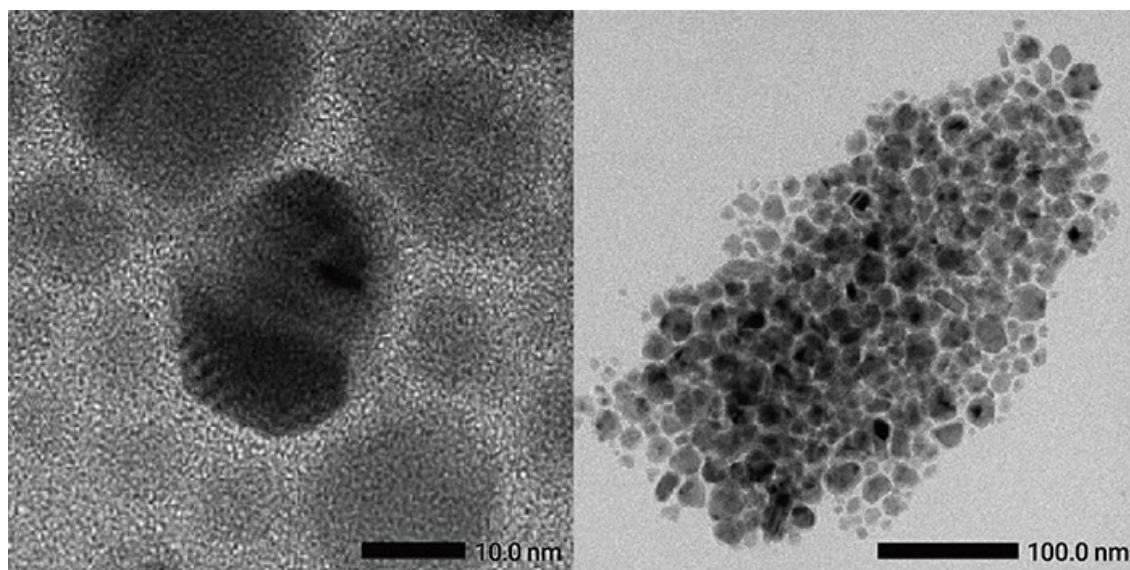
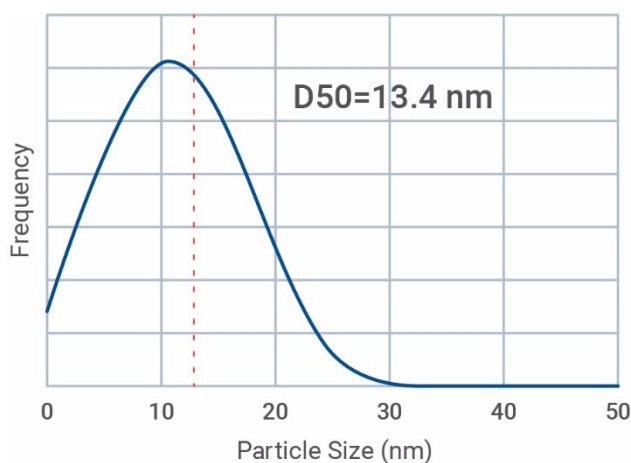


## Elephantech Launches World's Smallest-Class Copper Nanofiller

Japanese deep-tech startup Elephantech has launched its cutting-edge 15 nm class copper nanofiller – the smallest class available globally. This breakthrough makes Elephantech one of the first companies in the world to provide such advanced material for commercial use.



TEM image of Elephantech's copper nanofiller



Particle size distribution measurement result

Synthesized using Elephantech's proprietary technology developed over years of R&D, the newly released copper nanofiller consists of ultra-fine, uniformly produced particles averaging 15 nm in size. It exhibits exceptional dispersion stability for over 6 months. In addition to storage stability, the material also enables simplification of process by allowing low-temperature wet reduction at 60°C.

## Specifications (Copper nanofiller in semi-solid state)

Average copper nanoparticle diameter	15 nm
Viscosity	100 - 1,000 Pa · s (25 °C)
Specific gravity	3.2 - 3.5 g/cm <sup>3</sup>
Solid content	55 - 85 wt%
Supply form	Provided in glycol ether solvents, adaptable to various other solvents.(Suitable as base material for inks and pastes)

Supported by these specifications, the copper nanofiller offers excellent features, including high electrical conductivity, low resistivity, and thermal conductivity. Its flexibility across supply formats-from inks to pastes-enables a wide range of applications, such as:



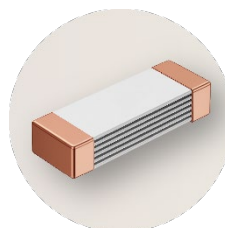
PCB wiring\*



Solar cell collecting electrodes



Bonding material  
for power semiconductors



MLCC electrodes



Sensors /Antennas / EMI  
shielding

\*This application is part of Elephantech's SustainaCircuits™ technology.

Upon its debut, Elephantech has received significant inquiries and intentions about adopting this best-in-class material in their products and solutions. By elevating the performance standards in its category, the innovative copper nanofiller is poised to help more manufacturers unlock new potential.

Building on its extensive experience in printed circuit board (PCB) development and manufacturing solutions, Elephantech is now expanding the value of its nano-materials portfolio while maintaining its focus on the PCB sector. With a strong foundation in science innovation and a longstanding commitment to sustainability, the company continues to drive momentum to accelerate transformation across the electronics industry.

## Inquiries

Elephantech Inc., Business Development Unit, [bd@elephantech.co.jp](mailto:bd@elephantech.co.jp)

## Download

<https://elephantech.com/en/download/>

Elephantech\_Cu Nano Filler\_Brochure

## Company Overview

Name	Elephantech Inc.
Establishment	January 2014
Headquarter	4-3-8 Hatchobori, Chuo-ku, Tokyo 104-0032, Japan
Representative	Shinya Shimizu, Representative Director & CEO
Business Description	Development of printed electronics manufacturing technology and provision of related services
URL	<a href="https://www.elephantech.com/en/">https://www.elephantech.com/en/</a>