SHT NP-ME

Nanopowders

DESCRIPTION

Traditional bulk materials display interesting properties when their dimensions decrease to the nanometer scale. This transformation has been attributed to the large surface-area-to-volume ratio of the nanomaterials.

Nanosized material is considered a promising alternative for powder metallurgy industry and 3D printing technology due to the size-dependent drop of melting point and low cost of raw materials. SHT provides nanoparticles with dimensions ranging from 10 – 100 nm:

- Metals: Ag, Cu, Sn, Fe and Al
- Semiconductors: Si, Bi_2Te_3, and Ge
- Alloys: Stainless steel, Ag_3Sn, Cu_6Sn_5 and Sn-Ag-Cu alloy

FEATURES AND BENEFITS

- Large aspect ratio
- Passivated surface
- Fine and uniform nanoparticles
- Liquid metals will wet the surface of the particles

TYPICAL APPLICATIONS

- Low temperature sintering
- Powder metallurgy
- 3D printing
- Catalyst
- Interconnect in electronics

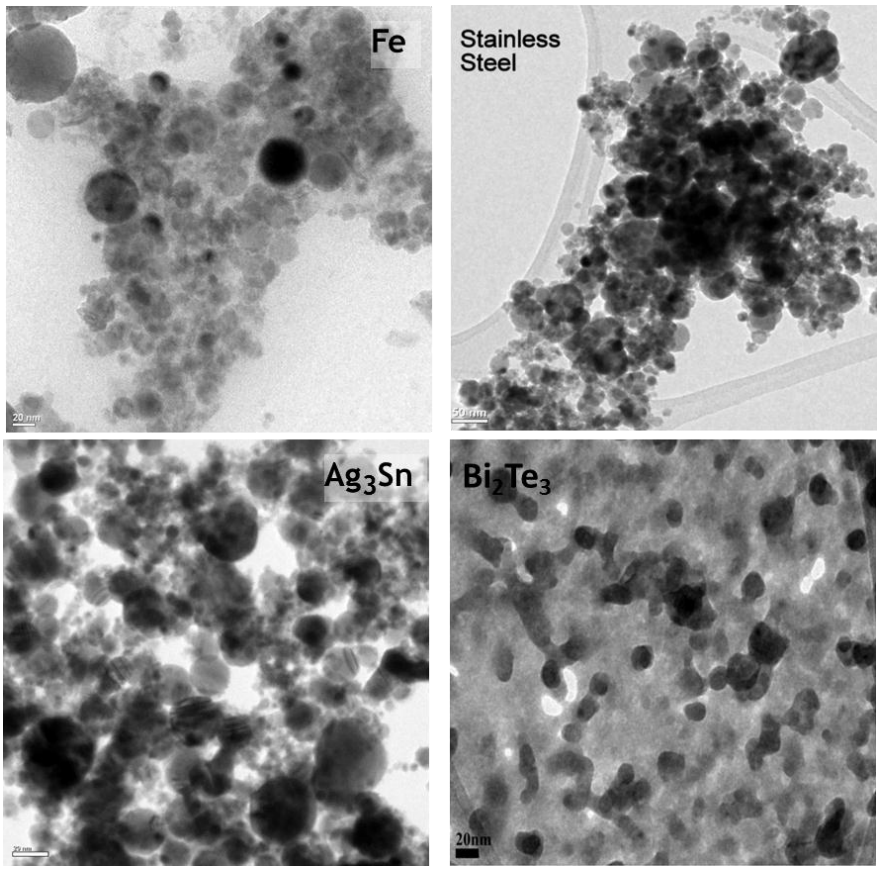

Figure 1: TEM images of nanoparticles.

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