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Ferric Oxide Nanoparticles
FNP202

Description:

Hematite (α-Fe2O3) is found to be the most stable and the cheapest iron oxide with n-type semiconductor properties (Eg=2.1eV) under ambient conditions. It exhibits weak ferromagnetism between 260 K and the Néel temperature, nontoxic, and corrosion-resistant. Moreover, it shows strong catalytic activity, widely and easily available, and is extremely environment friendly. It is a candidate for visible-light photocatalysis which can absorb visible light, collect up to 45% of solarspectrum energy.

Characterization	
CAS	1309-37-1
Stock No.	FNP202
Molecular formula	α-Fe2O3
Molecular weight (g/mol)	159.69
Form	Powder
Color	Dark Red
Morphology	Rod
Crystal structure	Rhombohedral
Size range (nm)	D= 50-80 L= 100-300
Total impurity (%)	N/A
Néel temperature (˚C)	677
Density (g/cm3)	5.25
Solubility	Insoluble

Image of iron(III) oxide nanopowder (FNP202)

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

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

Solar photoelectrochemical (PEC) cell , photocatalytic applications, sensing elements in gas sensors and humidity sensors, lithium ion batteries.

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

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A mission for sustainable future

Address: Tehran-Damavand road, Pardis technology park, Danesh 1 street, No. 18.1
Postals Code: 1654120931
Telefax: +98 21 7625 1689

(+98) 933 759 6565

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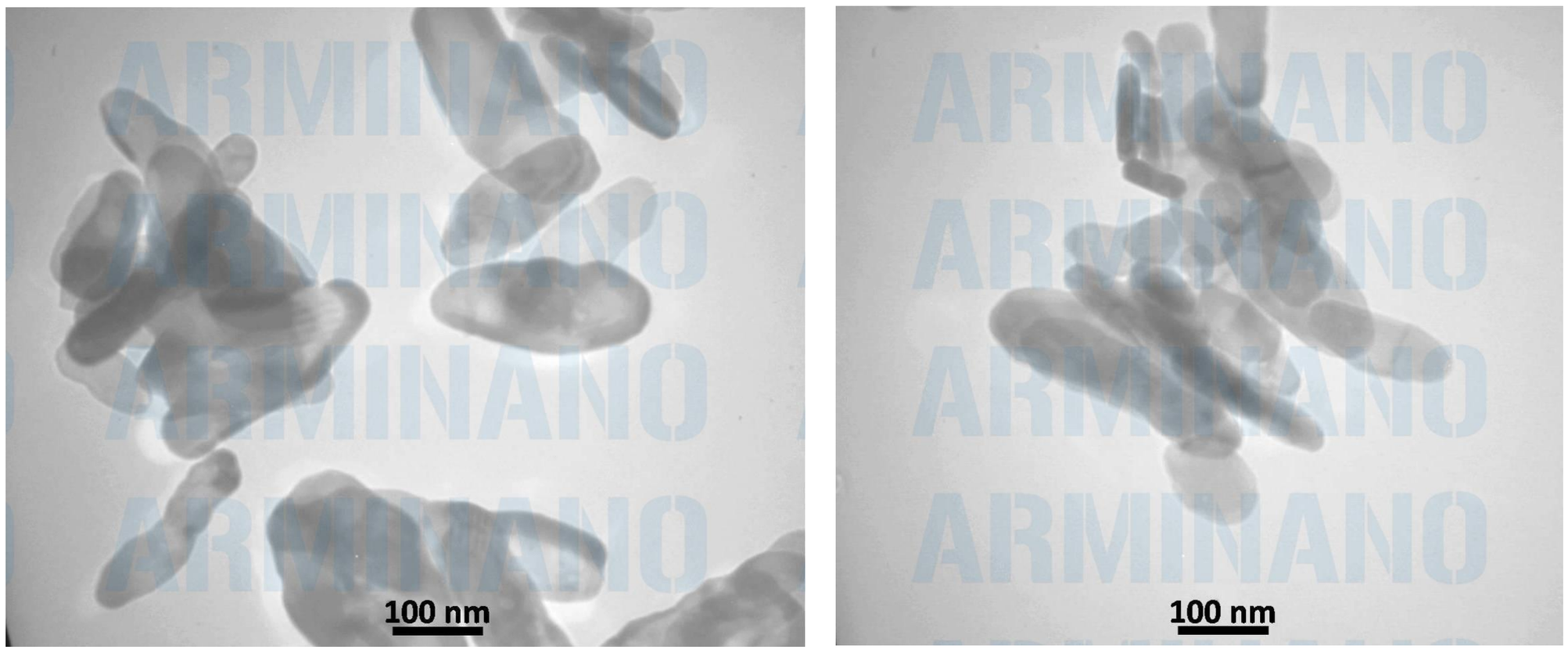
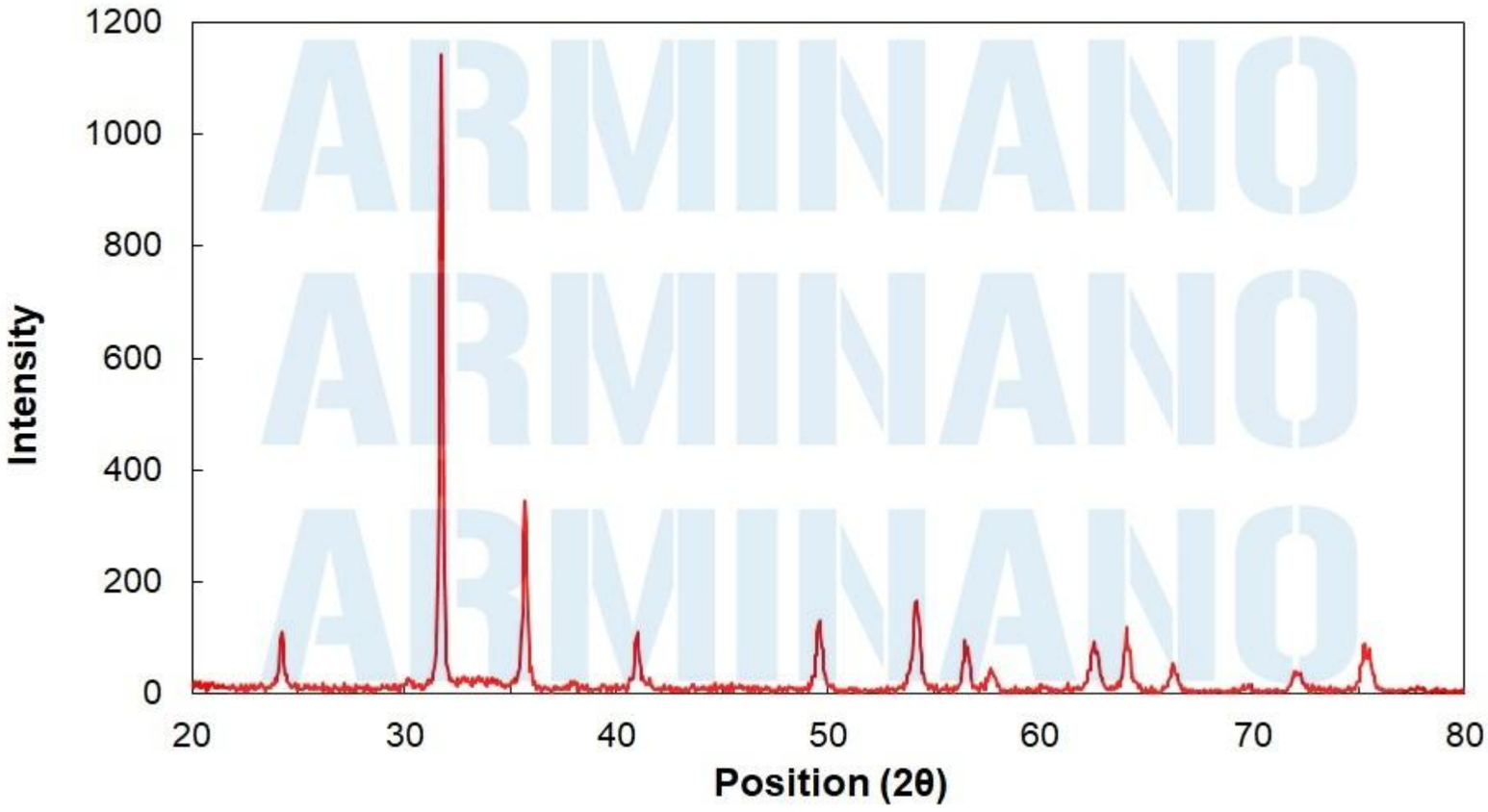


TEM image of FNP202



XRD pattern of FNP202

Storage:

Keep it in cool dry place.
Avoid direct sunlight.
Do not freeze.
To disperse powder use sonication.

Shelf life:

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

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