We revolutionize the design, testing and manufacturing of materials and systems for extreme environments

Ultra-high temperatures  Ultra-low temperatures
Acidic conditions  Extreme pressures
Radiation  Extreme deformations

Innovating across disciplines and industries
We develop advanced technologies for aerospace, energy, biomedical, nuclear, environmental, defense and advanced manufacturing applications through:

**MATERIALS DESIGN AND COMPUTATION**

**CHARACTERIZATION AND DIAGNOSIS**

**MANUFACTURING AND INTEGRATION**

**TALENT DEVELOPMENT**

**SYNTHESIS AND FABRICATION**

**ECONOMIC EVALUATION**

Collaborate with us.

Creating 21st Century Technologists
UC San Diego is collaborating with the Baja California Center for Nanoscience and Nanotechnology (CNYN-UNAM) to develop 21st century technologists with the talent and cultural fluency needed to forge global collaborations that leverage the CaliBaja border region’s industrial strengths.
“At UC San Diego, we have unique expertise to design, control and characterize materials and systems for extreme environment applications like never before. We create entirely new classes of materials and devices with extraordinary tolerances to many real-world environments. Our work benefits industries focused on defense, pharmaceuticals, aerospace, energy, advanced manufacturing and others.”

— Olivia A. Graeve, PhD, Director, CaliBaja Center for Resilient Materials & Systems

Membership Opportunities

- Access multidisciplinary materials and systems innovations through our semi-annual member meetings, workshops, short courses, visiting scholar opportunities and one-on-one collaborations.
- Access the most promising and innovative globally aware students. Connect with emerging technical talent.
- Cross-border collaborations to develop of new materials and systems for extreme environments.
- Join our Advisory Board and access fast-track collaborative agreements.

Expertise

Materials and devices for extreme environments
We develop and manufacture new materials and devices principally for the aerospace, nuclear, and biomedical industries, including advanced materials for jet engines, next-generation nuclear reactors, and biomedical devices.

Global scientists and engineers
We produce global scientists and engineers who can connect and communicate across borders. These professionals not only develop new technologies, but are also socially engaged and have the necessary cultural understanding to promote economic growth in the CaliBaja region.

Environmental technologies and systems
We develop new technologies that can provide information, statistics and trends on the environment and climate of CaliBaja.

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