NC STATE UNIVERSITY
Industry Extension Services

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NC State University Minerals Research Laboratory

Turning Mineral Resources into Real-World Solutions Since 1946

For 80 years, the NC State University Minerals Research Laboratory (MRL) has helped transform mineral resources into economic opportunity through applied research, testing, and process development. Located in Asheville, North Carolina, and managed by NC State University Industry Extension Services, MRL partners with industry to solve complex mineral processing challenges, reduce operational risk, and accelerate innovation.

As one of the nation's premier mineral processing laboratories—and home to the only university-based mineral processing pilot plant in the United States—MRL provides independent, science-based solutions that help companies optimize operations and develop high-value mineral products.

Our Expertise

Mineral Processing & Beneficiation

Evaluate and optimize mineral separation processes to improve recovery, product quality, and operational efficiency using advanced laboratory testing and analysis.

Pilot Plant Testing

Validate processing flowsheets and equipment performance on a larger scale before capital investment, reducing technical and financial risk while producing specification-grade materials for customer qualification.

We Can Help.

- Advanced Manufacturing & Technology Deployment
- Business Growth, Innovation & Marketing
- Business & Operational Assessments
- Cybersecurity Strategies
- Defense Industry Initiatives
- Environment, Energy & Sustainability Services
- Evaluation Services & Resource Development
- Industrial & Systems Engineering
- Instructional Design
- Leadership & Organizational Development
- Management Systems & Quality
- Process Optimization & LEAN
- Project Management
- Southeastern OSHA Training Institute Education Center
- Supply Chain & Supplier Matching
- Workplace Health & Safety

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Critical Minerals Research

Advance the recovery and processing of critical minerals, including rare earth elements, that support domestic manufacturing, energy technologies, and national supply chain resilience.

Technical Consulting

Provide independent expertise through process audits, feasibility studies, plant assessments, and customized research for mining and mineral processing operations.

Chemical & Mineralogical Analysis

Deliver accurate material characterization and quality verification through advanced analytical capabilities and a network of specialized laboratory partners.

Why Partner with Minerals Research Lab?

- Independent, unbiased technical expertise
- 80 years of applied mineral processing experience
- The nation's only university-based mineral processing pilot plant
- Customized research and process development
- Reduced technical and investment risk
- Improved recovery, efficiency, and product quality
- Support for critical minerals and advanced materials
- Backed by NC State University and Industry Extension Services

Supporting Industry. Advancing Innovation. Strengthening Supply Chains.

From industrial minerals to today's growing demand for critical minerals and rare earth elements, MRL helps companies develop practical, scalable solutions that improve competitiveness while supporting responsible resource development.

By combining scientific expertise with real-world industry experience, the Minerals Research Laboratory continues to strengthen North Carolina's mining sector, support U.S. manufacturing, and drive innovation across the mineral processing industry.

Visit the Minerals Research Lab website:

mrl.ies.ncsu.edu/

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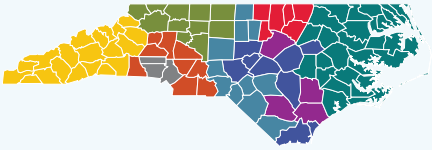
We Can Help. **919.515.2358 | iesservices@ncsu.edu**

NC State University Industry Extension Services, established in 1955 as the outreach team for the NC State University College of Engineering, provides resources, tools and customized training programs to help businesses survive, thrive and grow.

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