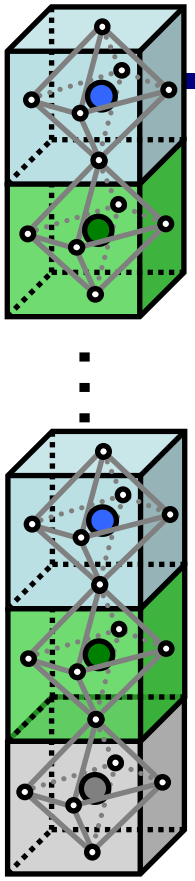
Multifunctional Heterostructures of Perovskite Structured Materials



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Research Program

- *Perovskite structured oxides* possess a diverse range of functional properties and display unexpected physical phenomena at *surfaces and interfaces*.
- *Laser-assisted growth* to control interfacial properties
- *State-of-the-art characterization techniques* to determine the structural, chemical, magnetic, and electrical properties.

Facilities

- Pulsed laser deposition (PLD) system with RHEED for *in-situ* characterization
- Bruker D8 Discover 4-circle diffractometer
- SQUID magnetometer (Physics)

Collaborators:

- At UC Davis:
  - Nigel Browning: TEM/STEM/EELS
  - Sangtae Kim: AC impedance spectrometry
  - Alexandra Navrotsky: Thermochemistry
- Stanford Synchrotron Radiation Lightsource: Structural characterization
- Advanced Light Source (LBNL): Soft x-ray magnetic spectroscopy and imaging
- Center for Nanophase Materials Science (ORNL): Nanopatterning, PLD