



# Evaluation of Thermal Protection Materials for Hypersonic Applications

ENGINEERING



Southern Research conducts ground tests and post-test analysis on thermal protection materials. The ground tests are carried out in government supported arc-heater test facilities using hardware and instrumentation developed and fabricated by Southern Research.

## ■ **Capabilities**

- Plan and field tests
- In-depth temperature measurements
- Dwell calorimeters
- Passive or cooled leading edges and nosetips
- Special instrumentation and hardware
- Thermal and mass loss modeling

## ■ **Applications**

- Hypersonic vehicles
- Interceptors
- Re-entry vehicles
- Experimental data for analytical models and code
- Validation



PLEASE CONTACT  
Timothy P. Ferguson / Southern Research  
tferguson@southernresearch.org / (205) 581-2893

[www.SouthernResearch.org](http://www.SouthernResearch.org)



#### ABOUT SOUTHERN RESEARCH

Founded in 1941 in Birmingham, Alabama, Southern Research is a scientific and engineering research organization that conducts preclinical drug discovery and development, advanced engineering research in materials and systems development, and energy and environmental technologies research. SR supports clients and partners in the pharmaceutical, biotechnology, defense, aerospace, environmental, and energy industries.

We pursue entrepreneurial and collaborative initiatives to develop and maintain a pipeline of intellectual property and innovative technologies that contribute to the growth of the organization and positively impact real world problems.

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