AMES LABORATORY
United States Department of Energy

AMES LABORATORY

Overview and Opportunities

Cynthia J. Jenks
Assistant Director for Scientific Planning
cjenks@ameslab.gov

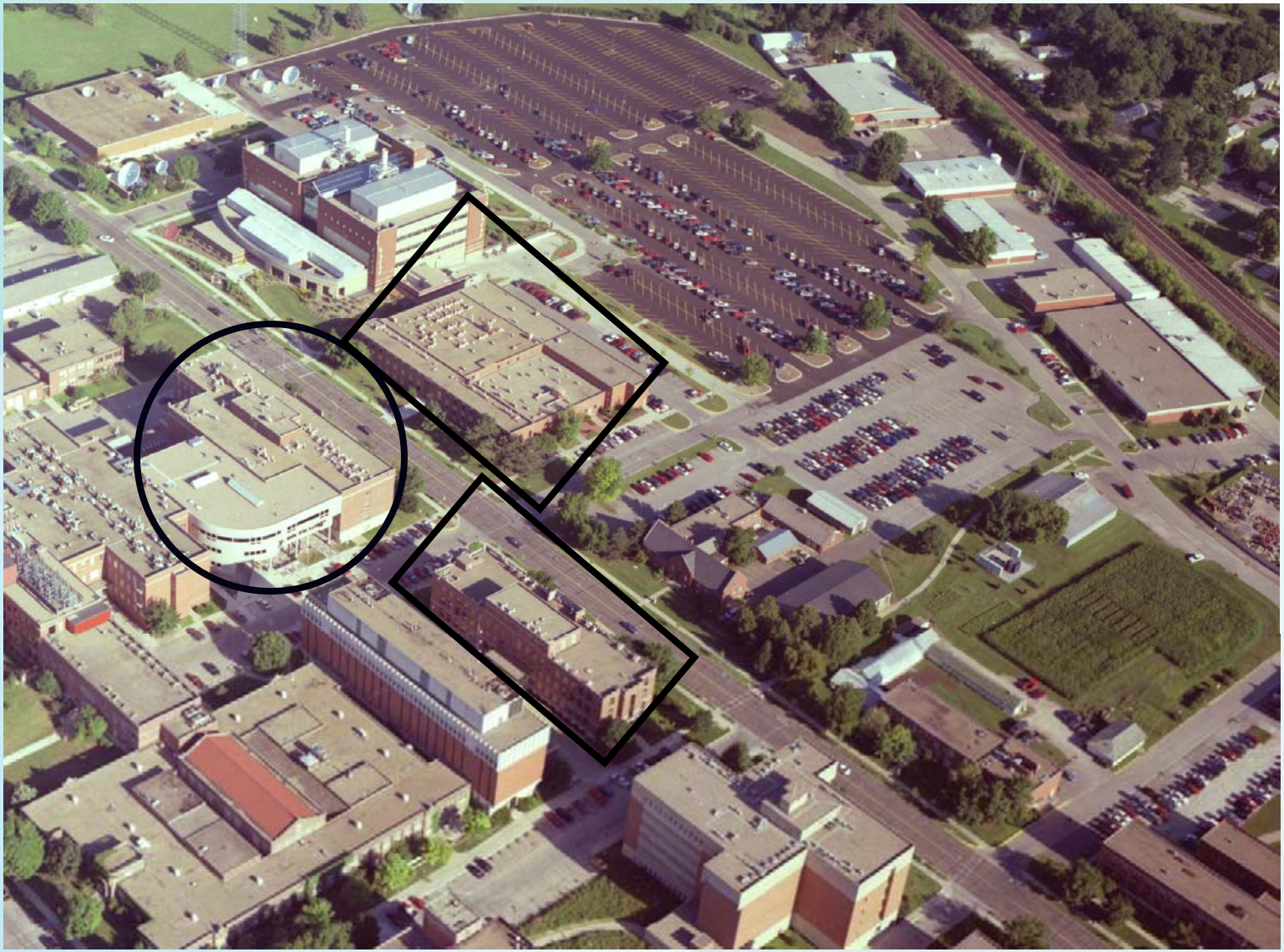
IOWA STATE UNIVERSITY
OF SCIENCE AND TECHNOLOGY

Ames Laboratory at a Glance

Location:	Ames, IA
Type:	Single-program laboratory
Contract Operator:	Iowa State University of Science and Technology (ISU)
Website:	http://www.ameslab.gov/

People:

- 350 Full-time equivalent employees
- 250 ISU grad/undergrad students, student employees, and associates
- 200 Facility users, visiting scientists, and associates

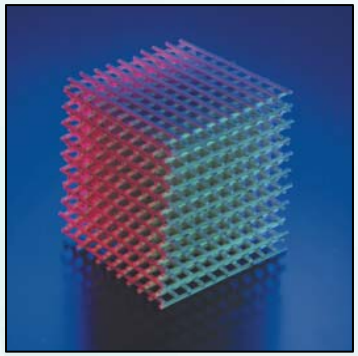


VISION

Ames Laboratory will sustain world-leading research in emerging areas of materials science, both within the Lab and in collaboration with others. It will create high-performing interdisciplinary project teams, supported by an array of unique instruments and capabilities, each developed or modified to bring specific capabilities to bear on the research at hand.

Materials Research

- Novel optical materials
- Materials design, preparation & synthesis
- Magnetic materials & correlated electron systems
- Complex intermetallic compounds
- Catalytic materials



Photonic Crystals

Magnetic Cancer Cells

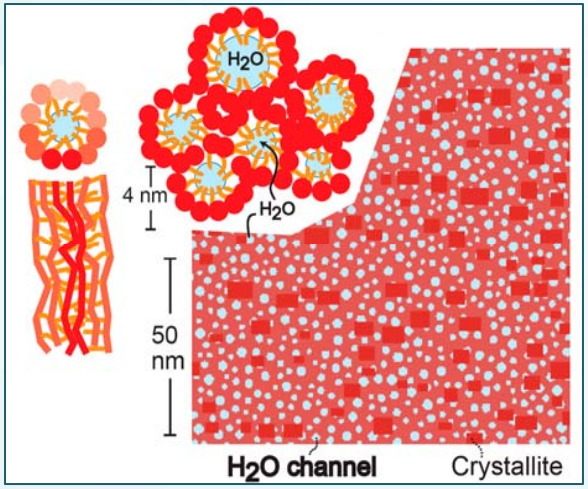
Plasma Arc Melting of a Refractory Metal

Facilitated by

- Theory integrated with experiment
- Scalable Computing Lab
- Interdisciplinary teamwork
- Materials Preparation Center

Analytical Techniques & Instrument Development

- Solid-state NMR
- Single-cell analysis
- Single molecule analysis
- Electrochemically modulated liquid chromatography
- Surface enhanced Raman scattering
- Mass spectrometer techniques and instrument design

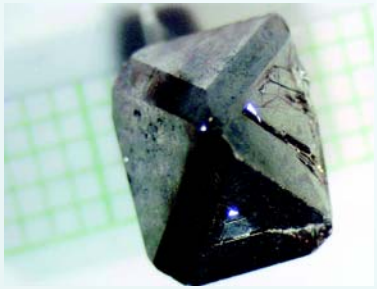


Solid-state NMR:

- Adsorbates on catalysts
- Organic-inorganic interfaces in nanocomposites
- Nanoscale structures of plant cell walls
- Magnetic molecule spin dynamics

Partnership Opportunities

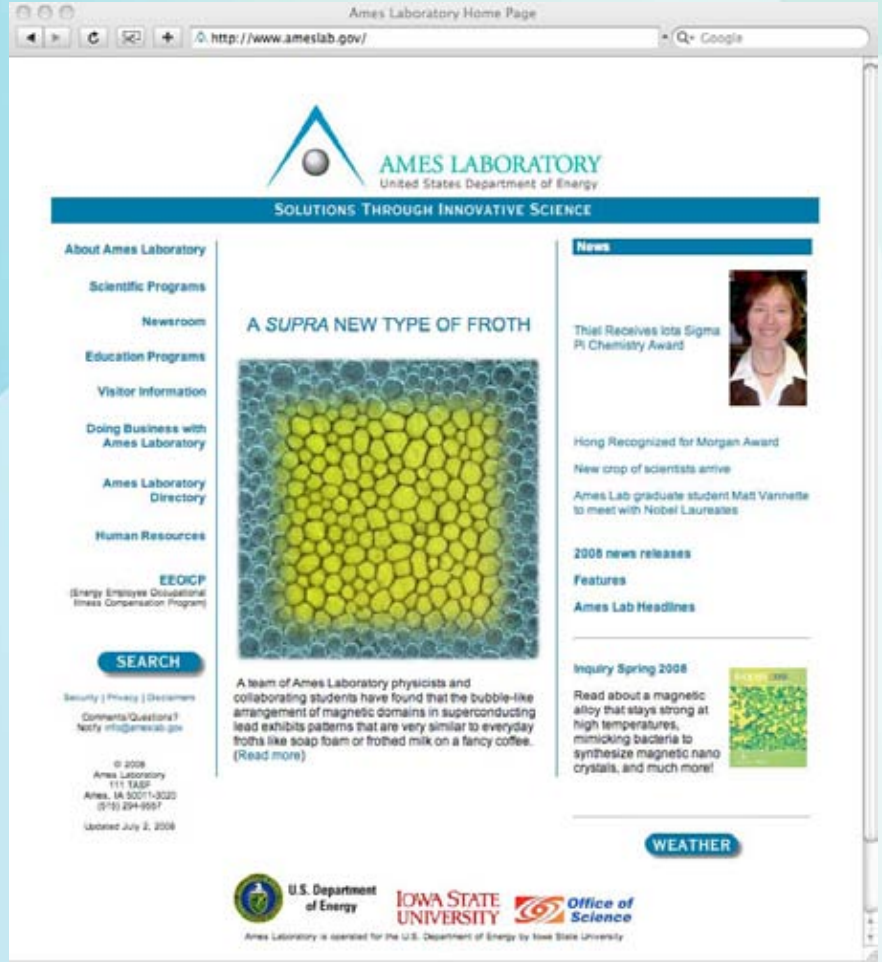
- Condensed matter theory, directed to the invention and utilization of novel materials
- Rare earths.
- Separation science.



Single crystal of YbT_2Zn_{20}

- Design and fabrication of analytical instruments and devices.
- Materials characterization using solid state NMR, solid-X-ray and neutron scattering
- Development and application of scalable and effective computational codes.

Visit our Website



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