

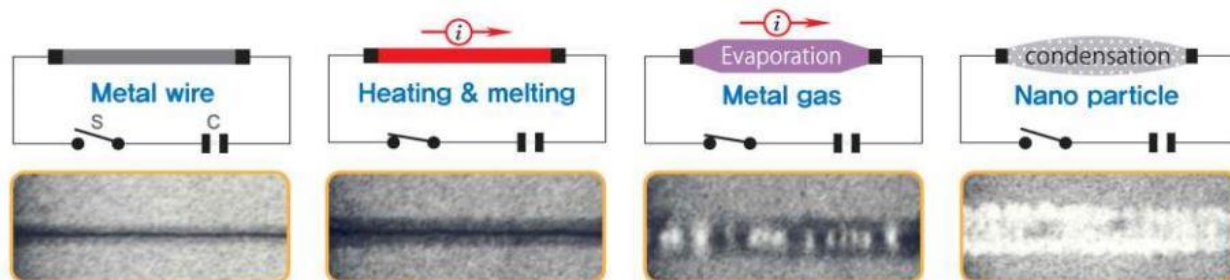
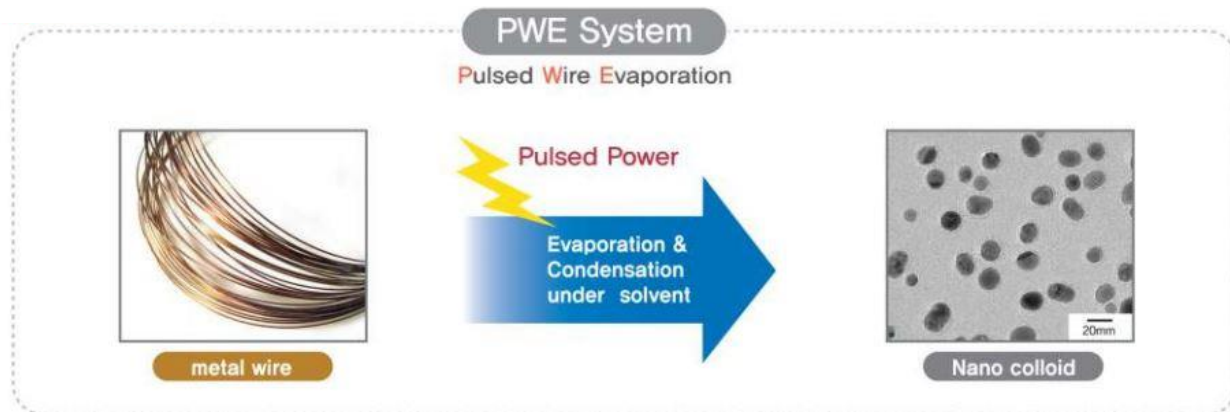
NanoColloid Generator



NTI 20C



NTI 40C



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

1. The electrical energy is transformed to pulsed power with high voltage and large current
2. The pulsed power is discharged to the metal wire during very short time.
3. The metal wire is melted and evaporated to metal gas.
4. The metal gas is condensed and nanoparticle is synthesized.

nanoColloid Generator Characteristics

1. Easy to produce nanoColloid **whenever and wherever** by easy operation
 - a. Input : metal wire and electric power → Output : nano colloid
2. Possible to produce **all kinds of conductive metal and metal alloy**
 - a. Pure metal : Ag, Al, Cu, Ni, Fe, Mo, Ti and more
 - b. Alloy metal : Cu-Zn, Cu-Ni, Al-Ag and more
3. Can use any type of solvents
 - a. Water, Alcohol and any organic solvent
 - b. Insulating oil, engine oil and mineral solvents
 - c. Ethylene glycol, oleic acid and etc.
4. **High energy efficiency** by using Pulsed Power
5. **Environmental Friendly Process** “no by-product”
6. Simple operation and **easy to maintain**
7. Suitable for small-quantity **production, research and education**

nanoColloid Generator Applications

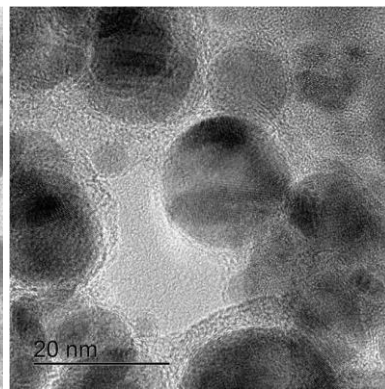
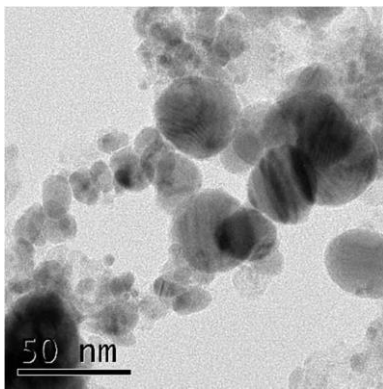
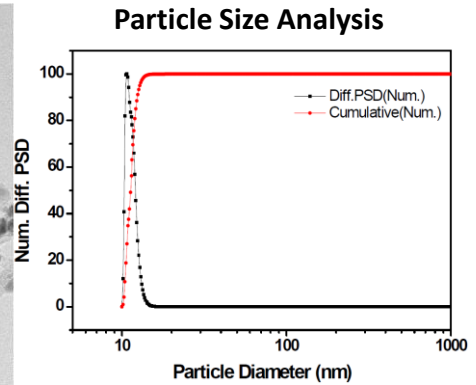
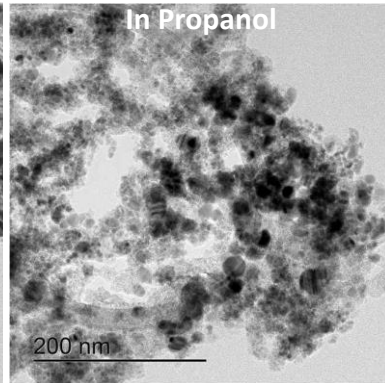
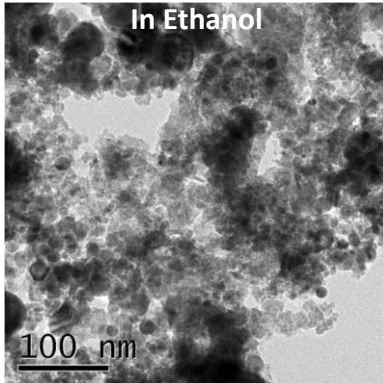
Nano Au	Nano Al	Nano Co	Nano Cu	Nano Ag	Nano Ni	Nano Fe
<ul style="list-style-type: none"> • Cancer treatment • Sensors • Drug carriers • Bacteria Identification • Computer memory 	<ul style="list-style-type: none"> • Optical devices • Catalyst carrier • IC Compo. • Ceramic Additives • Electronic Devices 	<ul style="list-style-type: none"> • Contrast Agent • Magnetic Inks • HD magnetic storage • EM-wave radiation shielding • Ferrofluids 	<ul style="list-style-type: none"> • Capacitor material • Catalysts • Conductive coatings • Lubricant additive 	<ul style="list-style-type: none"> • Bio probes • Sensors • Catalysts • Optical devices • Conductive inks 	<ul style="list-style-type: none"> • Additives • Catalysts • Conductive coatings • Ferrofluids • Capacitor materials 	<ul style="list-style-type: none"> • Drug carriers • HD magnetic recording • Magnetic pastes • Labeled probe synthesis

nanoColloid Generator Specifications

Model	NTI 20C	NTI 40C
Input power	1P 220V, 2A(max)	1P 220V, 3A(max)
Output voltage	~1500V	~1500V
Power consumption	300W	500W
Pulse energy	200 J/pulse	400 J/pulse
Input wire diameter	φ0.2-0.3 mm	φ0.2-0.3 mm
Length of wire / feeding	24 to 56 mm	24 to 80 mm
Morphology	spherical	spherical
Average particle size	5 to 30 nm	5 to 30 nm
Production Capacity (Ag base)	5,000ppm in 1L/h	800ppm in 20L/h
Chamber size	1L	20L
Ultrasonic Dispersion	Yes	Yes
Automatic Calculation	Yes	Yes
Weight	35 kg	70 kg
Dimension [W*D*H] mm	600x450x800	800x600x1200

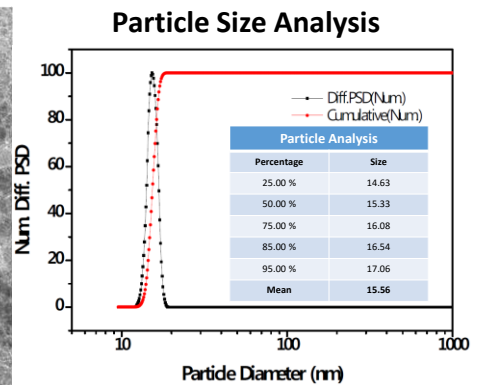
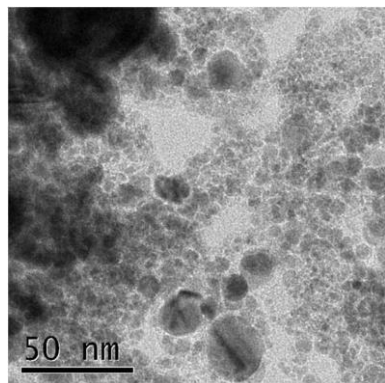
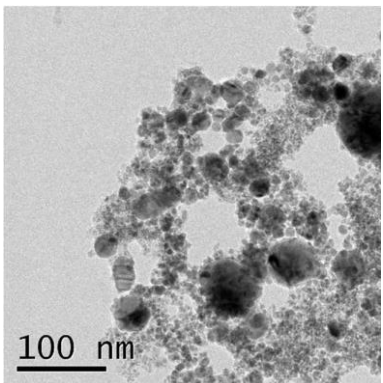


Copper (Cu) Colloid



Particle Analysis	
Percentage	Size
25.00 %	10.68
50.00 %	11.19
75.00 %	11.79
85.00 %	12.14
95.00 %	12.84
Mean	11.51

Nickel (Ni) Colloid in Ethanol



Silver (Ag) Colloid in Ethanol

