ThermoFisher SCIENTIFIC

Thermo Fisher Scientific

March NAATBatt

The world leader in serving science

Our Mission is our purpose:

To enable our customers to make the world healthier, cleaner and safer

Healthier

We make a positive impact on human health by providing our customers with advanced technologies and expertise to deliver breakthrough medicines and diagnostics that improve lives worldwide. Our customers rely on us to help them achieve the impossible.

Cleaner

We empower our customers with the tools to understand and address climate change, develop greener technologies and to help ensure the quality of air and water that sustains all life. As their partner, we are working with our customers to preserve our planet for future generations.

Safer

From products that detect contamination in food, to instruments that help solve crimes and identify potential threats, we provide the solutions that enable our customers to protect our communities. Together, we are determined to create a safer world.

Expertise you can rely on

$1.3B
Invested in R&D

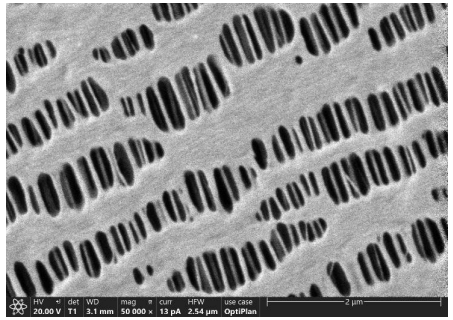
7,000+
R&D scientists/ engineers

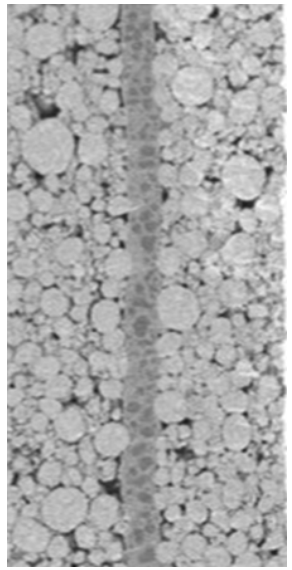
120,000+
Colleagues

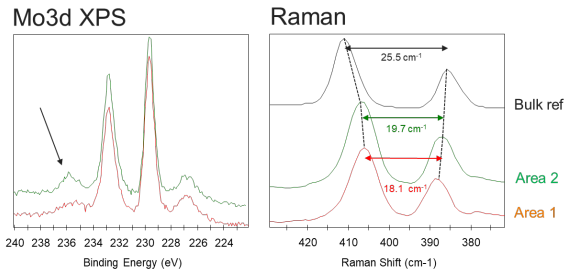
$40B+
In revenue

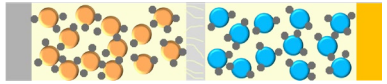
We partner globally to deliver advanced, integrated solutions from the research laboratory to the battery production line that ensure material quality and accelerate improvements in battery production efficiency.

Advance battery analytical tools for R&D









Surface and chemical characterization

- Visual detection and define what is happening at the surface of anode and cathode materials

Customized workflows

- Process designed for specific battery needs

Handling challenges

- Sample prep to keep your battery air and water free

Next generation of batteries

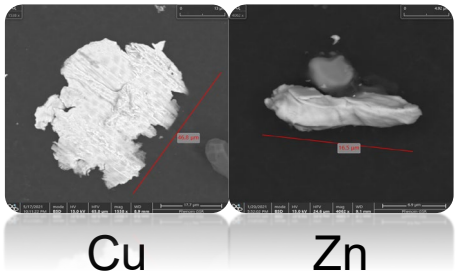
- Workflows for solid state / dry cathode / new chemistry

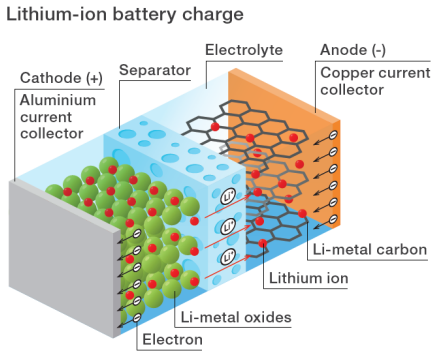
Scale up

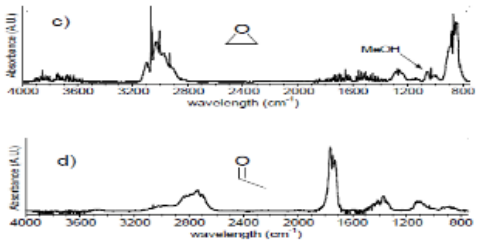
- Equipment to ensure reliable and consistent R&D process and scale up

Analytical tools and processes designed around how you work

Process quality assurance







Incoming raw materials
- Li salts, carbon anode, NMC powders, metals, and plastics

Contaminant detection
- Elemental detection of contaminants

Cathode inspection
- 100% electrode weight and defect detection

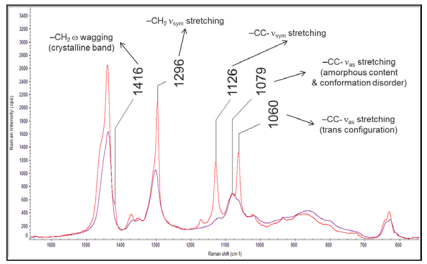
Morphology characterization
- Evaluate particle shape size and aspect ratio

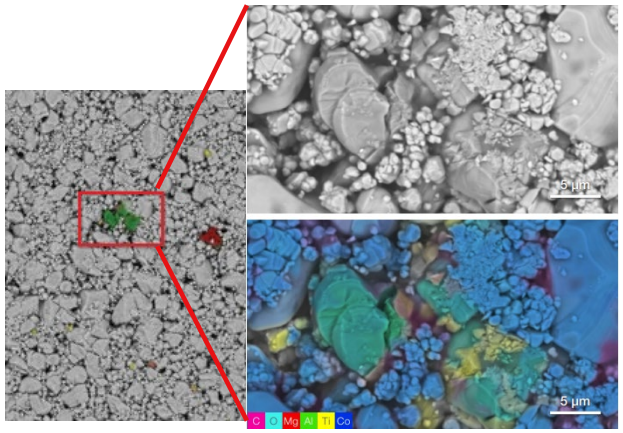
Automated analysis
- Software to automate and review samples

Identifying and containing problems at the source

Reliable failure analysis

Swollen Lithium Pouch Battery





Identification of chemical species

- Locate and identify failure in cells

Off gas analysis

- Chemical identification of gases from thermal runaway

Air and water free analysis

- Reliable analysis without air and water contamination

Visualization

- Tangible proof and identification of failure

Automated analysis

- Software to automate and review samples

Quantified data to identify the root cause of failures

Partnership

Fostering partnerships to advance analytical tools and battery technology

- Collaborating with partners drives advancements in next-generation technology and ensures that analytical tools meet emerging industry needs.
- Partnerships facilitate training and education of the future workforce, enabling them to effectively characterize and assess battery quality.
- Joint efforts allow for the identification and bridging of analytical gaps necessary for the successful delivery of innovative battery technologies.
- Working alongside industry and academic partners accelerates the development and validation of new analytical methodologies that support technological innovation.