

## **From Thermophysical Properties to Innovations in Advanced Manufacturing**

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Advances in thermodynamic research continue to contribute to the rapid acceleration in the pace of discovery and design of new materials. These advances in materials science are driving the development of new products, services, and production systems. Through work on issues ranging from alternative refrigerants to replacement solders to automotive light weighting NIST is working to ensure that these breakthroughs in research are rapidly brought into new manufacturing processes and into new markets. What is perhaps not as well understood is that the rapid pace of discovery is also forcing changes to the research and standards programs at NIST. Through new proposals like the Materials Genome Initiative NIST is taking the steps that will reshape our approach to supporting materials discovery, and advanced manufacturing which uses those materials.