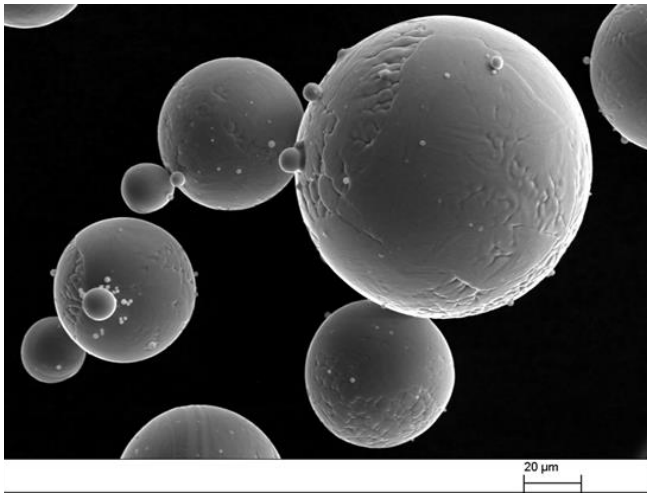


# CHARACTERIZATION OF ADDITIVE MANUFACTURED MATERIAL



Additive Manufacturing (AM) is the fabrication of a 3D object in layers, typically using powder metal consolidated with a heat source or polymer binder. The technology provides expanded manufacturing flexibility but comes with unique processing challenges.

Successful use of AM requires an understanding of the powder metal materials & processing involved and the outcomes produced. Lucideon can help AM users who have limited AM experience or metallurgical support achieve their processing goals.

Lucideon offers AM users a range of comprehensive support services, including analysis of powder materials, metallurgical evaluation of AM product, recommendations for process improvement, and failure analysis.

## POWDER METAL CHARACTERIZATION

- Particle Size Distribution (PSD)
- Particle Flow Behavior
- Particle Morphology/Microstructure/ Porosity Level

- Chemistry

## ADDITIVE MANUFACTURED COMPONENT EVALUATION

- Surface Characterization (Scanning Electron Microscopy)
- Microstructural Analysis
- Density Measurement
- Pore Size (Open Scaffold Structures)
- Chemistry

## ADDITIVE MANUFACTURING PROCESS IMPROVEMENT

- Failure Analysis
- Post-Build Processing
- Powder Recycling
- Design of Experiments for Process Optimization

Our experts will provide customized testing to ensure that your products are not only fit for purpose, but also perform to their optimum ability. Lucideon can help you to develop the next generation of products using Additive Manufacturing.

## RELATED SERVICES

Lucideon offers a complete suite of material analysis techniques, including advanced surface analysis, 3D surface profiling, electron microprobe analysis, microstructural characterization, chemical composition, thermal analyses, mechanical and electrical testing.