WEBER STATE UNIVERSITY

Engineering, Applied Science & Technology

MARS

MILLER ADVANCED RESEARCH & SOLUTIONS

The MARS Center is the primer hypersonic materials manufacturing lab in the United States.



Our Focus:

- ***National Security:*** Developing scalable and affordable manufacturing processes for some of the hardest to fabricate materials necessary for our national security. These include materials for nuclear energy, reentry vehicles, missile systems, hypersonic aircraft, and rocket motors.
- ***Student Engagement and Workforce Development:*** The MARS Center supports dozens of internships every year providing high-quality project work that supplements classroom work providing engaging and relevant projects important for our industry and government partners.
- ***Technology Transition:*** The MARS center accelerates technology development by focusing on both technology maturation and manufacturing capability simultaneously. Manufacturing technologies and expertise are then transitioned to industry and government partners.

Our Applications:

- Heat shields
- Apertures/windows for EM radiation
- Components for propulsion (rocket motors, scramjet, ramjet, rotating detonation engines)
- Thermal protection systems (TPS)



Our Advanced Testing Capabilities:

- Mechanical and thermal characterization up to 1500°C
- Hybrid solid rocket motor testing
- Mach 8 wind tunnel (in progress)

Visit with us today at https://www.weber.edu/mars

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