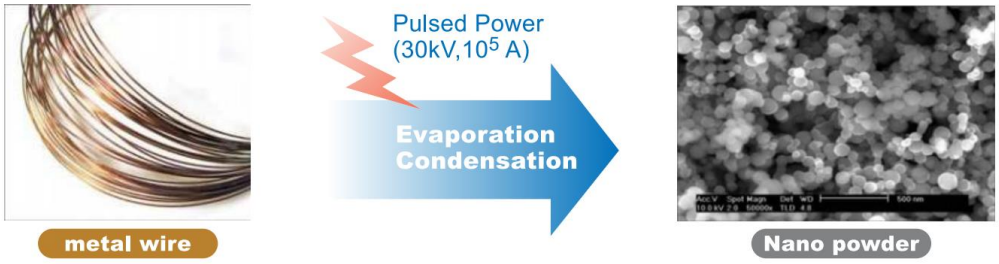
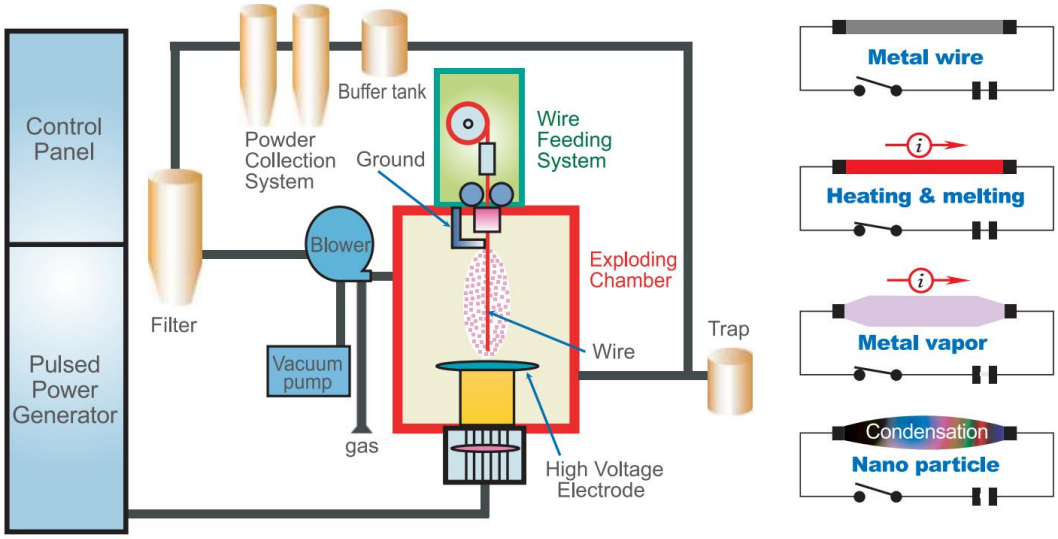
NanoPowder Generator

NTI 10P

Pulsed Wire Evaporation (PWE) is the technology to produce nanoparticle by using pulsed power and metal wire





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nanoPowder Generator Characteristics

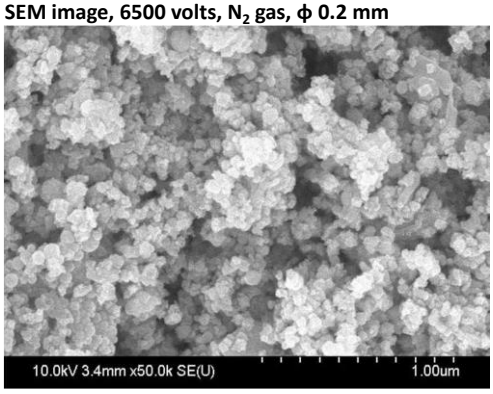
1. Easy to produce nanopowder **whenever and wherever** by easy operation
    a. Input : metal wire and electric power → Output : nanopowder
2. Possible to produce **all kinds of conductive metal** and **metal oxide**
    a. Spherical type, APS: 100nm
    b. High purity
3. Possible to fabricate nanopowder of high fusion point metal including tungsten
4. **High energy efficiency** by using Pulsed Power
5. **Environmental Friendly Process** "no by-product"
6. Simple operation and **easy to maintain**
7. Low cost and high productivity
8. Suitable for small-quantity **production, research and education**

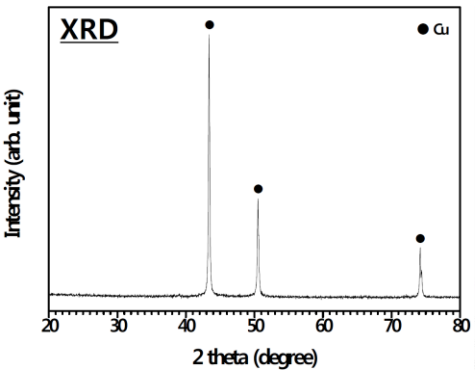
nanoPowder Generator Specifications

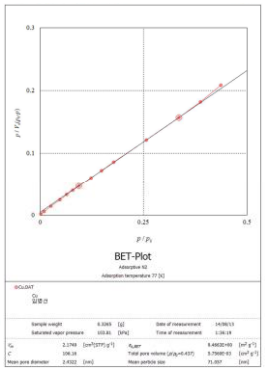
Model	NTI 10P
Input power	Single Phase 220V, 5A(max)
Output voltage	~6.5 KV
Power consumption	150 W
Pulse energy	400 J/pulse
Number of pulses per minute	30 times (max)
Cooling Type	Water cooling
Input wire diameter	ϕ0.2-0.3 mm
Length of wire / feeding	20 mm
Morphology	spherical
Average particle size	100 nm
Production Capacity (Cu base)	10 g/h
Gas used	Nitrogen, Argon and Oxygen
Weight	230 kg
Dimension [W*D*H] mm	1500x600x1400

Copper (Cu) nano powder

SEM image, 6500 volts, N_2 gas, ϕ 0.2 mm

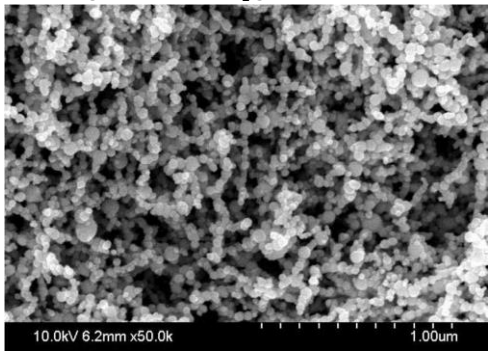


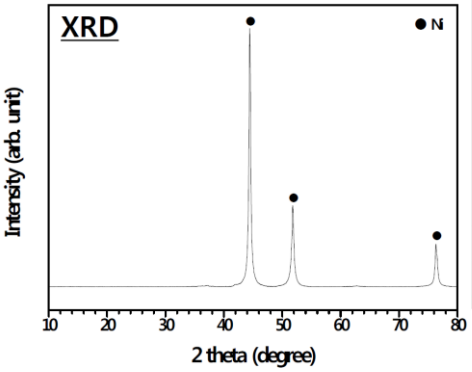


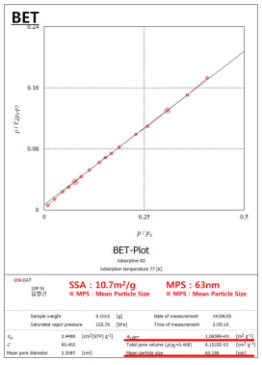


Nickel (Ni) nano powder

SEM image, 6500 volts, N_2 gas, ϕ 0.2 mm

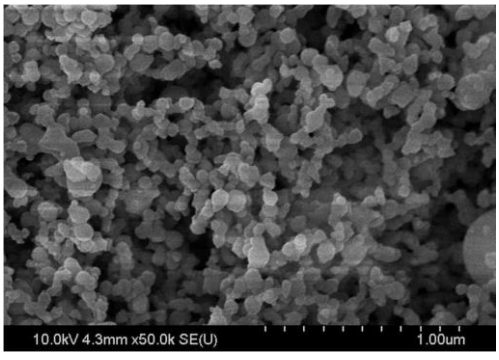


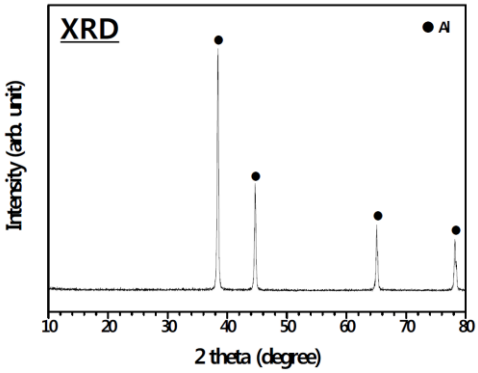


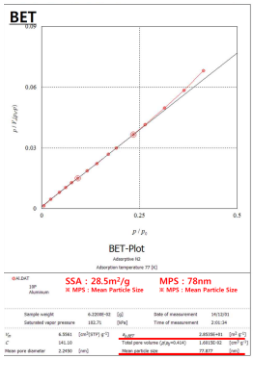


Aluminum (Al) nano powder

SEM image, 6500 volts, N_2 gas, ϕ 0.2 mm







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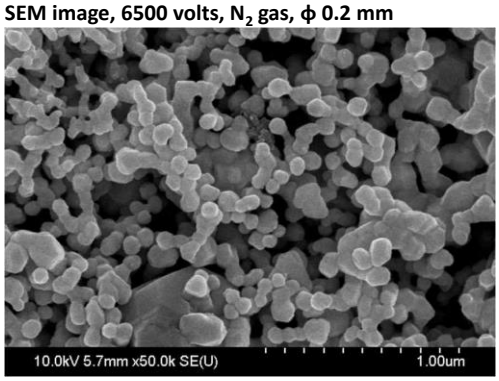
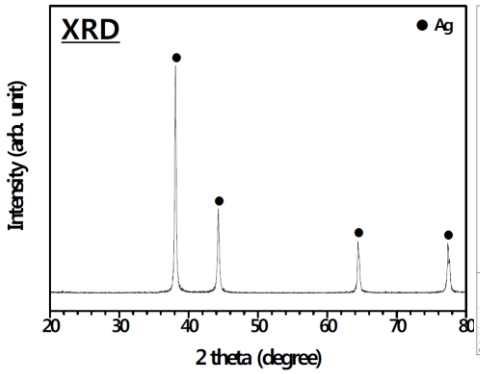
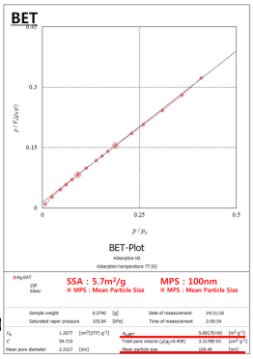
Silver (Ag) nano powder

SEM image, 6500 volts, N_2 gas, ϕ 0.2 mm

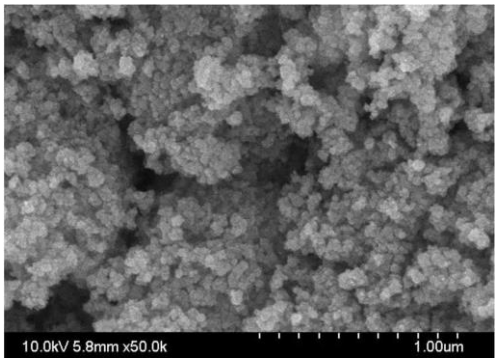


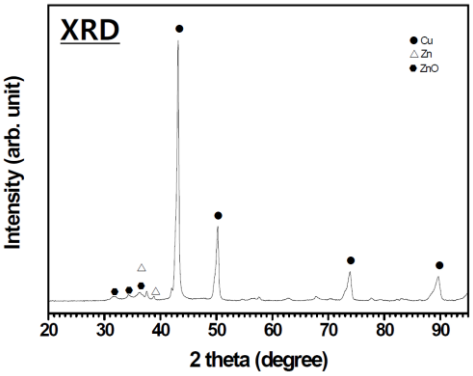


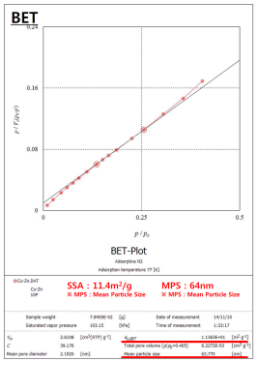


Copper-Zinc (Cu-Zn) alloy nano powder

SEM image, 6500 volts, N_2 gas, ϕ 0.2 mm

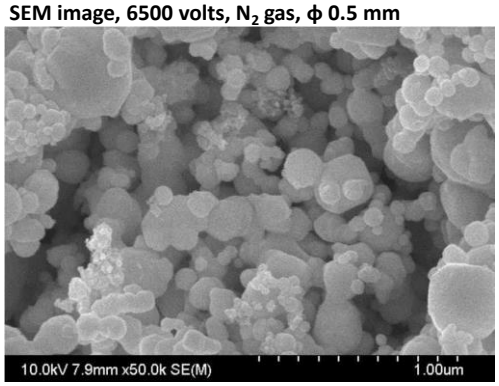


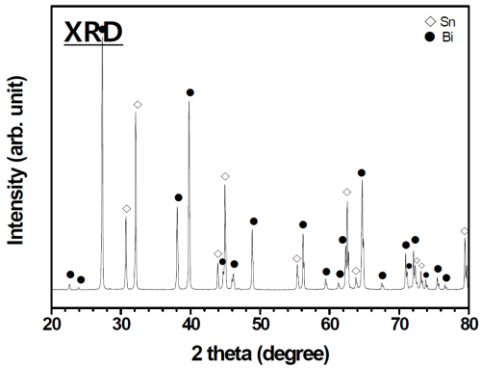


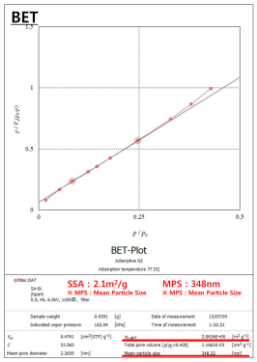


Tin-Bismuth (Sn-Bi) alloy nano powder

SEM image, 6500 volts, N_2 gas, ϕ 0.5 mm







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