As developing technologies continue to push the boundaries and expectations of energy storage, demand for specialized battery chemistries is growing rapidly. With a team of chemists and technical experts, we work closely with our customers to develop, customize, and produce solid-state electrolyte precursor materials to support a range of battery applications, including batteries for electric vehicles.

At Materion, we take pride in our ability to partner and collaborate closely with our customers while offering a wide range of technical capabilities to develop custom compositions to meet their specifications.

We are experts in:
- Customized manufacturing: synthesis, processing, and analysis
- Producing challenging, custom materials
- Particle size, purity, and packaging to meet stringent requirements
- Air- and moisture-sensitive material manufacturing and processing
- Scaling processes from R&D samples to full production quantities

### Chemical and Physical Characterization

- X-ray diffraction
- ICP-OES/ICP-MS/AA/GDMS spectrosopies
- O, N, C, S combustion analysis
- BET surface area
- Ion-selective electrode
- Laser diffraction particle size analysis
- TGA/DTA
- Wet chemical analysis

More than a supplier, we are your R&D partner.
- Customized materials and particle size
- Batch-to-batch consistency
- Highly reliable products
- Specialized packaging
- Manufactured to the most stringent material requirements
Material Offerings*

In addition to the following materials, Materion is in the process of producing additional chemistries. More compositions are available upon request.

High-Purity Metals
- Ag, Be, Cu, Co, Fe, Li, etc.

Oxides
- Silver Oxide, Ag₂O
- Aluminum Oxide gamma, Al₂O₃-g
- Lanthanum Oxide, La₂O₃
- Lanthanum Carbonate, La₂(ΚΟ₃)₃
- Lithium Oxide, Li₂O
- Lithium Carbonate, Li₂CO₃
- Lithium Cobalt Oxide, LiCoO₂
- Lithium Lanthanum Zirconium Oxide, LLZO
- Lithium Manganese Oxide, LiMn₂O₄
- Lithium Phosphate, Li₃PO₄
- Manganese Oxide, MnO₂
- Vanadium Oxide, V₂O₅
- Zirconium Oxide, ZrO₂

Fluorides
- Aluminum Fluoride, AlF₃
- Copper Fluoride, CuF₂
- Iron Fluoride, FeF₂ and FeF₃
- Lithium Fluoride, LiF
- Nickel Fluoride, NiF₂

Sulfides
- Cobalt Sulfide, CoS₂
- Copper Sulfide, CuS and Cu₂S
- Iron Sulfide, FeS₂
- Lithium Sulfide, Li₂S
- Lithium Sulfide Boron Sulfide, LiS₂ B₂S₃
- Lithium Sulfide Phosphorus Sulfide, LiS₂ P₂S₅
- Nickel Sulfide, NiS₂
- Silicon Sulfide, SiS₂
- Titanium Sulfide, TiS₂

*Not limited to the listed compositions

Markets & Applications
- Solid-state precursor materials for electric vehicles
- Medical applications
- Thermal batteries for military and defense
- Large-capacity storage

For more information, connect with our team today.