

Nickel Oxide Nanoparticles NOP1201

Description:

Nickel oxide (NiO) is an important transition metal oxide with rhombohedral or cubic (NaCl-type) structure. Fine particles of NiO exhibit weak ferromagnetism or superparamagnetism. Nickel(II) oxide nanoparticles is generally known as a non-stoichiometric compound (Ni_{1-x}O) which appear in green to black powder form, and are graded as very toxic. NiO has a wide intrinsic band gap of ~ 3.6 eV and is an attractive semiconductor. It exhibits anodic electrochromism, excellent durability and electrochemical stability and large spin optical density.

Characterization	
CAS	7440-02-0
Stock No.	NOP1201
Molecular formula	NiO
Molecular weight (g/mol)	58.69
Form	Powder
Color	Black
Morphology	Irregular Sphere
Crystal structure	Cubic
Size range (nm)	20-50
Total impurity (%)	N/A
Density (g/cm ³)	6.67
Solubility	Insoluble



Image of Nickel oxide
nanopowder (NOP1201)

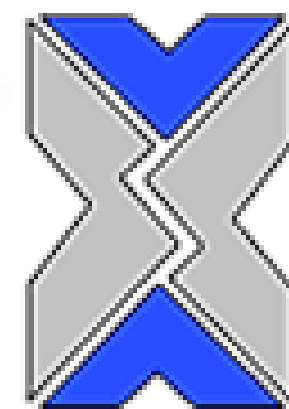
Note: product specifications are subject to amendment and may change over time.

Applications (but not limited to the following):

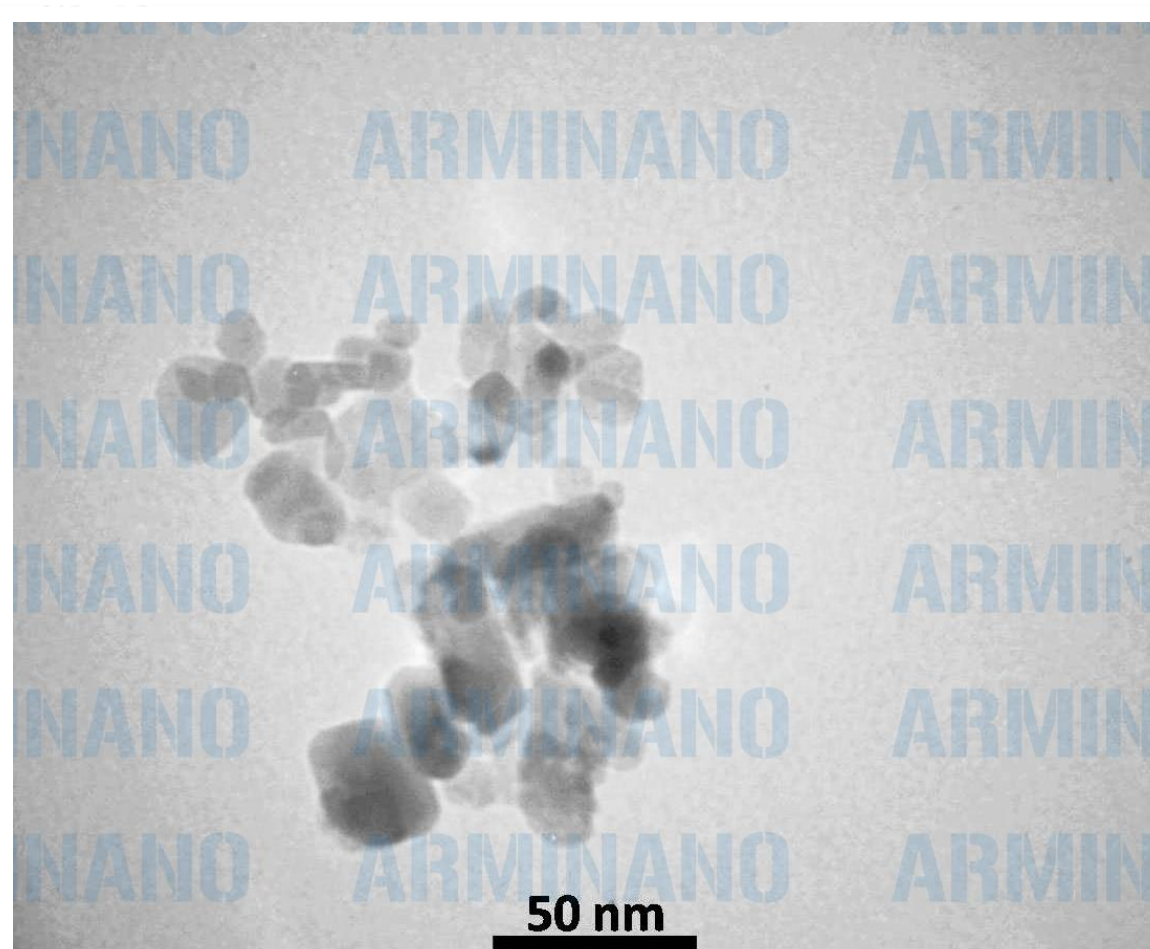
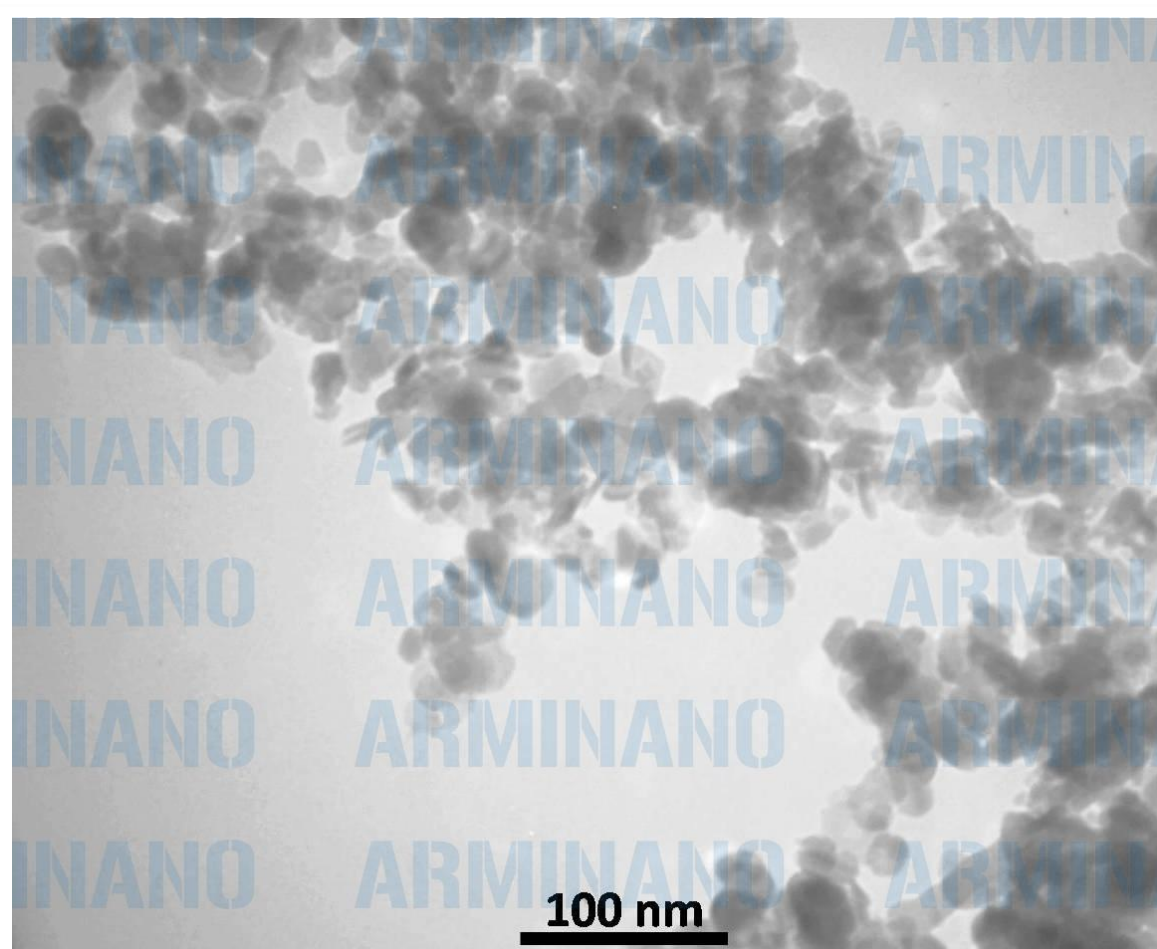
Magnetic fluid, radiation protection, in catalysts for hydrogen oxidation at the anode or for the oxidation of carbon monoxide, conductive paste in the PCBs, powder molding for electrical alloy industry, selective solar absorbing coatings for solar manufacturing, electromagnetic absorption in military stealth fields, seal shock absorption, solid oxide fuel cells.

Safety:

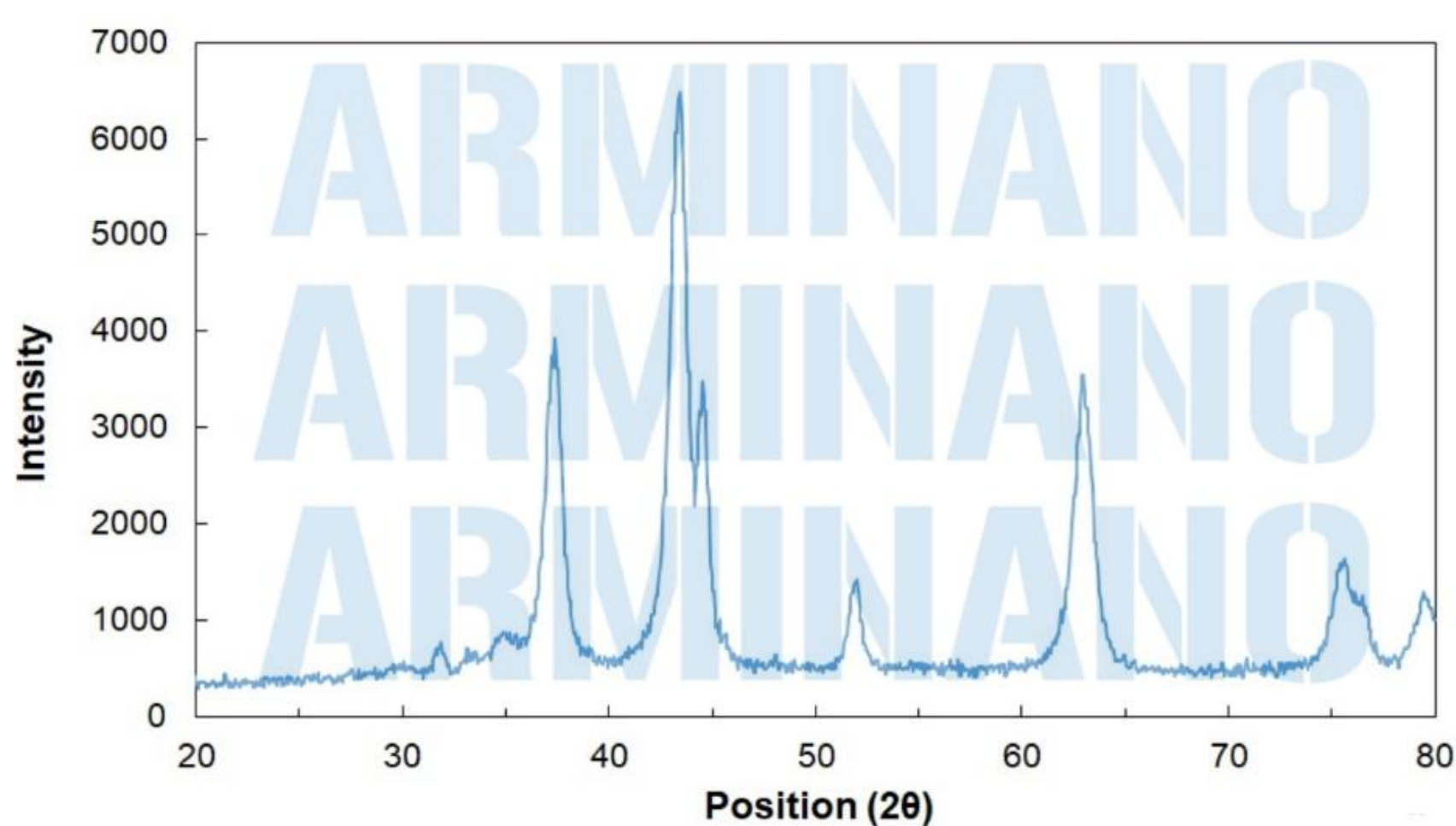
Avoid breathing dust.
Always use protective gloves and safety glasses.
Wash with soap and water after exposure.
Refer to MSDS prior to handling this material.



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TEM images of NOP1201



XRD pattern of NOP1201

Storage:

Keep it in cool dry place and tightly closed container.
Ensure good ventilation at the workplace.
The product is not flammable.
Avoid direct sunlight.
Store away oxidizing agents.
To disperse nanoparticles sonication could be used.

Shelf life:

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

