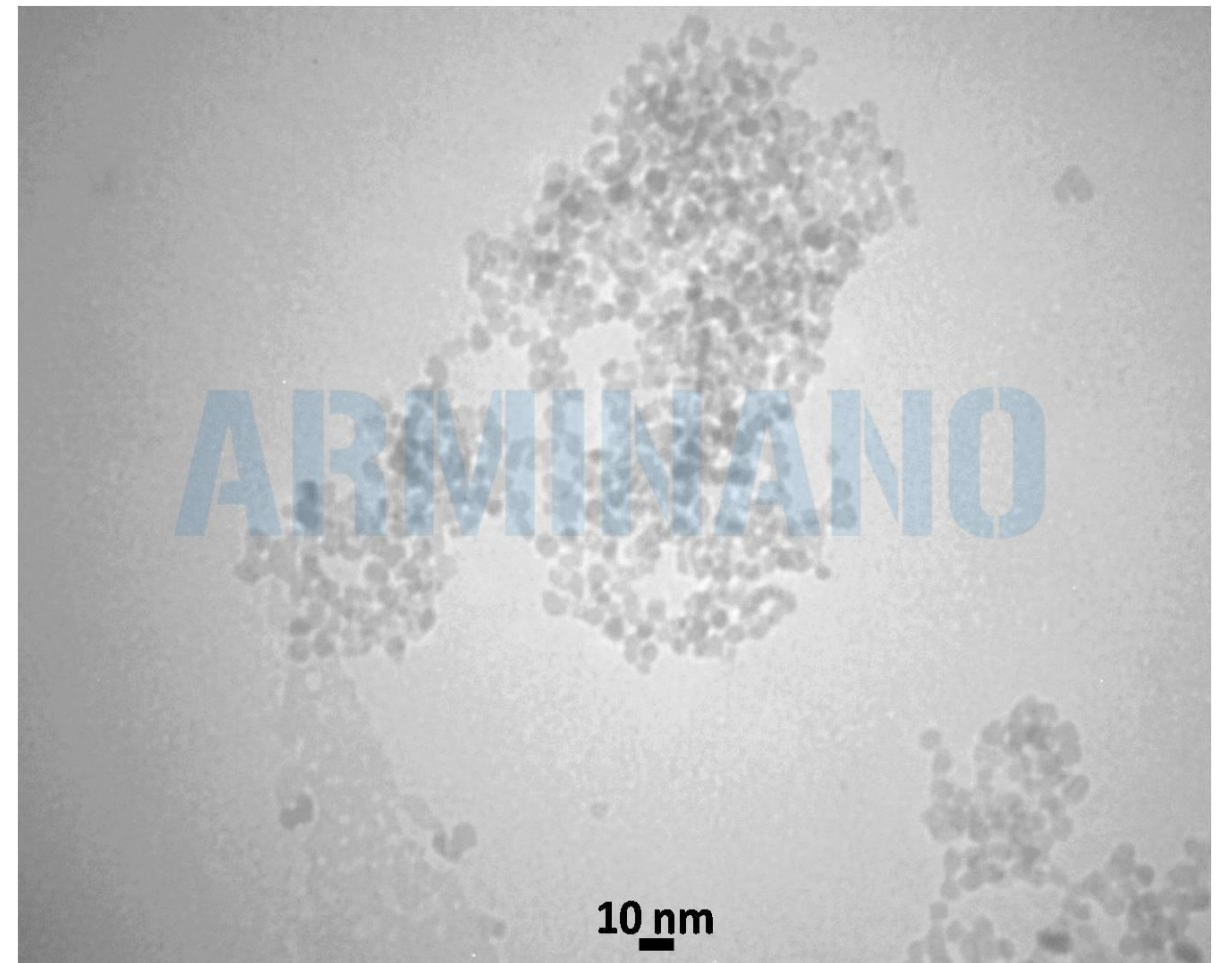
Textile industry, deodorant, cosmetics and skin care creams, solar cells, concrete manufacture to improve water resistance, gas sensors, rubber industry, cancer therapy, baby powder and creams to treat skin irritations, in food products, drugs coating

Safety:

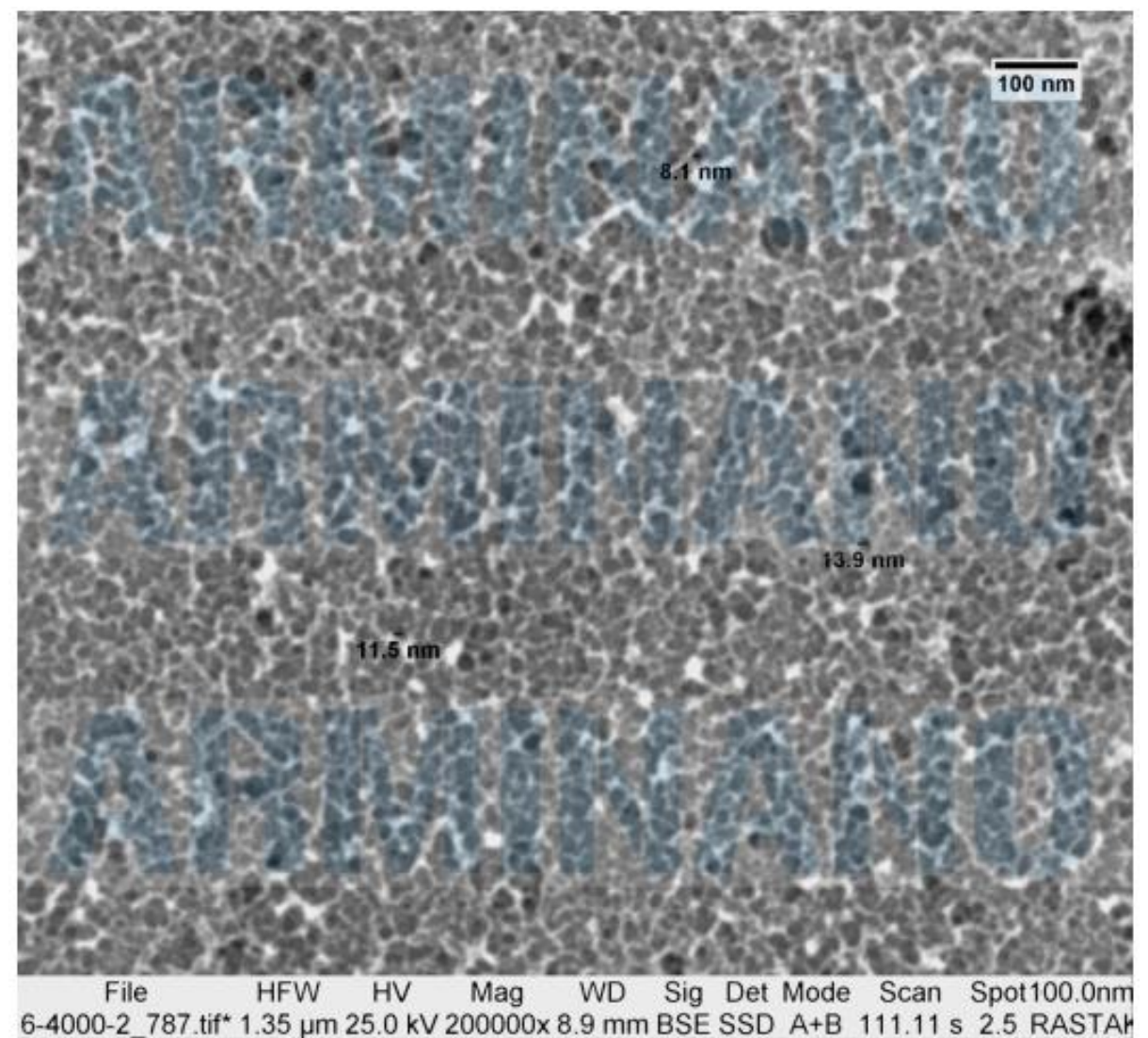
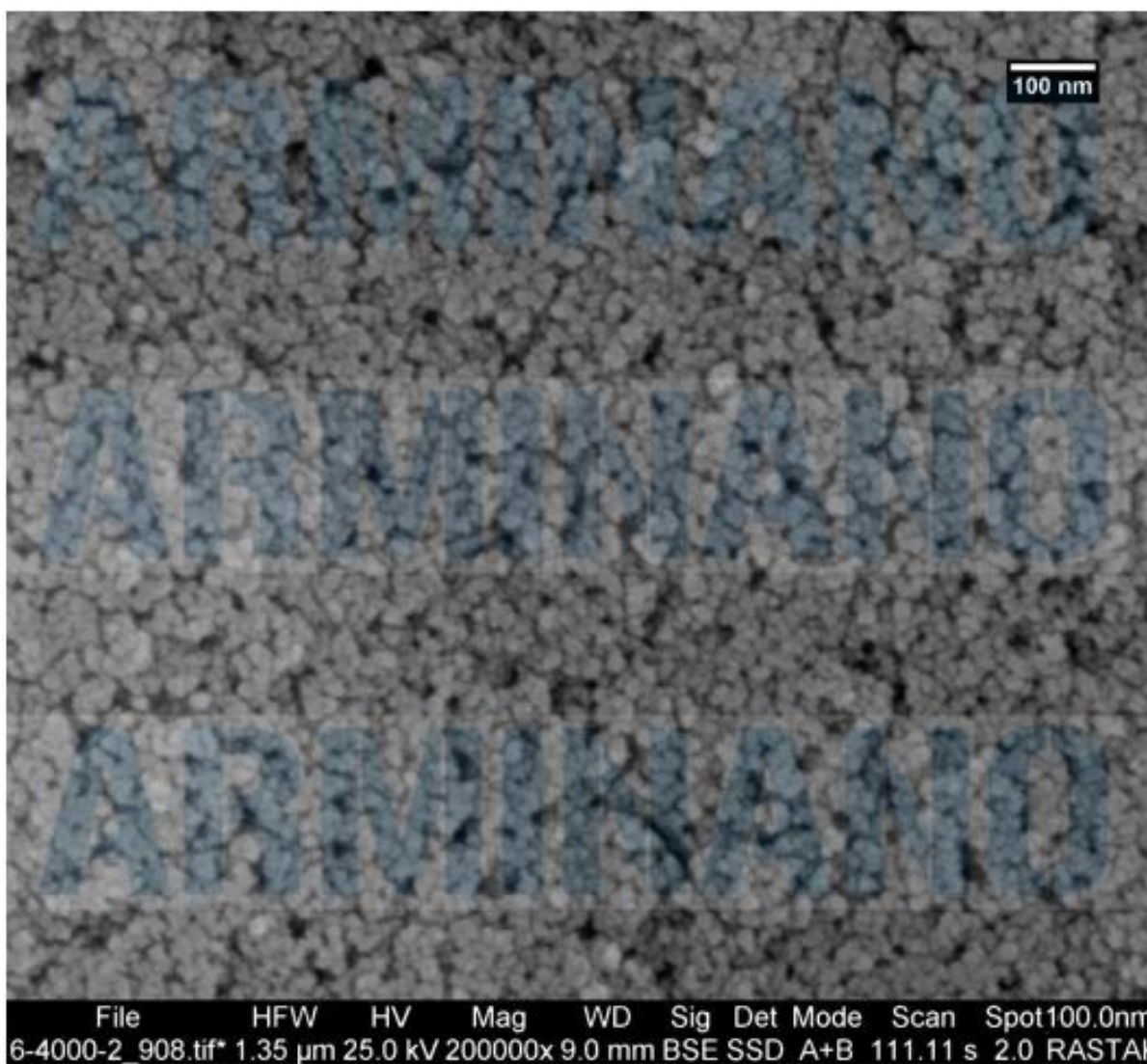
Avoid breathing dust.
Always use protective gloves and safety glasses.
Wash with soap and water after exposure.
Refer to MSDS prior to handling this material.



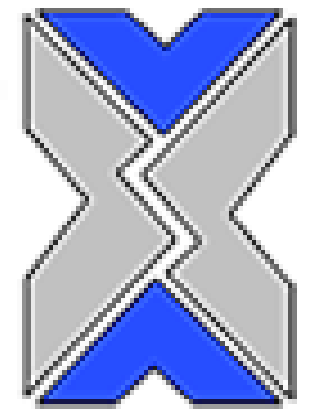
Zinc oxide Nanoparticles ZNP4



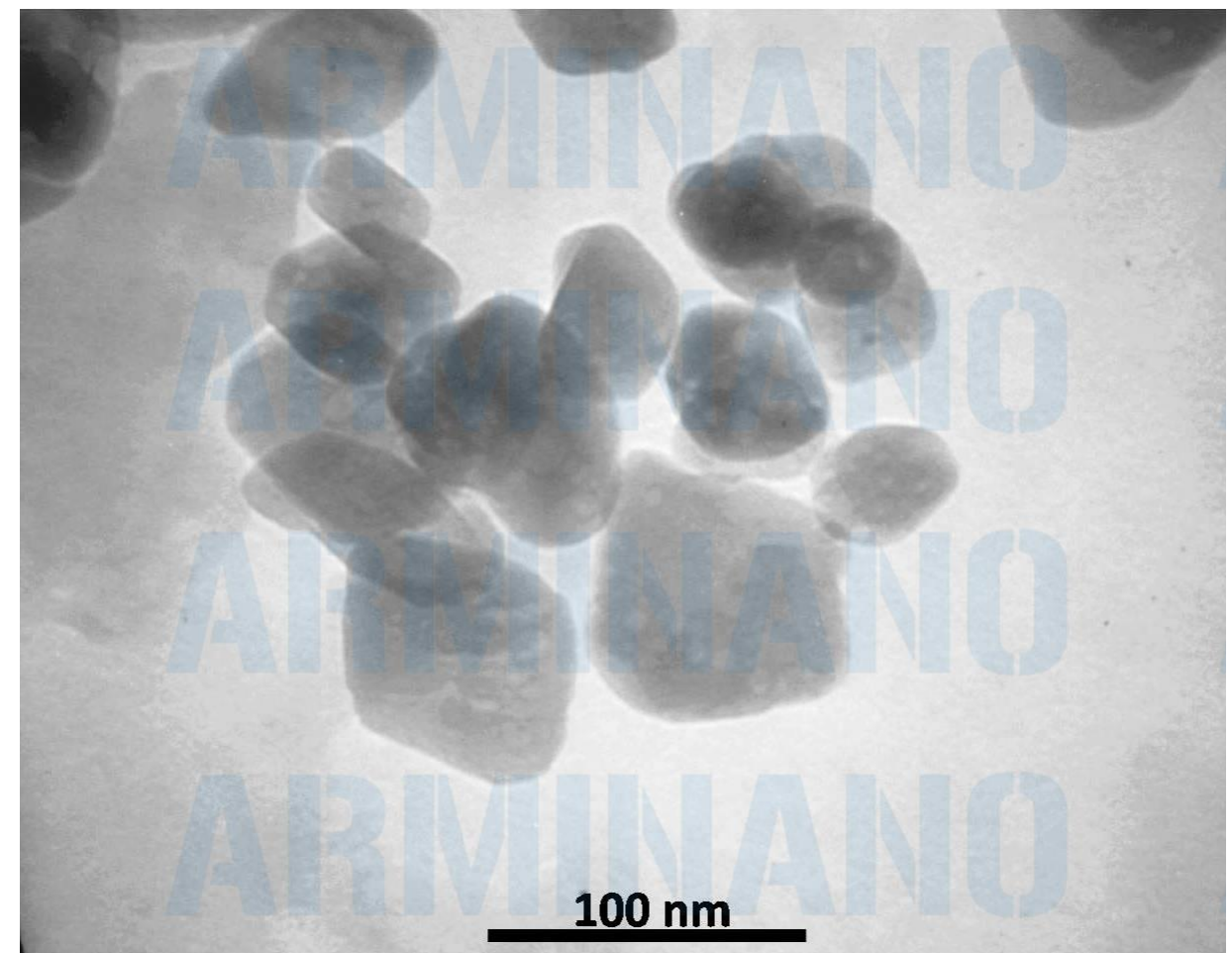
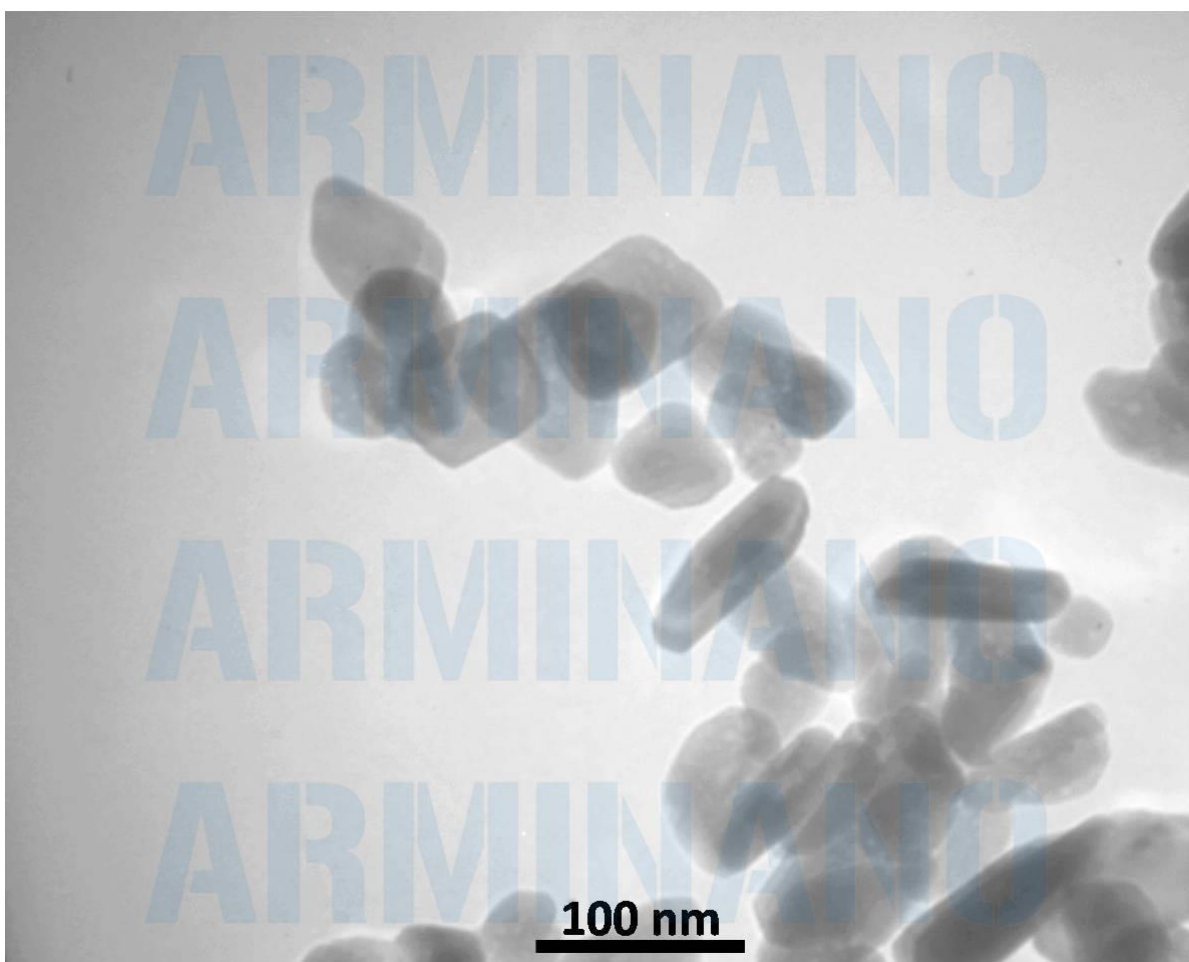
TEM images of ZNP401



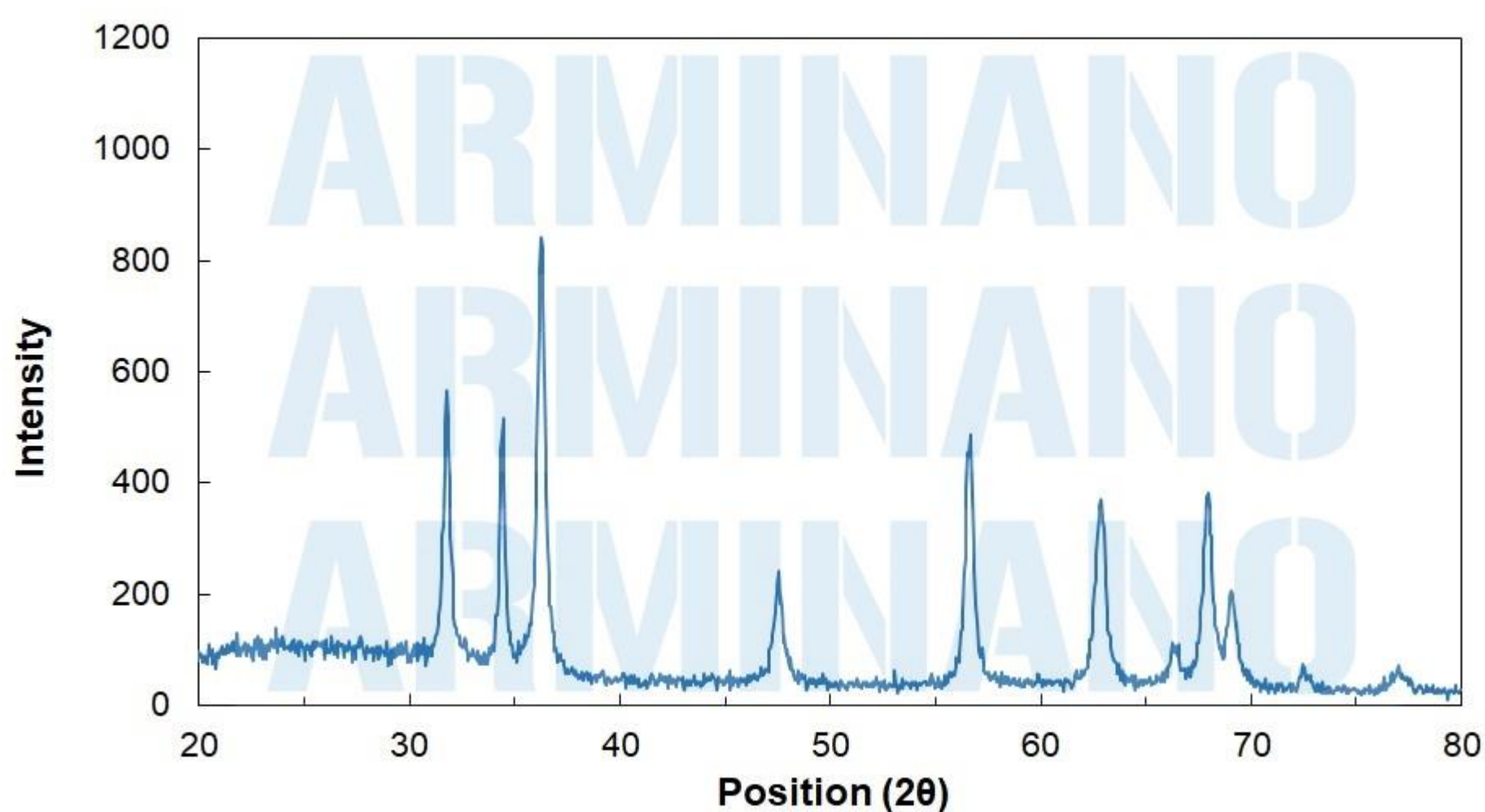
SEM images of ZNP402



Zinc oxide Nanoparticles ZNP4



TEM images of ZNP403



XRD pattern of ZNP4

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.