Research Interest:
• Processing of ceramics and ceramic composites for high temperature applications in harsh environments;
• Mechanical and thermal properties of ceramics and ceramic composites at high temperatures; Anelastic phenomena in ceramics.
• Materials: MAX phases, solid-state ionics and geopolymers.

Research Capabilities:
SPS, HIP, Tape Casting, Cold pressing, Powder mixing, Environmental/Vacuum, furnaces (up to 1200-1700°C), MTS high temperature testing machine (up to 1700°C), resonant ultrasound spectroscopy (up to 1300°C), four creep testing frames (up to 1400°C), etc.

CAREER: Effects of Anelastic Relaxation of Defect Complexes on the Mechanical Behavior of Oxide Ceramics (DMR- 1057155)

Elastic /Dielectric Dipole:

\[ R'_M + V''_o = (R'_M V'_o) \]

High temperature set-up for Resonant Ultrasound Spectroscopy developed and built at Texas A&M University.