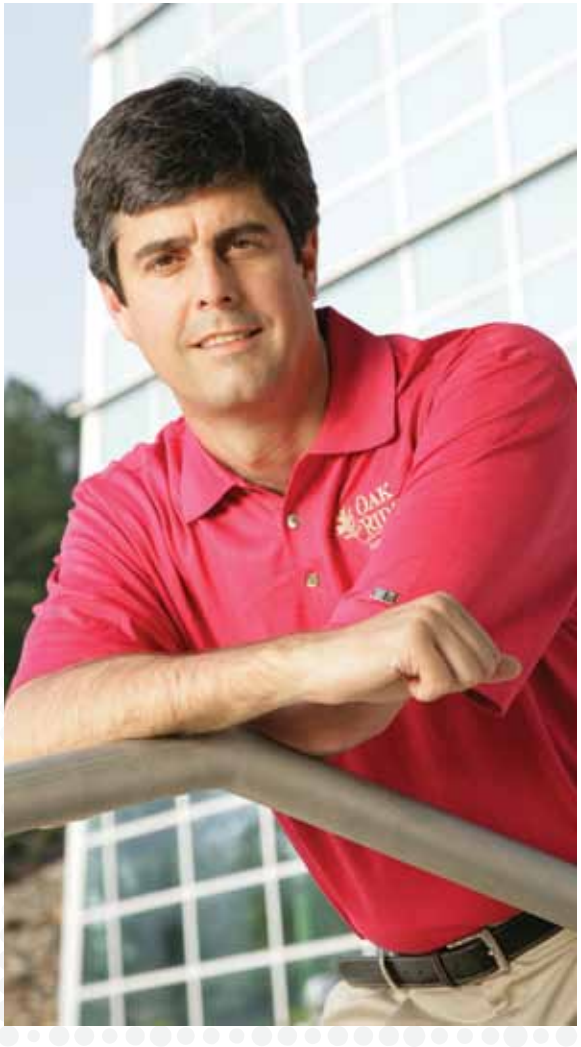
OAK RIDGE NATIONAL LABORATORY

MANAGED BY UT-BATTELLE FOR THE DEPARTMENT OF ENERGY

CHANGING the WORLD ONE DISCOVERY at a TIME

FOREWORD

SOLVING THE "BIG PROBLEMS"



Oak Ridge National Laboratory's future could not be more exciting. Not since the days of the Manhattan Project has the laboratory witnessed anything approaching the scale of what is taking place today in Oak Ridge. With more than $2 billion in new facilities completed since 2003, ORNL has one of the world's most modern campuses for the next generation of scientific discovery. The $1.4 billion Spallation Neutron Source, located adjacent to the new Center for Nanophase Materials Sciences, combines with one of the nation's largest research reactors to continue our reputation as a leader in the study of materials. ORNL's Center for Computational Sciences houses the world's most powerful open science supercomputer capable of a mind-boggling 1,600 trillion calculations per second. Each of these facilities works closely with ORNL's new Bioenergy Science Center, funded by the Department of Energy to develop a new form of cellulosic ethanol that will not require land currently needed for the production of food.

ORNL researchers are applying this unique collection of scientific facilities to some of the most important scientific challenges of our time. Working across scientific disciplines, we are developing breakthrough technologies that will enable us to provide alternative sources of carbon-free energy while we reduce the amount of energy we use in our cars, homes and businesses. Drawing on our scientific expertise and high-performance computing capabilities, ORNL provided support for the Intergovernmental Panel on Climate Change that received a 2008 Nobel Prize. As the Department of Energy's largest multi-program laboratory, our outreach literally spans the globe, from helping utilities find ways of reprocessing spent nuclear fuel here in Tennessee to aiding the cause of nuclear non-proliferation in nation-states of the former Soviet Union.

Having modernized the laboratory and recruited some of the world's top scientific talent, our goal is to produce the kind of science that will literally transform our future. I hope this brochure conveys a sense of the enthusiasm we are experiencing at Oak Ridge National Laboratory. On behalf of the 4,400 staff at ORNL, we are excited about the chance to be part of solving America's "big problems."

ORNL...

...is the Department of Energy's largest science and energy laboratory, managed since April 2000 by a partnership of the University of Tennessee and Battelle.

...has 4,400 staff from more than 80 countries, 3,000 guest researchers, 12 user facilities and a budget of approximately $1.4 billion.

...supports the Department of Energy's mission through six major scientific competencies in energy, neutron sciences, high-performance computing, complex biological systems, materials research and national security.

...is located in Eastern Tennessee on the Oak Ridge Reservation in Anderson and Roane counties. The laboratory is near Interstates 40 and 75 and is 20 miles from Knoxville's McGhee-Tyson Airport.

...welcomes visitors to the laboratory. Because of security requirements, visits must be arranged ahead of time. Contact ORNL Visitor Services (865) 574-7199, or email x10visit@ornl.gov, for information about how to arrange a visit to ORNL.

...provides additional information at *www.ornl.gov.*

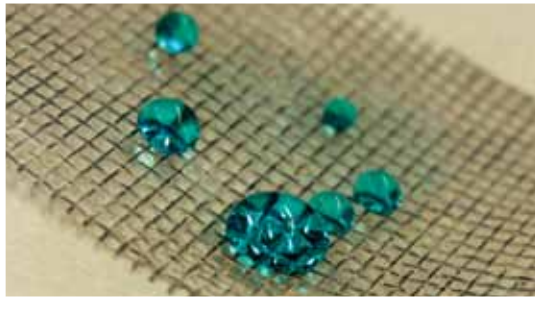
ORNL won eight R&D 100 awards in 2009 and six in 2007 and 2008.

Fire-Resistive Phase Change Material (2009)

An organic fire-resistive phase change material, when incorporated into conventional insulation, can improve the heating and cooling efficiency in buildings.

NanoSH™ Superhydrophobic Technology (2008)

The NanoSH™ technology makes coatings completely water repellant by forming a microscopic air gap between the treated surface and water.



The idea is a simple one. WORLD-CLASS RESEARCHERS are attracted to WORLD-CLASS FACILITIES

At Oak Ridge, new construction financed by a creative combination of federal, state and private sources has transformed ORNL into a modern laboratory that will support the next generation of great science.

Spallation Neutron Source: The world's most powerful accelerator-based source of neutrons for research is opening new frontiers in the structure and dynamics of materials at the molecular level.

Advanced Materials Characterization Laboratory: Housing the world's first aberration-corrected scanning transmission electron microscope and other sensitive microcharacterization instruments, the AMCL supports the Laboratory research related to the structure and spatial distribution of nanosized particles.

Joint Institute for Biological Sciences: Home to the new BioEnergy Science Center, one of three Department of Energy facilities dedicated to developing cost-effective and sustainable alternative fuels.

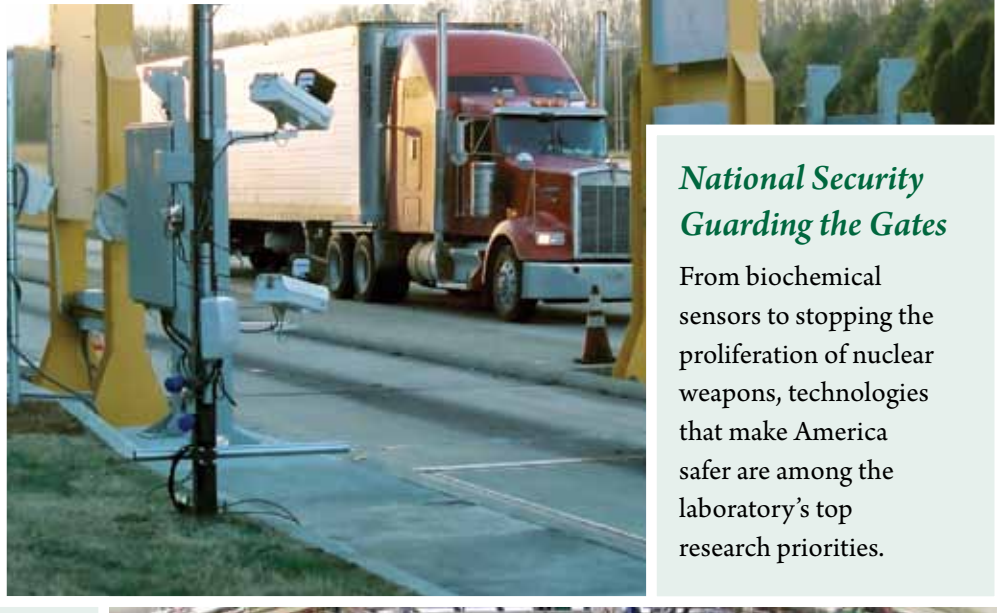
EVEREST: ORNL's Exploratory Visualization Environment for Research in Science and Technology provides a premier data analysis and visualization capability for understanding data from the world's most powerful open source computer.

6 SCIENTIFIC THEMES

Born of necessity. Inspired by our quest to know. We have always been called upon to address America's greatest scientific challenges.

Biological Systems Developing New Options

Whether converting biomass to fuel or understanding the impacts of climate change, biological research at ORNL is helping develop new options for energy, environmental protection, and human health.

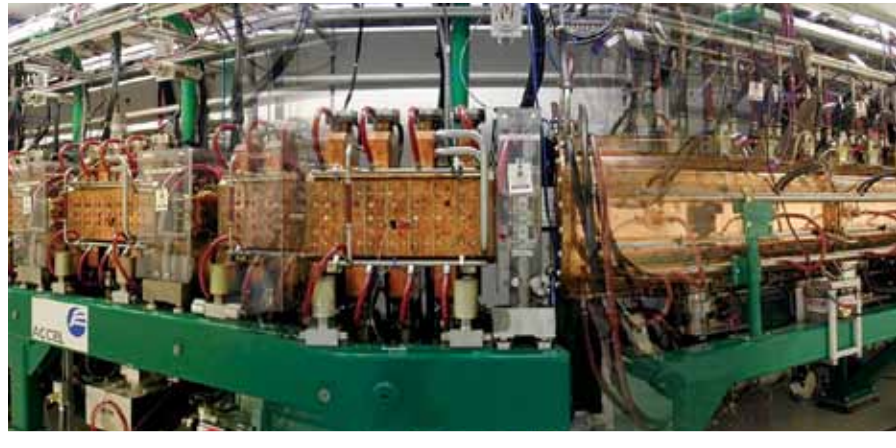


National Security Guarding the Gates

From biochemical sensors to stopping the proliferation of nuclear weapons, technologies that make America safer are among the laboratory's top research priorities.

Neutron Science Leading the World

The Spallation Neutron Source and the High Flux Isotope Reactor together make Oak Ridge the world's foremost center for neutron science.

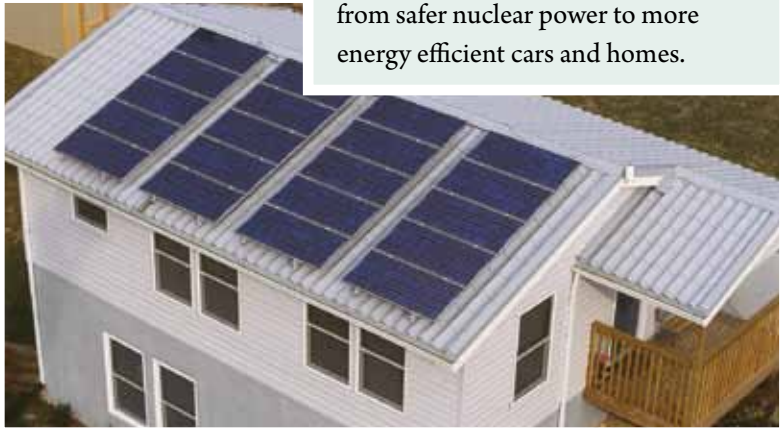


Advanced Materials Strengthening American Industry

With DOE's first Nanoscience Center; the world's most powerful electron microscope, and the High Temperature Materials Laboratory, Oak Ridge plays a critical role in American industrial competitiveness.

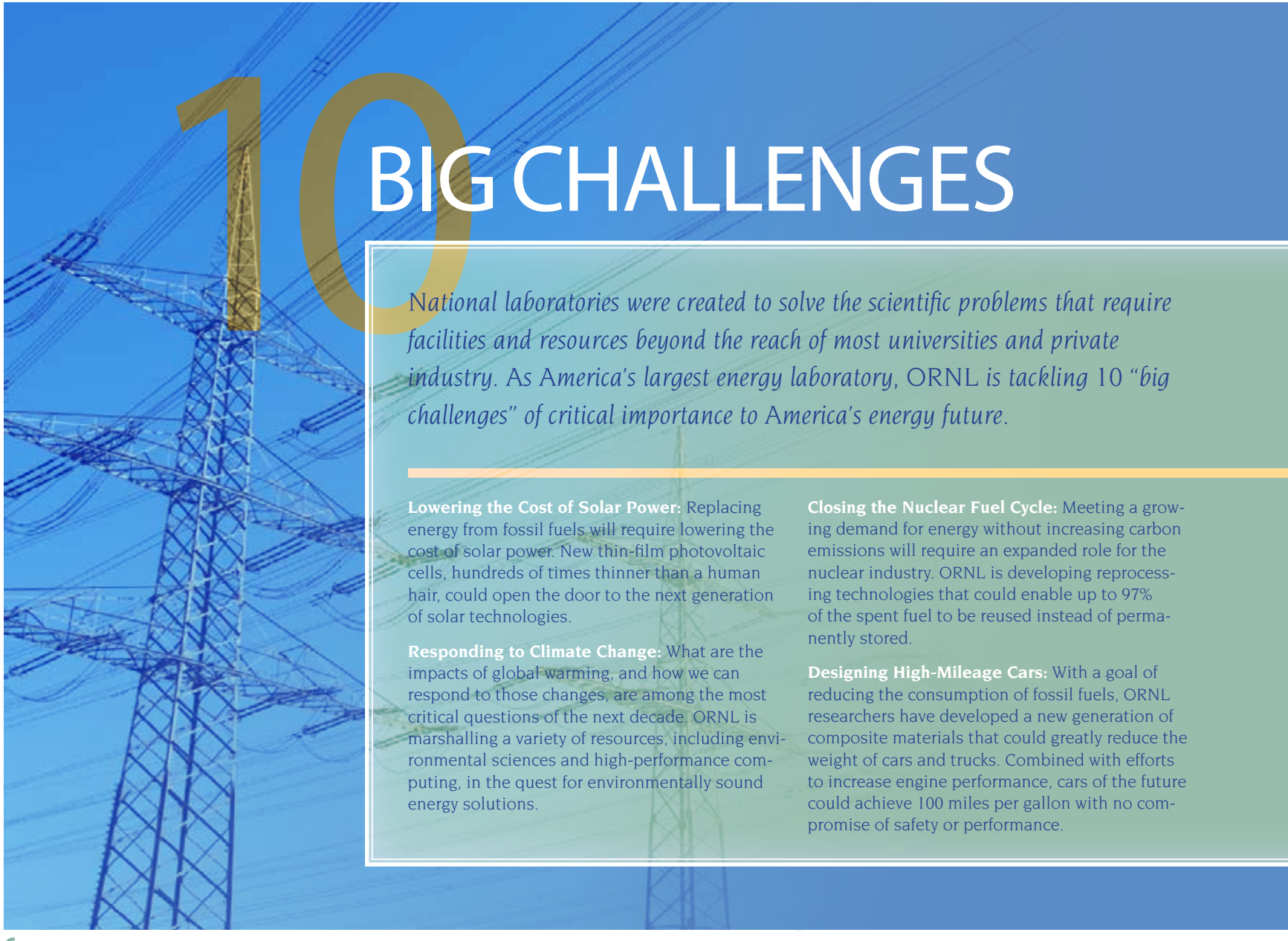
Energy Providing Energy Alternatives

Through increased production, improved transmission and reduced consumption, Oak Ridge is addressing our energy challenges on all fronts, from safer nuclear power to more energy efficient cars and homes.



High-Performance Computing Breaking Scientific Barriers

With unmatched capacity for open scientific research, Oak Ridge's Jaguar supercomputer has broken the "petaflop" barrier, or 1,000 trillion mathematical calculations per second, making it possible to model the most complex scientific problems.



10 BIG CHALLENGES

National laboratories were created to solve the scientific problems that require facilities and resources beyond the reach of most universities and private industry. As America's largest energy laboratory, ORNL is tackling 10 "big challenges" of critical importance to America's energy future.

Lowering the Cost of Solar Power: Replacing energy from fossil fuels will require lowering the cost of solar power. New thin-film photovoltaic cells, hundreds of times thinner than a human hair, could open the door to the next generation of solar technologies.

Responding to Climate Change: What are the impacts of global warming, and how we can respond to those changes, are among the most critical questions of the next decade. ORNL is marshalling a variety of resources, including environmental sciences and high-performance computing, in the quest for environmentally sound energy solutions.

Closing the Nuclear Fuel Cycle: Meeting a growing demand for energy without increasing carbon emissions will require an expanded role for the nuclear industry. ORNL is developing reprocessing technologies that could enable up to 97% of the spent fuel to be reused instead of permanently stored.

Designing High-Mileage Cars: With a goal of reducing the consumption of fossil fuels, ORNL researchers have developed a new generation of composite materials that could greatly reduce the weight of cars and trucks. Combined with efforts to increase engine performance, cars of the future could achieve 100 miles per gallon with no compromise of safety or performance.

Developing a New Generation of Ethanol: Many Americans seeking a substitute for gasoline prefer ethanol that is not made from valuable food supplies. ORNL's Bioenergy Science Center is developing new forms of cellulosic ethanol that can be grown on millions of acres of marginal land with little need for water or fertilizer.

Storing Alternative Energy: New ways of storing energy will be critical to efforts to reduce the consumption of fossil fuels. ORNL's expertise in advanced materials will play a leading role in developing a new generation of batteries that can store energy generated by solar panels, wind turbines and electric cars.

Reducing Energy Consumption: Reducing the energy consumption of homes, offices and factories is a major goal of America's energy policy. Working with the Tennessee Valley Authority, ORNL has constructed five Habitat for Humanity homes with an electric bill of only 40 cents per day. Researchers hope to develop a zero-energy home by 2012.

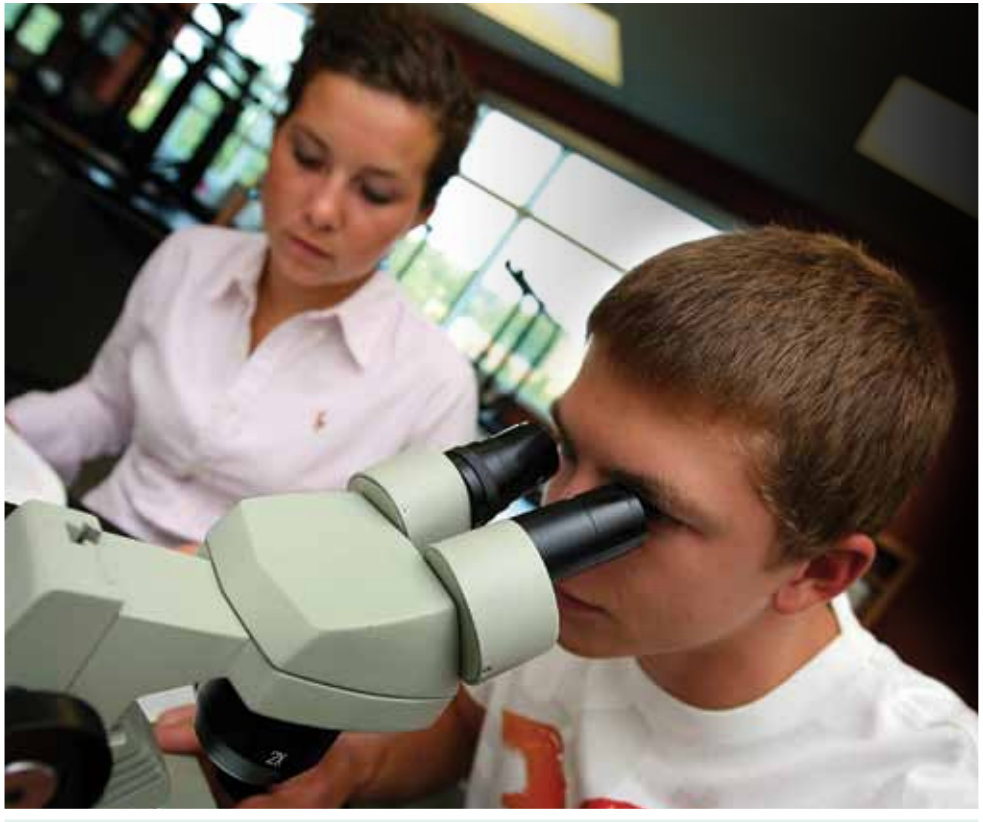
Finding an Inexhaustible Source of Energy: New research tools, including ORNL's supercomputers, are bringing the dream of fusion energy closer to reality. ORNL is leading the U.S. role in ITER, the international effort to build an experimental fusion reactor that could lead to an inexhaustible source of energy.

Modernizing the Electric Grid: ORNL is testing High Temperature Superconducting cables that can carry up to 140 times more electric current without losses. Superconducting cables will reduce the number of power outages and lessen the need for additional power plants.

Storing Carbon Emissions: One aspect of reducing the volume of carbon emissions into the air involves understanding the potential alternative of placing the carbon underground and the resulting impact on the ecosystem. ORNL research will help form the basis for assessing strategies for ocean and soil-based carbon sequestration.

COMMUNITY

Since 2000, UT-Battelle has provided more than $8 million in support of math and science education, economic development and corporate volunteerism in the greater Oak Ridge region.



Science Education

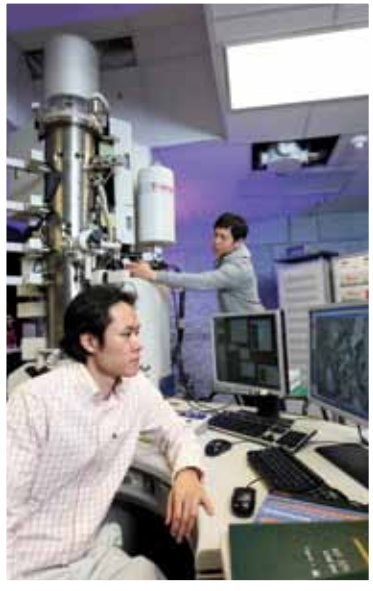
UT-Battelle is the premier supporter of science and education in East Tennessee, providing assistance and financial support for new high school science laboratories, math and science scholarships, and science competitions. UT-Battelle contributed $2 million for the renovation of Oak Ridge High School, the largest K-12 project in Tennessee history.

UNIVERSITY PARTNERS

With an eye toward developing the next generation of scientists and engineers, ORNL currently has over 200 active collaborative research relationships with universities worldwide and is always looking to develop and grow new relationships. Additionally, ORNL partners closely with major southeastern research universities whose activities and proximity allow close alignment with the ORNL mission to facilitate joint appointments, collaborative research, and graduate student programs.

Global Venture Challenge™

ORNL proudly hosts the Global Venture Challenge™ which began in 2007, under the name Nano Nexus, as an innovative endeavor offering students and businesses a unique opportunity to network with investors, top educators and leaders in industry along with experts in the research community who can help further their technologies. This annual event is designed to accelerate the discovery and development of innovative ideas along the commercialization continuum, with the ultimate goal of launching new entrepreneurial ventures.



Corporate Volunteerism

Working through Team UT-Battelle, ORNL employees donate thousands of hours to outreach projects in the Oak Ridge region. In addition to being East Tennessee's largest supporter of the United Way, UT-Battelle provides approximately $1 million annually to a variety of educational and civic initiatives.

United Way

VANDERBILT UNIVERSITY

Virginia Tech

ORAU

REAL SCIENCE

REAL LIFE

Favorable cost-of-living, outstanding schools, diverse employee population, outdoor activities and the cultural amenities of nearby Knoxville, provide the 4,400 staff at Oak Ridge National Laboratory a rich life beyond work. The Lab is less than a day's drive from ¾ of the country, and the 130 daily flights to or from Knoxville's McGee Tyson Airport makes the area extremely accessible.

Photo courtesy of Knoxville Tourism & Sports Corporation.

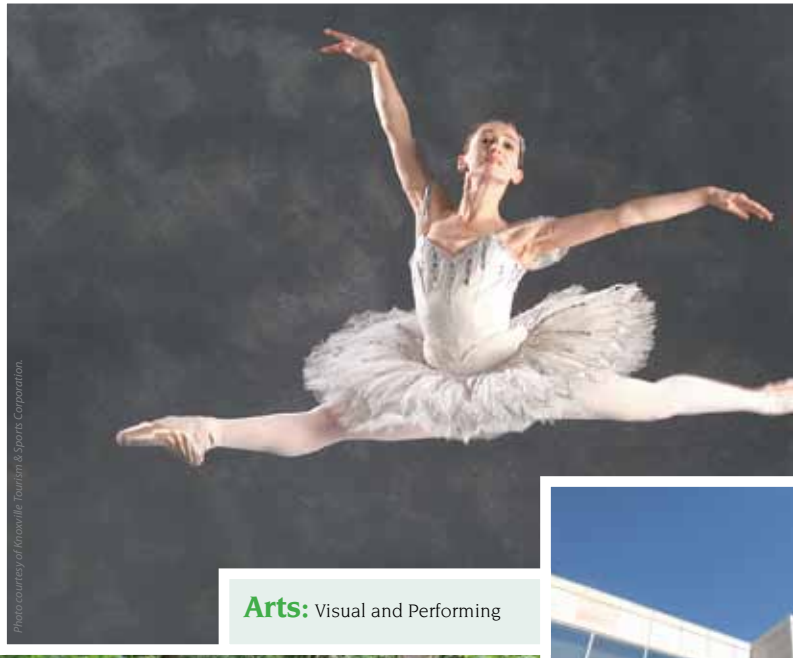


Photo courtesy of Knoxville Tourism & Sports Corporation.

Arts: Visual and Performing

Photo courtesy of Knoxville Tourism & Sports Corp

Shopping and Dining:
Familiar and Eclectic

Recreation: Boundless Possibilities

Photo courtesy of Knoxville Tourism & Sports Corporation.

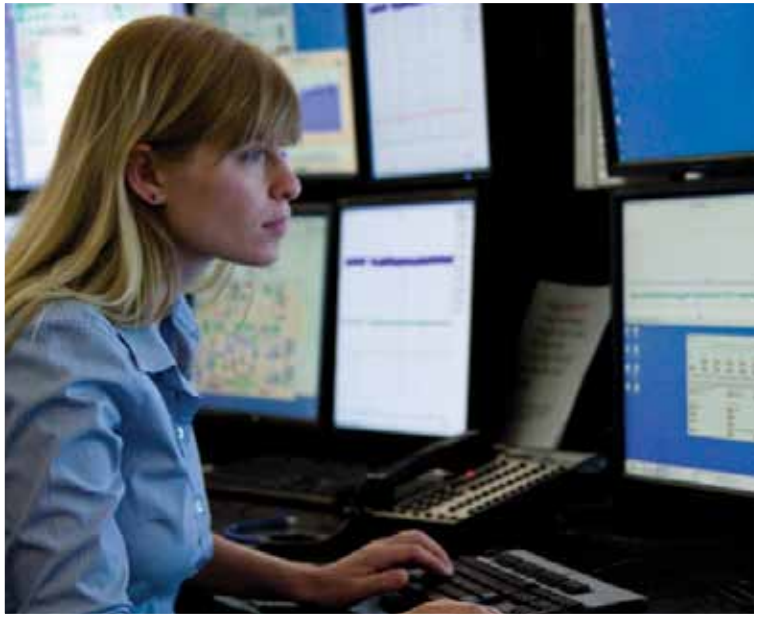
Schools: Simply Outstanding

CAREERS

Oak Ridge National Laboratory has spent the last decade investing billions in scientific infrastructure mapped to the most exciting and urgent science in the world. The unmatched caliber of the Lab's facilities gives our researchers and the user community the opportunity to conduct the most important science of their careers. Feel free to find out more about the Science and Life at Oak Ridge, meet our incredible staff, and while you're here—find the career you have been waiting for.

We have opportunities for:

Internships	*Post Docs*	*Fulltime Research Professionals*
Post Grads	*Business Professionals*	*Distinguished Fellowships*
Post Masters	*Technical Professionals*	*Joint Faculty Appointments*



ORNL employees come from

80+ countries across the world

making our environment diverse and inclusive.

multicultural FRIENDSHIP Club

Follow ORNL *at these Social Networking Sites*

Facebook Twitter Linked In YouTube Flickr

http://jobs.ornl.gov

jobs.ornl.gov

Equal Opportunity Employer

UT-Battelle is committed to achieving its strategic business objectives by attracting, retaining and developing a diverse workforce.

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