

#### **Our Priorities**

The Office of Science's research priorities hold enormous promise for the future of our Nation and the overall well-being of our citizens:



TER for Fusion Energy



Scientific Discovery through Advanced Scientific Computing



Nanoscale Science for New Materials and Processes



Transformational Science for Biofuel Breakthroughs



Dark Energy and the Search for Genesis



Nuclear Matter



Research Facilities for the Future of Science

### **Our Legacy**

At the Office of Science, we are proud of our historic contributions to the Nation's economic and scientific pre-eminence.



We initiated the human genome project in 1986.



We sponsored research leading to the discovery of quarks and leptons, the most fundamental constituents of matter.



In 1978, we launched the first federal research program in the U.S. to study climate change.



We supported the 1996 Nobel Prize winning discovery of a new form of carbon, the "buckyball."



We helped develop new tools for the non-invasive diagnosis of disease, including PET scans, MRIs, and nuclear medicine cancer therapies.



We funded research leading to the discovery that about 70 percent of the universe is composed of a mysterious "dark energy."



More than 40 Nobel Laureates since 1977 have been supported by or affiliated with the DOE Office of Science

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# U.S. Department of Energy

## OFFICE OF SCIENCE

Our mission is to deliver the remarkable discoveries and scientific tools that will

- transform our understanding of energy and matter and
- advance the energy, economic, and national security of the United States.









www.science.energy.gov







## The U.S. Department of Energy (DOE) Office of Science

### **Program Offices**

The Office of Science is the single largest supporter of basic research in the physical sciences in the United States.

We manage our research portfolio through program offices, with these goals:



**Advanced Scientific Computing Research** Deliver Computing for the Frontiers of Science



**Basic Energy Sciences** Advance the Basic Sciences for Energy Independence



**Biological and Environmental Research** Harness the Power of Our Living World



**Fusion Energy Sciences** Bring the Power of the Stars to Earth



**High Energy Physics** 

Explore the Fundamental Interactions of Energy, Matter, Time, and Space



## **Nuclear Physics**

Explore Nuclear Matter – from Quarks to Stars



### **Workforce Development for Teachers and Scientists**

Train the Next Generation of Scientists and Engineers to Maintain U.S. Scientific and Technological Leadership

#### **Research Universities**

The Office of Science supports researchers at more than 300 colleges and universities across the United States.

We balance our support for big science and interdisciplinary teams with investments in basic research projects conducted by leading university and laboratory investigators.



The Office of Science also offers a range of workforce development programs for teachers and scientists to help ensure that this Nation will have the scientific workforce we need in the twenty-first century.

And, to encourage America's youth to study and pursue careers in science, technology, engineering, and mathematics, we manage the annual DOE National Science Bowl® competitions for high school and middle school students.

### **National Laboratories**

The DOE national laboratory system is the most comprehensive research system of its kind in the world – and the backbone of American science.

The Office of Science is the steward of 10 of these 17 world-class laboratories with unmatched capabilities for solving complex interdisciplinary scientific problems.

> The 10 DOE Office of Science National Laboratories



Ames Laboratory



Argonne National Laboratory



BROOKHAVEN Brookhaven National Laboratory



Fermi National Accelerator Laboratory



Thomas Jefferson National Accelerator Facility



Lawrence Berkeley National Laboratory



Oak Ridge National Laboratory



Pacific Northwest National Laboratory



**PPPL** Princeton Plasma Physics Laboratory



Stanford Linear Accelerator Center

### **Scientific User Facilities**

The Office of Science builds and operates the world's finest suite of scientific facilities and instruments that researchers depend on to extend the frontiers of science.

The Office of Science facilities include particle accelerators, synchrotron light sources, neutron scattering facilities, nanoscale science research centers, supercomputers, high-speed networks, and genome sequencing facilities.













In the 2007 fiscal year, these Office of Science facilities were used by more than 21,000 researchers and students from universities. national laboratories, private industry, and other federal science agencies.



